UNIVERSITY OF GLOUCESTERSHIRE

EXPLORING THE RELATIONSHIP BETWEEN SYSTEM-BASED PERFORMANCE

MANAGEMENT SYSTEMS AND EMPLOYEES' MOTIVATION: THE CASE OF MID-SIZE

ENTERPRISES

Bernd THOMMES

A THESIS SUBMITTED TO

THE UNIVERSITY OF GLOUCESTERSHIRE

IN ACCORDANCE WITH THE REQUIREMENTS OF THE DEGREE OF

DOCTOR IN BUSINESS ADMINISTRATION

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UNITED KINGDOM

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IN ACCORDANCE WITH THE REQUIREMENTS OF THE DEGREE OF

DOCTOR IN BUSINESS ADMINISTRATION

IN THE SCHOOL OF BUSINESS & MANAGEMENT, COHORT 7, MUNICH

UNDER THE SUPERVISION OF

1ST SUPERVISOR	2ND SUPERVISOR AMINA
GORDON BOWEN, DBA	ELSHAMLY, PHD

JUNE 2017

Abstract

Aim: This research attempts to understand the interrelation between strategy, performance measurement and management systems (PMMS) and human behaviour. Literature and the researcher's experience suggest that PMMS most of the time do not deliver the expected results. In the specific case the focus is on a medium-sized company in Sweden which has experienced operational troubles with respect to delivery, which in turn has impacted financial performance. The research proposes a toolbox approach to introduce and align strategy, performance management and behavioural aspects.

Methodology: The research enquires about how existing performance measurement and management is influencing the behaviour of employees and managers of this organization. The actions taken during the management of the crisis and the results which were achieved are described. The method and methodology are based on constructivism in order to obtain information about the impact of the strategy, performance measurement and management systems and behaviour. Literature research provided significant conceptual frameworks for both the implementation of strategy and consequent measurement and management systems as well as human behaviour in an organizational environment, summarized in a revised conceptual framework deduced from previous research. This research brings these two fields together to examine the interrelation of both within the researched organization. The researcher is part of the system and also influences the participants and this cannot be separated from each other. The research is less concerned with a wider validity due to the uniqueness of the case. The work might be used as reference for researchers and practitioners to compare their specific situation and derive ideas how to approach them. Based on the findings, previous research is validated, and a process introduced which enables the organization to align strategy, performance measurement and management systems and

behaviour. To obtain the primary data the research uses a semi structured interviewing method of both individual and focus groups interviews. The primary data is the thematically coded with NVIVO.

Results: Literature suggests that the introduction of PMMS and addressing behavioural aspects are widely separate issues. In introducing new PMMS, literature often refers to "creating buy-in" or "engaging" employees but does not advise on how to address behavioural aspects. Behavioural research deals with the motivation of employees but mostly cannot establish a link between performance management and measurement systems and behaviour. In this specific research, it was found that there is validity of motivational theory with regard to human behaviour, which strongly influences the performance measurement and management of the company. The impact of motivators may have opposite effects than expected because in this specific case the PMMS of the corporate office for the local unit did not change but nevertheless financial performance improved significantly.

Contribution to knowledge: A conception framework was derived from literature attempting to interrelate Strategy, PMMS and behaviour. The primary research confirmed this framework and partially validated previous research and theories. Based on the findings from literature a revised conceptual framework is proposed to link behaviour to PMMS.

Publications with reference to the research

How important are Performance Management Systems to achieve outstanding financial results? QSHR | Qendra Shqiptare për Riskun, 09/2014, Thommes & Bowen

Performance Management Systems and Employee Motivation, a Literature Review, Seventh International Conference College, Globus and Partners, 11/2014, Thommes & Bowen

Performance Management Systems: Examining their validity due to their limited success in respect to human and organizational behaviour. International Journal of Management and Business Economics (IJMBE), Vol 3, 09/2014, Thommes & Bowen

Human motivation and performance management systems to drive company performance: Time to rethink? International Journal of Management and Business Economics (IJMBE), Vol 4, 05/2015, Thommes & Bowen

Declaration

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire and is original except where indicated by specific reference in the text. No part of the thesis has been submitted as part of any other academic award. The thesis has not been presented to any other educational institution in the United Kingdom or overseas. Any views expressed in the thesis are those of the author and in no way represent those of the University.

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June 2017

Acknowledgments

The Author

Bernd Thommes is a German national who graduated in mechanical engineering from the University of Applied Science in Konstanz, Germany. He holds a Dipl.-Ing (FH) degree and a Bachelor Degree from Coventry University, UK. Mr Thommes conducted his thesis submitted for Dipl.-Ing (FH) at the Indian Institute of Technology, Delhi, India. He worked in different engineering positions in Germany, France, the USA and South Korea. He attained an MBA degree from the École des Ponts Business School, France. Thereafter he was in several management positions in major corporations such as ArcelorMittal and Bodycote, and managed organizations in the USA, the UK, India, Sweden and Germany.

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Abbreviations

ABC	Activity Based Costing
ADI	Aerospace and Defence Industry
AGI	Automotive and General Industry
AP	Accounts payables
AR	Accounts receivable
ARS	Action Research
AS	Action Science
BOS	Business Operating System
BSC	Balanced Scorecard
BU	Business Unit
CMR	Collaborative Action Research
COI	Cooperative Inquiry
CRC	Critical Root Cause
CRT	Current Reality Tree
EPC	Engineering – Procurement – Construction
FPS	Finished Product Stock
INCA	Ideal Cost and Non Conformity Analysis
IOT	Intermediate Objective Tree
KPI	Key Performance Indicator
MAS	Management Action Science
NP	Net Profit
OE	Operating Expenses
PAR	Participative Action Research
PI	Performance Indicator
PMMS	Performance Measurement and Management System
PP	Performance Prism
PPD	Performance Pyramid
PTT	Prerequisite and Transition Tree
RBV	Resourced Based View Model
RI	Result Indicator
RMS	Raw Material Stock
RO	Research Objectives
ROI	Return on Investment
RQ	Research Questions
SCP	Structure Conduct Performance Model
SMART	Strategic Measurement And Reporting Technique
SWOT	Strengths, Weaknesses, Opportunities and Threats model
T	Throughput
TOC	Theory of Constraints
UDE	Undesired Effects
VSM	Value Stream Mapping
WIP	Work In Progress

1 Introduction, Background and Context

1.1 Academic Context

"Adapt or Die", according to Jung (2012) the ability of companies to adapt to a changing environment, is a question of survival. While the average life expectancy of a company today is 40 to 50 years it becomes essential that current methods are constantly reviewed and adapted to ensure the continued success of the enterprise (Jung, 2012).

Many organizations face challenges within their business environment and consequently engage in business improvement processes (Bititci, Turner & Begemann, 2000; Kaplan & Norton, 2001a). These often comprise the introduction of performance management systems. The objective of these systems is to monitor the progress of the organization to achieve better performance. To define better performance organizations have to create clarity about what they want to achieve (Hudson, Smart & Bourne, 2001). The objective of commercial enterprises is to generate a required rate of return which is higher compared to their cost of capital borrowed from shareholders and lenders (Goldratt, Eliyahu, 1990).

In modern management senior leadership is striving for the empowerment of employees (Kaplan & Norton, 1993; Neely, Andy, 1999) to take charge of their area of influence and manage it to support the success of the organization as a whole (Kapoor & Meachem, 2012). In this work a process shall be proposed for developing and deploying strategy through the organization.

Most organizations formulate a strategy to achieve their goal (Cox & Schleier, 2010). The strategy is a plan and consequently defines key actions and key performance indicators (KPIs) which enable a follow-up on the progress (Kaplan et al., 2001a) . The top level KPIs must be deployed and customized for the organization (Boyce,

2012; Quirin, 2015). Johnson and Scholes have provided a multilevel framework taking into account that strategy has to be modified on different levels of the organization to achieve the overall objective of the organization (Johnson & Scholes, 2002). The ever-changing strategy of a volatile environment should be reflected in the performance measurement and management system (PMMS) (Beamon, 1999; Kaplan & Norton, 1996; Neely, Andrew, Mills, Platts, Gregory & Richards, 1994). The design of performance measures is often compared with the need of a pilot for instrumentation (Kaplan et al., 1996; Tan, Platts, Noble, Tan, Platts et al., 2004) to give information for decision-making resulting in action.

The deployment of measurables such as KPIs and processes is part of an effort to reduce variability within the system (Misterek, Dooley & Anderson, 1992) and clarify communication (Neely, Andy, 1999; Schneiderman, 1999) about requirements to achieve the strategic plan and therefore the goal of the organization (Cox et al., 2010). Often these efforts lead to the collection of significant amounts of data resulting in a comparable amount of KPIs, reported in fixed time schedules (Banks & Wheelwright, 1979). The KPIs are reviewed on a frequent schedule to ensure the follow-up on the progress. These schedules can be daily, weekly, monthly or yearly. Most commercial organizations rely on a business cycle determined by their financial year for which they generate strategic and financial plans which are then translated into a yearly KPI system (TCii, 2011). It is necessary to deploy the KPIs throughout the organization and adapt them to the business unit and departments (Kaplan & Norton, 1992; Kaplan et al., 2001a).

The translation of corporate goals into strategy and achievement of organizational depth is not a researched field. Kaplan et al. (1996) state that the approach of local managers having to develop measurements fitting the overall strategy is too simplistic because of the risk that local optima are generated and the global goal of

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the organization is neglected (Goldratt, Eliyahu, 1990, 2009; Goldratt, E. & Cox, 1986; Holmberg, 2000; Misterek et al., 1992). Performance measurement and management systems rarely take into account the correlation of individual metrics and their impact on the systems goal (Holmberg, 2000). The use of a tree or hierarchical system was introduced (Santos, Belton & Howick, 2002) but did not take into account the organizational depth. There is no agreement but only general guidelines on how PMMS systems should be developed, deployed, used and revised. One key element, however, is the existence of a horizontal flow which is the actual value chain and a vertical linkage towards the flow of information and evaluation of performance (Kaplan et al., 1996; Najmi, Etebari & Emami, 2012; Neely, Andrew, Mills, Platts, Richards, Gregory et al., 2000).

"For most managers the big unanswered question remains: What do you want me to do" (Bungay, 2011, p. 1), to achieve the company goal. Reduced management levels and a decreased number of support staff reduce the time managers can invest into reflections on the build and revision of PMMS. Most managers would prefer to use a pre-build toolbox for their PMMS (Neely, Andrew et al., 2000). It can be argued that most organizations do not change "WHAT" they do as a business but "HOW" they conduct it. The lifetime of organizations is limited to a decreasing duration, still decades, in which the goal can be defined as ensuring that the company can generate more and more cash (Goldratt, Eliyahu, 1990; Schragenheim, 1999; Schragenheim & Dettmer, 2000). The long-term strategy must monitor the rise of disruptive changes which would endanger the current business model, adapting "WHAT". The short-term strategy focuses on the exploitation of opportunities constantly adapting the "HOW". The frameworks reviewed are generally very comprehensive and consider many dimensions of a corporate environment, but it is precisely this completeness that makes their application difficult.

As stated earlier, managers cannot manage a wide variety of measures and thus all systems will have indicators competing with each other and therefore fail to achieve clarity, instead increasing confusion: "What do you want me to do?" (Bungay, 2011, p. 1). The frameworks do not successfully describe a process of implementation and correlate it with proof sustaining success in an organization. This is related to the fact that most authors have helped to set up systems but were rarely involved in their deployment and management over a relevant period of time. Neely, Andrew et al. (2000) attempted to introduce PMMS but described many of the problems stated above as a result.

The frameworks presented trigger a steady flow of publications describing the design, deployment and barriers of performance measurement systems (Bourne, Mike, Mills, Wilcox, Neely & Platt, 2000; Dixon, Nanni & Vollmann, 1990). The main differences are in the clarity of the strategic plan and the communication through the organization (Sinclair & Zairi, 1995a). There is a strong sentiment that strategy and its measurement are not connected in many organizations today (Eccles, 1991; Holmberg, 2000) compared to previous emphasis on purely financial data (Kaplan et al., 1996; Neely, Andrew et al., 1994).

1.1.1 Aim of the research

The aim of the research is a definition of current practices in performance management and employee motivation from the literature and the definition of a toolbox, based on existing research, to improve performance in the researched organisation.

1.1.2 Research Questions

1. In the context of the research object, how can managers operationalize strategy and translate it into key performance indicators that synchronize processes and drive the required employee behaviour?

2. How can a company clarify the employee's role, through their performance, in value creation?

3. What are motivators for employees which drive behaviour, in their role in the organization, and how can these motivators be part of a PMMS?

4. What key performance indicators can be defined, taking organizational requirements and employee motivation into account, to reinforce the alignment process with the strategic organizational goal?

1.1.3 Research Objectives

1. To develop key elements of efficient performance management in relation to strategy.

2. To appraise the strategic goal of the specific organisation and link and translate it into key performance indicators (KPIs).

3. To construct a concept to align employee motivational parameters and company requirements to fulfil the strategic goal.

4. To create a toolbox process to implement a performance measurement system that supports internal alignment and employee behaviour with the strategic organizational goal.

The research of which this work is part will develop a holistic model of multi-layered performance measures and management systems by presenting a theory derived from a focus group survey and a consequent generalization of the development and deployment process of the model (Easterby-Smith, Thorpe & Jackson, 2012). The known performance management systems, like the Balanced Score Card (Kaplan et al., 1996) or the Performance Prism (Neely, A., Kennerley & Adams, 2002) are focused on macro level performance. The questions arising are how to develop a process and how to deploy the company's strategic priorities into operational indicators on different levels of the organization of a small operation unit.

In the western world the requirements for employees have shifted from mere execution of task to creative problem-solving (Pink, 2010; Vollmer, 2014). This is not restricted only to office jobs but extends to production floor level systems which require the members of an organization to go beyond executing and actively participate in the continuous improvement of processes (Liker & Hoseus, 2008). Many organizations trust standardization of employee interactions in a context of changing requirements for employee performance. A transactional and controlling management style which is engrained in many organizations conflicts with an active leadership that fosters an environment of learning and development combined with purpose and values. There is an organizational conflict between the fear of losing control and empowering the employees responsible for executing the process. To define motivational factors for each and every employee might be challenging but research shows that a deprivation of motivational factors leads people not only to underperform but also to actively use their creativity to undermine organizational efforts (Vollmer, 2014). The importance of motivational factors, extrinsic or intrinsic, may vary and therefore its impact on the employee varies, which is in line with Gostick and Elton (2014) and Herzberg, Mausner and Bloch Snyderman (1993).

To enable an effective performance management system it is necessary to know the employees better and establish a motivational profile. Gostick et al. (2014) proposed a questionnaire based on the identities and motivational factors that correlate with this identity. As soon as the organization knows what drives a person it can set up performance management tasks which are in line with the aspiration of the individual. No individual or organization is entirely X/1 or Y/2 (Henri, 2006; McGregor, 2005) but modern management needs more employee engagement which is based on the company providing an environment in which to thrive. The environment that supports mastery, autonomy and purpose emphasises a Y/2

management style, increasing the employees' motivation to move towards the organizational goal. The conflict for managers in type X/1 or Y/2 is the choice between control and engagement/trust (Figure 1-1).

For most commercial organizations, making more and more profit now and in the future is the goal for which all members of the organization should strive. It is a system-based approach where all links or members must be synchronized to achieve the goal (Bromiley & Harris, 2014; Goldratt, Eliyahu, 1990; Quirin, 2015; Simon, 1954).

To achieve this, most organizations rely on performance management systems which operationalize the strategy into key actions and key performance indicators. Often these systems fail due to the lack of buy-in within the organisation (Thommes & Bowen, 2014a, 2014b, 2014c). It is therefore important for managers to become type Y/2 leaders instilling purpose in their employees and creating an environment of autonomy and mastery. Whether employees acknowledge the importance of these measures depends on how authority is delegated within the company (Bromiley et al., 2014).
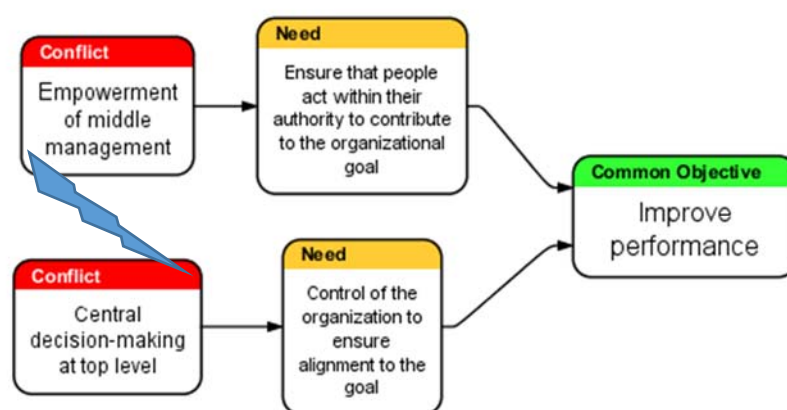
Figure 1-1: Decisions are centralized vs managers can act with authority

Most performance management systems should improve system performance but human resources management works to standardize human interaction and ignores

individual motivation (Figure 1-2). Any personal goal must fit their motivational identity to ensure that individuals can contribute to the performance of the system.

Employee motivational theories commonly state that there should be a mix of hygienic (extrinsic) and motivational (intrinsic) factors, of which depending on your identity some are more important than others. Research developed refers to more and more motivational factors going far beyond Maslow's hierarchy of needs. Research on motivation has developed models to classify employees more precisely in relation to their motivational drivers. There is a clear gap in what business does and science knows (Pink, 2010).
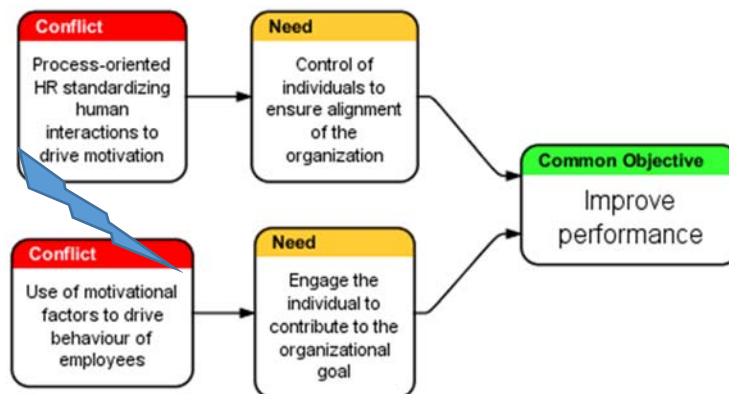
Figure 1-2: Behavioural science against process standardization

Analysis of individual motivation may be the key to make performance measurement and management systems more successful. It would help to close the gap of improving the individual performance of the employee while trying to improve the system's performance. More research is needed on how the management of motivational factors may improve the implementation and sustainability of performance measurement systems such as, for example, the Balanced Scorecard and its translation into the successful achievement of the organizational goal.

1.2 Significance and contributions to knowledge

1.2.1 Academic Significance and Contribution

Performance measurement and management is one of the most researched fields in a business context. Companies are constantly facing the pressure of changing markets and competition, which require continuous adaptation. Early research focuses on the translation of strategy and its deployment with the organization. The most influential work on strategy generation was published by Porter, M. (1980) in which he proposed the Five Forces methodology as an analysis to generate a strategy. There is a significant amount of research and literature that points to a gap between strategy and execution. It seems that many strategic initiatives never bear fruit due to problems in implementation.

The deployment requires communication of the strategic plan within the organization to define clear priorities for the individual segments of the organization. An effective communication is required to align the organization.

> *"Imagine you're sitting with 15 other people in a small room. The host asks your neighbour to tap out the rhythm of a famous song like Happy Birthday on the table. You have to guess the tune. How much chance do you think you have of guessing the song correctly? You've just taken part in an experiment designed by Elizabeth Newton from Stanford University. Over the course of the study, Newton repeated the process 120 times. Only 4 songs—2.5 percent—were guessed correctly. Not many, is it? But here's the interesting thing. Before the Listeners tried to guess the song title, she would ask the Tapper and the Listeners to predict their success rate. While the Listeners thought they would get 10 percent of the songs right, the Tappers thought the Listeners would guess a whopping 50 percent of their songs. Isn't that amazing? The average Tapper got the*

message across 1 time in 40, but they thought they'd hit a homerun 1 out

of 2. They overestimated their communication abilities by a factor of 20.

So what happened? Does tapping make you a poor judge of your

abilities? The simple answer is yes." (De Flander, 2013, p. 5)

Key performance indicators are considered a tool to facilitate the communication of the expected outcome in relation to the current situation. The rise of the Balanced Scorecard by Kaplan et al. (1992) provided a comprising tool for companies which consequently gained considerable traction within the business world. Within this work other propositions for measurement systems will be reviewed, such as systems-focused approaches like TOC, because many PMMS do not deliver the required results. Furthermore, the use of performance measurement was extended to individuals as part of their personal performance evaluation, which conceptually was designed to generate supporting behaviour for achieving the organizational goal.

In an article Schragenheim (2015) asks the question why organisations actually measure their employees against standards. He argues, referring to Goldratt, Eliyahu and Cox (1992) that flawed measurements might hamper the overall performance because:

- They are the wrong measures.

- Dependency: The performance does not only depend on the individual performance but also on others (Figure 1-6).

- Variation: The individual performance varies, influenced over time due to explainable or inexplicable reasons.
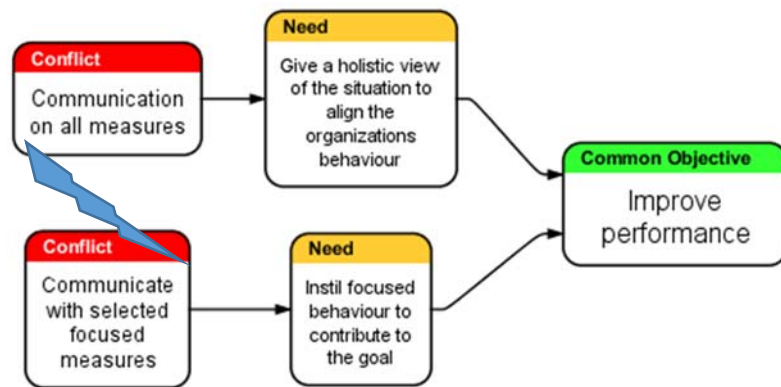
Figure 1-3: Broad communication or focused communication to achieve required behaviour

Dependencies within the organization are very complex where interrelated processes influence the individual performance (Figure 1-6). This is valid for the process itself as it is for the individuals working with the process. The communication of broad or focused information target business improvement is shown in Figure 1-3. The uncertainty of processes and individual contributions creates variation within the system which may impact the overall performance of the system (Goldratt, Eliyahu et al., 1992; Schragenheim, 1999)

If employees distrust the measurements, because of the impact of both process and individual contribution, they most likely learn how to manipulate them in their favour and therefore often act against the interest of the organization. Often measurements are used as a means of control which results in a distrustful relationship between the management and the employees (Vollmer, 2014).
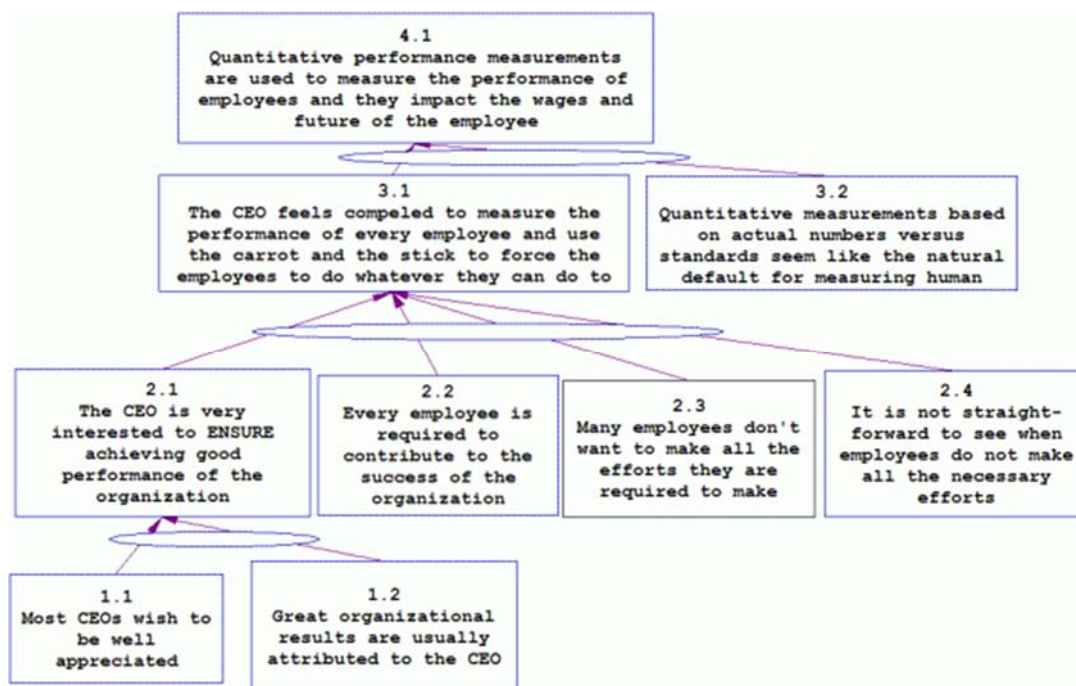
Figure 1-4: A simple cause-and-effect tree to showing the rush for using performance measurement on employees (Goldratt, Eliyahu et al., 1992; Schragenheim, 2015)

Figure 1-4 shows a predicament of performance management. The top management is measured by basic metrics like profit, return on investment and earnings per share. Whatever the metrics, it is about the generation of more and more money now and in the future. Every commercial organization has this objective and hence must motivate its employees to contribute to this goal. For this to happen the CEO can operate in trust that the employees work with the company's best interest in mind or, as in Figure 1-4, assume that employees do not operate like that. In the latter case the performance measurement system is a means of control which, depending on the result, entails reward or punishment. In a complex system, employees who operate under assumptions of distrust learn to manipulate the numbers in their favour. Depending on the level of their manipulation they probably actively or passively jeopardize actions and policies which are imposed by the management.

Operationalization of strategy often fails due to the human dynamics which impact the process. The reasons according to De Flander (2013) are that the human

dynamics and complexity which are engrained within the behaviour may override rational thinking.

 "*Taylor sought to remove the informal side of the organization and the human relations message was to acknowledge its irrepressibility and find ways of managing it into alignment with the formal parts and purpose of the organization*" (Grey, 2013, pos. 1115).

The human side of PMMS, because of its complexity, is often neglected in performance management systems. Measurable numbers and standardized processes are required to set expectations but are based on a Taylor type management philosophy (Figure 1-5).
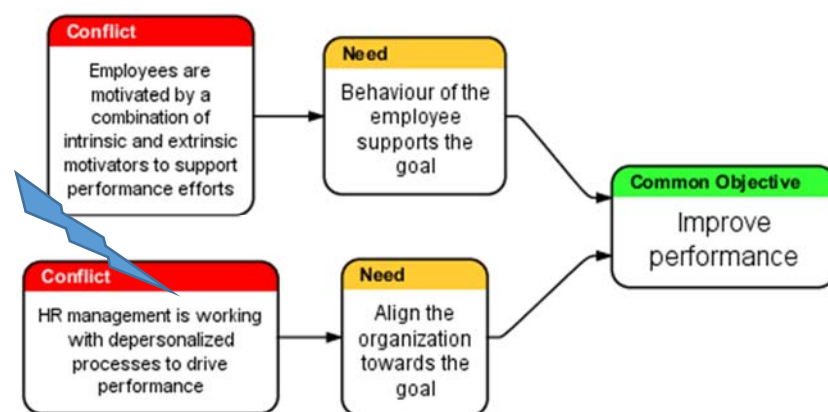
Figure 1-5: Conflict between motivational factors and standardization of HR processes

Taylor type management shifted the power from the shop floor to managers, which increased measures to ensure compliance and corrective actions (Figure 1-3). Since then the business environment and work attitudes of employees have changed. During the last decades, substantial efforts were taken to make organizations leaner and layers of control were removed. Empowerment of employees became fashionable and in combination with higher education and training, the needs and requirements of employees towards their employer became more complex (Kapoor et al., 2012).

Some motivational theory refers to three components to motivate: Mastery, Autonomy and Purpose. Mastery is a process of Maslow`s self-actualization (Maslow, 1943) or perfection of skills which enables personal growth. Autonomy refers to a person's authority to make decisions within their area, which is in line with Maslow`s need for esteem. Instilling purpose to employees makes them part of something bigger than themselves and could be related to Maslow`s self-actualization.

Motivational factors are important for the success of the organization because many performance management systems create a gap between actual and desired behaviour (Taylor, J., 2014). Most companies focus on result measures and not on the behaviour which should drive the results (Boyce, 2012). As a result companies fail to achieve the potential they have identified for themselves (Bromiley et al., 2014).
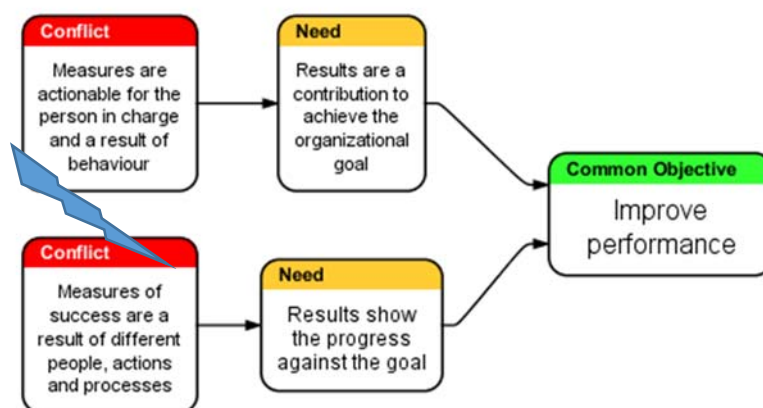
Figure 1-6: Actionable measures or result measures result in behaviour

The thesis will summarize research of strategy operationalization and the use of KPIs in combination with behavioural aspects. In particular, the research will identify shortcomings based on scientific and popular literature, third-party feedback on experience, and behavioural aspects of the operationalization. Based on the information, collected problems and challenges are summarized in a current reality

tree (CRT). In a second step, information within the researched organization is collected and an organization-specific CRT is established and compared with the intermediate objective tree (IOT) from the literature.

Based on literature, success factors for effective strategy operationalization and performance measurement and management can be established and summarized in IOT. This is done for both the literature and the specific research and then compared. During the literature research, questions and objectives are defined which should be aligned and answered with the CRT. The research focused on a system-based approach to operationalize strategy with the aid of the theory of constraints (TOC) by using the CRT (Figure 2-21) and IOT (Figure 2-20).
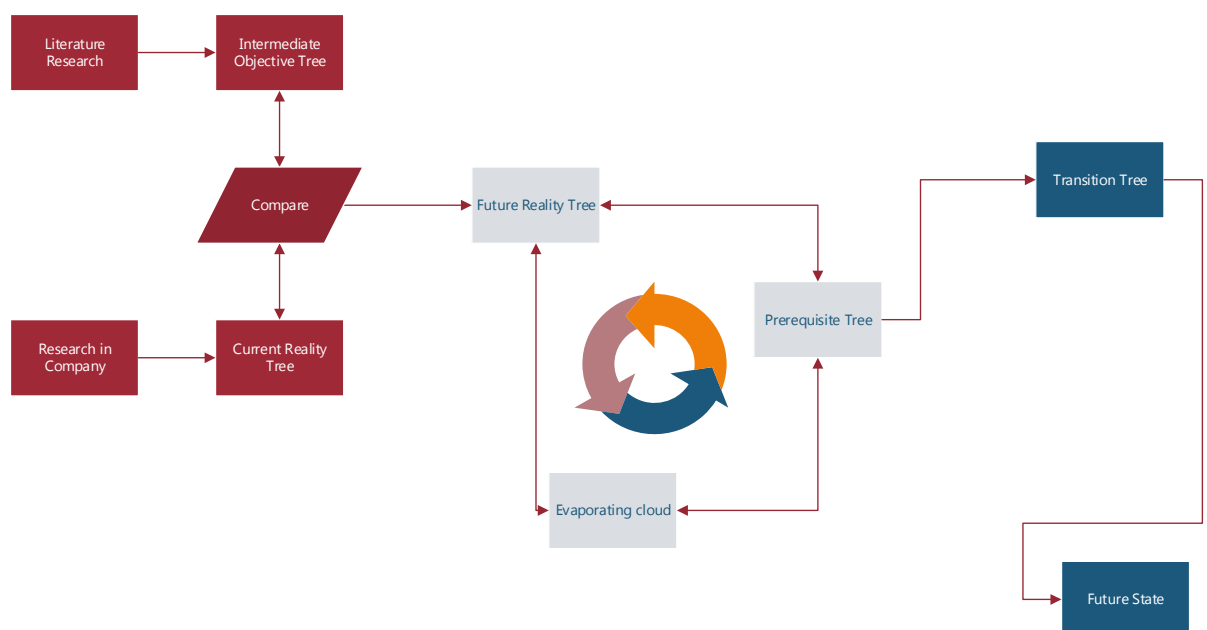
Figure 1-7: Process for the development of the thesis

1.2.2 Personal and organizational significance

Some years ago, I was part of a balanced scorecard implementation team and followed the deployment of the scorecard within an organization. At that time, I was convinced that the implementation would yield significant results for the corporation. The process was described in a transparent approach and figures consequently improved. However, improvements did not yield any increase in the financial results,

but the contrary. The approach focused very widely on a significant number of indicators that assumed linearity between cost decrease and improvement. In the many discussions I had with the local managers in respect to the system it became clear that the measurements were a mere reporting obligation because there were too many and their interrelation made it difficult to set the priorities (Figure 1-6). Later I oversaw a part of an organization which was highly financially driven. When the local unit, which is researched in this thesis, did not provide the expected results the volume of reports and numbers constantly increased. Reports or numbers that were required once for a discussion suddenly became part of the system. No reporting requirements were ever scrapped. Clarity on the strategic development in the specific business area was missing. It was not clear what the strategy was and what had to be done to achieve the goal. The results or conclusions of reports or numbers were never discussed with the personnel who created the numbers. The central corporate was considered a black hole because of the number of reports that were given and the absence of feedback. Employees became frustrated because they felt they were not in control of any decisions. Target setting created most of the frustration within the organization. The targets were imposed by the central administration without consulting the local business unit. The relationship between the corporate office and the local unit became strained.

Despite all the corporate reporting efforts the performance did not improve. Yet two years after this research was done, surprisingly for the corporate office the local unit achieved the best sales and the year ended with the highest order book in the history of the company. The corporate office had not changed their PMMS.

The experiences in these companies made me wonder why most performance management systems seem to have a limited effect on the overall performance. It seemed that organizations did not outperform thanks to their performance

management but despite it. This also raised the question of how the apparently failed unit recovered from its crisis.

Consequently, I wanted to dedicate time and effort to investigate reasons for failure and implementation challenges based on research in the literature and to learn about successful implementation and efforts to keep systems alive. It was clear that the reason for failure was not with the measurement systems but the interaction between the system and the employees. Research has been carried out on both fields independently, but it is never brought together.

This thesis attempts to bring together measurement and motivation by using the theory of constraint logical thinking process. This is necessary because there is a gap between practice and theory in relation to behavioural impacts of PMMS on the organization.

1.3 Methodology and Method

For the purpose of this research the analysis is based on a phenomenological ontology and a constructionist epistemology.

The researcher is part of a system of a group of individuals and it can be assumed that a group of people create their own view of the company's performance based on their value systems and perception of reality. Different levels of the organization have different performance information available and this drives the behaviour of individuals and groups within the system. The methodology relies on a focus group study on different levels of the organisation and derived from this are numerical measures for the performance measurement and management system (PMMS).

Companies and processes within them are measured by numbers and consequently explanations and actions are based on the numerical results. Numerical data and analysis are instruments of a positivist epistemology.

People value sets of motivators which are a mix of extrinsic and intrinsic. The motivators sometimes change with the fulfilment of a motivator but more often with the absence of fulfilment. The reality of the employee is therefore constructed based on external impacts. The research on the behavioural side should therefore be approached from a relativistic epistemology.

The research is about change within an organisation and therefore an action research or action science approach seems to be the most appropriate. The research analyses literature from the field of performance management and behaviour and with the application of TOC generates a theory for the development, deployment and sustainability of PMMS.

The constructionist stance chosen supports the data acquisition with observation, interviews and questionnaires to allow for triangulation of data to support the analysis and conclusion.

1.4 Structure of the following chapters

In the following chapter the industry and the company are introduced to show the competitive environment as well as the interrelation of the industries.

After introducing the company and the industry the literature of different performance management systems, like the Balanced Scorecard, is reviewed. There is substantial literature regarding the benefits of a scorecard measurement but there is also feedback within organizations that after an initial success the initiative loses traction. Often these initiatives do not generate sustainable results and the organization and its employees become disillusioned by the lack of its impact.

A review of published documents leads to the topic of the research and the organization in which the research was conducted. Based on the literature the

research questions and objectives are detailed. An ideal state for performance management standards can be established to determine an intermediate objective map (IOT) to be successful in this process. The findings are summarized with the help of TOC.

The research not only analyses a situation and suggests changes but results in a playbook on how to manage performance and keep the system alive over time. Based on the findings I interviewed several levels of the organization to acquire a comprehensive input. For this action research a choice was made to investigate the comprehension of and attitudes towards the existing system. The findings are summarized with the application of causal trees of TOC.

I present the results of the interview process and summarize them in a statement of the current reality tree (CRT). The current state and prerequisites determined earlier are compared and possible options for a future state (FRT) and the transitions (PTT) are developed. The focus of the entire process must be the fit between strategy, the goal of the organization and its transition into the operations.

Therefore, it is planned to take findings of the data analysis and implement them in the researched organization. There are limitations on the number of implementations that can be introduced to the system which might jeopardize the impact of the change.

The motivational aspect implies, as can be seen later, that every employee is driven by their own set of motivators. This also could be interpreted as the individual defining their role within the company based on these motivators. In the research, important motivators for individuals are investigated and a process for how to address the motivational challenges within the performance management system is suggested.

The research is based on a questionnaire as a guide for semi-structured interviews, which was used to engage employees on different levels into conversations about their opinions on strategy, performance management and motivational aspects. The results are presented in a later chapter.

Within an analysis and conclusion, a framework for successful performance management system implementation is suggested and partially tested within the researched organization. It might be possible to report results within the scope of the thesis.

1.5 Summary of the chapter

The personal experience of the researcher as a practitioner initiated the research in hand. The limitations experienced and the contradictions between performance measured and realized seem to question the existing PMMS of the researched company and its impact on the required results. Despite no change in the corporate approach results improved to historical levels. The research employs the TOC method in an attempt to establish a causal relationship between the findings and also enables future research to find guidance within the key elements presented.

2 Literature Review

2.1 Introduction

Researchers and practitioners have contributed vast amounts of data to the field of performance managements systems (PMMS). For commercial organizations, it is a topic that has gained substantial importance over the last decades. Volatility of markets, disruptive technologies and increased competition through globalization are increasing the demand for systems that drive the performance towards the goal of the organization. The goal of any commercial organization is its ability to generate more and more profit today and in the future. The notion of the future emphasizes the ability to create and sustain the business model. The organization and its management must answer the questions why it is worthwhile for investors or owners to invest money in the undertaking. This is generally done by the development of a strategy which defines a plan for how the business must develop in order to meet the shareholders' expectations. The top management must define key initiatives on how to develop, resist and take opportunity of market developments and disrupting shifts. Today's focus is the exploitation of existing opportunities and capabilities while tomorrow's opportunities should be developed. The management should define key activities as well as priorities and consistently communicate them throughout the organization, thus sustaining the strategic process to achieve the goal. The key initiatives have to be operationalized by a performance management system that defines key performance indicators (KPIs) which then are deployed within the organization (Quirin, 2015). This process of operationalization determines the success of the system and the organization. In this thesis, several performance management systems are reviewed and criticized. Research shows that many of these systems fail despite their apparent sound framework. The need for evaluating performance management systems may not be limited only to the operationalization

but also to employee motivation. The paper reviews the literature on the strategy deployment process which results in the deployment and difficulties of PMMS in respect to their impact on employee behaviour. There is only a little research available combining PMMS and behaviour (Wierks, 2007).

In the following sections the organizational goal, strategy deployment and its operationalization are reviewed. Operationalization is commonly done by introducing measurement systems of which the important ones will be explained and reviewed in this chapter. These steps should provide information on how efficient PMMS are established and support the synchronisation of processes and drive employee behaviour. The role of employees within the value creation process has to be defined based on behavioural research on models that are highlighted in this chapter. With the support of TOC an IOT is constructed combining PMMS, behaviour and motivation.

2.2 Strategy and the objective of the organization

2.2.1 Definitions of strategy

The word "Strategy", originating from the Greek "strategus", was originally used to describe the military movements of the commander-in-chief during a campaign (Armstrong, 2012; FitzRoy, Ghobadian & Hulbert, 2011). The birth of strategic studies goes back to Drucker (1955) who summarized that strategy consists of the decisions that really matter to an organization. The first definition of strategy was provided: "Strategy can be defined as the determination of the basic long term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals" (Chandler, 1962). A further definition for strategy was proposed as "the unified, comprehensive and integrated plan" whose design ensures that the basic objectives of the company are achieved (Glueck, 1980). Andrews (1980) defines corporate strategy as a "pattern

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of purposes and policies defining the company and its business". Porter (1980) argues that a company is subject to the prevailing social and economic conditions. These concern not only the industry structure but also outside forces. These forces are known as Porter's five forces of competition, which determine the company's position in the context of industry rivalry, related to the power of suppliers and buyers and the threats of new entrants and substitution (Porter, 1980). Mintzberg proposes that strategy is a "pattern in a stream of actions" (Mintzberg, 1987a, p. 12). Another definition proposed by Mintzberg (2003, p. 6) is that "strategy is a position". A further definition proposed by (Mintzberg, 2003, p. 7) is that "strategy is a perspective" of how the organization perceives the world from a specific set of internal and external value sets. Hoffer (1978, p. 4) asserts that it is the "match" between the enterprise and the surrounding market forces or environment. Johnson et al. (2002) propose further that strategy is the understanding of the competitive position and the required actions and choices for ensuring the survival of the organization in the future. The strategy of an organization depends on the current culture and context (Gallos, 2006) (Figure 2-1), which acknowledges that strategy has to take into account the current state of the organization (Bradt, Check & Pedraza, 2011). The organization depending on its state needs different strategies, e.g. if the company (Figure 2-1) is "facing disaster" a "shock" is needed to save the company. Therefore, the need for change is great but as the company has manoeuvred itself into severe problems the readiness for change is low.

These definitions of strategy, if combined, refer to a desired future state of the company, which is desirable to be achieved with the definition of key activities which are driven by internal (operational) and external (market) forces and the readiness of an organization to execute the activities.
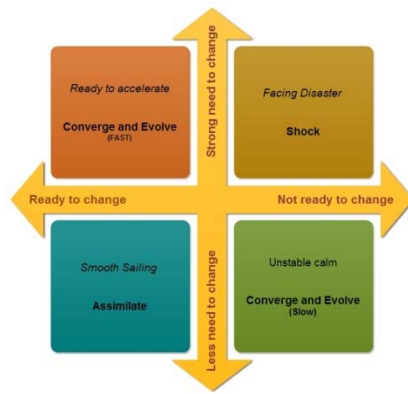
Figure 2-1: Context and Culture: State and Means (Bradt et al., 2011)

2.2.2 Impact of strategy

The impact of strategy and its purpose for the organization has to be investigated further. Mintzberg (1987b) argues that the purpose of strategy is to "provide direction, focused effort, define the organization and provide consistency". Johnson et al. (2002, p. 12) describe strategy as "the direction and scope of an organization over the long term, which achieves advantage for the organization through its configuration of resources within a changing environment and to fulfil the stakeholder expectation". Bossidy (2002) argues that the corporate strategy is about allocation of resources to the business. The strategy is about being different, providing a distinct value to attract customers' preference as well as create a sustainable competitive advantage (Bossidy, 2002). A company can only outpace its competition if there is a differentiator it can preserve. The competitive advantage stems from an organization's ability to manage its activities in a correlated manner. The emphasis is on the ability to drive the overall effectiveness of the system differently than the industry. The success is achieved by the combination of activities, where Porter refers to "fit". The fit inhibits competitors by creating a chain whose strength is determined by the strongest link (Porter, M., 1996). The right question could be derived from an assessment of the firm's condition (Figure 2-1). Is the company stable, growing or declining? (Misterek et al., 1992). This reverts

back to Figure 2-1 showing that the state of the undertaking determines the strategy to be applied.

The situation determines the need for change which determines the degree of impact required (Figure 2-2) (Abell, 1999, p. 75: Figure 1).
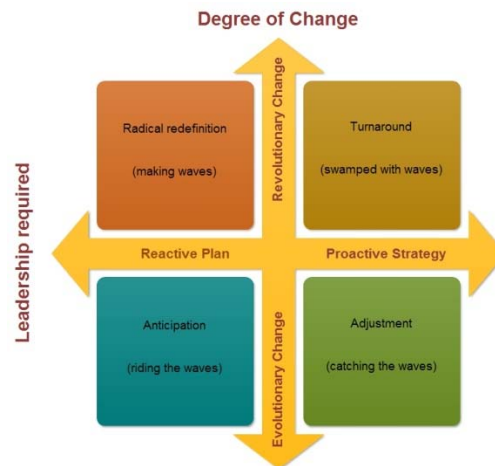
Figure 2-2: Adapted Leader/Follower & Degree of Change (Abell, 1999, p. 75 : Figure 1)

Therefore the purpose of strategy is about continuous change, improving business and aligning the strategy (Abell, 1999) with the macro environment and forces (Porter, M., 1980). Abell (1999) also proposes the differentiation of strategy in defining a short and medium term as taking opportunities, while the medium and long-term strategy should define the need for change to sustain the business. This only occurs if managers have a clear perspective about managing today and tomorrow (FitzRoy et al., 2011). The focus of today is the exploitation of existing opportunities and capabilities while tomorrow new opportunities have to be developed (FitzRoy et al., 2011). To manage volatility and change over time in the market new resources and capabilities have to be acquired (Markides, 1999b). Research separates the process of developing the strategy and its deployment (Mintzberg, 1987a, 1987b, 2003; Porter, M., 1980, 1996; Sweetman, 1996). This results in a disconnect between the strategy finding and its implementation in the organization concerned.

2.2.3 Strategy development and deployment

The strategy success for an enterprise operating in the competitive market can be defined by four main models, namely the structure-conduct-performance model SCP, the resourced-based view model RBV (FitzRoy et al., 2011), Ansoff's matrix of four strategies, and Porter's list (Cox et al., 2010). The SCP model argues that the company's success is bound to the characteristics of the industry it is operating or chooses to compete in. The model implies that managerial decisions are less important than the choice of industry. The general conduct within this industry is the primary influencer for the success of the business (Caves, 1998). Strategic choices are limited due to the existing or implied constraints of the industry's systemic behaviour. Companies compete either on cost, differentiated product or brand value. Skill development to implement strategic decisions driven by structural characteristics of the industry is key to ensure continued success (FitzRoy et al., 2011). The RBV model argues that it is not industry characteristics but the uniqueness of the resources of an enterprise that provides the foundation for success (Ambrosini, Bowman & Collier, 2009). This model implies that differences within the industry are exploited to achieve success. The unique resources and capabilities are not easily transferable and either generate more revenue or reduce costs (FitzRoy et al., 2011). The strategy is about being different, providing a distinct value to attract customers' preference as well as creating a sustainable competitive advantage (Bossidy, 2002). A company can only outpace its competition if there is a differentiator it can preserve. Ansoff's model states that the organization must develop a thread of extension of its current product and market position to define possible extensions of the current business. These growth directions are market penetration, which is the increase of market share of existing products and gain of market share from competitors, furthering the development of new products, which

are new solutions for customer problems, and market development, which is the development of new applications for existing products, and finally diversification, which is the entrance of the company outside its current markets and products (Cox et al., 2010). Porter's list (Porter, M., 1980) argues that there are mainly three basic strategies available for companies to achieve success, which are low-cost leadership, differentiation or focus. Cost leadership is a difficult position to maintain in an industry because of logistical challenges, raw material sourcing, productivity improvements, outsourcing and decreased product features. Even large corporations like Wal-Mart have given up on this strategy (Cox et al., 2010). Differentiation offers many opportunities for developing the company (Cox et al., 2010). Literature refers to three differentiators. Product differentiation refers to the enhancement of a product's features, making it more appealing to the customers. Service differentiation encompasses customer relations in pre-sales service, order execution, delivery precision, education on product features and use, follow-up and repair of goods. An organization which has well trained sales and service personnel is able to establish a personal differentiation with its customers. Lastly image differentiation is mentioned, which refers to a brand appreciation by the customers (Cox et al., 2010; Porter, M., 1980). The focus strategy serves a specific niche in which the company decides to excel. This could be that it represents a combination of cost management and developing a differentiation within a specific product or service (Porter, M., 1980).

Porter's five forces map (Porter, M., 1980) defines the strategic environment and helps to determine the strategic approach which can be chosen.

Barriers to entry:
- Economies of Scale
- Proprietary product differences
- Brand identity
- Switching costs
- Capital requirements
- Access to distribution
- Absolute cost advantages:
  - Proprietary learning curve
  - Access to necessary inputs
  - Proprietary low-cost product design
- Government policy
- Expected retaliation

New entrants

Threat of new entrants

Rivalry determinants:
- Industry growth
- Fixed (or storage) costs/value added
- Intermittent overcapacity
- Product differences
- Brand identity
- Switching costs
- Concentration and balance
- Informational complexity
- Diversity of competitors
- Corporate stakes
- Exit barriers

Industry competitors

Intensity of rivalry

Bargaining power of suppliers

Suppliers

Bargaining Power of buyers

Buyers

Determinants of supplier power:
- Differentiation of inputs
- Switching costs of suppliers and firms in the industry
- Presence of substitute inputs
- Supplier concentration
- Importance of volume to supplier
- Cost relative to total purchases in the industry
- Impact of inputs on cost or differentiation
- Threat of forward integration relative to threat of backward integration by firms in the industry

Threat of substitutes

Substitutes

Determinants of buyer power:

Bargaining leverage:
- Buyer concentration versus firm concentration
- Buyer volume
- Buyer switching costs relative to firm switching costs
- Buyer information
- Ability to backward integrate
- Substitute products
- Pull-through

Price sensitivity:
- Price/total purchases
- Product differences
- Brand identity impact on quality/performance
- Buyer profits
- Decision makers' incentives

Determinants of susbtitution threat:
- Relative price performance of substitutes
- Switching costs
- Buyer propensity to substitute

Source: Michael Porter, "Competitive Strategy", 1980

Figure 2-3: Porter's Five Forces (Porter, M., 1980)

Summarizing, an enterprise should evaluate its competitive environment in respect to internal and external strengths and weaknesses and determine a strategy in line with the described models. Ansoff's list is considered too simplistic and fails to provide insight into possible implementations of proposed development directions (Cox et al., 2010). The RBV model focuses on internal factors of competitive advantage and on internal improvements to obtain a competitive advantage within the industry and does not take outside factors into account. SCM takes the opposite approach, viewing the industry and the relationships within it as determining the company's success, which is only an outside view. Porter, on the other hand, has provided a comprehensive model for strategy development with Porter's list and Porter's five forces (Porter, M., 1980) guiding the strategy process from inception to definition. Porter assembles the previous models and compiles them into one with their dimensions.

The limitations of such models are the amount of information which is required to create viable models of the competitive environments. The type of industry and its regulatory environment determine the validity of assumptions. Models do not take into account volatility of markets which changes assumptions or information found in the strategic analysis (Symes, 2011), or the transition from the strategy definition

towards its deployment and execution (Mintzberg, 1987a, 1987b, 2003; Porter, M., 1980, 1996; Sweetman, 1996). Up to 90 per cent of all strategy implementations fail to succeed because the strategy cannot be operationalized (Kaplan & Norton, 2005; Lundberg, 2007).

2.2.4 Strategic goal of an organization

The purpose of strategy is to adapt the organization to the ever-changing environment in which it must be developed and deployed. The strategy development should be a revolution (Hamel, 1996). Hamel argues that strategy today is a ritual based on the assumption that the future is as the past. Boundaries in markets and products are taken as a given and rendering the planning process extrapolative (Hamel, 1996). The author implies that companies should take the opportunity to reflect on how to strive for new unoccupied territory because the effect of strategy is jeopardized if the process limits the scope of discovery. Not astonishingly, strategy making seems to be easy when the goal of the organization is a long stretch (Hamel, 1996). To define the goal, mission and vision for strategy building the managers should identify the 10 to 20 fundamental beliefs and conventions of the industry the enterprise is operating in and exploit them to create new business opportunities. A strategy building process requires a broad cross-section of the company that challenges the conventions and "inevitable reaching of surprising conclusions" (Hamel, 1996, p. 70). Johnson et al. (2002) propose a deployment and the variation of strategy on different levels of the organization. The authors argue that the corporate level is responsible for the scope and overall purpose of how value is created throughout the different entities of the organization. The next level in the organization must determine how it creates the required value by competing in the respective markets. They continue that specific entities can be identified which could require specific strategic direction towards the goal. The strategy is a plan defining the actions and tactics based on the competitive situation and internal and

external factors (Porter, M., 1980) to achieve the goal of the organization (Goldratt, Eliyahu, 1990; Goldratt, E. et al., 1986; Schragenheim, 1999; Schragenheim et al., 2000). It is important for defining the company's goal. It can be argued that the only goal of an enterprise is to generate returns well superior to its average cost of capital now and in the future (Goldratt, Eliyahu, 1990; Goldratt, E. et al., 1986) and therefore to continuously generate shareholder value (Appendix C: Interview with Stephen Harris, CEO Bodycote).

2.2.5 Strategy needs direction towards a defined goal

It can be assumed that every system has a goal and a set of necessary conditions which must be satisfied to achieve the goal. Friedrich Nietzsche says that losing the goal is losing the way. It is therefore important for all organizations to know their goal (Cox et al., 2010). The goal of an organization is the single item it wishes to achieve or to improve (Schragenheim, 1999). There should be an organizational agreement on the goal (Lima, Costa, Angelis, Lima, Costa et al., 2009).The goal translates into strategy and strategic planning, into strategic decisions or building blocks (Beamon, 1999; Bossidy, 2002) and execution. The goal is the only thing that has to be clearly defined (Goldratt, Eliyahu, 1990). The enterprise has to strive to meet its goal within the boundaries imposed by policy makers and fulfil its purpose without violation of externally imposed necessary conditions (Goldratt, Eliyahu, 1990). Companies are generally regarded as successful if they have generated profit consistently over a sustained period (FitzRoy et al., 2011). Bossidy (2002) offers a definition that the goal is to generate sufficient cash for the shareholders (Bossidy, 2002). It should not only have this history but also the ability to repeat the success in the future (Abell, 1999). These formulations are supported by Mason-Jones and Towill (1997) in defining the speed of response to customer demand as key to success. To define the goal of the organization it is important to 'formulate'

the right question (Markides, 1999b). To formulate a goal, Goldratt, Eliyahu (1990) suggests it is the reason why shareholders should consider investing in the undertaking. He proposes further that the company's only goal is "to generate more and more cash now as well as in the future" (Goldratt, Eliyahu, 1990) or shareholder value (Appendix C: Interview with Stephen Harris, CEO Bodycote). All other activities are important to serve this single purpose (Goldratt, Eliyahu, 1990). The company has to create value as an economic necessity as the reason for its existence and without that there is no reason for it to exist (FitzRoy et al., 2011). Depending on this goal any strategic context for change can be developed and be the basis of the strategic plan (Bradt et al., 2011). The performance measurement and management system is the link between the strategy and results achieved by the organization (Beamon, 1999; Kaplan et al., 1996; Nørreklit, 2000). The result indicates the difference between the achievement and the target (Amaratunga & Baldry, 2002). To achieve the goal of the organization, indicators have to be operationalized (Bungay, 2011) throughout all levels to achieve alignment. The performance measurement and management system and indicators should reinforce behaviour leading to the achievement of the company goal (Neely, Andy, 1999; Neely, Andrew et al., 1994; Schragenheim, 1999).

2.2.6 Section Summary

There are many definitions of strategy and although much research and work is done to define strategies to underpin the success of the enterprise, there is little agreement about how such a strategy can be developed (Markides, 1999b). For senior management to achieve clarity on the future it is important to know in which state the company is today (Bradt et al., 2011) and to have a vision of where it should be tomorrow. For the survival of the company it is essential to differentiate time horizons because the strategy for today is different compared to the needs of tomorrow (Abell, 1999). This is essential because it is very challenging to

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immediately change what a company does but less challenging to change how the business is conducted, therefore a short-term strategy is required. Changing what a company does is a long-term strategy. How the time horizons are defined depends on the rivalry within the respective industry. Nevertheless, it can be argued that strategies for different time horizons build on each other. The progress in a strategy must be measured and for this purpose the company must determine measurable indicators. It was stated that on different levels of the organizations different strategic directions have to be taken (Johnson et al., 2002). The short and long-term focus of the company must be on the goal. The survival of the company is driven by its ability to generate more and more cash now and in the future (Goldratt, Eliyahu, 1990). It is the only single goal an enterprise has and all strategic efforts must relate this goal. It is therefore important that short-term strategy aims for the exploitation of existing opportunities, which should be translated into Key Performance Indicators (KPI) on an operational level. This exploitation has to be linked to manufacturing driving important choices in policy making, resulting in efficiencies and effectiveness (Skinner, W., 1969) of the on-going operation. The long-term strategy has to question the fundamentals of the business (Hamel, 1996) and new opportunities and capabilities have to be created (Markides, 1999a, 1999b) which give it a unique strategic position. Relating back to the introduction, the work will focus on short-term strategy and the exploitation of opportunities in the current operation. Therefore, past and current performance measurement and management systems are reviewed going forward.

2.3 Performance Management Systems (PMMS)

2.3.1 What is performance and why measure it?

A definition of the performance of any system is the ratio between input and output to measure the efficiency of the transformation process (Kaplan, 1983; Misterek et al., 1992). Waggoner, Neely and Kennerley (1999) propose that performance measurement serves the purpose of identifying performance gaps, improving communication and achieving accountability. Amaratunga et al. (2002) define it as a means for positive organizational change, providing the opportunity to modify or confirm the current policy framework, as well as to reallocate and prioritize resources for the pursuit and meeting of agreed objectives. The purpose of a measurement is to constantly seek ways of improving products and processes so that there is a better value proposition for the customer (Neely, Andy, 1999). Later, Neely, Andy, Gregory, Platts, Neely, Gregory et al. (2005) defines performance measurement as a set of metrics of efficiency quantification to measure the effectiveness of actions. A further five roles for a performance measurement and management system are proposed: performance measurement, strategy management, communication and learning and improvement (Franco-Santos, Kennerley, Micheli, Martinez, Mason et al., 2007). Therefore the measurements have to be designed to encourage the individuals to act as a group for the achievement of the strategy (Neely, Andy, 1999). The target setting for measures is challenging and can be harmful as the group or individual has to be in agreement with the goal, which requires clarity about the goal (Meekings, Briault & Neely, 2010). The improvement cannot be focused on a single individual process but must evaluate the entire system holistically. That relies on the understanding of how a modification of a single process changes the behaviour of the entire system

(Dettmer, 2007; Goldratt, Eliyahu, 2009; Goldratt, E. et al., 1986; Nørreklit, 2000; Schragenheim et al., 2000). Incremental improvements without tangible reduction in cost or additional sales only translate into excess capacity (Cooper & Kaplan, 1991). The PMMS serves as a tool for communication of achievements within the organization to engage the employees to act upon the measurements. This is only possible if the Key Performance Indicators (KPIs) are clear and correlated and not targeting local optimums. It is unlikely that the system will improve by the improvement of single individual processes. Although managers acknowledge the need for PMMS their success in the past is questionable (Kennerley & Neely, 2002; Neely, Andrew et al., 2000).

2.3.2 Failure of early performance measurement systems

Industrial developments have changed the nature of the cost related to work and the approach on how to account for them. In the 1950s and 1960s about 50 per cent of the cost was related to labour hours and it was therefore easy to calculate the product cost. By the 1980s manufacturing had invested in automation and it became difficult to allocate the overhead based on direct labour, which led to wrong assumptions about product costs (Chandler, 1993; Kaplan, 1983, 1988; Misterek et al., 1992). It is further suggested that the financial measurement of performance or productivity was impossible because the systems in place captured only monetary transactions. To reliably measure the cost of a product detailed information has to be available, such as electricity, capital employed, and labour hours (Kaplan, 1988). Accounting systems therefore work with approximations which result in distortion of data, making it impossible to derive conclusions about performance (Kaplan, 1984). It is argued that the use of non-financial indicators separates the pricing impact from the actual performance changes (Misterek et al., 1992). For many years the Return On Investment (ROI) has been used to evaluate the overall performance of the

organization, in particular highly diversified ones. It has however become difficult because it does not detail the unique requirements of each business and different markets return different profitability (Kaplan, 1984). In a competitive environment the company is not primarily looking into being the cost leader but providing greater value to the customer (Neely, Andy, 1999). The competition is more and more driven by non-financial factors which requires the organization to outperform on a wide range of influence dimensions (Neely, Andy, 1999). Many shortfalls were identified in research explaining why traditional financial measures failed to achieve the goal. Many of these systems were based on the management movements of the early 20th century and were focused on determining the product cost as a measure of performance (Cooper & Kaplan, 1988; Kaplan, 1984, 1988; Schmenner, 1988). The competitive environment has fundamentally changed since and managers have to refocus from optimizing the local performance for their internal operations (Goldratt, Eliyahu, 1990, 2009; Goldratt, E. et al., 1986) to increasing attention on customer value and the competitive environment (Kaplan et al., 1996). Those measures drove managers to reduce the variance of their product cost by adjusting operational performance instead of focusing on continuously improving their operations (Schmenner, 1988). Overproduction and high capital needs for inventory are two of the negative results of these measures (Drucker, P. F., 1990) and are indicators for short-term optimizations of processes (Banks et al., 1979; Nørreklit, 2000). The high focus on cost accounting makes it difficult to find justifications for innovation and improvements (Drucker, P. F., 1990), which is the foundation of a long-term strategy. This is also an effect of the fact that the measures used look at past data and have no leading forward-looking indicators (Dixon et al., 1990; Ghalayini & Noble, 1996). Traditional measures have failed to provide the insight and changing strategies have changed the measures. The measures are a tool to drive the strategy of the organization and influence the behaviour of individuals and groups

within the firm (Neely, Andy, 1999). Dissatisfaction with early traditional and purely financial performance measures has initiated a new approach and interest in performance measurement (Eccles, 1991; Goldratt, E. et al., 1986; Hayes & Abernathy, 1980; Kaplan, 1988; Kaplan et al., 1996).

2.4 The new performance management systems PMMS

In the mid-1980s the traditional financial measures were challenged by academics (Goldratt, E. et al., 1986; Johnson, T. H. & Kaplan, 1991) because of their volume-based allocation of overhead (Jiambalvo, 2004) and their neglect of intangible assets as a success factor (Kaplan et al., 1996). During the early 1990s a wider approach for performance management systems gained importance in practical application and research (Neely, Andy, 1999). Kaplan suggested early that more non-financial information is required and the quality of financial reporting must be improved in order to be able to drive the performance of a business. Senior managers not only have to understand the financials but must also have fundamental knowledge of the organization and its technologies (Kaplan, 1984, 1988). There are many models for performance measurement and the following are highlighted based on their citation popularity (Neely, Andy et al., 2005).

2.4.1 The Activity Based Cost (ABC) performance model

The failure of traditional accounting systems led to the development of the activity based costing model (ABC) which was very popular during the 1980s but was then challenged as flawed by Goldratt, Eliyahu (1990) and Johnson, T. H. et al. (1991). Compared to traditional cost accounting, which allocated overhead costs to a product mainly via direct labour (Jiambalvo, 2004), ABC uses process-specific drivers to determine a related cost portion of a product (Cooper et al., 1988). The cost driver is calculated by dividing a resource cost by a practical capacity, which results in an activity cost driver rate. This is done with past financial data over a

certain chosen period. The product standard consumption multiplied by this rate determines the cost of the product (Cooper & Kaplan, 1998). The use of cost drivers instead of the volume-based allocation the ABC method provides significantly better cost information (Cooper et al., 1988) than traditional systems.

The main criticism is that the ABC method pinpoints the profitability of a product independently of its contribution to the system as whole (Goldratt, Eliyahu, 1990; Misterek et al., 1992; Schragenheim et al., 2000). The calculated cost is a moving target as market environments are dynamic and internal and external changes drive the distortion of the ABC model (Cooper, 1989). Cooper therefore advocates frequent reassessment of the effectiveness of the current models and assumptions (Cooper, 1989), but also clearly shows the shortcomings of cost models and their application in strategic management and decision taking. A major shortcoming is the accounting for excess capacity which is not taken into account in part costing (Cooper et al., 1988). The most common application of ABC is the full costing, which requires the allocation of fixed costs. In this case, incremental changes in volume results are not reflected in an incremental change in cost. However, the incremental change is required for decision-making (Jiambalvo, 2004). The resulting impact is that the individual cost of all parts cannot be correlated with the profit and loss statement and therefore it is difficult to establish a relevance to operational levels because financial measures are too complex to communicate on the work floor level (Ghalayini et al., 1996; Kennerley et al., 2002).

2.4.2 The Balanced Scorecard (BSC)

The most referred to approach to performance management (Neely, Andy et al., 2005) is the balanced scorecard by Kaplan et al. (1996), which is based on the concept of strategy by Porter, M. (1987); (Porter, M., 1996, 2008). The perspective of the competitiveness and dynamics of the market environment are added and a

more comprehensive approach has been developed, in particular a reference to strategic management (Porter, M., 1996). The BSC proposes a new way in which companies are managed and takes a holistic approach (Assiri, Zairi & Eid, 2006; Elshamly, 2013) to determining the state of the company on a horizontal cross-functional level (Banker, Chang & Pizzini, 2004). It was developed from the realization that purely financial measures are only analysing historical data (Dixon et al., 1990) and do not value intangible assets of the organization that give an indication of the ability to sustain the current business performance (Kaplan et al., 1996).

The BSC proposal was an initiative to translate the goal into tangible measures (Elshamly, 2013). "Balanced" refers to the consideration of external, e.g. customer and shareholder, and internal, e.g. critical business processes, innovation, learning and growth, measures (Kaplan et al., 1996). The build of the scorecard commences with the senior leadership defining the goal of the organization and translating it into strategic targets and key initiatives. The consensus of this process is to be communicated throughout the organization and upon understanding the high-level objectives can be translated into local measures (Kaplan et al., 1996). The application of the balanced scorecard has the biggest impact as a change agent by using "stretch targets" (Kaplan et al., 1996, p. 14) which are defined by senior management for a chosen future time period.

The system assumes the top-down approach, where the CEO is the "captain of the ship" and the rest are "sailors" executing the orders and implementing them. It was suggested that after the corporate scorecard has been prepared, subdivisions should develop their own local scorecards (Kaplan et al., 1993). The scorecard separates strategy into four perspectives, which in sequence start from lagging, financials, customers, moving to leading indicators, internal business processes,

learning and growth. A combination of outcome measures, like revenue or profit, and performance drivers, like Overall Equipment Efficiency (OEE) or Cost of Poor Quality (COP), provides a concise picture if improvements drive financial performance (Kaplan et al., 1996).

Bititci et al. (2000) point out that an indicator measures improvement of local activities. Limits should be established to generate alarms in case of a deviation from the expected levels. The criticality of the individual measurement should be quantified. Marr (2012b) adds two more perspectives for a Scorecard: marketing, sales and corporate social responsibility. The Balanced Scorecard is suggested to fill the gap between the "lack of a systematic process to implement and obtain feedback about strategy" (Kaplan et al., 1996, p. 19). It is also suggested that there should be a cause and effect relationship between the measures and the perspectives which then lead towards the company goal (Bititci et al., 2000; Kaplan et al., 1996). Marr (2012b) proposes 75 key performance indicators based on which a company could build its own Balanced Scorecard. Behind every measure there are people who have to execute the figures, so the measures have to make sense not only to the top level but to the last employee (Marr, 2012b).

The Balanced Scorecard strives to assess the intangible assets of the organization, which leads to substantial efforts of measuring the unquantifiable (Marr, 2012a). A major issue is the large number of measures on the scorecard. There are four (Kaplan et al., 1996; Kaplan & Norton, 2001b) to six (Marr, 2012b) perspectives in which four to seven measures can be required, which would lead to a scorecard size of 16 to 42. It is not possible for an organization to effectively manage 16 to 42 separate measures. It is too complicated to communicate throughout the organization (Kaplan et al., 1996). There is no notion of cause and effect, implying the existence of a time lag between an action and reaction of competing measures (Nørreklit, 2000), which would require a system of trade-off criteria (Santos et al.,

2002). The deployment of measurements into business units ignores their specific uniqueness (Banker et al., 2004).

2.4.3 The Performance Pyramid

The Performance Pyramid (PPD), or Strategic Measurement And Reporting Technique (SMART), was introduced by Lynch et al. (1991). This framework starts with the customers' expectations rather than by focusing on internal processes. The process drives the corporate vision which is built around volatile external factors as drivers for building a dynamic strategy. The strategy planning uses the Porter, M. (1980) Strengths, Weaknesses, Opportunities and Threats model (SWOT) to chart gaps between the current and the desired future state of the organization. Lynch et al. (1991) propose that the gaps and risks identified are translated into objectives following the process in Figure 3. The pyramid is separated into internal and external areas to drive the effectiveness of the business processes.

They propose mapping the activities of executing the business operating system

Figure 2-4: Performance

(BOS) (Lynch et al., 1991), nowadays referred to as Value Stream Mapping (VSM). The process describes what is actually done in the organizations to create value for the customer, identifying the drivers for fulfilling customer expectations. The framework proposes a model for deployment and a large range of tools for how to measure and how to communicate these. The framework identifies that measures on different levels are correlated and employees on different levels must be able to

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understand different types of measures. The measures used on different levels of the organizations become increasingly financial the higher the level in the pyramid.

The framework starts from the strategy finding, which is the easiest portion of performance measurement and management. The five building blocks described by Lynch et al. (1991) that are presented are difficult to correlate into success; e.g. quality and delivery are not correlated into customer satisfaction. In particular nothing seems to correlate into the vision or goal (Lynch et al., 1991). The SMART system does not provide essential information on essential indicators like quality, cycle time, cost and delivery. It also neglects the fact that continuous improvement improves indicators (Ghalayini et al., 1996).

The PPD takes a multidimensional, top-down approach, and is similar to the BSC which is the most referred to PMMS (Neely, Andy et al., 2005). Critiques of the model were that despite its simplicity it neglected important aspects (Hudson et al., 2001), e.g. people. This model, like the PPD, has not gained traction within an industrial environment mostly because the BSC gained significant popularity and the PPD could not differentiate itself (Lueg & Vu, 2015; Madsen & Slåtten, 2015).

2.4.4 The Performance Prism (PP)

(Neely, A. et al., 2002) propose a multifaceted approach to PMMS which takes a five-perspective interrelated view. The first and second dimensions are stakeholders, e.g. customers, employees, investors, trade unions, suppliers and regulators, who have different demands and responsibilities towards the business. The third-dimension strategy is set up to ensure that stakeholder demands, and responsibilities are met and measurements are developed and deployed accordingly. The fourth-dimension processes analyse the horizontal flow of the actual value chain from development to customer delivery. The process owners of the incremental processes within the chain focus on improving the process and

corrective action in case of deviation from expectations. The owners of the process should decide what must be measured and the frequency. The fifth-dimension capabilities evaluate the requirement gap for meeting the stakeholders' demands and responsibilities in combination with the strategy and processes. Capabilities encompass people, technologies, practices and infrastructure and how the combination of those enables the organization to create value for itself.
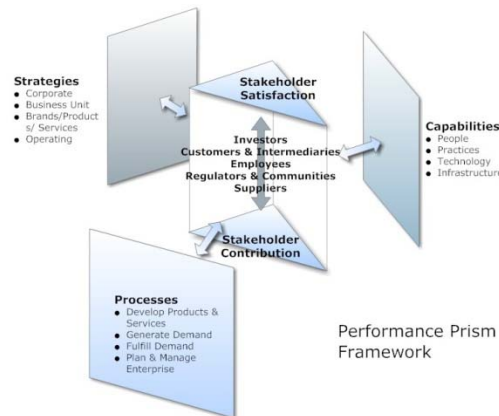
Figure 2-5: Performance Prism (Kennerley et al., 2002)

This is a fundamental difference from other systems which argue that measures should be derived from strategy. The PP argues that strategy is a set of actions to satisfy stakeholder requirements, not that strategy is the starting point for PMMS (Kennerley et al., 2002; Neely, Andrew et al., 2000). Although the framework is the most comprehensive, it does not provide a process to review and validate its relevance over time (Najmi et al., 2012).

2.4.5 Theory of Constraints (TOC)

The PMMS in general measure the performance of individual segments within the organization as compared to mapping the delivery process as a chain. Systems generally operate like chains in which the weakest link determines the performance of the system (Goldratt, Eliyahu, 2006). It is therefore suggested that improvements to individual parts of a sequence of operations do not automatically lead to an

improvement of system performance because the bottleneck or system constraint limits the flow or throughput (Cox et al., 2010; Goldratt, E. et al., 1986; Schragenheim et al., 2000). The system is not limited to internal processes but also includes external activities. To manage the system it has to be accepted that every system has a goal which is not temporary but valid for the lifetime of the organization (Cox et al., 2010). It must also be accepted that the system is more than the sum of its parts, and the mathematical sum of its parts does not represent the success of the system. The individual processes of the system are linked and problems often occur at the interfaces (Cox et al., 2010; Goldratt, Eliyahu, 1990; Schragenheim et al., 2000) and there is a limited number of factors, perhaps only one, inhibiting the system from performing better. These inhibitors are referred to as constraints (Goldratt, Eliyahu, 1990; Goldratt, E. et al., 1986). Organizations generally create value by the synchronization of processes with different capacities. It becomes evident that planning for high utilization of the entire chain can be devastating because small variations within one process can disrupt the throughput of the system (Cox et al., 2010). It is therefore necessary to understand the causes constraining system performance and at which location in the chain the constraint is located (Cox et al., 2010; Goldratt, Eliyahu, 1990; Schragenheim et al., 2000). TOC therefore proposes a focusing step which elevates the importance of the bottleneck and exploits the constraint of the system. These five focus steps are in sequence (Cox et al., 2010; Goldratt, E. et al., 1986; Schragenheim et al., 2000):

- Identify: In a first step the system's constraint must be identified. It might be a machine, a policy, or a subcontractor.

- Exploit: Exploiting the bottleneck is getting the maximum out of the system's constraint. If the system's constraint is a machine it must be ensured that the machine is always running.

- Subordinate: The exploitation of the bottleneck is overriding priority of the management. The rest of the organization must be scaled so that all non-constraint processes support the effort to keep the bottleneck operational.

- Elevate: If after the first three steps the system constraint is still the limiting factor it is sure that the maximum production capacity is reached. To obtain more from the system now the capacity at the bottleneck has to be increased, with the risk that the constraint might move. It is also possible that the new constraint will be more difficult to resolve. After removing the system's constraint, it has to be ensured that even during changes in the requirements the system's constraint is well identified.

TOC-Marketing-Group (2015) describes this process as layers of resistance which can be encountered when engaging in any change.
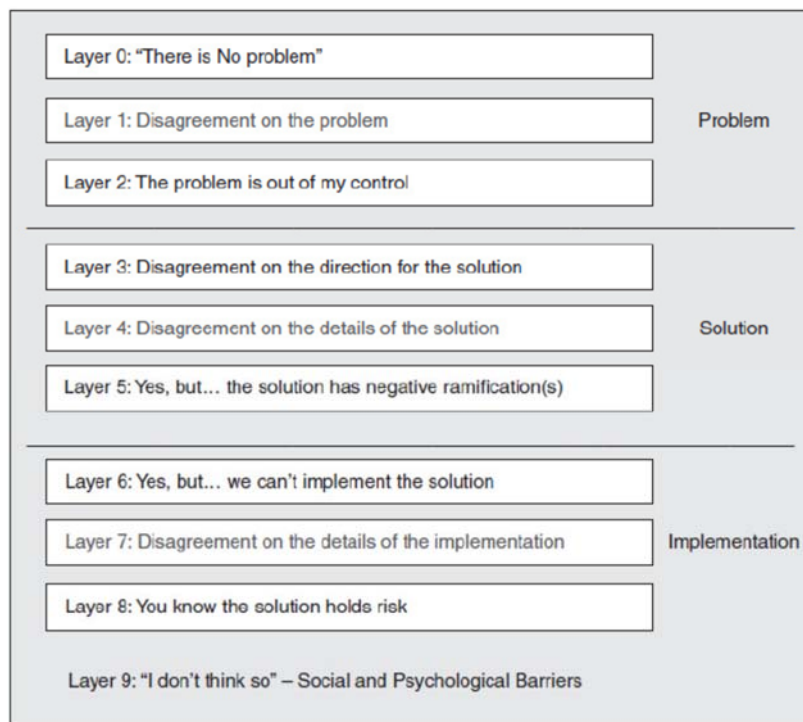
Figure 2-6: Layers of resistance (TOC-Marketing-Group, 2015)

Constraint	Description
Physical	Typically, equipment, but can also be other tangible items, such as material shortages, lack of people, or lack of space.
Policy	Required or recommended ways of working. May be informal (e.g. described to new employees as "how things are done here"). Examples include company procedures (e.g. how lot sizes are calculated, bonus plans, overtime policy), union contracts (e.g. a contract that prohibits cross-training), or government regulations (e.g. mandated breaks).
Paradigm	Deeply engrained beliefs or habits. For example, the belief that "we must always keep our equipment running to lower the manufacturing cost per piece". A close relative of the policy constraint.
Market	Occurs when production capacity exceeds sales (the external marketplace is constraining throughput). If there is an effective ongoing application of the Theory of Constraints, eventually the constraint is likely to move to the marketplace.

Table 2-1: Constrains as described by Vorne (2016)

Throughput Accounting: Assessing system success (Galloway, D & Waldron, D, 1988a; Galloway, D & Waldron, D 1988b; Galloway & Waldron, 1989a, 1989b; Goldratt, Eliyahu, 1990; Schragenheim et al., 2000) is an alternative accounting methodology that eliminates distortions and promotes behaviour supporting the organizational goal.

Core Measures	Definition
Throughput	The rate at which customer sales are generated less truly variable costs (typically raw materials, sales commissions, and freight). Labour is not considered a truly variable cost unless pay is 100% tied to pieces produced.
Investment	Money which is tied up in physical things: product inventory, machinery and equipment, real estate, etc. Formerly referred to in TOC as Inventory.
Operating Expense	Money spent to create throughput, other than truly variable costs (e.g. payroll, utilities, taxes, etc.). The cost of maintaining a given level of capacity.

Table 2-2: Throughput Accounting as described by Vorne (2016)

In TOC the success of an operation is not measured in terms of net profit or return on investment because these are not easily applied to daily operating decisions (Cox et al., 2010). This is based on the assumption that the undertaking has to generate more and more money now and in the future (Cox et al., 2010; Goldratt, Eliyahu, 1990; Schragenheim, 1999). The focus in this work is on a manufacturing organization and therefore the definitions of Goldratt, Eliyahu (1990) are introduced (Cox et al., 2010; Schragenheim, 1999). For a manufacturing organization on an operational basis the rate of revenue or cash generation is suggested for measuring the success and ongoing improvement of the operation. This rate is called throughput (Galloway et al., 1988a; Galloway et al., 1988b; Galloway et al., 1989a,

1989b; Goldratt, Eliyahu, 1990; Goldratt, Eliyahu & Fox, 1986; Schragenheim, 1999). Throughput (T) represents the rate at which the chain of processes is generating an influx of new money into the system by synchronizing value-adding processes. On a company level the throughput can be defined as the sales revenue in a certain defined period, from which the cost of material and all truly variable costs are deducted. Investment or Inventory (I) is the amount of money bound into the system to operate and create value. On a plant level and daily basis, the mid-level management is in control of the total value of inventory such as finished product stock (FPS), work in progress (WIP) and raw material stock (RMS) added to the total outstanding receivables (AR) minus the total outstanding payables (AP). It is therefore practical to use this on an operational level. In addition there are the operating expenses (OE) which are related to running the operation and are not directly related to the production of the product (Goldratt, Eliyahu, 1990; Goldratt, Eliyahu et al., 1986; Schragenheim, 1999; Schragenheim et al., 2000). The best definition might be the cost of opening the business each day (Cox et al., 2010).

Throughput Accounting has four key derived measures: Net Profit, Return on Investment, Productivity, and Investment Turns.

Net Profit = Throughput − Operating Expenses

Return on Investment = Net Profit / Investment

Productivity = Throughput / Operating Expenses

Investment Turns = Throughput / Investment

Decisions should be guided by the following questions:

- Will Throughput be increased?

- Will Investment be reduced?

- Will Operating Expenses be reduced?

The emphasis is on the increase of throughput and less on cost cutting, like Investments and Operating Expenses (Vorne, 2016). There is a relation between the throughput success indicator and traditional indicators like net profit (NP) and return on investment (ROI) (Schragenheim et al., 2000).

In respect to the management priorities Schragenheim (1999) argues, despite the compelling statement that every dollar, euro, yen of cost saved goes directly to the bottom line, that questions arise whether a company is in the business of saving money or making money. The potential for better financial performance is greater by increasing T than by decreasing OE and I (ArcelorMittal, 2005; Schragenheim et al., 2000, p. 45)

2.4.6   Section summary

The highlighted PMMS were developed after purely financial measurements failed to provide results (2.3.2). Activity-based costing tried to determine cost per activity in an effort to dissect the manufacturing process into its components and determine a related cost. In application ABC did not provide the significant information for decision-making because the information on specific cost varied according to market fluctuations. This led to the rise of PMMS which takes a more holistic approach to the system than PPD, PP and BSC which monitor different perspectives of the business. The wide monitoring of performance led to a complexity which makes it difficult for front line managers to relate their performance to the overall strategy and performance of the organization. TOC, on the other hand, focuses on

the value creation process and provides a problem-solving approach to operations. The focus enables front line managers to resolve constraints to optimize their operation. The challenge of implementation is the definition of key actions which are related to overall strategy. PPD, PP and BSC are top-down systems while TOC is a horizontal, production stream oriented system. A combination of both might be required to achieve optimal results.

2.5 The use of performance measurement in improvement efforts

In today's competitive environment cost is no longer the essential criterion for success. Customers emphasize quality, reliable delivery, short delivery, customer service, rapid product introduction, flexible capacity and efficient capital employed (Skinner, W., 1986). The compression of time is arguably worthwhile because it enhances the delivery performance and reduces risk in manufacturing operation. Time in comparison to cost is not a lagging indicator (Ghalayini et al., 1996) and cannot be recovered. For every measurement goals are required (Elshamly, 2013; Ghalayini et al., 1996) to optimize the flow or throughput. In defined key processes a four-factor analysis can be performed to help goal and improvement setting. These factors are historical performance, theoretical limits, engineering limits and relevant benchmark information (Ghalayini et al., 1996). The measurement system has the objective of fostering improvement but this can only be achieved with good improvement tools (Schneiderman, 1999) such as "Lean", "Total Quality Management", "Just In Time" or "Six Sigma" (Skinner, W., 1988). It is suggested that various tools are available but there is a lack of practitioners who develop ideas (Skinner, W., 1988). Benchmarking has become popular for some time (Anderson & McAdam, 2004) but failed, because benchmarking output is more difficult than processes (Kaplan et al., 1993). However, benchmarking, e.g. "Ideal cost and Non Conformity Analysis" (INCA) (Appendix F: ArcelorMittal INCA) within the

organization is suggested to be a driver for improvement of non-financial measures translated into monetary gains (ArcelorMittal, 2005). The challenge in addressing improvements is to determine the performance problem (Goldratt, Eliyahu, 1990). PMMS, like the BSC, allow the measurement of every aspect of the operation but do not guide in prioritizing key issues which hamper the overall performance (Goldratt, Eliyahu, 2006; Goldratt, Eliyahu et al., 1992; Schragenheim, 1999; Schragenheim et al., 2000).

2.6 Shelf Life of Measurements

"You are what you measure" (Ariely, 2010). The goal of every business is dependent on the successful execution of its operations and activities. The market environment is not static, so measurements which are defined have to reflect its volatility (Bititci et al., 2000). The validity of measurements is not only driven by external factors or top-down, they also change according to modifications within the different units of the organization (Bititci et al., 2000). Bititci et al. (2000) therefore determine that external and internal measures should be assessed by a review system at a higher level to adjust them to the dynamics of the market (Elshamly, 2013). It is an accepted fact that measurement systems are rarely revamped to reflect the current competitive situation of the organization and the required change in the activities of the operation (Holmberg, 2000; Jung, 2012). As change occurs, process measures run down and fail to discriminate good from bad performance. This results in an increased number of measures over time without questioning the validity of the existing measures (Meyer & Gupta, 1994). Although performance measurement systems have received substantial attention nobody has answered the question how a measurement system has to evolve to remain relevant (Kennerley et al., 2002). Measures have the tendency to converge towards an expected value, which is also accompanied by a decrease in variance. This can be driven by either positive

learning through which the organization's ability to manage the measure has increased or negative learning. The members of the organization learn how to manipulate the measure to achieve the expected performance and reduce the variability of the outcome. This can be driven by the same identical measure (Gallos, 2006; Meyer et al., 1994). Most PMMS have a good coverage of the business but do not provide guidance for maintaining the relevance of measures (Hudson et al., 2001). It can therefore be concluded that measures have limited time frame validity and need to be reviewed for their relevance.
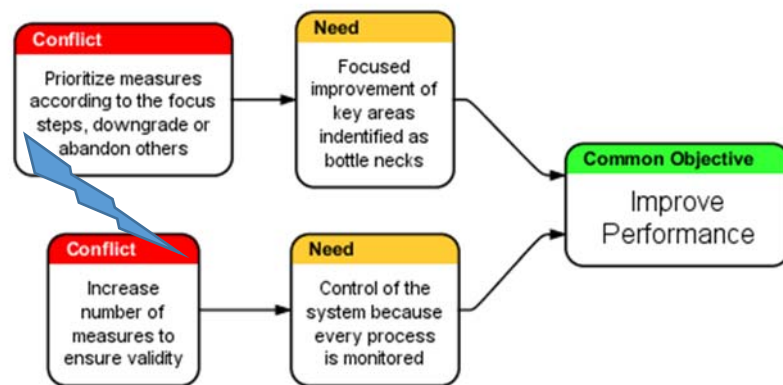
Figure 2-7: Validity of measures vs unimportant/increasing number of measures

2.7 Key performance indicators and their role in strategy implementation

Key performance measurements or indicators are a set of metrics which quantify the efficiency and effectiveness of actions that support the strategy (Neely, Andy, 2005). Most strategies according to the literature do not achieve expected results, not because they are badly formulated but because they fail within the realm of execution (Bible, Kerr & Zanini, 2006). Therefore clarity on strategy and the development process is essential (Taylor, A. & Taylor, 2013) for implementation. Even a flawed strategy is more valuable if it can be executed effectively (Kaplan et al., 2001a). Therefore, the success of an organization depends on the execution of the strategy and KPIs are an essential tool to implement the strategy throughout the organization. As stated earlier, companies develop and implement performance management and measurement systems to map their business priorities. The development of such systems often fails (Bourne, Mike , Neely, Platts & Mills, 2002) as early in the development phase and therefore it is important to identify the characteristics of an effective development process (Hudson et al., 2001). These PMMS define key actions (Quirin, 2015) described by key performance indicators encompassing financial and more recent non-financial aspects. A key thought regarding the KPI set is that a maximisation of all aspects of the individual components results in an overall improvement of the organizational performance (Kaplan et al., 2001a). The underlying assumption is therefore that an outcome of an action and the reaction within the organization can be foreseen (Schragenheim, 1999). Managers are often not able to translate the strategy into PMMS and define what actually should be done (Bungay, 2011).

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2.7.1 Size of the organization and use of PMMS

The researched organization is part of a corporation employing only 70 people, which makes it a SME. Literature suggests that SMEs may differentiated from larger companies by a number of characteristics (Hudson et al., 2001).

1. Personalized management with little devolution of authority
2. Severe resource limitations in terms of management and manpower, as well as finance
3. Reliance on a small number of customers and operating in limited markets
4. Flat and flexible organizational structure
5. High potential for innovation
6. Reactive fire-fighting mentality and absence of planning
7. Strategies are not formalized explicitly

Limited resources (Anderson et al., 2004) drive the need for SMEs to decrease cost by reducing waste and slack in the system. The flat hierarchies enable employee empowerment creating the need for the individual to take more responsibility. The absence of a clear formulation of strategy might hamper the development of an effective PMMS. Smaller companies have no process towards the establishment of PMMS (Garengo & Biazzo, 2012). However, research has shown that an effective linkage between strategy and the operations makes SMEs outperform their competition. Yet performance measures should be clearly defined, have a clear and widely understood purpose, be relevant and easy to maintain for the responsible managers as well as simple to understand and use for the employees concerned (Hudson et al., 2001).

Hudson et al. (2001) summarized key characteristics of performance measures from literature:

Characteristics	Reference
Derived from Strategy	(Globerson, 1985), (Maskell, 1989), (Dixon et al., 1990), (Lynch et al., 1991), (Neely, Andy, Bourne, Mills, Platts & Richards, 2002)
Clearly defined with an explicit purpose	(Globerson, 1985; Neely, Andy et al., 2002)
Relevant and easy to maintain	(Lynch et al., 1991; Maskell, 1989)
Simple to understand and use	(Lynch et al., 1991; Maskell, 1989; Neely, Andy et al., 2002)
Provide fast and accurate feedback	(Dixon et al., 1990; Globerson, 1985; Maskell, 1989; Neely, Andy et al., 2002)
Link operations to strategic goals	(Lynch et al., 1991)
Stimulate continuous improvement	(Lynch et al., 1991; Maskell, 1989; Neely, Andy et al., 2002)

Table 2-3: Characteristics for KPIs (adapted from Hudson et al., 2001, p. 1101)

Schragenheim (1999) argues that a company is a complex system for which cause and effect cannot be predicted. In accordance with Goldratt, Eliyahu et al. (1992) he makes the following assumptions:

1. An organization has a goal to achieve, which is the single objective that an organization wants to achieve or improve

2. An organization is more than the sum of its parts, it is about synchronisation

3. The performance of an organization is constrained by very few variables
    (Schragenheim, 1999)

The achievement of the strategic goal is the successful synchronization of each of the organization's components. Most organizations are divided into sub-

organizations which create an overwhelming number of interdependencies between processes, resources and functions. The combination of complexity and uncertainty makes it impossible to synchronize all functions to achieve performance towards the company goal. The complexity results in a decomposition of the organization into performance centres, like profit centres, that are responsible for their own performance (Schragenheim, 1999). This is not only valid for a profit centre but literature recommends a deployment of KPIs within the organization by creating sets for sub-units to measure contributing KPIs (Kaplan et al., 1996). As the measures are deployed more deeply into the organization the number of variables increases and thus the complexity of their interrelationship. An assumption stated by Schragenheim (1999) and (Goldratt, E. et al., 1986) referring to performance is that an organization is limited only by a limited number of variables or constraints. "A mere 7% of employees fully understand their company's business strategies and what's expected of them in order to help achieve company goals" (Kaplan et al., 2001a). To address these issues (Goldratt, E. et al., 1986) proposed the five step process described earlier (Goldratt, Eliyahu, 2009; Goldratt, Eliyahu et al., 1992; Schragenheim, 1999).

There is a conflict between the TOC and the Balanced Scorecard (Figure 2-8). The number of measurements according Kaplan et al. (1996) is a deployment of the organizational KPIs in the individual business by creating individualized KPI sets representing the business role within the efforts to achieve the organizational goal. Conversely, Goldratt, Eliyahu et al. (1992) and (Schragenheim, 1999) state that a large number of variables cannot be correlated or managed successfully but they recommend that constraints are determined within the system with the focus on their removal. The size of the company determines the resources that can be employed and the use of PMMS to determine the number of measures.
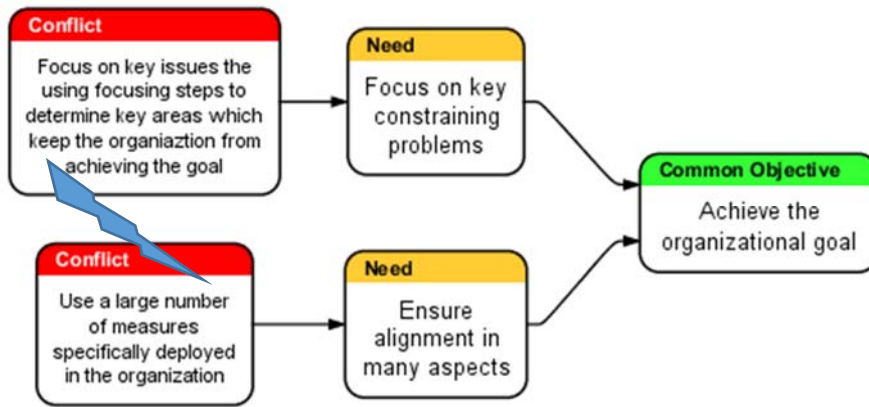
Figure 2-8: Conflict in deployment efforts

2.7.2 Classification of KPIs

The PMMS like, for example, the Balanced Scorecard promote the idea that for an organization to perform all indicators are of similar importance. Therefore, the organization strives for the optimization of all indicators. The TOC, on the other hand, focuses on the bottleneck which determines the system's performance; all other performance measures may be monitored but do not take priority over resolving the bottleneck. Aström (2012) refers to KPIs as active and passive because not every indicator is equally important for success. Passive indicators only need to be monitored if they stay within a certain threshold. Equally, TCii (2011) developed an onion framework classifying four types of indicators:
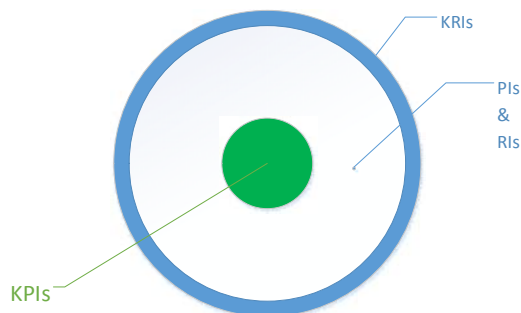
Figure 2-9: Indicator Onion (TCii, 2011)

Indicator type	Description	Examples
KRIs	The Key Result Indicators give an indication of past performance ideals for macro review based on the Critical Success Factors (CSF) of TOC or the BSC (TCii, 2011). They also have a different time horizon and look over past performance in terms of months or quarters.	• Monthly, quarterly sales • Cost structure • Market Share • Operational Performance
PIs	Performance indicators tell staff management where they stand against a strategic action.	• Percentage increase in sales to the top 10% of customers • Number of employees' suggestions implemented in the last 30 days • Customer complaints from key customers • Sales calls organised for the next one to two weeks • Late deliveries to key customers.
RIs	Result Indicators report on what was done.	• Net profit on key product lines • Sales made yesterday • Week's sales to key customers • Debtor collections in week • Machine utilization in week.
KPIs	Key Performance Indicators are actionable and tell staff and management what to do to increase the performance drastically (TCii, 2011). That requires a positive correlation between the indicator and the organizational goal.	• Hold points • Days to Shipment • Sales target to achieve • Order book current • Turnaround time current

Table 2-4: Classification of indicators (TCii, 2011)

This framework suggests that on the contrary to the BSC, or similar PMMS, indicators must be classified and given the right perspective. There are active and passive indicators as suggested by Aström (2012). The active KPIs at the core (Figure 2-9) are actionable for the employees and managers to achieve the organizational goal. The other passive ones like RIs and PIs measure results that are the effects of actions taken on the KPIs. KRIs monitor if the KPIs support the achievement of the organizational goal. This is a similar process to the TOC and the Five Focus Steps (Cox et al., 2010; Goldratt, E. et al., 1986; Schragenheim et al., 2000). For successful implementation, it is important to define a classification of indicators because not every indicator is actionable for the responsible employee but a result of many actions.

2.7.3 Key performance indicators and implementation process

Platts (1994) suggests a generic development framework:

1. Point of entry, which determines an audit of the existing systems and highlight gaps

2. Participation, which suggests that the organization and key personnel participate in the development process

3. Procedure defines the translation of strategic objectives into operationalized KPI

4. Project management, which Hudson et al. (2001) defined with the following key elements:

    a. Top management support

    b. Everybody on board

    c. Clear and explicit objectives

    d. Time-framed project management

In deWaal (2003) a set of behavioural criteria are established for the successful implementation of a performance management system by summarizing relevant literature (Table 2-5).

Classification Scheme Part	Subpart	Behavioural Factor
Performance management system – development method	Development method	• Managers accept the need for performance management • Managers have an active role during the development stage of the performance management system project • Managers agree on the starting time • Managers have been involved in decision-making about the project starting time • Managers have been informed about the status of the performance management system project • Managers are communicate about the performance management system project
Performance management system content	Quality	• Managers understand the meaning of KPIs • Managers are involved in defining KPIs • Managers have insight into the relationship between KPIs and financial results
	Registration	• Mangers do not become discouraged by the collection of performance data
	Purpose	• Managers have insight into the relationship between strategy, critical success factors and KPIs • Managers have insight into the relationship between business processes and KPIs
	Targets Balance	• Managers are involved in setting KPI targets • Managers' KPI sets are aligned with their responsible areas • Managers have insight into the relationship between cause and effect
Performance management system feedback	Feed forward	• Managers are involved in forecasting • Managers trust good quality forecasts • Managers' activities are supported by KPIs • Managers' frames of reference contain similar KPIs
	Feedback	• Managers are involved in making the CSF/KPI/BSC reporting layout • Managers understand the CSF/KPI/BSC reporting • Managers trust performance information • Managers are involved in making analysis • Managers trust good quality analysis

Classification Scheme Part	Subpart	Behavioural Factor
Controlled System	Management level	• Managers use the CSF/KPIs/BSC that match their responsibility areas • Managers' 'information processing capabilities are not exceeded by the number of CSF/KPIs • Managers have enough time to work with their CSF/KPIs/BSC
	Management Style	• Managers have earlier (positive) experiences with performance management • Managers realize the importance of CSF/KPIs/BSC to their performance • Managers do not experience CSF/KPIs/BSC as threatening • Managers can use their CSF/KPIs/BSC for managing their employees
Controlling system	Responsibility	• Managers can influence the KPIs assigned to them • Managers have sole responsibility for a KPI
	Supervision	• Managers accept the promoter • Managers see that the promoter spends enough time on the performance management system implementation • Managers clearly see the promoter using the performance management system
	Relationship with controlled system	• Managers and their controlling systems have a mutual trust
Internal environment	Alignment	• Managers find the performance management system relevant due to regular evaluations • Managers use the performance management system regularly during the planning and control cycle • Managers agree on changes in the CSF/KPI set
	Organizational culture	• Manager are stimulated to improve their performance • Managers work in a stable, relatively tranquil environment • Managers' results on CSF/KPIs/BSC are openly communicated • Managers' use of the performance management system is stimulated by the reward system structure
External environment	External environment	• Managers find the performance management system relevant because only those stakeholders' interests that are important to the organization's success are incorporated • Managers find the performance management system relevant because it has a clear internal control purpose

Table 2-5: Overview of the behavioural factors from deWaal (2003)

2.7.4 Previous research on PMMS development in SME

Hudson et al. (2001) have undertaken a study on the use of PMMS in SME. They summarized relevant literature in six dimensions of performance measurement:

Quality	Time	Flexibility	Finance	Customer Satisfaction	Human Resource
Product performance	Lead time	Manufacturing effectiveness	Cash flow	Market share	Employee relationships
Delivery reliability	Delivery reliability	Resource utilization	Market share	Service	Employee involvement
Waste	Process throughput time	Volume flexibility	Overhead cost reduction	Image	Workforce
Dependability	Productivity	New product introduction	Inventory performance	Integration with customers	Employee skills
Innovation	Cycle time	Computer systems	Cost control	Competitiveness	Learning
	Delivery speed	Future growth	Sales	Innovation	Labour efficiency
	Labour efficiency	Product innovation	Profitability	Delivery reliability	Quality of Work/Life
	Resource utilization		Efficiency		Resource utilization
			Product cost reduction		Productivity

Table 2-6: Critical dimensions of performance (Hudson et al., 2001, p. 1102)

Hudson et al. (Hudson et al., 2001, p. 1102) further defined a topology for an evaluation of strategic PMMS development approaches.

Development process requirement	Performance measure characteristics	Dimensions of performance
Need evaluation/existing PM audit	Derived from strategy	Quality
Key user involvement	Clearly defined/explicit purpose	Flexibility
Strategic objective identification	Relevant and easy to maintain	Time
Performance measure development	Simple to understand and use	Finance
Periodic maintenance structure	Provide fast, accurate feedback	Customer satisfaction
Top management support	Link operations to strategic goals	Human resources
Full employee support	Stimulate continuous improvement	
Clear and explicit objectives		
Set timescales		

Table 2-7: Typology for the evaluation of strategic PMMS development approaches

2.7.5 Section summary

Depending on the size of the organization the requirements for PMMS change. The corporation often sets targets, in cooperation with the local unit, which are expected to be achieved. PMMS, like the BSC, suggest an operationalization of indicators within the local unit. This requires the definition of indicators for each department. In the previous section, it was attempted to demonstrate that PMMS often take a wide approach on measurement. Implementation efforts are complex as can be seen in 2.7.4 and at the same time these PMMs should be easy to use and

understand and instil improvement efforts. The role of indicators has to be clarified and Kaplan et al. (1996) suggest a wide measurement approach measuring every aspect of the operation. Conversely, (Goldratt, E. et al., 1986) suggest a focused approach. TCii (2011) proposes a combination of both which resolves operationalization obstacles and enables the ease of use. The system however requires clarity of indicator classification within the PMMS which has to be part of the implementation process. Most organizations suffer from performance measurement systems that are poorly designed and therefore face implementation obstacles (Bourne, Mike et al., 2000; Santos et al., 2002; Schneiderman, 1999) or experience failure (Bible et al., 2006; Bourne, Mike et al., 2002; Elshamly, 2013). Many organizations have removed layers of management and have eliminated middle management functions. This resulted in the absence of capacity for the measurement, analysis, correlation (Santos et al., 2002) and correcting deviations from the performance goal and therefore managers suffer from data overload. Most companies compile large amounts of data that measures all and everything but nothing which is important for the business (Kennerley et al., 2002; Neely, Andy, 1999). Companies therefore must decide which measures really matter (Lima et al., 2009; Marr, 2012b). If it is not clear which variables really matter for the success of the organization and managers monitor too many indicators the impact can be detrimental for success. Schragenheim et al. (2000) refers to it as the "Nero Effect". While Rome was burning many operations were important for the survival of the city, like fire-fighting, but music appreciation was not (Cox et al., 2010). Defining and focusing on essentials is key in measurement systems (Schragenheim et al., 2000). The implementation of PMMS is the responsibility of senior management, and employees have to be an integral part of the process to create buy-in (Banks et al., 1979; Sinclair & Zairi, 1995b) and overcome implementation obstacles (Santos et al., 2002). In a corporate environment in which employees should be empowered

and the "captain – sailor model" (Kaplan et al., 1996) is no longer relevant. The empowerment of employees is very potent but challenges managers to communicate the company goals more efficiently (Neely, Andy, 1999).

Summarizing, it can be stated that according to research the key criteria for a performing organization (Thommes et al., 2014a) are connected to:

1. The company goal: There must be clarity on the goal of the organization

2. The strategy: What are the key activities and key targets to achieve the goal?

3. Performance management: Define the key performance indicators on a macro and micro level

4. Communicate: Purpose and goal of the organization to generate trust

5. Empower and engage: Define the authority in decision-making

6. Define and agree on performance measurement: Define mutually a limited set of KPIs for the organization, groups and individuals

7. Feedback: Rely on frequent personal feedback and employee self-reflection

8. Reward: Intrinsic and extrinsic rewards that are considered fairly mixed achieve high performance.

Removed

Literature refers to these eight items as the basis to create an engaged and performing organization. Consequently, in a company which outperforms its index by a factor of three some of these traits should be present. Measurements are generally considered as interlinked but a system approach is often absent (Holmberg, 2000). Many individual measures in organizations are rarely correlated and consequently in combination sustain the business and its strategy (Lynch et al., 1991). A large number of indicators (Figure 2-10) compete with each other and require trade-offs to achieve the best results. There has to be a process defining which trade-off supports best the overall strategy (Banks et al., 1979) but very little research has been done to guide such a process. The absence of exact definitions of measures creates misunderstanding between the managers and employees concerned (Neely, Andy, 1999; Schneiderman, 1999), which then renders the measure useless for effective communication.
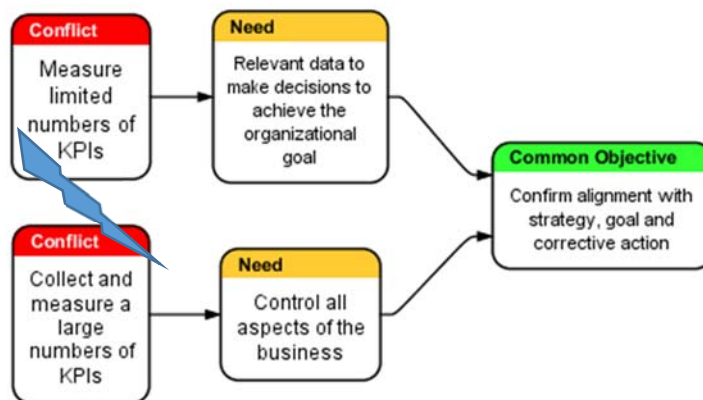
Figure 2-10: Conflict of big data

Studies confirm that practitioners are generally dissatisfied with the performance measurement systems and performance measures today (Eccles, 1991; Ittner & Larcker, 1998). Managers found aggregated measures misdirected, irrelevant, too complex to be understood, and ineffective in motivating performance (Atkinson, Balakrishnan, Booth, Cote, Groot et al., 1997; Atkinson, Waterhouse & Wells, 1997;

Ittner et al., 1998; Santos et al., 2002). It is important to realize that strategy (Mintzberg, 2003; Porter, M., 1980) is deployed vertically in the organization but the processes which synchronize and align are horizontal and across functions (Schragenheim et al., 2000). Therefore many companies measure what is easy to measure but might not be relevant (Marr, 2012a) and nobody knows what should be measured (Beamon, 1999). Most importantly none of the models addresses the deployment to shop-floor level and the improvement of the value-adding activities (Ghalayini et al., 1996). Companies design PMMS to monitor and control rather than improve the operation. Improvement is not an integrated component of PMMS (Ghalayini et al., 1996).
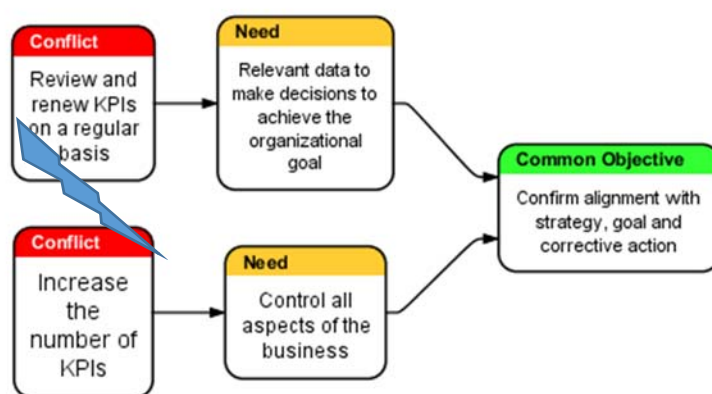
Figure 2-11: Conflict or loss of focus

All systems miss the dynamic behaviour that would be required to map changes in the environment (Santos et al., 2002), e.g. changes in order book. This results in a disconnect between strategy and performance measures, which then leads to local optimization instead of serving the overall success of the organization and customer focus. To address changing environments the number of measurements used in companies tends to increase over time and they are rarely removed when strategy changes (Holmberg, 2000; Schneiderman, 1999). All systems lack a mechanism for revision of key areas, measures and goals (Ghalayini et al., 1996; Kennerley et al.,

2002), and in particular timelines for the goals to be reached and alignments for future developments instead of reviewing current achievements (Ghalayini et al., 1996). Failing to align the measures with budgets risks creating two parallel systems without exploiting their overlap (Nørreklit, 2000; Schneiderman, 1999). For the purpose of this work it is stated that modern PMMS focus on the vertical measurement of performance and the TOC on the horizontal throughput. The intention of all systems is to achieve the company goals translated by strategy into operational actions.

Experience shows that there is a gap between strategy and its execution (Torben, 2014). Organizations fail to create buy-in among their employees which results in a significant failure rate of these strategic actions. PMMS rely on the deployment of key performance indicators (KPIs) to operationalize (Torben, 2014). The PMMS are most efficient if the task is simple and the result is clearly defined. The KPI design should give clear guidance and answer the question "What do you want me to do?" (Bungay, 2011). However most management processes are more complex and have a variety of variables which may or may not result in contributing to the organizational goal. The complexity of the system requires trade-offs which create a lack of clarity over the importance of individual indicators. Often the impact of actions cannot be related to the organizational goal. Managers and employees often find themselves in a situation where priorities are not clearly defined, as the impact of individual KPIs cannot be correlated with the organizational goal. A majority of employees refer to their performance management system as an unnecessary and cumbersome task. Many employees refer to KPIs as a top management requirement which does not influence their behaviour. The question therefore arises: What is actually important for the employees and how does this drive their behaviour? Thus the literature research is expanded to include behaviour factors of employee motivation.

2.8 Motivation to work

Measuring and standardization is the basis of scientific management. In pre-Taylor times the work was departmentalized in gangs, which organized within themselves rather autonomously in all aspects (Dilys & Jonny, 2014; Grey, 2013; Vollmer, 2012). The rise of scientific management shifted the power to managers whose main responsibility was to control the workmen's adherence to the established standards (Grey, 2013; Vollmer, 2012). Many layers of management were added to manage the flow of measured information (Grey, 2013). Organizations were challenged with new competitive situations which resulted in two major changes. Firstly, the removal of organizational layers, often referred to as lean hierarchies (Santos et al., 2002), which consequently resulted in an empowerment of the remaining employees and these were often organized in groups (Liker et al., 2008), e.g. quality circles or within continuous improvement teams. Secondly, the outsourcing of highly standardized work to low-cost countries, which moved the processes and activities that were initially managed by scientific management (Vollmer, 2012). For the remaining processes the requirements changed towards self-organized problem solving and creative problem solving (Pink, 2010; Vollmer, 2012). The parallel rise of Human Resource Management emphasized the new approach towards employees (Grey, 2013). Literature shows that significant efforts were taken to understand what motivates employees, only resulting in the acknowledgement that there is a large variety of motivators which differ from person to person (Gostick et al., 2014; Herzberg et al., 1993). Therefore, motivational factors and theories are reviewed.

Conflict Definition:
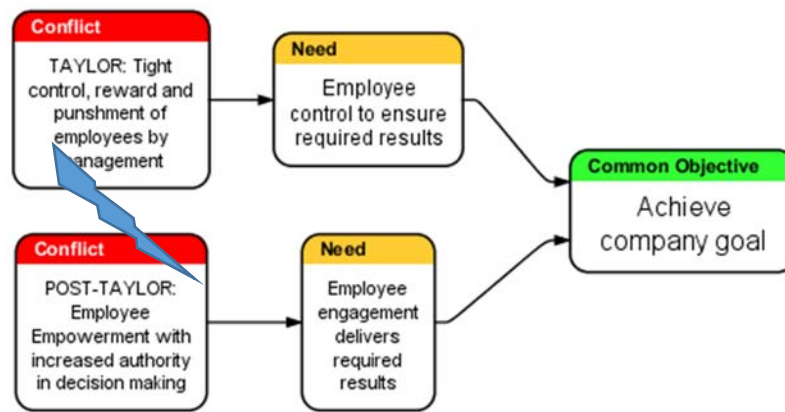
Figure 2-12: Conflict of Taylor and Post-Taylor Management Styles

2.8.1 Introduction

In modern management, senior leadership strives for the empowerment of employees (Kaplan et al., 1993; Neely, Andy, 1999) to take charge of their area of influence and manage it to support the success of the organization. Individual performance is considered a keystone of organizational success (Aguinis, Joo & Gottfredson, 2011). This led to the rise of human resource management, because the employee became a key resource to achieve the company goal (Grey, 2013). Lean management and quality circles created self-organized teams with a certain authority to take decisions. This is a shift from Taylorism (Dilys et al., 2014), or scientific management, which had the objective of breaking up self-organized teams, standardizing work and controlling the standard against actuals by "managers" (Grey, 2013). In pre-Taylorism different departments in the factories were organized in "gangs" which were given authority to organize internal matters autonomously within the group and therefore to decide on business-related issues with human resources or internal production priorities (Grey, 2013). The rise of scientific management resulted in the breakup of these gangs and the rise of management and production standards which in the first place were a means of top-down control of blue collar performance against the new standards. This obviously

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represented a shift in power from floor level to management, which made the individual employees' performance secondary as long as the standards were fulfilled.

During the second half of the last century the globalization of markets exercised cost pressure on companies, in particular in the western world, which led to the rise and development of performance management systems (Chandler, 1993; Kaplan, 1983, 1988; Misterek et al., 1992). It became clear that purely financial figures might not be sufficient to obtain satisfying results in a production environment (Bourne, Mike et al., 2000; Santos et al., 2002; Schneiderman, 1999). Taking Japanese management practices and transferring them to western culture was a key initiative which as a consequence led to the reduction of management layers and the empowerment of shop-floor employees by e.g. quality circles or flat hierarchies (Liker et al., 2008). As a result the ability by the top to control an organization by senior management has been decreased (Santos et al., 2002). Modern organizations therefore rely heavily on PMMS to deploy strategy and empower the employees as groups and individuals towards the company goal (Liker et al., 2008). Consequently it is of the utmost importance that organizations understand human behaviour and motivation (Dilys et al., 2014). To guide employee behaviour the PMMS are connected to rewards based on the achievement of mutually agreed targets (Figure 2-11). The impact of reward systems coupled to a certain performance is doubtful as research shows that reward systems may cause the opposite effect (Boyce, 2012; Pink, 2010; Taylor, J., 2014; Vollmer, 2012). For the company this can mean that the strategy is not properly executed and as a result the strategy is not operationalized (Torben, 2014). Therefore, senior managers have not only to answer how to achieve the company goal but also how their employees are motivated to support the strategic plan. In this section literature on motivational

theory is reviewed and a core conflict is defined between organizational needs. In the next paragraph several motivational models are reviewed.

2.8.2 Review of motivational models

Adam Smith (1776) in his book *The Wealth of Nations* argued that people only work for the monetary reward obtained by the work while the content of their work does not matter. This belief led him and later Taylor, F. W. (1911) to think that dividing labour into simple and easily executed and repeated, essentially meaningless units can be done because the power of monetary incentives is more important. This thought also influenced the work of Skinner, B. F. (1965) who proved that frequencies and quantity of rewards can precisely control the behaviour of animals. The driver of motivation seems to be simple but to evaluate this some motivational theories are introduced here.

According to motivational theory (Figure 2-12) there are basic needs which have to be satisfied (Maslow, 1943). The needs build on each other, meaning that without satisfying the pre-potent others may not appear. Needs may not arise as the satisfaction of another but gradually emerge from slow degrees of nothingness (Maslow, 1943).
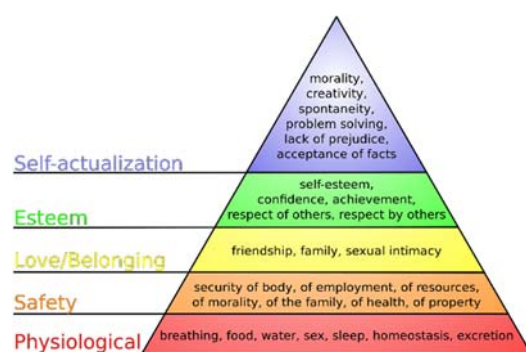
Figure 2-13: Maslow's hierarchy of needs

That means that in the absence of satisfaction of one need people consciously or unconsciously seek satisfaction by satisfying other needs. In addition to safety the

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main drivers for motivation in a professional environment are at the belonging, self-esteem and self-actualization level. Belonging is the need of the individual to belong to a group and in our case the company, business unit or department (Mishra, Boynton & Mishra, 2014). The need to belong to a group may be subordinate to post-potent individual needs (Maslow, 1943).

In a business environment McClelland's "theory of needs" (McClelland, 1983) refers to three needs. These are firstly the need for achievement, which is the drive to success in relation to a standard, secondly the need for power, which refers to the person's ability to manipulate people, and finally the need for affiliation which refers to the desire to have good and conflict-free relationships (Robbins, Judge & T., 2010).

Existence, Relatedness and Growth (ERG) theory (Alderfer, 1972; Wanous, Keon & Latack, 1983; Wanous & Zwany, 1977) refers to a set of three needs: existence, relatedness and growth. As with Maslow, existence covers the basic needs like food and water as well as safety. Relatedness accounts for belonging to groups and our relationships at work. The growth factor encompasses the need for advancement. Similarly to Herzberg, the need for fulfilment varies by the absence of fulfilment of another (Herzberg et al., 1993; Kim, 2006).

Reinforcement Theory (Skinner, B. F., 1965) refers to a causal relationship between behaviour and its consequences. The motivation for the employee is mainly the fear of negative consequences and the need of being recognized. The theory assumes that immediate rewards or punishment create change in employee behaviour. Positive and rewarding consequences trigger a repetition of the desired behaviour. On the other hand, a combination of punishments and reprimands also triggers a change in behaviour.

The expectancy theory of motivation (Porter, L. W. & Lawler, 1968; Vroom, 1964) explains why an individual chooses one behaviour over another. It consists of three components of which the first one is expectancy. Expectancy is the belief that the effort results in the expected results and consists in itself of *three prerequisites*. The first component is a *person's belief about their ability to perform a certain task*, and the individual assesses whether they possess the necessary skills or knowledge to perform the task. If the difficulty of the goal is considered unattainable by the individual the expectancy is low. The individual must believe they exercise a certain level of control to influence the outcome of their efforts. If the individual believes that the goal is beyond their control, expectancy is low and the result of the expectancy is also low. The second component is instrumentality which is the *belief of a person that there will be reward* if a certain expectation is met. The rewards can be intrinsic or extrinsic but have to be varied according to the level of performance. Employees have to trust (Wierks, 2007) in their leadership and rely on policies. The third component is valence, which is the *value a person attaches to the reward*. The employee therefore has to prefer attaining the objective to not attaining it. Expectancy and instrumentality are attitudes, while valance is based on the person's value system.

Cognitive evaluation theory (Deci, 1972; Deci & Ryan, 1985; Ryan, 1982) suggests that people work best towards goals if these are consistent with their interests and core beliefs or values (Bowen & Lawler, 1995; Robbins et al., 2010). The organization must enable this by offering extrinsic and intrinsic rewards. The theory describes two aspects: one informal and the other controlling (Ryan, Mims & Koestner, 1983). The impact of extrinsic rewards has a negative effect on motivation because of their controlling nature (Thill, Mailhot & Mouanda, 1998). The Impact of external factors on individuals' motivation results in a person's change of perception

and thinking (Figure 2-14) (Thill et al., 1998). The controlling aspect hinders seeking, learning and creativity or better autonomy and influences extrinsic motivation (Thill et al., 1998). Interpersonal relationships and feedback influence intrinsic motivation (Thill et al., 1998). Considering that both intrinsic and extrinsic motivation exist within a person already, PMMS systems and rewards are applications to trigger these behavioural aspects. Not only are they triggered but they evolve and exist by the application of systems and rewards and the need of the individual (Feenberg, 2002). The best alignment is achieved if the employees feel that their work is within their control and authority (Ji-Eun, 2012; Ryan et al., 1983; Thill et al., 1998) and is a result of free choice (Robbins et al., 2010). Frequent review and open discussion (Ji-Eun, 2012) with the self-assessment of the employees seems to be reinforcing. During the goal setting process, employees commit to the goal, believe that the goal can be achieved and also want to achieve it. Research suggests that the simpler the task, the more significant the impact of performance. Interdependent goals are better managed by groups (Robbins et al., 2010).
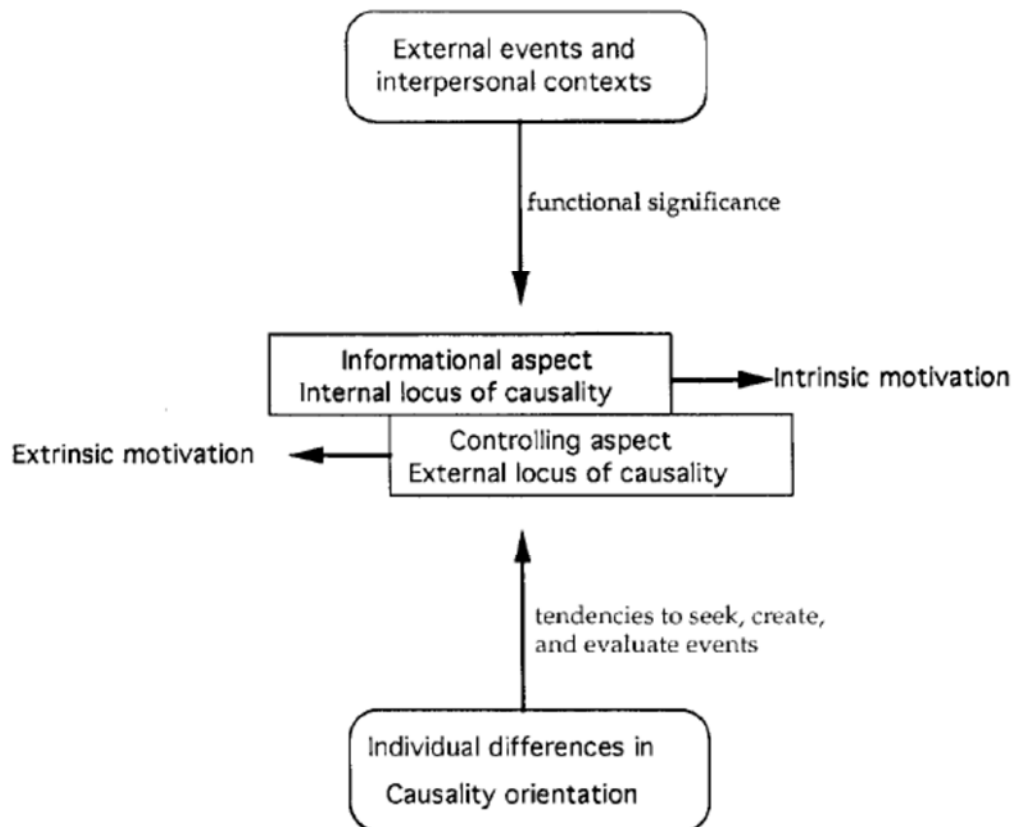
Figure 2-14: "Joint impact of external events and individual differences in causality orientation on inner states of motivation" (Thill et al., 1998 p. 143)

Herzberg's two-factor theory distinguishes hygienic and motivational factors. Hygienic factors do not create motivation and are mostly extrinsic factors (Figure 2-14), but their absence or perceived negativity may lead to a decline in motivation. The motivational factors, mostly intrinsic, enable the motivational process (Herzberg et al., 1993; Pink, 2010).

Gostick et al. (2014) summarized intrinsic motivators as interesting work, challenge (Aguinis, Gottfredson & Joo, 2012; Tampu, 2015), responsibility, autonomy (Armache, 2013; Tampu, 2015), mastery (Allen, Ericksen & Collins, 2013; Tampu, 2015) and purpose, but found that these are too abstract to grasp the core of human motivation. They reviewed a large number of interviews and defined 23 motivators which recurred within these interviews (Table 2-8).

Motivator	Definition
Autonomy	This motivator defines the need of the individual to work and decide by themselves within the corporate setting
Challenge	This motivator defines the need of the individual to thrive in the overcoming of obstacles and difficulties
Creativity	Individuals are driven by the need of experimenting, exploring and discovery
Developing others	Individuals are driven by the need to bring the best out of people to reach their full potential
Empathy	The individual thrives by connecting with others and helping them to overcome their problems
Excelling	The individual thrives by achieving or exceeding the set targets
Excitement	This motivator defines the individual's need for adventure and a little risk-taking at work
Family	The motivator defines the individual's need for recognition by their family
Friendship	Individuals are driven by very good interpersonal relations at work and outside
Fun	Individuals are driven by creating a positive ambiance at the workplace

Motivator	Definition
Impact	The individuals thrive on the need to know that they are doing work that changes the world positively
Learning	The individual thrives on the need to explore new things and better themselves
Money	This motivator defines the need of the individual to confirm their personal value
Ownership	This motivator defines the need of the individual to lead and control others
Pressure	Individuals are driven by pressure because they think that this brings out the best in them
Prestige	Individuals are driven by the admiration of others and the perks they have obtained
Problem solving	The individual thrives on the need to resolve their own or other people's critical situations
Purpose	The individual thrives on the need to be part of something bigger than themselves
Recognition	This motivator defines the individual's need to receive positive acknowledgement for their work
Service	This motivator defines the individual's need to serve others

Motivator	Definition
Social Responsibility	Individuals thrive on the need to highlight issues which are important to the world
Teamwork	Individuals thrive on the need to work in a team and be the bonding agent
Variety	This motivator defines the individual's need for changing responsibilities

Table 2-8: Motivators (Gostick et al., 2014)

It was found by Gostick et al. (2014) that these motivators can be clustered into five identities. Every individual is a mix of these identities having higher or lower tendencies towards these identity archetypes (Table 2-9).

Identity	Characteristics	Motivators
The Achievers	An Alpha type personality	• Challenge • Excelling • Ownership • Pressure • Problem Solving
The Builders	They want to be part of something bigger and keep the team together	• Developing Others • Friendship • Purpose • Service • Social Responsibility • Teamwork
The Caregivers	They want to improve and value interpersonal relationships	• Empathy • Family • Fun
The Reward-Driven	These types strive for rewards of any kind	• Money • Prestige • Recognition
The Thinkers	These types thrive in an environment that provides autonomy and the possibility to discover and explore new opportunities	• Autonomy • Creativity • Excitement • Impact • Learning • Variety

Table 2-9: Identities and Motivators (Gostick et al., 2014)

Ensuring the focused behaviour of employees is the greatest challenge for an organization because as individuals and groups people might pursue personal goals, e.g. personal enhancement, salary, bonus or feuds with other individuals and groups, which are in contradiction with the organizational goal (Gabriel, 2012; Grey, 2013; Huczynski & Buchanan, 2001; Jordheim, 2014). The absence of focus in parts of the organization jeopardizes the functioning of performance management (Grey, 2013). In addition to this, employees measure their job output in comparison to their peers and adapt its output accordingly, most often downwards as there is a

perceived problem (Robbins et al., 2010). The employees' needs are not limited to interpersonal relationships but also the need for purpose described in the cognitive evaluation theory. The question "What is in it for me?" must be answered and employees grow or resign depending on the answer they are given by the organization. Mixed intrinsic and extrinsic rewards may achieve high performance (Fernandez & Moldogaziev, 2013). Literature theory has separated motivational factors into hygienic (extrinsic) and motivational (intrinsic) (Grey, 2013; Herzberg et al., 1993; Pink, 2010). The hygienic factors have no apparent impact on the individual's performance while their absence creates demotivation. The hygienic factors mainly refer to rewards such as salary and bonuses. The issue with performance-based pay in a heuristic framework is that it has proven counterproductive. In particular, goals that are set by others seem to have dangerous side-effects, like unethical behaviour. Research shows that if-then motivators fail because they reduce the depth of thinking and limit the focus only to the immediate task (Ken, 2014; Pink, 2010).

On the other hand, motivational factors really impact the engagement of the employee (Armache, 2013; Bowen & Lawler, 1992; Bowen et al., 1995; Ji-Eun, 2012; Ken, 2014; Pink, 2010). These factors are related to the satisfaction people gain from their work. Studies prove that people perform best if the task at hand generates curiosity and is challenging. The autonomy in which people may develop ideas and prove creativity drives their engagement with the task. It seems that people strive for the mastery even if there is no extra reward for achieving the task but only for the sake of achieving it. There seems to be a need embedded in human nature to playfully achieve a challenging objective or purpose. The third factor is purpose. People would like to be part of and influence something bigger than themselves (Armache, 2013; Bowen et al., 1992, 1995; Ji-Eun, 2012; Ken, 2014; Pink, 2010).

Literature distinguishes between algorithmic and heuristic work. Algorithmic work is a clearly defined process that can be repeated over and over again. Heuristic work is a creative task which cannot be clearly defined. It is suggested that reward systems based on monetary pay-outs work best for algorithmic tasks because of the clarity of the expectation. Heuristic work is a creative process in which the framework is not so clearly defined (Bowen et al., 1995; Grey, 2013; Pink, 2010). Most performance management systems apply to middle management, who in general are engaged in heuristic work but the reward is extrinsic. Consequently most organizations still wrongly assume that monetary gain is the main motivator (Grey, 2013; Pink, 2010). An organization does not have to maximize employee satisfaction but provide a minimum satisfaction level to elicit the commitment required (Schragenheim, 1999).

Pfeffer (1998) proposes factors which enable effective organizations:

1. A high level of job security which builds trust and loyalty

2. Reliance on decentralized decision-making to enable self-managed teamwork to grant autonomy and trust

3. Salary levels above market rates and not heavily reliant on individual incentives. The company engages in profit sharing if results are good

4. The organization provides intensive training at the beginning and as an ongoing process to keep the employees facing new challenges and developing new skills, and this again fosters trust

5. Employee performance is measured but not every detail of the employee's job is under scrutiny. The company trusts that the employee works in the interest of the company

6. Day-to day practices reflect the organizational mission

In summary there are many theories describing human motivation. Each theory refers to a set of motivational factors, which shows the difficulty for organizations to address a complex subject with standardized performance management systems.

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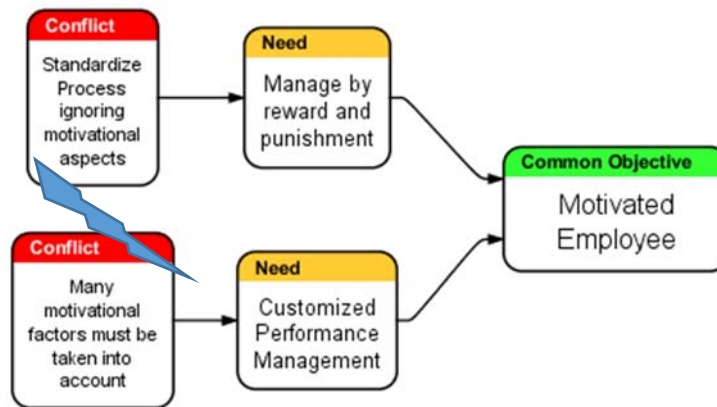
Figure 2-15: Conflict between the large number of motivational factors and standard processes

In their book *The Carrot Principle* Gostick and Elton (2009) describe today's conflicts of modern management. The volatility of modern economies has created a chasm in which companies are more and more demanding on performance but then remove important motivational and hygienic factors by standardization (Figure 2-15), relocation of responsibilities, off-shoring and loss of job security.

Motivational factors beyond monetary rewards encompass a complex variety of elements (Gostick et al., 2014). Some models imply that reward and punishment or the size of rewards drives behaviour; others indicate the existence of higher level motivators such as self-actualization. Herzberg et al. (1993) two-factor theory divides hygienic from motivational factors. Hygienic factors do not influence behaviour significantly if present but if taken away have negative effects. Combining the commonalities of the motivational models, the hygienic factors are extrinsic factors. Motivational factors are higher level motivators such as interesting work (Aguinis et al., 2012), challenge, responsibility, autonomy (Armache, 2013), mastery

and purpose. Mastery may encompass challenge, interesting work and autonomy including responsibility.

Management must go beyond standardization and take into account motivation (Figure 2-15). Summarizing, the following model may be established (Table 2-10):

Hygienic Factors	Motivational Factors
Extrinsic Rewards like salary, bonuses, perks	**Mastery, Autonomy and Purpose**

Table 2-10: Summary of motivational models

2.8.3 The motivation to work

Engaged employees are crucial to the success of the organization. Studies show that less than 50 per cent of employees in the US are actually engaged in their work (Pink, 2010). A study in Germany has revealed similar numbers (Spiegel.de, 2014). Schwarz (2015) argues that social contracts between organizations and employees are broken. The off-shoring of work, layoffs and reorganizations have strained the relationship. The results of distrust are the increased control by PMMS, policies and incentivised work. Increase of control leads to a removal of the autonomy employees can exercise in their work.

A large number of PMMS were developed in the last 20 years, but despite the substantial quantity of systemic approaches in PMMS, researchers and practitioners have clearly stated that most strategic performance management initiatives fail (Bourne, Mike et al., 2002; Kotter, 1995; Schneiderman, 1999; Torben, 2014).

The introduction of measures, increased control and less authority, resulting in reward and punishment systems, shifts the engagement with the company from a moral to a transactional one (Schwarz, 2015). This means that in the absence of measurements and control the employee did their job to the best of their ability, but the same work is now done to measurement sufficient to avoid punishment or even accepting the punishment because of its insignificant nature.

Psychology and organizational behaviour emphasize the importance of understanding employee motivation. Research connects motivation with a resulting behaviour (Kim, 2006), which is directed towards the goal of ensuring the success of the company. Motivation, however, is inferred from a systematic analysis of environmental characteristics. It is also not a fixed trait as it may change due to a change in external factors (Carolyn, 1997). Therefore needs might be triggered by the absence of another need (Herzberg et al., 1993). Motivation affects the

individual or group behaviour but does not automatically translate into job performance (Carolyn, 1997). It is suggested that motivational work design improves behaviour and engagement (Barrick, Thurgood, Smith & Courtright, 2015).

Many studies have been carried out on employee satisfaction, some as early as in the 1950s (Herzberg et al. (1993). Researchers and practitioners want to understand the motivation that drives employees to contribute towards the company goal. A good understanding has to be developed to capture the reason why people come to work and what makes them excel in their job (Carolyn, 1997). There has to be a clear link between job performance and the employee's effort to achieve better outcomes (Carolyn, 1997).

Motivators	1946	1980	1986	1992
Full appreciation of work done	1	2	2	2
Feeling of being in on thing	2	3	3	9
Sympathetic help with personal problems	3	9	10	10
Job security	4	4	4	3
Good wages	5	5	5	1
Interesting work	6	1	1	5
Promotion and growth in the organization	7	6	6	4
Personal loyalty to employees	8	8	8	6
Good working conditions	9	7	7	7
Tactful discipline	10	10	9	8

Table 2-11: Employee Motivation: Factors that motivate me (Carolyn, 1997)

Motivators	1946	1980	1986	Wiley's(1992) Survey (Employees)
Full appreciation of work done	8	8	8	2
Feeling of being in on thing	9	10	3	9
Sympathetic help with personal problems	10	9	10	10
Job security	2	2	2	3
Good wages	1	1	1	1
Interesting work	5	5	5	5
Promotion and growth in the organization	3	3	3	4
Personal loyalty to employees	6	7	7	6
Good working conditions	4	4	4	7
Tactful discipline	7	6	9	8

Table 2-12: What people want from their work, a supervisor's perspective (Carolyn, 1997; Kovach, 1980, 1987)

Research also shows that managers' perceptions of employee motivation mainly focus on extrinsic rewards (Kovach, 1987; Tampu, 2015). It is evident that almost all performance management systems are linked to monetary rewards. Kim (2006) argues that there are many successful cases where monetary rewards have helped to increase company performance. The examples mentioned in the paper also refer to an increased autonomy and self-direction. Research shows that most incentive programs based on monetary rewards fail (Kohn, 1993; Meck, 2015; Tampu, 2015). The reasons for this could be implementation issues (Aguinis, Joo & Gottfredson, 2013) but more likely are related to behavioural adaptations of the workforce (Grey, 2013; Pink, 2010; Watt, 2010).

The employee survey results in Table 2-11 and Table 2-12 show primarily that motivational or perceived factors change over time. They also indicate that changes in the environment influence the importance of motivators (Carolyn, 1997; Herzberg et al., 1993).

Research is inconclusive on the effects of hygienic and motivational factors (Table 2-11 andTable 2-12). Some argue that management research has little impact on real life operations (Aldag, 2012). The primary research should therefore focus on making management research actionable.

2.8.4   McGregor Theory of X or Y

The McGregor (2005) theory of X and Y defines how employers look at their employees in their relationship to work. The X Theory determines that employees must be controlled tightly with higher results rewarded. Directive work orders and possible punishment is needed as employees avoid responsibility. The managerial role is, in line with Taylor, to control, reward or punish (Boyce, 2012; DeGroot, 2012; Dilys et al., 2014; Pink, 2010; Vollmer, 2012). The Y Theory states that the employee is self-motivated to reach and exceed agreed upon goals. Responsibility needs an

environment that supports learning and management's role is to maximize the individual contribution to achieving the company goal (Boyce, 2012; DeGroot, 2012; Pink, 2010; Vollmer, 2012).

'Theory X'

management

Theory X - authoritarian, repressive style. Tight control, no development. Produces limited, depressed culture.

staff

'Theory Y'

staff

Theory Y - liberating and developmental. Control, achievement and continuous improvement achieved by enabling, empowering and giving responsibility.

management
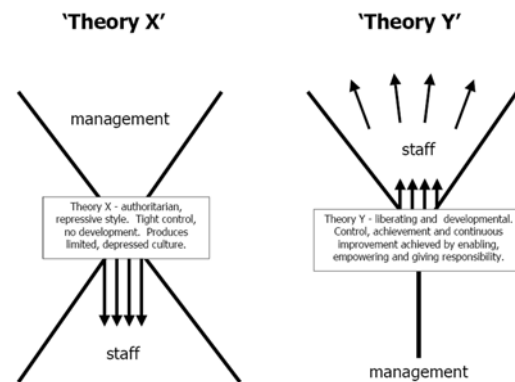
Figure 2-16: McGregor's Theories of X and Y (BusinessBalls, 2015)

Conflict	Need	Common Objective
Apply theory Y	Enable Employee Motivation by Engagement	Employee Motivation
Conflict	Need	
Apply theory X	Control Employee by reward and punishment	
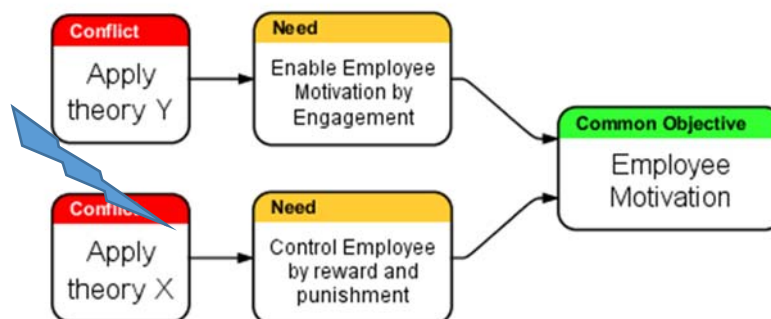
Figure 2-17: Conflict of Types X and Y

2.8.5 The role of key performance indicators and employee motivation and behaviour

"Competitiveness cannot be achieved without managing performance and at the same time developing the skills and competence of employees. Performance management potentially makes the most significant contribution to individual and

organizational learning and helps to raise organizational efficiency and promote growth" (Adhikari, 2010, p. 3).

According to Kaplan et al. (2001a) companies miss the right tool for strategy execution within an ever-changing environment. This is amplified by the change of the industry from a purely transformational process where raw material is processed into a product to knowledge-based business models. In this model, other key aspects define the value creation which is driven by educated and motivated employees and interpersonal relations.

The performance of the organization is the outcome of the combination of organizational and human focused activities (Allen et al., 2013; Cheung-Judge & Holbeche, 2015; deWaal, 2003). A direct connection between PMMS and human nature was long neglected but firstly addressed by Argyris (1952) and Simon (1954) mainly focusing on controlling departments and purely financial targets. Simon reported on target setting and its implications for employee motivation. Simons (1999) and Holloway, Mallory, Lewis and School (1995) argue that performance management cannot be successfully designed without the knowledge of human motivation. Hartmann (2000) remarks that individual motivators are important for behaviour towards the financial planning process and Vagneur and Peiperl (2000) state that motivational and behavioural characteristics are an under-researched subject. In the same line Lipe and Salterio (2000) argue that cognitive limitations hinder employees from exploiting the potential of performance management systems. According to Martin (2000) performance management research focuses mainly on implementation and neglects behavioural issues.

The application of performance management systems has developed during the last 30 years starting from questioning the validity of existing measures, the adoption of systems like e.g. the performance pyramid or the balanced scorecard to the

application of collected data. The main reason according to research is the use of data to influence the human behaviour of employees (Aguinis & Pierce, 2008; Zairi & Jarrar, 2000). For performance management to work it must be assumed that employees want to contribute to achieving good performance. They know right from wrong and generally choose the right, and set themselves goals to achieve even without external motivators. They like to innovate and to search for new technological approaches and continuous improvements and want to use their competencies to excel in their tasks and obtain satisfaction from proving their competence (Simons, 1999).

Defined processes are said to direct behaviour as they define what to do and when to do them. They are useful when the shortcoming in behaviour is due to the absence of knowledge. Employees follow rules to complete tasks but some consequences of actions do not reinforce the most desired behaviours and therefore result in ignoring rules and choosing different routes to complete an assignment. The consequences impact a person's behaviour and the experience of behaving in a certain way (Boyce, 2012). Feedback for good and poor behaviour should therefore be immediate. The employee's best asset is their own performance (Boyce, 2012).

The problem that most PMMS systems have is the measurement of past data which is a result of behaviour and not the other way around. The focus therefore has to be on predicting the organization's or employee's behaviour (Boyce, 2012) based on the measurements employed.

Performance management in an organization closes the gap between organizational complexity and dysfunction and the ability to synchronize. The impact of performance management systems within small organizations may be smaller due to their lack of complexity (Klaas, Semadeni, Klimchak & Ward, 2012).

Often the original idea of desired behaviour due to the implementation of a PMMS is not an observable result. Research shows that in fact the behaviour may be totally opposite from what is desired (Taylor, J., 2014). Taylor, J. (2014) defines the use of performance as consistent if it supports the realization of desired behaviour. The neglect of performance management data supporting evidence-based management leads to undesired behaviour (Taylor, J., 2014).

Henri (2006) and McGregor (2005) discussed the connections between organizational values as practised and routines and the effects on the utilization of performance measurement. Organizations (Type 1 or X) which predominantly use the PMMS as a means of control show the following organisational value set:

1. Formality
2. Rigidity
3. Conformity
4. Tight control of operations
5. Highly structured
6. Restricted flow of information

Flexible organizations (Type 2 or Y) can be described according to (Henri, 2006) as possessing:

1. Openness
2. Responsiveness
3. Adaptability
4. Informal and loose controls
5. Open and lateral communication channels
6. Free flow of information throughout the organization

Henri (2006) found that managers in type 2 / Y organizations more frequently base their actions and decisions on collected information, compared to their counterparts

in type 1 / X, who rely on a more symbolic performance management if the organization clearly defines its purpose but fails to establish the support mechanisms to enable the organization to achieve this or if most of the organisation remains unconvinced of its value (Taylor, J., 2014).
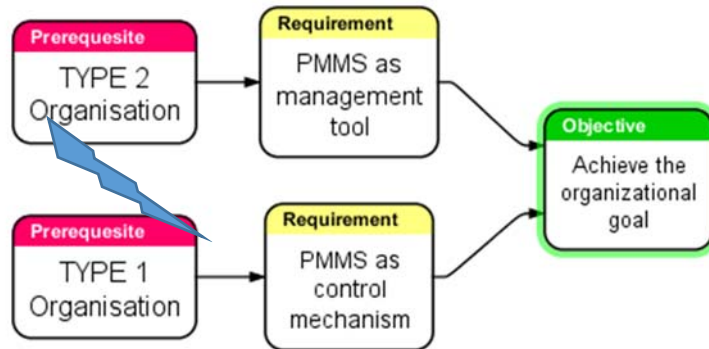
Figure 2-18: Conflict regarding organizational use of PMMS

Hudson et al. (2001, p. 1105) researched literature summarizing characteristics of SMEs and found them to be different in the following respects:

1. Personalized management with a centralized decision-making

2. Limited resources in terms of management, staff and financial strength

3. Small customer base and often operating in a specific market or region

4. Flat organizational structures

5. Innovation capabilities

6. Reactive to the market compared to planning

7. Strategies are not formalized and change as required
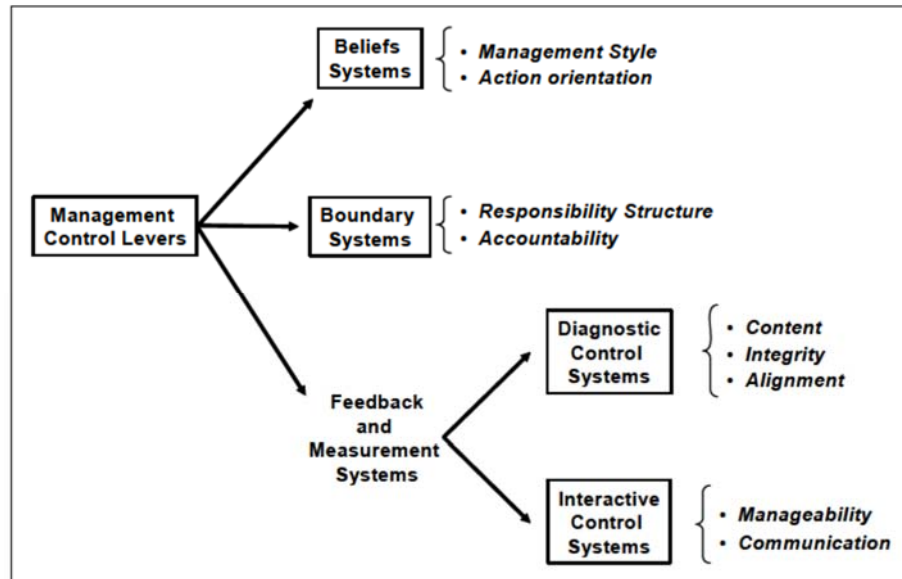
Figure 2-19: Features of Simons` lever of control model (deWaal, 2010) adapted from (Simons, 1995)

- *Belief systems:* These systems (Cheung-Judge et al., 2015; Henri, 2006; McGregor, 2005) define what the organization is all about, like mission, strategy, or core values. They serve to give direction to the organization and are frequently communicated and reconfirmed by the senior leadership. As these systems should inspire and direct employees in the search for new opportunities they can be seen as behavioural (Abdelrahman & Papamichail, 2016; Aguinis et al., 2008; Barrick et al., 2015; deWaal, 2010; Lueg et al., 2015; Soleman, Abdelrahman & Skoumpopoulou, 2017; Taylor, J., 2014).

- *Boundary systems:* These systems define the boundaries within which the employees are expected to work to mitigate risk for the organization. These often contain the code of conducts or policies. These systems are used to set limits in the search for new opportunities and therefore influence behaviour (deWaal, 2010; McGregor, 2005; Taylor, J., 2014).

- *Diagnostic control systems:* These are PMMS, which measure the execution of the strategy, provide feedback on the actions taken and as a result take corrective and preventive actions to ensure the achievement of the goal.

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These systems are used to motivate, monitor and reward achievement of specific objectives and are therefore instrumental in driving behaviour (deWaal, 2010; Henri, 2006).

- *Interactive control systems:* These systems foster the exchange of information and ideas within the organization. They are used to enable learning and should facilitate the finding and discussion of new ideas to improve the business. The multilevel interaction influences the behaviour (Aguinis et al., 2008; deWaal, 2010).

Ownership determines the ability and willingness to implement a PMMS system (Jankulović & Škorić, 2013). An organization does not have to maximize employee satisfaction but provide a minimum satisfaction level to elicit the commitment required (Schragenheim, 1999). The organization must define its own identity to correctly assess the purpose of a performance management and measurement system. The type of organization and its belief system (Barrick et al., 2015) strongly determine the effect measurements have on the employee's behaviour.

The behaviour of an employee can take place on either a moral or a transactional level. The difference between these attitudes may be influenced by the organization which describes rules, policies and incentives. It was discovered that an organization that increases its control of employees' work and performance by either policies or incentives shifts the focus of the employee from moral commitment to a transactional business activity. While earlier the employee had the autonomy to decide on the execution of their job and the achievement of the objective, increased control removes this autonomy and the focus shifts from what is the best possible to the fulfilment of the targets, KPIs or policies. When confidence in employees is lost and trust is replaced by incentives the organisation receives what it pays for. The main reason for this is that most jobs are, particularly if they involve other

people, organized around "incomplete contracts" (Schwarz, 2015, p. 58). The company wants the employee to give their best possible "good faith effort" (Schwarz, 2015, p. 58) to support the company's objective. In job descriptions, some explicit description of how to conduct the job is defined but how and when to do them is in general left to the employee to figure out. For example, if one of the tasks is to take customer calls it is not defined how to interact with the customer, e.g. tone of voice, friendly language, courtesy, and chat about personal matters if more familiar with the customer. The employee has the choice to stick to the basics of the job, maybe even to a prepared checklist. Less tangible are assumptions employees make about their organization, which influence how they think about things and adapt their behaviour (Taylor, J., 2014).

Based on the literature review an Intermediate Objective Tree (IOT) is developed summarizing the concepts in respect to performance management and how to successfully implement and sustain a PMMS. This tree is used in the discussion of results in Chapter 5 as a comparison with our actual findings.
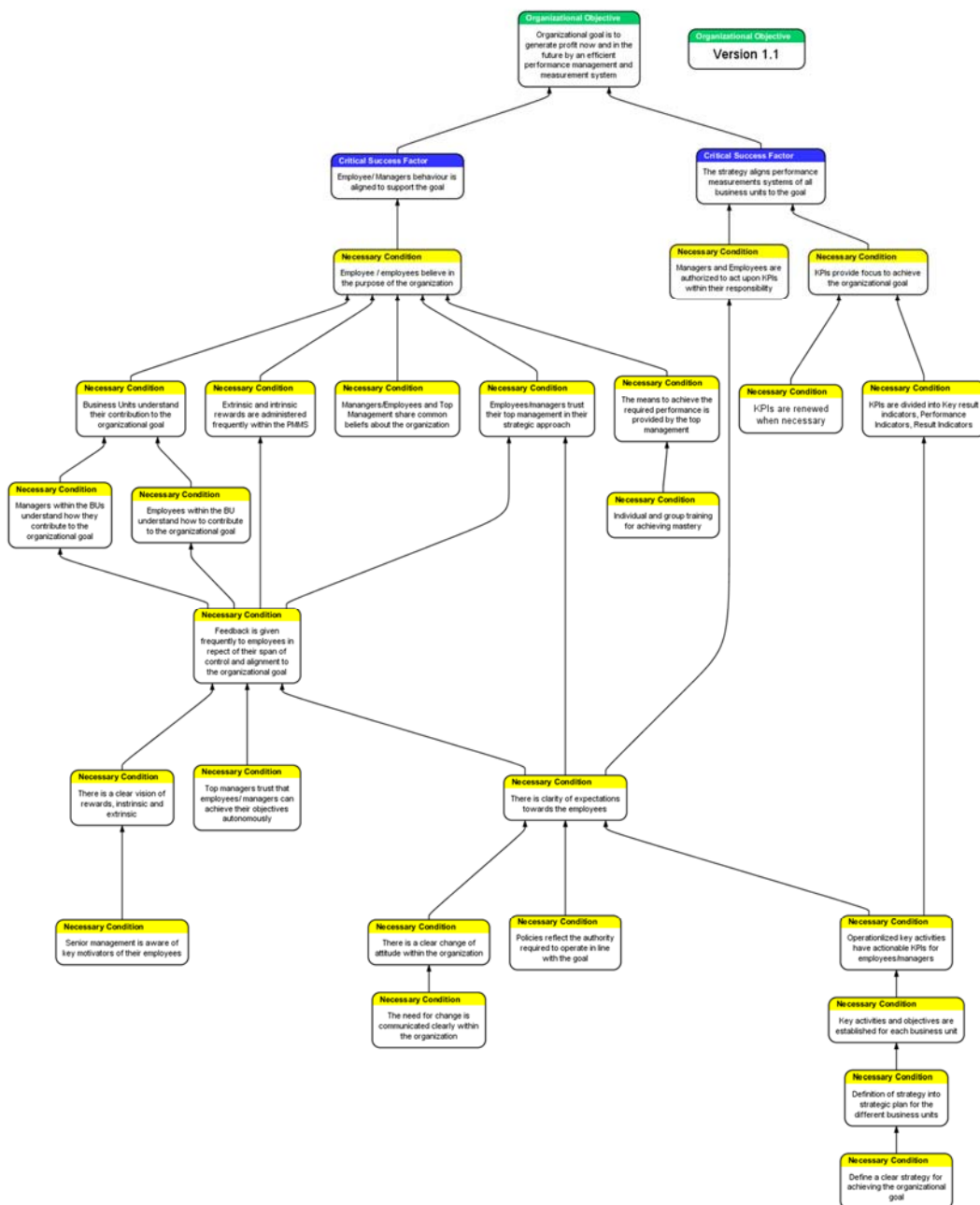
Figure 2-20: Intermediate Objective Tree

2.8.6 Section Summary

Several undesired effects (UDE) as identified in literature and described as summarized in Figure 2-21. In addition to the effects critical root causes (CRC) are indicated. The method used is described in Dettmer (2007). A UDE is a symptom that exists and indicates that there is a problem with the system. CRC can be an existing condition, assumption, policies or practices which determine the existence of UDEs.

UDE — Strategy fails to deliver results

UDE — Performance Expectations set by owners are not met (Bromley, 2014)

CRC — Local optimas may not be aligned with the organizational requirements (Schragenheim, 2000; Goldratt, 1992)

UDE — Informal fictations create power structures and jeopardize strategic efforts (Grey, 2003; Mishra, 2014)

CRC — Local optima can be easily achieved (Schragenheim, 2000; Goldratt, 1992)

UDE — Employees learn to work their KPIs in their favour (Meyer, 2014)

CRC — Employee create a parallel measurement system and set own targets. (Thommes, 2014,a,b,c)

UDE — Employees do not support the performance measures. (Neely, 2007; Banks,1997; Sinclair,1995)

UDE — Employees SEEM not want to make all the efforts necessary (Herzberg, 1993; Schragenheim 2015; Vollmer 2014)

CRC — Employees seek other option to satisfy needs. (Gabriel, 2012; Grey, 2013; Huczynski, 2001; Jordheim, 2014)

CRC — Employees are in strong disagreement with the company strategy, rewards system, etc. Ji-Eun, 2012; Thommes, 2014,a, b,c; Eccles, 1991,1992; Robbins, 2010; Bowen, 1992, 1991; Meekings, 2010)

CRC — Employees do not see relevance of PMMS. (Lima, 2009; Schragenheim, 2015)

UDE — Employee do not trust the top management. (DeWaal, 2004; Holmberg, 2010)

CRC — Employees are demotivated by management decisions (Boyce, 2010)

CRC — Instrinsic motivational factors are neglected. (Vollmer, 2014; Godstick, 2009, 2012, 2014; Holmberg 2000; Csikszentmihalyi, 2008)

CRC — Employees disagree on how to achieve the required performance. (TOC-Marketing-Group, 2014; Ittner, 1998; Atkinson, 1997; Santos, 2009)

CRC — Individuals might not be able to influence group behaviour to achieve the required performance.(Goldratt 1992; Villey, 1997)

CRC — Extrinsic rewards are the only motivators. (Vollmer, 2014; Boyce, 2010; Pink, 2010; Taylor, 2014)

CRC — Empowerment of employees is not happening (Bromley, 2014; Holmberg 2010; Robbins, 2010; Ji-Eun, 2012)

UDE — Strategy and its purpose remains unknown for employees (Kaplan, 2001)

CRC — Target are considered unrealistic by the employees (Thommes, 2014,a, b,c)

CRC — The reward system does not satisfy important needs (Vollmer, 2014; Godstick, 2009, 2012, 2014; Holmberg 2000)

CRC — Employee behaviour can be motivated by unsatisfied needs (Herzberg, 1993)

CRC — Measured Results depend on others. (Schragenheim 2015; Holmberg, 2000)

CRC — Quantitative KPIs determine the future of the employee in terms of wages, bonus. (Goldratt 1992)

UDE — Many organizations rely on extrisic rewards as sole motivational means. (Pink, 2010; Watt, 2010; George 2011)

CRC — Extrisic rewards are easy to administrate (Kovach, 1987; Tampu, 2015)

CRC — Top management does not have a strategy (Thommes, 2014 a, b,c)

CRC — KPIs and Actions are decided without the input of concerned employees (Thommes, 2014 a,b,c)

UDE — Top management does not communicate efficiently on strategy (Sinclair 1995)

CRC — Top management uses stick and carrot on every employee (Goldratt, 1992)

UDE — Managers want to control results fearing loss of control (Schragenheim 2015)

UDE — Quantitative Performance measures are a means of control (Henri, 2006; McGregor, 2005)

CRC — Top management has to ensure the delivery of results (Schragenheim 2015)

UDE — Top management does not trust employees (Goldratt 1992)

CRC — Taylor management principles are basis of management style (Gray 2013)

UDE — Good performance is attributed to the individual managers. (Schragenheim, 2015)

TEXT — Version 1.5

Figure 2-21: Current Reality Tree: why PMMS often fail

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2.9   Summary and relevance to research

2.9.1   Performance measurement and management systems – design, deployment and sustainability – relevance to research summary

The balanced scorecard is the PMMS design which is most popular with commercial organizations (Hudson et al., 2001; Lueg et al., 2015; Madsen et al., 2015; Marr & Schiuma, 2003). Most managers have touched on the BSC topic within their organization. According to research the design and deployment seem always to be successful (Hudson et al., 2001) and the BCS encompasses intrinsic and extrinsic aspects of the company. I was also involved in the introduction of a BSC implementation which gives me experience of a cross-unit implementation process with all its challenges. Some argue that research is rarely actionable (Aldag, 2012) and the primary research therefore focused on guiding practitioners in the process of operationalization.

On the other hand, there are many reported failures in relation to performance management systems. The research seeks to find a different way of utilizing performance measures by combining input from traditional PMMS, the theory of constraints, TOC and their impact on employee behaviour.

It is particularly interesting how literature and research recommend implementation and deployment in organizations. It seems that development and deployment are often successful but the initial euphoria is soon replaced by frustration and finally disillusion. It seems that systems which are designed to make the business more understandable and to provide clarity on required behaviour-driven action often leave the organization paralyzed. In the next section I attempt to summarize and analyse the findings from literature.

2.9.2 Definition of gaps in literature – relevance to research summary and conceptual framework

Modern performance management systems encompass many aspects of the organization. It is a prerequisite to determining the goal of the organization. If there is no clarity on the goal the development of a strategy is hampered. Literature states that there is no real process (Markides, 1999a) to develop a strategy but senior leaders of the organization have to define a clear vision on the future state of the company (Garengo et al., 2012; Taylor, A. et al., 2013). Much performance management literature suggests that several dimensions of measurements are necessary to achieve the goal. Other research suggests that improvements should focus on performance inhibitors, resolve them and move to the next. KPIs should be localized in the business units, departments and shop floor, which results in a significant number of local KPIs. How these correlate with the organizational goal is difficult to assess. Managers often doubt the use of KPIs because of their conflicting nature (Vernadat, Shah, Etienne & Siadat, 2013) and lack of guidance on priorities or pressing issues.

Therefore, it is necessary to investigate how managers can operationalize strategy and translate it into key performance indicators that synchronize processes and reinforce the alignment process with the strategic organizational goal. These are key elements of performance management which correlate directly with the strategy of the company and must be answered early in the management process. Research is often not transferable into real life and therefore primary research gives insight into an organization in change.

"A mere 7% of employees fully understand their company's business strategies and what is expected of them in order to help achieve company goals" (Kaplan et al., 2001a). The senior management has to be clear on the use of the system. Does it

serve to control the organizational performance or is the expectation for middle management to act on the indicators? The organizational value system is not the same. A controlling organisation forces and orders action upon deviating indicators. Middle management is generally not empowered to act upon deviations without consulting the top of the organization. An empowered organization expects middle management to act upon deviations and lead the correction independently in a framework of authority.

Literature and research do not give practitioners guidance on the entire process of performance management because different fields of research investigate different areas of the issue; for example, PMMS and behavioural aspects are not combined. Research is often designed as such that it is difficult to operationalize in the practical world. The combination of strategy, PMMS, behaviour and motivation are described in a conceptual framework in Figure 2-22. The organization must be clear on the organizational goal and consequently provide a strategy defining a plan for achieving this goal. The goal for most commercial organizations is a sustainable flow of profit now and in the future. The strategy must provide answers on how this objective can be achieved. The answers are strategic actions which are followed up by KPIs. It was learned that many PMMS are too complex to support this effort and therefore it was suggested that indicators are classified into active and passive indicators. A further classification was provided by establishing KPIs as active and RI and PI, and KRIs as passive indicators. The current PMMS are either top-down or horizontal but neither approach yields sufficient results because of the missing correlations between the measures. This and the increasing number of measures in PMMS additionally increase complexity and lower the effectiveness of PMMS. There is a conflict between the wide and focused measurement approach where only a combination can satisfy corporate requirements and local operations (Vernadat et

al., 2013) (Figure 2-11). It seems that a classification of measures may provide the necessary structure to fulfil wide and focused requirements. The success factors for effective PMMS were summarized. PMMS were introduced to drive employee behaviour but the research in Figure 2-22 shows that the mere existence of PMMS does not guarantee that it influences behaviour. Behaviour is driven by motivators which determine the employees' belief in their role in the company and how they align with the PMMS. Beliefs also determine whether the organization is ready for change. If employees do not believe in the PMMS they jeopardize the efforts by, for example, creating parallel systems. The essential components of the PMMS are clarity and communication to influence belief systems. Only an assessment of the belief system enables the combination of PMMS and behaviour and motivation.

This framework is the basis for the RO (2.11) and RQ (2.10).

Figure 2-22: Conceptual Framework from Literature

2.10 Research Questions

1. In the context of the research object, how can managers operationalize strategy and translate it into key performance indicators that synchronize processes and drive the required employee behaviour?

2. How can a company clarify the employee's role, through their performance, in value creation?

3. What are motivators for employees, which drive behaviour in their role in the organization, and how can these motivators be part of a PMMS?

4. What key performance indicators can be defined, taking organizational requirements and employee motivation into account, to reinforce the alignment process with the strategic organizational goal?

2.11 Research Objectives

1. To develop key elements of efficient performance management in relation to strategy.

2. To appraise the strategic goal of the specific organisation and link and translate it into key performance indicators (KPIs).

3. To construct a concept to align employee motivational parameters and company requirements to fulfil the strategic goal.

4. To create a toolbox process to implement a performance measurement system that supports employee behaviour and internal alignment with the strategic organizational goal.

2.12 Summary

Organizations are both a technical system, managed by PMMS, rendering services or manufacturing products, and social systems in which people interactively execute processes to enable the technical system (Gallos, 2006). The interrelation between PMMS and human behaviour is often neglected in implementing and measuring performance (De Flander, 2013). The performance of the organization is the outcome of the combination of organizational and human focused activities (Allen et al., 2013; deWaal, 2003). The relation of PMMS and human behaviour was first described by Argyris (1952) and Simon (1954). Simons (1999) and Holloway et al. (1995) argue that performance management cannot be successfully designed without the knowledge of human motivation. Hartmann (2000) remarks that individual motivators are important for behaviour towards the financial planning process, and Vagneur et al. (2000) state that motivational and behavioural characteristics are an under-researched subject. In the same line Lipe et al. (2000) argue that cognitive limitations hinder employees from exploiting the performance management system's potential. According to Martin (2000) the performance management research focuses mainly on implementation and neglects behavioural issues. Pink (2010) and (Vollmer, 2014) describe the impact of neglecting human behavioural aspects in PMMS. Gallos (2006) and Cheung-Judge et al. (2015) state that organizations disregard potential by neglecting behavioural aspects in PMMS. A process of strategy implementation has therefore to focus on behavioural aspects as well as systems. By examining these aspects in the researched organization and a specific case this work contributes to knowledge.

3 Company Background

3.1 Purpose of the section

The purpose of this section is to provide insight into the industry in which the researched company operates. The focus is on a description of the supply chain relations with suppliers as well as challenges due to the change in strategy which changed the company from a service provider to a parts manufacturer. The researched unit is part of this corporation and the section describes the magnitude of the operation and highlights the challenges of the transitions to manufacturing. The description of the local unit is based on the notes of the researcher because such information is not available publicly.

3.2 Company description in the industrial context

Bodycote is specialized in heat treatment services for various industries and has recently expanded this business mainly in the USA. The company operates about 200 facilities in different parts of the world but mainly in Western Europe and the USA. Bodycote is listed at the London stock exchange with the ticker symbol "BOY".

The current CEO joined the company during the 2008 economic crisis, in which he reduced personnel and the divestments of activities. Further, he restructured the different facilities according to their markets, Aerospace Defence and Energy (ADE) and Automotive & General industry (AGI) (Communication, 2012).

3.3 ADE

Figure 3-1 and Figure 3-2 show the sales per market and geography respectively.

ADE revenue by market sector
£m

■ Aerospace and Defence	141.4
■ Energy	43.7
■ Automotive	8.9
■ General Industrial	56.9
Total	**250.9**
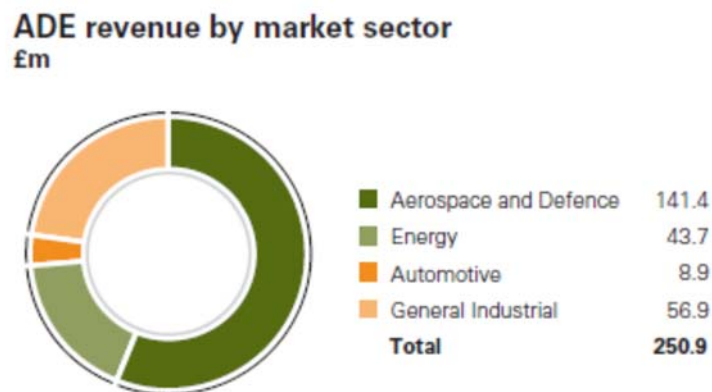
Figure 3-1: Sales % per market ADI (Communication, 2012)

ADE revenue by geography
£m

■ Western Europe	115.1
■ North America	134.7
■ Emerging markets	1.1
Total	**250.9**
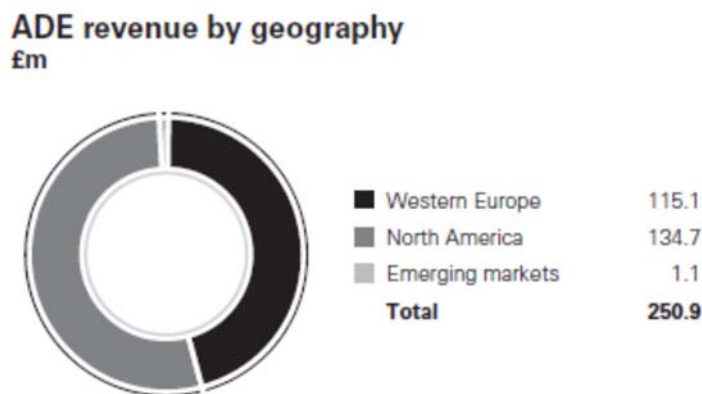
Figure 3-2: Geographical sales as % of sales ADI (Communication, 2012)

3.4 AGI

Figure 3-1 and Figure 3-2 show the sales per market and geography respectively.

AGI revenue by market sector
£m

■ Aerospace and Defence	9.4
■ Energy	8.3
■ Automotive	162.5
■ General Industrial	169.5
Total	**349.7**
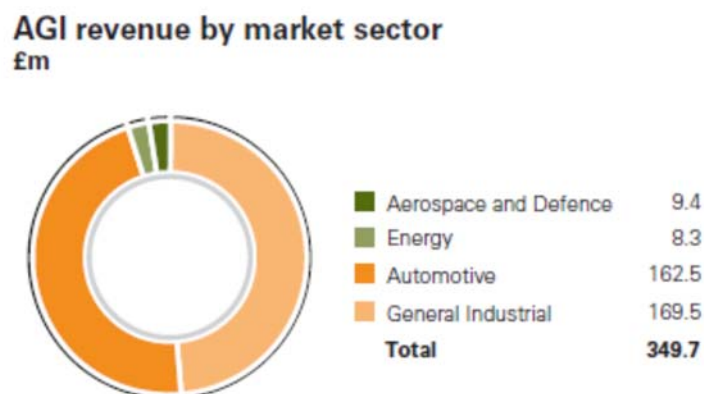
Figure 3-3: Sales % per market AGI (Communication, 2012)

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AGI revenue by geography
£m

■ Western Europe		214.9
■ North America		94.3
■ Emerging markets		40.5
Total		**349.7**

Figure 3-4: Sales % per market AGI (Communication, 2012)

3.5   The researched unit

The facility is within the group of "Product Fabrication" (PF). The president of HIP reports directly to the CEO of Bodycote. The researcher directly reports to the president of the division and is responsible for the HIP product fabrication. The units are located in Haag, Germany, Surahammar, Sweden, Sheepbridge, UK and in Andover, USA.
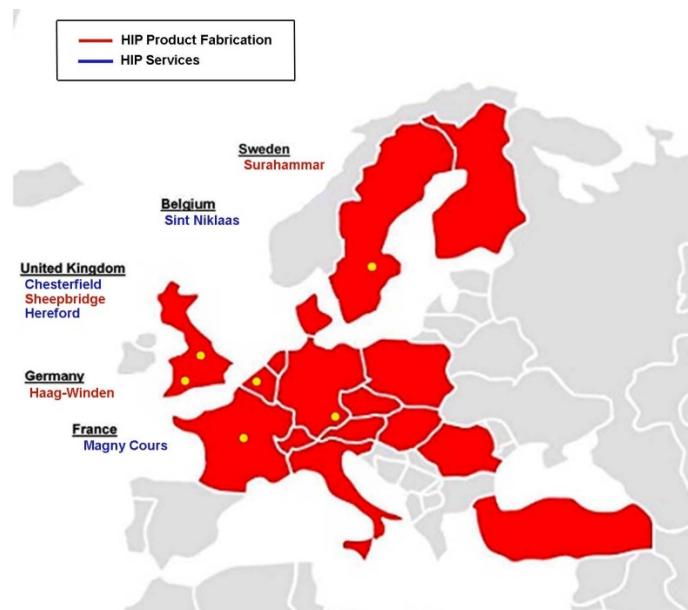
Figure 3-5: HIP Plants in Europe: Product Fabrication in red (Turin, 2013)

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The PF subdivision has an approximate revenue of 40 million euros, of which the majority is generated in Sweden and Germany. While the German facility serves a wide range of markets the Swedish facility is specialized in the oil and gas industry.

3.6 Product and Markets

The HIP powder metallurgy covers the following products in the local unit which is researched in this thesis.

Figure 3-6: Products in powder metallurgy (Turin, 2013)

a. Tool Steels: These are products which are produced in billets to be cut to length in a variety of industries. The consumption depends on automotive and general industry. The last crisis led to substantial destocking of these products and since the restocking of the supply chain between 2009 and 2011 the demand for the product has been flat or declining. The reason for this is that customers seem to use more stockists to buy small quantities and therefore do not carry any inventory.

Figure 3-7: Tool steel billet and Applications

b. Diffusion Bonding: With the HIP technology, any metal combination can be connected together by diffusion bonding. In the HIP oven, the material exchanges atoms and therefore creates a solid bond between the contact surfaces. The same is possible for powder-metal or powder-powder combinations. This is interesting for exotic material combinations or materials which are highly abrasive resistant as the process reduces final machining. The main application is thin film deposition for e.g. flat screen panels or computer chips.
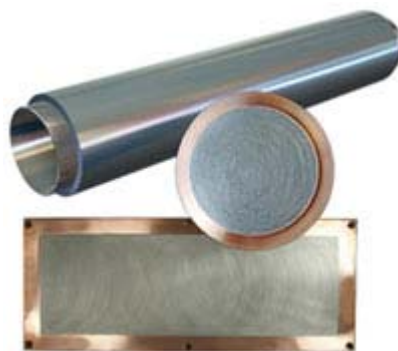
Figure 3-8: Target for electric depositing

c. Near Net Shape (NNS) components: These components are produced by manufacturing a mould and filling it with metallic powder. After the filling the

mould is evacuated and sealed. The HIP process then solidifies the powder. A heat treatment process gives the component its mechanical properties. This process is used in the oil and gas industry due to the reduced machining times and the isotropic properties of the components. The process also allows for implementing features without additional welding. A manifold system can be built with connecting flanges (see Figure 3-9). It is the main growth area for the researched organization due to rising demand from the oil and gas industry.

Figure 3-9: NNS manifold system for the oil and gas industry

While the markets for tool steel and diffusion bonding are declining due to changes in customer behaviour or production moving to Asia, the NNS is still growing (Figure 3-10) due to its low market penetration. Most of the components supplied today are forged, then machined and welded together.
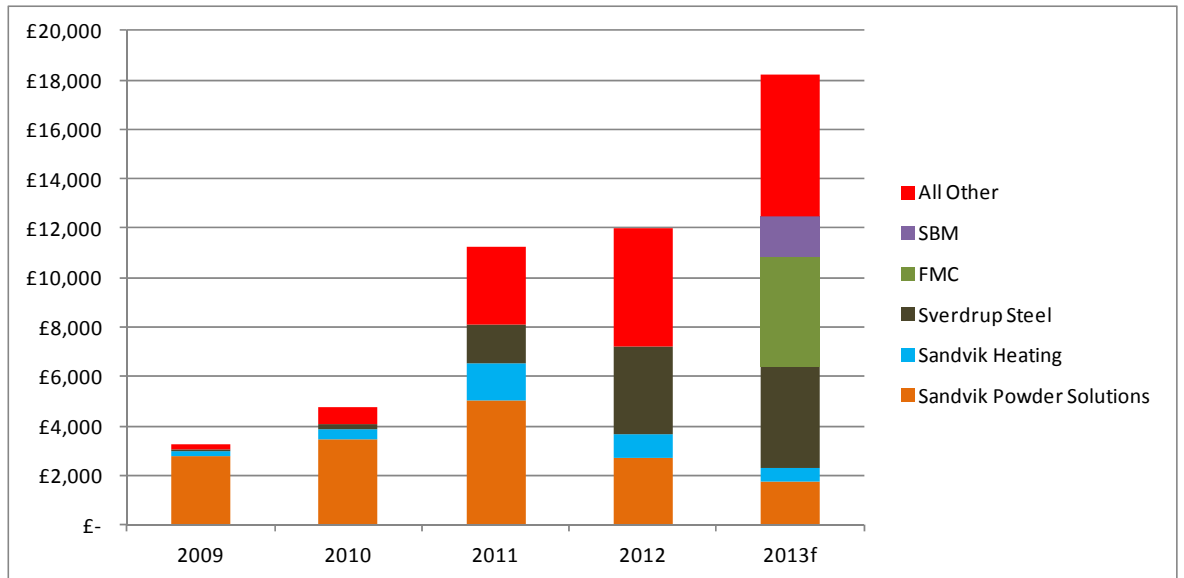
Figure 3-10: Sales of Bodycote HIP AB for NNS (Turin, 2013)

The welding requires frequent inspection of the components which are mostly parts of subsea stations on the sea floor (Figure 3-11).
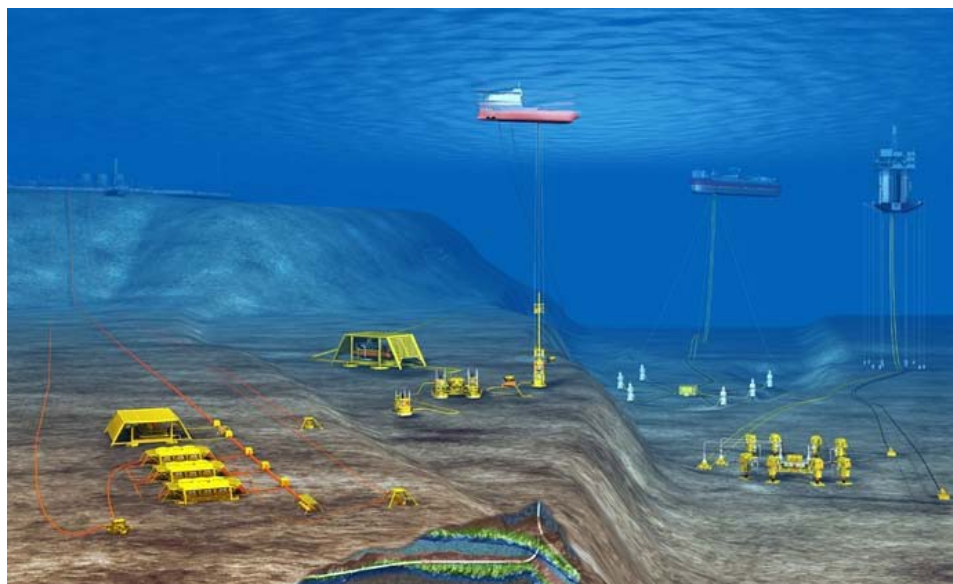
Figure 3-11: Subsea installations for oil and gas (FMC Technologies)

The NNS does not have any welding and therefore inspection cycles can be extended. Another advantage of HIP components is the resistance to Hydrogen Induced Stress Cracking (HISC) which was one of the causes of the Deepwater Horizon accident.

Figure 3-12: 3-Metre manifold weighing about 2 tons

Bodycote HIP AB has the biggest HIP ovens (Figure 3-13) in the western world. There is only one bigger which is located in Japan. There is the possibility of processing components up to 1.7 metres wide and 3 metres high. For manufacturing big manifold systems Bodycote HIP AB is the only source for sourcing such components.

Figure 3-13: A Quintus HIP vessel (Avure Technologies)

3.7 Supply chain and industry interdependencies

Like every manufacturing organization Bodycote HIP AB transforms raw materials into a sellable product. The supply and production process has several steps and the individual steps are not complex.
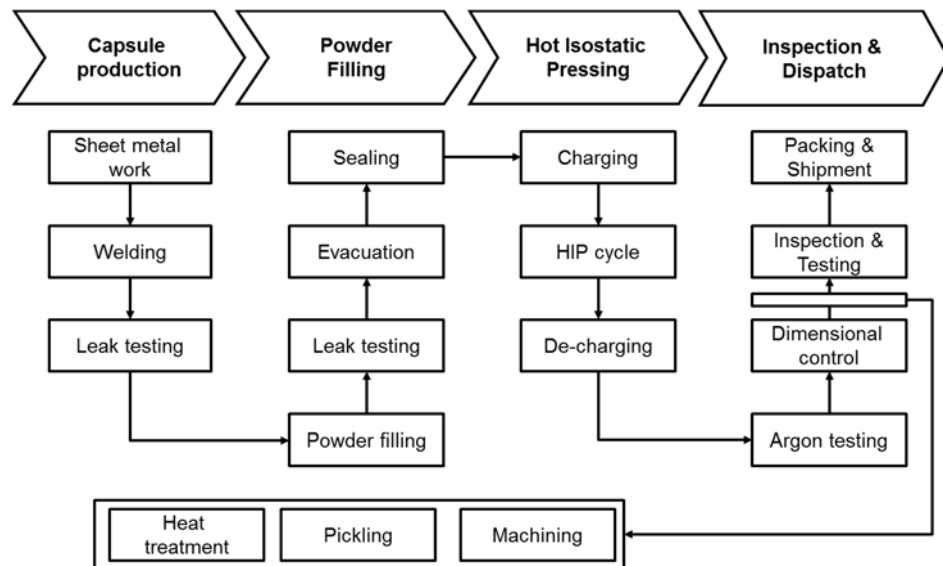
Figure 3-14: Supply chain and production process for an HIP component (Turin, 2013)

The challenges in the oil and gas industry are the qualifying of raw material and processes to the NORSOK standard which is the predominant quality standard in the oil and gas industry. Bodycote HIP AB decided to enter this industry without knowing the implications of the NORSOK standard and it became soon clear that many problems were related to the absence of knowledge within the organization on what the decision to go Tier 1 entailed.

While providing services to the Tier 1 supplier, Bodycote HIP AB concentrated on in-house manufacturing which is easier to manage because everything is located under one roof. With the choice of going Tier 1 the components had to be transported to subcontractors. The ability to synchronize internal and external processes became crucial for the success of the company. The lack of experience of managing complex supply chains represented a major obstacle. Possibilities for internal efficiency improvements had long been disregarded.

There was fundamentally no planning to produce components. This is crucial because of the internal production processes. The first steps in the manufacturing are a flow process, which means that several parts are processed at the same time independently. To optimize the cost at the HIP oven the vessel must be filled to the maximum load. This is important in order to reduce consumables during the process, and as the cycle of the process is about 20 hours there is a fixed yearly capacity.

3.8 Way to market and industrial dependencies

Bodycote uses two powder suppliers, Erasteel-Kloster AB and Carpenter Powder Products AB, to obtain most of their requirements. Both suppliers are also customers of Bodycote in the tool steel market. The dynamic of such a relationship concerning pricing is difficult because any increase of HIP billet costs might entail an increase in the powder cost. Due to the qualification process to the NORSOK standard the choice of procurement source is limited because every material has to be qualified in a lengthy and costly process.

Carpenter has a supply agreement with Sandvik, which is a customer for NNS components for Bodycote. Sandvik has an agreement with Bodycote on the cost of services but is not bound on volumes, which enables them to purchase services outside of the agreement.

The competitive situation (Figure 3-15) is very complicated. The players are supplier and customer at the same time which creates a fierce dynamic and pressure on the pricing even though the growth rates are double digit.
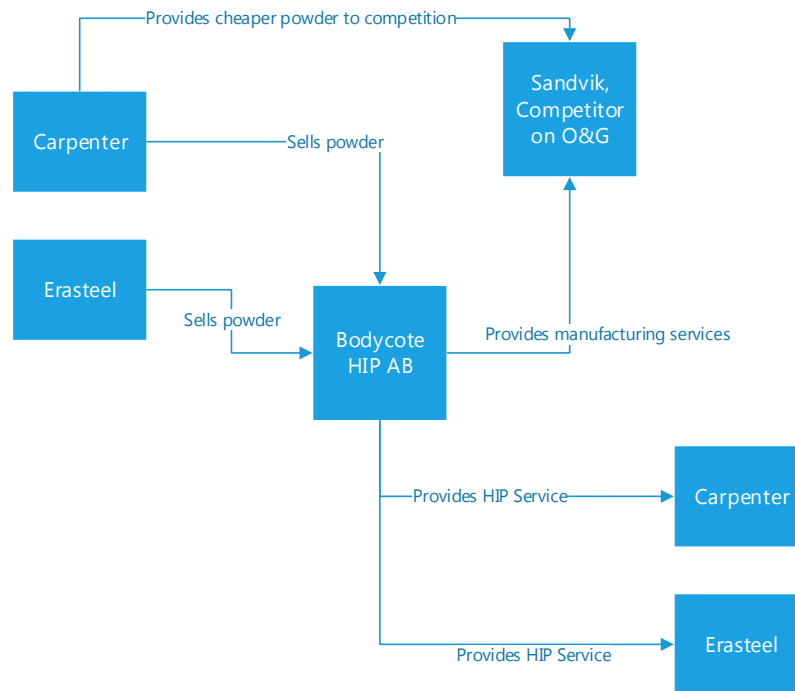
Figure 3-15: Interrelation in the Powder Supply Market

For the sale of its products Bodycote has chosen a multichannel sales structure (Figure 3-16). In this case Bodycote HIP AB uses a distributor of components in Norway. The company Sverdrup caters for HIP components in addition to their other portfolio for all major EPC companies in the area. In addition, a sales agent with intensive experience in the oil and gas industry actively develops leads within the industry. The direct sales to the EPC are managed by an internal sales organization.
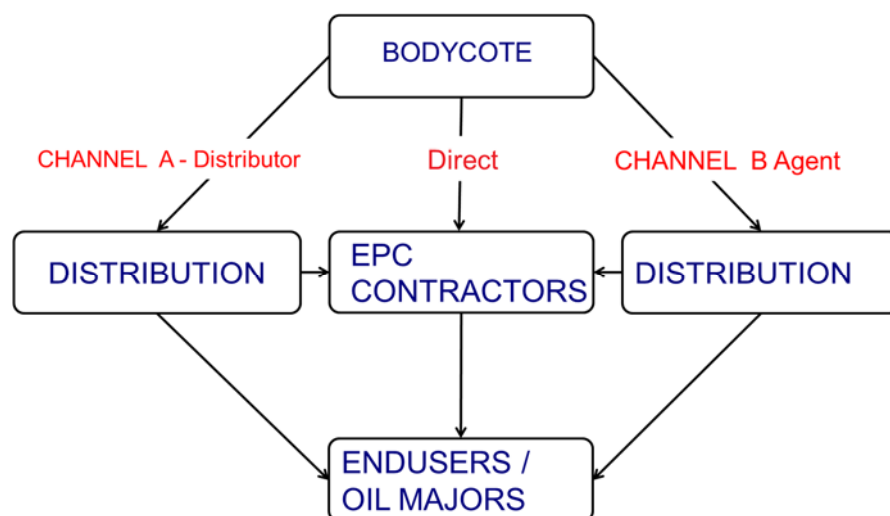
Figure 3-16: Bodycote's multi-channel sales strategy

3.9 Practices and Drivers

The strategic growth of Bodycote HIP AB is driven by its increasing ability to deliver projects at the right quality in short time frames. Some of the traditional markets of Bodycote are in decline and the development of growth areas is essential. The competition has advantages in the specific market, because they have been supplying components for a longer time and have established relevant relationships with key customers. On the other hand, the customers look for a second source because of pricing and backup. Interdependencies and supply agreements with the industry, which is mainly situated in Sweden, create constraints on Bodycote HIP AB which have to be addressed in the strategy. The synchronization of internal and external sales efforts is key to developing customers for the HIP technology. The technology has not penetrated the target market. It is estimated that only 3 per cent of components are made by this technology. There is substantial opportunity to grow the business.

3.10 Summary

The researched company is part of a global corporation which mainly provides services to a variety of industries. The unit is in Sweden and transitions from a service provider to a part manufacturer of complex components. The competitive structure of the market is complex because of supplier-customer relationships within the industry. In the transition process the unit encountered challenges which led to a crisis and problems with achieving the financial targets. This chapter was designed to illustrate the complexity of the environment within the industry and in the corporation. The PMMS which is in place did not account for the transition and the company failed in their commitments to their customers. The research therefore focuses on the previously stated research objectives (2.11) and questions (2.10).

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4 Methods and Methodology

4.1 Purpose of this section

The aim of the research is a definition of current practice in performance management and employee motivation from literature and a definition of a toolbox, based on existing research to improve performance in the researched organisation. Based on this research, key elements of efficient performance management in relation to strategy have to be developed. Further, a strategic goal of the specific organization has to be examined and appraised and linked as well as translated into key performance indicators. Standard approaches for the development of KPIs generally do not consider employee motivation and therefore a concept of linking motivation to company requirements should be developed. This concept should lead to the creation of a toolbox process for a performance measurement system supporting internal alignment and employee behaviour with the organizational goal. For the purpose of the research the analysis is based on a phenomenological ontology and a constructionist epistemology. The researcher is part of a system of a group of individuals and it can be assumed that a group of people based on their value systems and perception of reality creates its own view of the company's performance. Different levels of the organization have different performance information available and this drives the behaviour of individuals and groups within the system. The methodology relies on a focus group study on different levels of the organisation, and derived from there numerical measures for the performance measurement and management system (PMMS). The pros and cons of methodologies and methods for this particular research are not as important as the "fit" to the research objectives in a managerial context.

4.2 Scope & Context

The scope of the research is limited to the single site of a manufacturing unit in which the researcher is not independent but part of the system and able to trigger mechanisms to generate events of change within the system (Henderson, 2011). The company or groups within the company have personal ambitions which bias their behaviour and might compete with the group's objective (Gabriel, 2012).

In a complex system of a manufacturing organization the approach of searching for a single truth or fact is pointless because it has to be accepted that organizations are diverse. Despite hierarchies providing control, members of an organization provide diversity of perspective and have to be empowered to align themselves to the company goals, regardless of their personal agendas and ambitions (Huczynski et al., 2001). Human subjectivity is a determining driver for creating a reality where the individual gives or derives meaning from experiences and events (Gabriel, 2012). The purpose of performance measurement and management systems (PMMS) is to align the experience of past events from which employees and managers have to interpret and analyse the meaning of numbers and propose corrective action in the same way. The organization has to experience success and failure and making sense in a shared experience that is unambiguously commonly interpreted by individuals and groups within the system (Gabriel, 2012).

The research is focused on defining a toolbox system that influences the mechanics within the company to positively generate events for improvement within the current set of conditions. The mechanics or toolbox drives performance by allowing feedback by measured data towards the employees concerned. The aim is to gain an increased understanding of the system and how an operationally deployed system drives or hinders performance. To achieve these current theories based on the TOC, onsite measured data is converted into a model. Measuring the change

within the system based on developed key performance indicators (KPIs) analyses the effectiveness of the proposed framework.

4.3 Philosophy

4.3.1 Purpose of the section

Everybody has a specific view on how they learn about the world and acquire and interpret knowledge. This section analyses how researchers have segregated these views into different ontologies and the consequences for the means employed for achieving the research results. Depending on the chosen philosophical stance the researcher employs different methodologies to obtain the research results. According to Flick (2014) research has the following purpose:

- To clearly isolate cause and effects

- To properly operationalize theoretical relations

- To measure and quantify phenomena

- To create research designs which allow a generalization of findings

- To formulate general laws

Efforts are taken to generate general laws deducted from the cases studied. Observations of phenomena are classified according to their frequency and distribution (Flick, 2014). The resulting ontology for this specific work is justified and the methodology is described.

4.3.2 The definition of ontology, epistemology, methodology and methods

For every research, it is important to define how knowledge is perceived, acquired and interpreted to achieve a valid contribution to knowledge.

Ontology:	Philosophical assumptions about the nature of reality
Epistemology:	A general set of assumptions about ways of inquiring about the nature of the world
Methodology:	A combination of techniques used to inquire into a specific situation
Methods:	Individual techniques for data collection and analysis

Table 4-1: Ontology, epistemology, methodology, methods (Easterby-Smith et al., 2012)

4.3.3 Ontologies

Ontology refers to the philosophical assumptions that a researcher makes about the nature of reality.

- Research separates ontology into four dimensions: realism, internal realism, relativism and nominalism (Easterby-Smith et al., 2012; Saunders, Lewis & Thornhill, 2007).

- Realism operates under the assumption that there is a single truth and this single truth can be unveiled by finding the corresponding facts.

- Internal realism assumes that truth exists but is obscure and cannot be accessed directly although facts are concrete.

- Relativism states that there are many truths and the facts depend on the viewpoint of the observing party.

- Nominalism assumes that there is no truth and all facts are human creations.

4.3.4 Ontology, Epistemology and Methodology

Epistemology is a general set of assumptions about the way the researcher inquires about the nature of the world (Easterby-Smith et al., 2012; Saunders et al., 2007).

	Positivism	**Social Constructionism**
The observer	Must be independent	Is part of what is being observed
Human interest	Should be irrelevant	Is the main driver of science
Explanations	Must demonstrate causality	Aim to increase general understanding of the situation
Research progresses through	Hypotheses and deductions	Gathering rich data from which ideas are induced
Concepts	Need to be defined so that they can be measured	Should incorporate stakeholder perspective
Units of analysis	Should be reduced to the simplest terms	May include the complexity of 'whole' situations
Generalization through	Statistical probability	Theoretical abstraction
Sampling requires	Large numbers selected randomly	Small numbers of cases chosen for specific reasons

Table 4-2: Epistemology (Easterby-Smith et al., 2012, p. 24)

Every research philosophy determines the methodology and method which are used to obtain the required data, analysis and outcomes (Easterby-Smith et al., 2012):

- A strong positivist chooses an experimental method to establish numbers and facts, which then support or falsify the hypotheses which were stated at the beginning of the research project.

- A positivist approach is characterized by using large surveys which result in numbers and words. The data is correlated or regressed by statistical methods. The results support the initial theory or generate a new theory.

- Constructionism focuses on cases and surveys to obtain data in the form of words and numbers. The analysis derives a theory by triangulation and comparison of the acquired data to generate a new theory.

- Strong constructionism focuses on the interpretation of existing data by generating new views on the subject based on discourses and experience.

Ontologies	Realism	Internal Realism	Relativism	Nominalism
Epistemology / Methodology	Strong Positivism	Positivism	Constructionism	Strong Constructionism
Aims	Discovery	Exposure	Convergence	Invention
Starting points	Hypothesis	Propositions	Questions	Critique
Designs	Experiment	Large surveys; Multi cases	Cases and surveys	Engagement and reflexivity
Data types	Numbers and facts	Numbers and words	Words and numbers	Discourse and experience
Analysis / Interpretation	Verification / Falsification	Correlation and regression	Triangulation and comparison	Sense-making; understanding
Outcome	Confirmations of theories	Theory testing and generation	Theory generation	New insights and actions

Table 4-3: Linking Ontologies, Epistemologies & Methodology (Easterby-Smith et al., 2012, p. 25)

Realism consists of the epistemology of positivism which assumes that a real world exists outside and it is measured quantitatively by objective and value-free means (Easterby-Smith et al., 2012). The researcher is therefore independent from the system which is examined and problems can be reduced to the simplest possible elements (Hjørland, 2005). A positivist approach provides a high level of focus to explain a specific phenomenon in a controlled environment (Flick, 2014). To classify causal relationships and establish their validity it is important to control the conditions under which the phenomena occur as well as are possible. The researcher`s influence must be limited as far as possible to guarantee the objectivity of the study (Flick, 2014). A strong positivist approach is quantitative and uses experiments to obtain data which then is statistically processed (Henderson, 2011; Mearns, 2011). The positivist uses large surveys and multiple cases which are then processed mathematically to generalize the findings. Within a positive approach the subjective view of the researcher and the participants must be eliminated as far as

possible (Flick, 2014). Scientific research in many fields has relied exclusively on empirical research designs which were mainly based on standardized surveys. These generated vast amounts of data which correlate relations and variables and conditions under which they were valid. The aim was mainly to capture the frequency and distribution of phenomena within the tested group. Whether the standards of quantitative research helped to clarify the research objectives and questions they were connected to was not examined (Flick, 2014). Qualitative research in a positivistic setting can be used to generate a clear correlation between cause and effect. The research designs allow the reduction of the researcher's impact on the data and subsequently allow for the generalization of the findings and the formulation of general laws, because of the objectivity achieved. The occurrence conditions of the phenomena are controlled as far as possible and the phenomena observed are classified by statistical means (Flick, 2014). Strong-positivism relies on empirical and perceptual data, seeking verification of a theory. A single methodology includes experiments, observation, an ethnological research with the viewpoint of the researcher, and surveys to obtain relevant data. The analysis of the data can be a deductive or inductive process. Post-positivists employ the same methodologies as positivists while allowing for the falsification of the theory by utilizing not only deductive, inductive and abductive processes (Easterby-Smith et al., 2012; Saunders et al., 2007) but also a mix of deductive and inductive ones (Gray, 2009). There is an increasing disenchantment with positivist methods due to their low applicability and the problems of connecting results to theory as well as social developments. The results of the research are rarely applied in everyday life as they do not provide more insight than everyday theories (Flick, 2014). In comparison to positivism, in post-positivism the researcher tries to stay as neutral as possible but accepts limitations to their independence from the system which is researched (Easterby-Smith et al., 2012). Only events which can be physically

observed are acknowledged as existing (Gabriel, 2012; Henderson, 2011; Mearns, 2011). There is the assumption that a universal closed system exists and can be analysed by quantitative methods (Henderson, 2011; Mearns, 2011). A further criticism of a positivist view is the underlying assumption that human actions and events do not fit our self-understanding (Easterby-Smith, Thorpe & Lowe, 1991) and therefore cannot be investigated purely quantitatively. All people have motives and ambitions which might compete with the requirements of the larger system or group (Huczynski et al., 2001). In relation to this, the reduction of a problem to the simplest explanation and the independence of the observer can lead to wrong conclusions because people tend to construct a reality according to their experience and bias (Huczynski et al., 2001). The assumption that by pure quantification of a theory a universal solution can be found (Henderson, 2011) in the context of management research seems to be flawed.

Critical theorists, born out of the Frankfurt School, sought to critique the impacts of society and technology on human development. It is argued that society leads to an unequal system which is invisible to people as they cannot see the changes (Feenberg, 2002). People are driven to a behaviour that does not reflect their real needs and wants. The critical theory's main contribution in management and organizational research focuses on the interest of the least powerful and criticizes the motives of the powerful (Easterby-Smith et al., 2012). Critical theorists rely on capturing the social reality and applying a single method. The methods employed are observation, activism, the promotion of change, and dialectic, a method of argument to resolve a dispute. The result is that ideologically based change stems from the effects of society and technology on human development. It questions the distribution of power within society and organizations, in particular the influence of power groups or individuals determining truth or reality. It argues that the powerful may show concern for the less powerful by emancipatory communication and

exchange. It has its relevance for how knowledge is determined by political or knowledge-intensive organizations (Easterby-Smith et al., 2012). The critical theorists investigate macro level phenomena of organizations, which makes this approach unsuitable for the research at hand.

Critical Realism is adopted by many researchers in the field of management and organizational research because of its median position between positivism and relativism. It contains aspects from both positivism and constructivism (Gabriel, 2012). It realizes that social conditions have real impact and actions and events take place whether observed or not. People's perceptions are never value-free and the difference between the reality of one person or group varies depending on the value system of those concerned (Gabriel, 2012). Critical Realism wants to link generative mechanisms to actual events in a causal analysis (Henderson, 2011). More importantly it accepts that there is a causality between events and that many underlying mechanisms employed do not reflect the interests of ordinary people, and a reality exists on a deeper level that prevents direct observation (Aastrup & Halldórsson, 2008; Mearns, 2011). The activation of causal mechanisms and the subsequent events depend on current conditions (Henderson, 2011). However, the exposure of causality can provide the opportunity of emancipation from their effects (Easterby-Smith et al., 2012). As reality can never wholly be accessed and discoverable the researcher uses a methodology of theory and experiment (Gabriel, 2012). In management research this epistemology challenges the current conditions or frameworks which differentiate levels within a phenomenon. This leads to an eclectic approach of research methods (Easterby-Smith et al., 2012). Critical realists employ empirical studies and allow for multi-methodologies while seeking system comprehension. This combines positivist and constructionist features in terms of methodologies and methods (Adamides, Papachristos & Pomonis, 2012). The methods include a single method or combination of experiments, observation and

surveys to obtain relevant data. The research is driven by questions that generate new theories and confirm these within the research (Easterby-Smith et al., 2012). This philosophy is based on the idea that a causality exits as a potential and not as a direct cause and effect relation between events which is a feature of positivism (Aastrup et al., 2008). It draws from the critical theory that many underlying mechanisms and assumptions within the organizations do not support the efforts of employees and make them visible and the organization can emancipate from these effects. Critical realism has been adopted in the field of management research due to its compromise between stronger versions of positivism and constructivism (Adamides et al., 2012). It realizes that individuals, by their actions, create a reality influenced by social conditions, observable or not. This approach uses a variety of methods to generate a new theory (Easterby-Smith et al., 2012). The stance of critical realism is frequently taken within the realm of management research because of the possibility of a mixed method approach to understand the researched phenomena (Flick, 2014).

Constructivism is based on the absence of objectivity as reality is socially constructed and its meaning is given by the individual or a group of people (Gabriel, 2012; Guba & Lincoln, 1994). People based on their bias and experience determine reality by the means of sharing these with others. Reality is therefore not objective or dependent on external factors but a mental construct as meaning is derived from internal and external factors within the individual or group. That a reality is constructed does not make it less real. The aim of constructivism is understanding and reconstruction of constructions (Guba et al., 1994). The researcher is part of the system and also influences the participants and cannot be separated from each other (Gray, 2009; Lincoln & Guba, 1985).

The researcher therefore focuses on the analysis of patterns and how often they occur. In the focal point are the individual and groups of people, their experiences,
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their feelings and thinking, taking into account their verbal and nonverbal communication (Gray, 2009). Human action is driven based on the way these people make sense of their environment and external injections (Easterby-Smith et al., 2012). The researcher is less concerned with a larger impact but focuses on the specific case with "contextual description and analysis" (Gray, 2009 p. 28) The constructivists reject the view that the observer can be independent of the system, asserting that he or she is an integral part of the system to be researched and is a participant and facilitator (Guba et al., 1994). Human activities are best understood from inside than being an outside observer (Gabriel, 2012). Knowledge is created by interaction of the researcher with interviewees (Guba et al., 1994). The research is time and context bound because the researched entity is in a "constant "mutual and simultaneous shaping" (Lincoln et al., 1985, p. 37), which therefore makes it impossible to establish a cause–effect relationship (Lincoln et al., 1985). Constructionism focuses on specific cases and surveys which are analysed by triangulation and comparison. Strong constructivism relies on the interpretation of discourse and experiences (Easterby-Smith et al., 2012). Constructivist methodology consists of case(s), multi-methodologies, and ethnological research with the viewpoint of the research object. The methods include hermeneutic dialectic (Guba et al., 1994), the interpretation of written texts, ideographs, the interpretation of signs, or observation. The research is focused on a new interpretation of existing knowledge (Easterby-Smith et al., 2012; Saunders et al., 2007). A pure interpretation of behaviour, as described in a constructivist setting, is not sufficient to encompass the entire scope of the system. All organizations are measured against numbers which are perceived as a determination of success or failure by internal or external stakeholders (Goldratt, Cox & Whitford, 1986; Kaplan et al., 1996). For the research in hand this approach is not suitable because the interpretation of existing knowledge to the specific situation seems to be flawed. Due

to the uniqueness of the case a generalization is not possible (Lincoln et al., 1985). The case study can be used as an injection by a reader into a similar situation to compare and infer applicability to its context (Lincoln et al., 1985; Lincoln & Guba, 2002).

Nominalism refers to an epistemology of hermeneutics/interpretivism/post-constructivism which states that the real world can only be perceived and its working is a human construct. The researcher mainly focuses on the interpretation of facts. To understand these facts, it must be understood in which external circumstances these facts were created. The external context during the fact generation therefore determines their meaning (Easterby-Smith et al., 2012).

4.3.5 Summary of the section

The research inquires into an organization within a managerial context. In particular, how current strategy is deployed within the organization is examined and performance is accordingly measured and managed. The process of strategy deployment collides with employee behaviours towards the strategy deployments and related measures and creates a chasm between the company's required performance and what employees think the performance can be. The group dynamic in the researched organization and the targets set created a dysfunction of the official performance management system and the creation of a parallel unofficial target-setting mechanism. The research therefore requires a combination of methods to investigate employees' knowledge and identification with the organization before engaging in a deployment process of performance management. In literature, these issues are treated separately. A large number of resources can be found explaining the process of implementation and they often touch on key words like engagement or involvement of all members and levels of the organization. On the other hand, much literature can be found explaining how to

create employee engagement and motivation. As is described in Lincoln et al. (1985), the researcher is part of the system and therefore influences the results. The system is in constant motion and changing according to the inquiries of the researcher. This makes the case specific, time and context bound, and in line with Lincoln et al. (2002) it cannot be generalized.

4.4 Methods

4.4.1 Purpose of the section

How the research process is built has to be established. There are different thinking processes to enable a researcher to achieve a result, by either testing an existing theory or generating new theories from the generated data.

4.4.2 Method design

A clear research method design encompasses a plan for collecting and analysing evidence that answers the research questions. In this design the following components have to be considered (Flick, 2014):

- The goals of the study

- The theoretical framework

- The concrete questions

- The selection of empirical material

- The methodical procedures

- The degree of standardization and control

- The generalization goals

- The temporal, personal and material resources available.

Gray (2009) distinguishes three types for research designs, which are experimental (Chow, 2010), quasi-experimental (Baldwin & Berkeljon, 2010) and non-experimental (Lobmeier, 2010). They are differentiated by the choice of the sample group and the ability to manipulate variables within the experiment (Creswell, 2009; Gray, 2009). The experimental design is considered superior to the others because the randomization improves the results of the research. In an organizational context, however, differentiating variables between groups can only be observed but not manipulated. They have to be seen as independent variables (Gray, 2009). Creswell (2009) refers to four main variables: independent, which are causes or influences;

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dependent, which are results or effects of the independent; mediating, which connect the independent and dependent variables; and finally moderating, which are constructed by the researcher (Creswell, 2009). During the design of the study the variables relate to the research questions (Creswell, 2009).

Constructionism uses quantitative research which can formulate more specific subject- and satiation-related statements that are empirically well founded (Flick, 2014). Essential features of quantitative research (Flick, 2014) are:

- the appropriate choice of methods and theories
- the recognition and analysis of different perspectives
- the researcher's reflection on contributions towards knowledge
- a variety of approaches and methods

The chosen methods and theories must be appropriate to cope with the complexity of the problem. As stated earlier, the organization and its employees' behaviour are a complex system in which many variables can influence the overall performance and therefore the study object determines the method design (Flick, 2014). The design has to be sufficiently open to allow for the complexity and the presentation of variables in their entire contexts. It should capture a variety of perspectives on the topic and accept that operational practices might derive from viewpoints because of the context participants might have on the matter (Flick, 2014). The researcher is a part of the knowledge and an influencing variable in which observations and actions as well as irritations or feelings become data on their own (Flick, 2014).

Qualitative research does not represent unified theoretical and methodological concepts. It encompasses various methods and theoretical approaches are part of the discussion and research practices. The variety of approaches originates in the historical development of quantitative research (Flick, 2014).

It is therefore possible to combine quantitative and qualitative methods in research, which process is called triangulation or mixed methods. Participants may take part in interviews and before or after them may take a survey. The results of both may be interlinked with a typology of a survey (Flick, 2014) and support each other. This can be used to show a broader picture of the subject or investigate specific issues within the research. Specific results might be generalized with the combination of different methods, or help to clarify the correlation between variables. Quantitative or qualitative methods might be appropriate at different stages of the project and can show a relationship between micro and macro levels in substantial levels of the research (Flick, 2014).

4.4.3 The inductive process

The inductive thinking process is a bottom-to-top process that moves from observations, from which a pattern is derived, to a tentative hypothesis which results in theory generation. The process starts from a single particular instance and moves to a broader generalization. Inductive processes are biased by the limitation of personal experience and knowledge. The inductive methodology does not seek the corroboration or falsification of a theory (Gray, 2009).

4.4.4 The deductive process

The deductive thinking process is a top-down process of one or several general premises which allow a certain conclusion. The first step is the development of principles and ideas, which in a second phase are operationalized and made measurable. Hence to improve performance within the organization it has to be agreed what performance means within the context of the system. From a theory, a hypothesis is developed and by observation the theory is confirmed or falsified. Deductive arguments are evaluated based on their validity and soundness because

deductions can be logical but not sound in themselves (Gray, 2009). Table 4-4 describes the process of deduction within an organizational setting.

4.4.5 The abductive process

Abduction is the explanation of an observation which is the most likely to fit the current situation. The observed consequence abducts a hypothesis of the most likely causality. The term was introduced by the American philosopher Charles Sanders Peirce as "guessing".

4.4.6 The combination of inductive and deductive processes

The use of a combination of both inductive and deductive methods is possible. The researcher can gather a set of facts and data from which inductively a hypothesis or theory is developed. From there a related theory can be tested by a deductive method (Gray, 2009).

Initially the inductive process is used for generating criteria derived from the literature research. The literature showed internal conflicts in performance management research which create problems in development, deployment and sustainability. It is attempted to logically present the findings of the literature research with the support of TOC.

The data gathered from the research is examined to the extent that it fits the previously developed criteria or theory. This process may confirm or falsify findings of the literature research, research objectives and research questions. According to the results a new, improved theory might be developed to be field tested within the organization. Therefore, a combination of inductive and deductive processes is necessary.

Stages in the deductive process	Actions taken
Organizational mission	Read and take into account
Theory	Select a theory or set of theories most appropriate to the subject under investigation
Hypothesis	Produce a hypothesis (a testable proposition about the relationship between two or more concepts)
Operationalize	Specify what the researcher must do to measure the concept
Testing by corroboration or attempted falsification	Compare observable data with the theory. If corroborated the theory is assumed to have been established
Examine outcomes	Accept or reject the hypothesis from the outcomes
Modify theory if necessary	Modify theory if the hypothesis is rejected

Table 4-4: Summary of the deductive process within an organizational context (Gray, 2009, p. 16)

4.4.7 Section summary

The first step of the research is a bottom-to-top process that determines the gaps between the strategic deployment within the organisation and the perception and understanding of employees regrinding the importance of strategy and its related indicators. Therefore, from an initial hypothesis a theory is developed which indicates the gaps within the current understanding of strategy deployment and performance measurement. In a second step a top-down process must be defined on how to improve the situation, if necessary, to increase the impact of the performance management process to achieve an overall improvement of the organizational performance. A mixed approach of inductive and deductive process is used.

4.5 Research strategy

4.5.1 Purpose of the section

This section justifies the choice of methods employed in this research. It compares different methods and establishes criteria for choosing the relevant ones according to the scope and context of the research. The aim of the section is to propose guidance for data acquisition. Input from different levels of the organization is required and therefore a mixed method is proposed to obtain the input data. Depending on the chosen philosophical stance, the researcher employs different methods to obtain the research results.

4.5.2 Surveys

Quantitative research tries to develop standardized models of a cause-and-effect relationship. The planning for such research requires the proper isolation of this cause-and-effect relationship to enable the operationalization of theoretical relations as well as the generalization of the findings about the measured and quantified phenomena. The purpose is to formulate general laws and therefore statements should be made as generally as possible about the studied cases, and the conditions under which the data is acquired have to be controlled as far as possible. This also allows causal validity to be established (Flick, 2014). In areas like finance and manufacturing operations where clear causal relations can be found quantitative models do provide support for decision-making (Sharma, 2010). The researcher has to be independent of the researched phenomena in order to avoid influence and provide objectivity to the research. This research method is rooted in psychology and social science and has produced large quantities of data. There is a certain disenchantment with this approach because of the problems of operationalization of findings (Flick, 2014). As stated earlier, a further criticism of a positivist view is the underlying assumption that human actions and events do not

fit our self-understanding (Easterby-Smith et al., 1991). All people have motives and ambitions which might compete with the requirements of the larger system or group (Huczynski et al., 2001). In relation to this the reduction of a problem to the simplest explanation and the independence of the observer can lead to wrong conclusions because people tend to construct a reality according to their experience and bias (Huczynski et al., 2001). The assumption that by pure quantification of a theory a universal solution can be found (Henderson, 2011) in the context of management research seems to be flawed. In addition, the researcher is part of the system researched and therefore a controlled and independent research environment cannot be guaranteed. In the specific case a survey might support findings but cannot be the core of the data acquisition.

4.5.3 Case studies

Schramm (1971) refers to a case study as the effort to draw an explanation of a set of decisions and why they were taken. Following a case study (Yin, 2009) is an empirical investigation that analyses phenomena within a certain context which can be more or less defined. The case study approach encompasses systems of many variables. It does not focus only on data points and therefore relies on many different sources which converge by triangulation. A case study may rely on previous propositions and data to enable the analysis process (Yin, 2009, p. 18). A case study can provide a profound understanding of a single case or set of cases and derive learning about real world behaviour and its meaning (Yin, 2012). The choice of a case study method is valid if the research question is a descriptive or explanatory one, e.g. why or how something has happened. Secondly, it is chosen if the study investigates a phenomenon within a certain context, and thirdly it is used in conducting evaluations for government bodies (Yin, 2012). Despite its rich results and explanations the case study has not gained ground due to the fact that it is considered the exploratory phase for other social science methods (Yin, 2012). It is

further challenged by doubts as to the methods applied to achieve the results as the method is too exposed to the researchers' bias (Yin, 2012). It is therefore necessary to design the case study to ensure its validity in its construct, externally, internally and as regards its reliability (Yin, 2012).

In Yin (2009) three different types of case studies are differentiated. The explanatory or causal case study attempts to analyse a certain phenomenon within its context and tries to establish a causal relationship between decisions and their effects. The descriptive case study scrutinizes a phenomenon and connects it with an existing theory. The exploratory case study leads into the research question and prepares the adjacent research which could follow a different method (Yin, 2009, 2013).

Case studies concentrate on single topics which are of interest by their uniqueness. The case study does not seek to generalize because of its uniqueness. It is an in-depth exploration of a topic in its complexity and requires an investigation from multiple perspectives. The objective is the fundamental understanding of the subject (Thomas, 2011). It is suggested that the main difference between case study and other research methods is the small number of cases which are investigated and the quantity of specific information which is collected about these (Thomas, 2011). A certain issue or problem is linked to an existing theory (Yin, 2012). Case studies use a multi-method approach to gather and analyse data. Sometimes a storyboard (Figure 4-2) can be used to outline the investigation and to generate ideas and thoughts to progress to the core of the case. Case study research is driven by the assumption that a certain phenomenon is more than the sum of its parts and it might not be possible to break or reduce it into single components. It strives for wholeness and context (Figure 4-1) to give an understanding of the complexity (Thomas, 2011). System thinking, like TOC, is therefore a methodological tool which supports case studies, providing route maps to analyse data. The thinking of the system specifically addresses the requirements for holism in explaining and simplifying

complexity. Some system thinking methods also provide the possibility to analyse the current reality and transition to a required state (Dettmer, 2007). In the context of ecological psychology an ecological system theory is described as the individual being part of a system in which a set of rules instructs individual behaviour and provides explanations in a social environmental context.
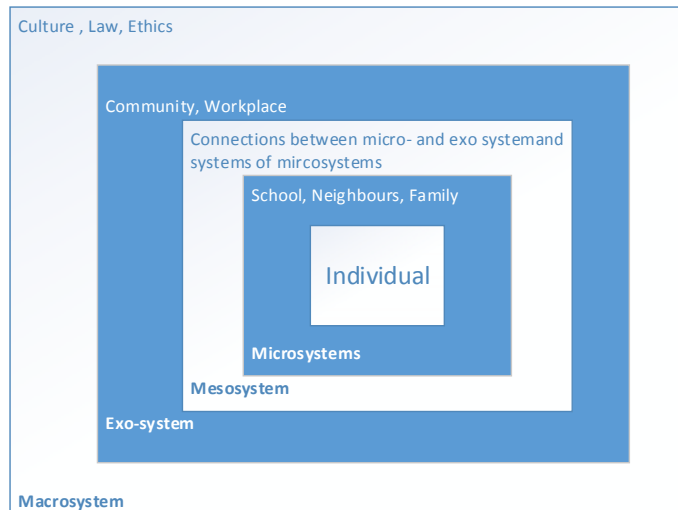
Figure 4-1: Bronfenbrenner`s ecological systems (Thomas, 2011, p. 58)

In case study triangulation it is a prerequisite to view the case from different perspectives. As stated earlier, the case study focuses on a specific topic but drills down to the core by using different methods (Thomas, 2011).

A case study uses a variety of sources for data acquisition and is not limited to one, such as in the use of questionnaires. Yin (2012, p. 10) refers to six different sources of evidence exhibited in Table 4-5.

Type	Example
Direct Observation	Human actions, physical environment
Interviews	Open-ended conversations with key participants
Archival Records	Student records, employee records
Documents	Newspaper articles, letters, e-mails, reports
Participant observation	Role as a researcher as well as the real-life role
Physical artefacts	Computer downloads of employees' work

Table 4-5: Six common sources of evidence in doing case studies (Yin, 2012)

Case study research can be done on one or multiple cases (Table 4-6), which also can be embedded:

Table 4-6: Main types of case study design (Gray, 2009, p. 256)

Type 1: The single case study, holistic: Can be chosen if the case is critical and allows the testing of a theory or is unique and revelatory or a precursor for future research (Gray, 2009).

Type 2: The single case study, embedded: Can be used to compare a certain condition, issue, problem within different units of analysis (Gray, 2009).

Type 3: The multiple case, holistic: Can be used if instead of using the units of analysis as a starting point the condition, issue, problem is (Gray, 2009).

Type 4: The multiple case, embedded: can be used to separate units of analysis and conditions, issues, problems into multiple case studies (Gray, 2009).

Determined by its uniqueness and importance for the development of the entire organization, a single holistic approach would be suitable for the research in hand.

Because the primary distinction between case studies is the single or multiple case study, direction, as follows, is needed before the actual start of the research. A single case study is a valid design if it fulfils five single case rationales. The case has to be "critical, unusual, common, revelatory or longitudinal" (Yin, 2013, p. 51). For a critical case (Mills, Durepos & Wiebe, 2010; Zivkovic, 2012) it is required that it is related to a theory or a theoretical proposition that determines a framework in which these assumptions are valid. The contribution of the research then is to examine the validity of the propositions and the possibility of an alternative explanation that might be more appropriate (Small, 2009; Yin, 2013). Secondly, a very unusual situation or event which has no comparison can be the basis of a single case study. The uniqueness of the situation and its analysis of actions taken during the event might provide insights into normal processes and behaviour which contributed to the development (Small, 2009; Yin, 2013). Thirdly, a case study of very common situations can provide understanding about everyday relationships within the research subject (Small, 2009; Thomas, 2011; Yin, 2013). Fourthly, the revelatory case could provide new information about an environment or subject which has not been accessible before that study (Small, 2009; Thomas, 2011; Yin, 2013). The fifth rationale for a single case study is the longitudinal case, which refers to the study of the same case but at different periods of time. The theory would predict how certain conditions and underlying processes change over time periods, which are

anticipated by the change and its effects (Yin, 2013). The single case, due to its focus on a specific event or phenomenon, has to be planned with great thoroughness (Mills et al., 2010) to avoid misinterpretation because the case has not developed to the initial intention (Small, 2009; Yin, 2013). Single cases can be used to support or contest a theory (Zivkovic, 2012).

Multiple case studies are recommended because they establish better validity (Eisenhardt, 1989, 1991; Yin, 2009, 2012, 2013). The way the data is acquired requires attention to ensure that the cases are representative of the subject in hand (Small, 2009). These are sampling logics concerning how the cases were chosen and consistency in data acquisition, such as similar or related questions (Small, 2009).

To plan and design the case study Thomas (2011) recommends a storyboard, e.g. the example of the researched company in Figure 4-2. This helps to brainstorm on the case and sort ideas and refine the research questions (Thomas, 2011).
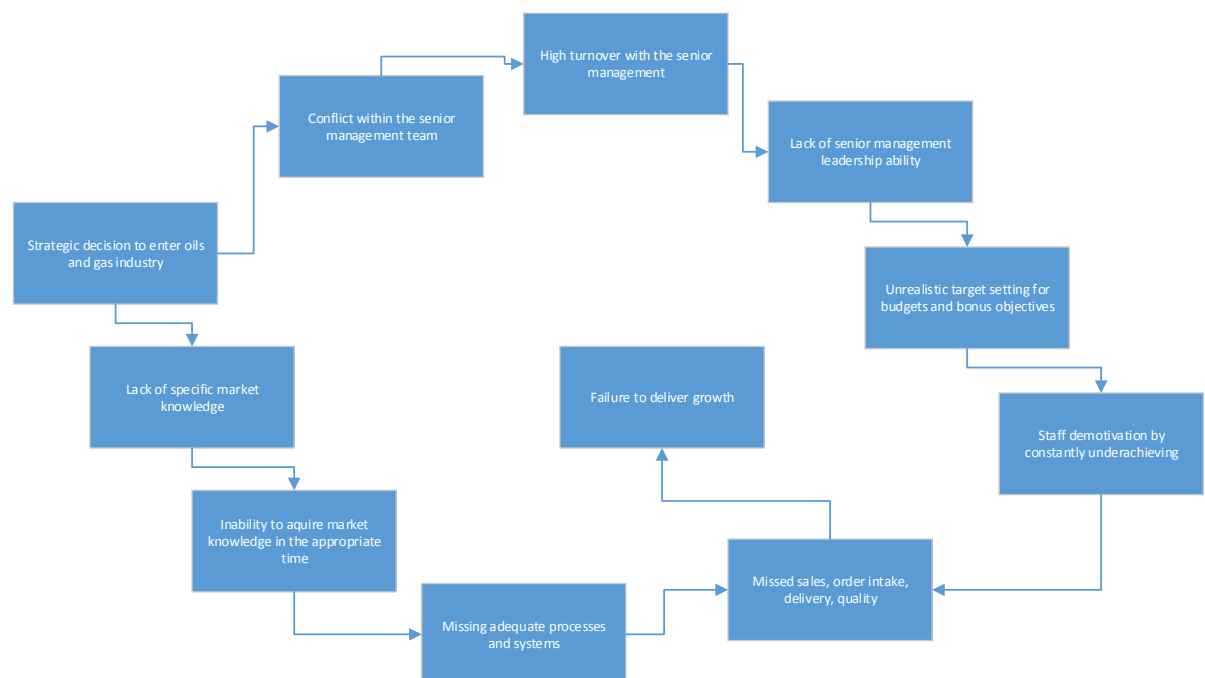
Figure 4-2: Storyboard design for case study applied to the specific research project (Thomas, 2011)

Thomas (2011) proposes the following case study build or selection described in Table 4-7:
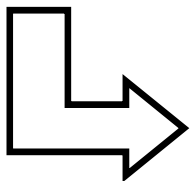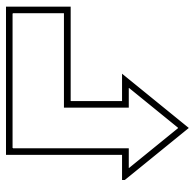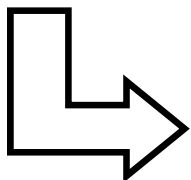
Subject (Thomas) / Rational (Yin, 2013)	Purpose	Approach	Process
Special/Unusual (Yin, 2013) or Outlier Case (Thomas, 2011) **Common (Yin, 2013) or Key Case (Thomas, 2011)** **Revelatory (Yin, 2013) or Local Knowledge (Thomas, 2011)**			
	Intrinsic **Instrumental** **Evaluative** **Explanatory** **Exploratory**		
		Testing a theory **Building a theory** **Drawing a picture, illustrative** **Descriptive** **Interpretative** **Experimental**	
			Single or Multiple Case: • **Nested** • **Parallel** • **Sequential** • **Retrospective** • **Snapshot** • **Diachronic**

Table 4-7: Kinds of Case Study – Simplified, adapted from (Thomas, 2011)

Action science (AS) aligns with collaborative management research (CMR) (Shani, Coghlan & Cirella, 2012) or Participative Action Research (PAR) (Gray, 2009;

McTaggart, 1994) as several individuals and groups are involved and needed (Pascale, Millemann & Gioja, 1997) in the process. Both need a problematic situation or an opportunity for development as a starting point to enable change and generate actionable knowledge (Shani et al., 2012). According to Shani et al. (2012) AS and CMR have different foundations but in the specific case the employee team of the company has to resolve a "red and hot" topic while the researcher uses this as part of the AS. In the specific case a group of employees and key stakeholders are brought together to map out the current state, or Current Reality Tree (Cox et al., 2010; Dettmer, 2007; Goldratt, Eliyahu, 2009; Goldratt, E. et al., 1986; Gray, 2009; Schragenheim et al., 2000), and define a desirable future state or future reality tree (Cox et al., 2010; Dettmer, 2007; Goldratt, Eliyahu, 2009; Goldratt, E. et al., 1986; Gray, 2009; Schragenheim et al., 2000) in a workshop. Actions and measures (PMMS) (Holian, 1999) are derived from this to evaluate the progress of the AR. This progress is arranged by introducing theory to the participants, who then act as a focus group (Krueger & Casey, 2009) for the researcher.

4.5.4 Action research

The purpose of this section is the explanation of action research as a research tool. As opposed to a case study, the researcher conducting action research is part of the system, often a practitioner (McNiff & Whitehead, 2011; Mills et al., 2010; Reason & Bradbury, 2008; Wadsworth, 1998) .

Action research methodology is about the analysis of the world and tries to induce change. It analyses a specific problem and tries to change it for the better. It not only analyses the status quo but also questions possibilities for change. The researcher is not only an observer but also a change agent involved in the change process. Action research uses a wide range of methods to acquire data (Easterby-Smith et al., 2012; Gray, 2009). Compared to other methods, action research commences with very little information and strives for the holistic understanding of

complex social systems. Action research is often based in an organizational context, in which practitioners try to improve professional practice (Gray, 2009). According to Gray (2009) there are three common properties:

a. Researchers are part of the system (internal action research) or partnering with an individual being part of the system (external action research)

b. The researcher initiates change

c. Participants generate data from their direct experience

The participants have to be involved, not only in the data collection, but also in the consecutive change process and its methodology. Action research has the advantages that participants and the researchers have an intimate knowledge of the organization. Researchers may drive the research in the organization without the others being aware that they are being researched (Gray, 2009).

There are different types of action research and the possibly relevant ones are introduced here. In addition to internal and external research there is action science which integrates practical problem solving with theory building and change. This form integrates the use of knowledge in order to foster a learning organization (Gray, 2009). Management action science (MAS) (Aldag, 2012) emphasises the value for both science and business by addressing current challenges and producing favourable results. The action researcher contributes to knowledge by applying a theoretical perspective and its validation or falsification in a business environment. Problems often arise if the original content has to be changed in order to obtain short-term results. Action science relies on interpersonal relationships but also needs internal support to control the change efforts (Gray, 2009). Action Science (AS) is suitable in management research where the researcher has to produce results satisfying the academic and practitioner worlds. It attempts to combine resolution of performance problems and theory building and change (Gray, 2009).

The acquired knowledge has to be applicable in practice and the role of the researcher is not likely to generate conflict due to the role of the researcher as colleague, change agent or supplier (Gray, 2009). Action research might not present finalized answers to a problem but uncover several realities. The information collected is probably be interpreted differently depending on the personal experience of the individual researcher.

The co-operative inquiry (COI) involves all the stakeholders in the data acquisition and a sense-making process for the research and the resulting actions and initiatives (Reason et al., 2008). COI emphasizes the collaboration between the researcher and the participants. The process focuses the research with people and not on people (Gray, 2009). Members of the group have to develop an open and honest appreciation in the research process. That depends not only on the framework of the research but the personal relations between the participants and their ability to engage in the process, leaving behind their biases and agendas (Reason et al., 2008).

Participative action research (PAR) is the effort of involving the participants in the process of data collection and analysis. It is the attempt to achieve transformation in an egalitarian manner. It is often used in the social change and transformation efforts of large agencies (Gray, 2009; McTaggart, 1994).

Action research is about changing and improving a current situation by analysing the data (McNiff et al., 2011; Reason et al., 2008). Management is about change (Kotter, 1995; Stone, 1995) and AR is a tool used when there is a need for action and an intervention is expected as part of the process of improving a current condition (McNiff, 2013; Pålshaugen, 2006; Wadsworth, 1998) and where system thinking is required (Cox et al., 2010; Dettmer, 2007; Garvin, 1993; Goldratt, Eliyahu, 2009; Goldratt, E. et al., 1986; Hayes & Garvin, 1982; Schragenheim et al., 2000). The movement from a current status quo to a desired state requires a creative

moment of transformation (Gustavsen, 2005; Wadsworth, 1998) and the joint learning of researcher and participants (Svensson, Eklund, Randle & Aronsson, 2007; Svensson, Ellström & Brulin, 2007). To be successful AR has to happen in an environment where people are willing to share information and knowledge (Coghlan & Coughlan, 2008; Pålshaugen, 2006; Svensson, Eklund, et al., 2007; Svensson, Ellström, et al., 2007; Thiollent, 2011). The researcher is challenged with two external horizons: the practical application, e.g. the completion of the task, and the theory, e.g. the dynamics of change and the organization (Coghlan, 2010; Coghlan et al., 2008). In addition the researcher faces ethical problems because of their different roles in the company, on one side researcher and on the other side manager (Holian, 1999) as well as the political agendas of the sponsor (Pedersen & Olesen, 2008).

As discussed, the literature (McNiff et al., 2011) separates action research into two mainstreams. In the first, the external researcher observes and documents the actions the practitioners take. This type is referred to as "interpretive action research" and is probably the most common (McNiff et al., 2011, p. 11). Within this group three subgroups have been developed. Reason et al. (2008) call their topology "first, second and third-person action research". Within the first-person AR the researcher inquires into their own life and how decisions and behaviour influence their environment. The second-person AR investigates a subject within a group of people with a common concern, while the third-person AR looks at a wider social system and the involvement of independent participants (Reason et al., 2008). There are also the participatory AR, feminist participatory AR, educational AR and practitioner AR, which are all "tautological" (McNiff et al., 2011, p. 11)

It can be argued (Wadsworth, 1998) that most action research, in particular second and third-person (Reason et al., 2008), is participatory because of the involvement

of several individuals or groups in the process. These have to collaborate within the process to achieve the required level of action or change (Wadsworth, 1998).

The second type of action research is "living action research" (McNiff et al., 2011, p. 11) or living theory (Whitehead, 2009) where the researcher is part of the system. The researcher analyses their own actions by self-study and derives theory from the obtained data with the objective of how to improve themselves (Whitehead, 2009). Within this group a subgroup has focused on self-study without generating any new theory and emphasizes practical improvement (McNiff et al., 2011).

The AR methodology is used if the researcher wants to inquire about a specific phenomenon, in particular imminent real-life problems (Ellis & Kiely, 2000; Shani et al., 2012) and how the influence of the researcher generates results with or without others (McNiff et al., 2011). The cycling through a "cycle of action, reflection, raising of questions, planning of 'fieldwork' to review current (and past) actions – its conduct, analysis of experiences encountered, the drawing of conclusions, and the planning of new and transformed actions" (Wadsworth, 1998, p. 14) generates the transition from current reality (Cox et al., 2010; Dettmer, 2007; Ellis et al., 2000; Goldratt, Eliyahu, 2009; Goldratt, E. et al., 1986; Schragenheim et al., 2000) to the desired state, future reality (Cox et al., 2010; Dettmer, 2007; Ellis et al., 2000; Goldratt, Eliyahu, 2009; Goldratt, E. et al., 1986; Schragenheim et al., 2000). AR should be used to improve the understanding of a phenomenon and result in actions to improve the situation but the process has no fixed answers (McNiff, 2013) nor does it develop personal knowledge or influence others' learning which can then be applied to change a situation (McNiff, 2013; McNiff & Whitehead, 2005; McNiff et al., 2011; Wadsworth, 1998). The situation most likely cannot be changed in one single step but requires iterations (see Figure 4-3: Action learning set spiral based on Lewin (1946).
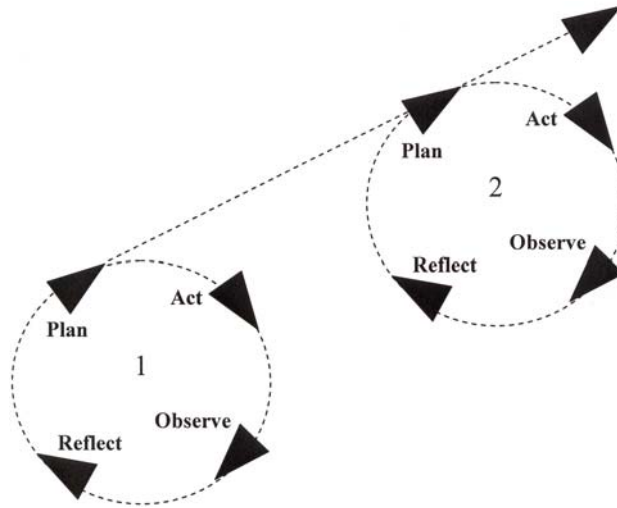
Figure 4-3: Action learning set spiral based on Lewin (1946)

According to March (1991) two central processes of organizational learning are exploitation and exploration. Exploitation refers to the exploitation of old certainties and includes such things as refinement, choice, production, efficiency, selection, implementation and execution. Exploration refers to the exploration of new possibilities and includes things captured by terms such as search, variation, risk taking, experimentation, play, flexibility, discovery and innovation. Shani et al. (2012) highlight that AR has similarities with collaborative management research but starts from different foundations. The change which happens during the process is not at the end but happens throughout (McNiff, 2013; Wadsworth, 1998). AR should not be used as a methodology if the researcher wants to "draw comparisons, show statistical correlations or demonstrate cause and effect relationships" (McNiff et al., 2011, p. 16).

The researcher's finding must correlate the theoretical ideas with the data collected. A compelling link between evidence and theory (Gray, 2009) ensures the internal validity. The external validity refers to the possibility of generalizing the findings, which is difficult in AR due to the specific research context (Gray, 2009). Validity can

be established by making the data auditable, which provides a trial from the analysis back to concepts, constructs and data sets (Gray, 2009).

It is essential to establish the validity of the AR research by a well-documented process and method (Miles, Huberman & Saldana, 2014). This includes the design of questionnaires and focus group sessions to acquire relevant data, e.g. questions or subjects targeting the research questions (Gray, 2009; Whittemore, Chase & Mandle, 2001).

To improve the quality it is necessary to review the findings with peers, supervisors (Silverman, 2011), critical friends and validation groups, and possibly publish the work to ensure peer review (Gray, 2009; McNiff, 2013).

The data gathering and problem solving can be a mixed method approach (Lambert, 2005; McNiff, 2013; McNiff et al., 2005, 2011; Reason et al., 2008; Silverman, 2011) and use triangulation for result induction or deduction of theory (Reason et al., 2008; Silverman, 2011).

4.5.5 Section summary

As the researcher is part of the system he is researching and therefore automatically introduces bias into the data due to his relation and position in the organization, a survey might not be the right choice as the primary data acquisition methodology because it does not allow for drilling down during the process of acquisition. The case study methodology provides understanding and analysis of a past phenomenon and might suggest a course of actions to vary the outcome. The purpose of the research is to provide a toolbox of actionable guidelines to enable the user to achieve better results in a similar case. The use of a case could be sufficient for providing base data and examples to enable the user to apply findings within their own organization. The validity of the research would improve if the findings could be applied within the researched organization and the resulting

changes be documented. Therefore, a case study research seems to be the most suitable because this approach allows the researcher to be part of the researched system and the single case it studies.

4.6 Data collection

4.6.1 Purpose of the section

This section provides a summary of different methods for data acquisition and a guideline for data analysis. It was determined that a constructionist approach implies the use of certain techniques, interviews and observation. At this stage, the relevant data acquisition methods are presented and some are justifiably chosen for this project.

4.6.2 In research of convergence

Based on the literature research it was established that in terms of performance management systems based on KPIs several theories exist. In this research, a toolbox (Table 4-8) is developed for how to introduce performance management systems and therefore it is necessary to evaluate the needs of the company and employees' needs and whether these needs converge in themselves and with the earlier theories.

Project	
Aim	Convergence: a representation of common ground between theories or phenomena
Starting Point	Propositions & questions
Designs	Focus groups, Semi-Structured interviews, Financial reports
Data Types	Words & numbers
Analysis/Interpretation	Triangulation & comparison
Outcomes	Theory testing and generation

Table 4-8: Methodology requirements for the proposed research

4.6.3 Structured interview

A structured interview follows a predetermined set of questions, which has limited advantages. The interview can be done quickly and responses can be coded easily. It can also be administered in written form (Thomas, 2011). This type is unfit for the research in hand because it investigates a wider context that might not be uncovered with specific questions. For the application in the researched organization a structured interview might not uncover the desired data as the researcher introduces bias, and similarly to a survey there are limited possibilities to drill down if the method is properly applied.

4.6.4 Unstructured interview

The interviewee will not receive a list of topics or questions but can steer the conversation and the topics to cover the subject area. The interviewer has a passive role in the process (Thomas, 2011). The research focuses on specific topics and a loose definition of the scope might not result in relevant data. The method does not allow the researcher to guide the discussion in the field of research and therefore the results might not be satisfactory and supportive of the research.

4.6.5 Semi-structured interview

In this type of interview, the interviewee is provided with a structure of the topics that should be covered in the interview. The interviewer may follow up on answers or steer the interview in a specific direction (Appendix A: Questions for the interviews). The topic list is a guideline of the subjects to cover during the interview This type of interview encourages the probing of answers and drilling for more detail (Thomas, 2011).

For the interview with the senior executive a semi-structured interview approach is used. This type of interview is not standardized and the interviewer might not be working through all the issues and questions, because the discussion will take different turns as it progresses (Gray, 2009). The direction for the interview should be driven from general strategy towards the development of measures and key performance indicators perceived as the most important for the CEO. The purpose of the interview is to evaluate the opinions and views (Gray, 2009) of the person and to determine the perceived shortcomings of the organization.

The management of the operational unit was also interviewed in a semi-structured manner in which the managers were questioned about specific topics but allowed to include their personal opinions and views in the interview. The opinions within a group context are well known to me and therefore it was decided to interview them

separately because there was the impression that some of them do not contribute fully within the group. The four people in the local management group work together very closely. They were therefore interviewed independently to avoid bias in their answers and to gain better insight into their personal opinions, which they might not be willing to share within the group with their peers. They should also speak about their personal motivators which drive their behaviour in the workplace. This is only possible in a face to face interview.

The methods proposed for the different levels are as outlined in Table 4-9.

Level	Method
CEO, Senior Manager	Semi-Structured Interview
Local Management	Focus Group
Local Line Management	Focus Group
Local Sales Team	Focus Group
Local Office Staff	Focus Group
Local Production Team	Focus Group

Table 4-9: Methods of data acquisition

The semi-structured interviews with focus groups relate to the different managerial levels within the company which are interviewed. The influence of strategy and PMMS on behaviour is determined based on these interviews. The theory of constraints is then linked to the KPI choices and a new toolbox is developed and tested based on a defined baseline. The baseline corresponds to an evaluation of the current performance and monitors the development while the KPIs are deployed and monitored in the company.

Based on these input guidelines for subsequent steps, the case study and the focus group interviews can be developed.

4.6.6 Focus group interviews

A focus group is a group of people who share a commonality and is a way of better understanding the opinion people have about a subject and encouraging the participants to share information and personal perceptions about the subject (Krueger et al., 2009). Focus groups can help to make decisions according to their input. The number of the focus groups and their different levels within the organization improve the outcome because it is possible to adjust the questions within the interviewing process (Krueger et al., 2009).

The outcome of the interview is a view of the groups and individuals regarding the perceived goal of the company. They should state how the progress towards this goal is measured at their level of responsibility. In particular, they should propose KPIs and discuss how they on an individual basis or as a group contribute to the achievement of the goal.

There are obviously weaknesses in focus group interviews such as the influence of dominant individuals which biases the result, the triviality of answers due to the size of the group, a lack of knowledge leading to the making up of answers, individuals trying to portrait themselves as intellectually superior and highly rational in discussing their past behaviour, and participants who do not share because their past behaviour was emotionally driven (Krueger et al., 2009).

It is therefore necessary to keep it simple and not to complicate the task. The questions should be straightforward and tested within the first groups and adapted not in content but in complexity according to the groups. The number of groups and their responsibility within the organization provide a broader view of the subject.

The decision to interview within groups is mainly driven by the expectation that the individuals may not have spent time on analysing the subject in the past and might be overwhelmed by the questions. With the managers, however, it can be expected

that the contributions of individuals can motivate the others to offer their opinions. The risk is that the group creates a consensus on the topic and the stronger characters monopolize the discussion. This is also a risk in respect to the use of English language for the interviews. Despite the good English levels in Scandinavia there is a wide distribution of linguistic ability within the employees which hinders blue-collar staff in particular from contributing to the subject effectively.

It was therefore necessary to steer the discussion not only by questions but by enabling participants to contribute by directly addressing them and giving them the time to answer. In some cases there was even a need to ask for the help of others to translate from Swedish to English if a person did not have sufficient vocabulary to express their thoughts. At the same time people who seemed to monopolize the conversation had to be directed by the interviewer to give space to others. The role of the interviewer was not only to question and obtain information but also to ensure the active contribution of each participant.

For guiding the focus group interviews the same questions are used as provided in the semi-structured interviews (Appendix A: Questions for the interviews).

4.6.7 Observation

Observation is an important tool in collecting data but there are different approaches (Thomas, 2011):

a. Systematically observe a particular kind of behaviour
b. Informally but methodically record behaviour

With the first type of observation the researcher (Appendix D: Personal Notes Bernd Thommes) makes the assumption that behaviour can be broken down into small and measurable elements. The second type is a participant's observation because the assumption is that the researcher becomes a participant in the situation he is researching.

The second type fits the research project in hand and we therefore rely on notes collected during the research process.

4.6.8   Questionnaires

A questionnaire is a written form of inquiry containing either open or closed questions. The results may be numerical data like a Likert scale or written data (Thomas, 2011). In our case a questionnaire was used directly after a workshop concerning improving performance management with employees and suppliers based on the five dysfunctions of a team (Lencioni, 2002).

4.6.9   Pilot testing

For the first semi-structured interview with the CEO (Appendix C: Interview with Stephen Harris, CEO Bodycote) a set of guiding questions was compiled to test the individual questions guiding the conversation. It became clear that the questions had to be reworked because the answers scratched too much on the surface of the topic than was sufficient for the context of a senior executive. For the interviews with the managers the questions had to be more directly related to the research questions. After the first interviews and based on the initial results, further adaptations were made and built into the conversations. The adaptations though were marginal, and a repetition of interviews was not necessary, also because there were still a substantial number of interviews lying ahead.

4.6.10 Content of interviews and relation to RO and RQ

The questions targeted opinions on the following topics:

- Organizational goal: To determine if there is a shared view on the organizational goal
- Knowledge of strategy: To determine the knowledge of strategy and the purpose of the organization

- Knowledge of key performance indicators: To determine the contribution to the organizational success

- Motivation to work: To determine what the main motivators are for people to come to work

The connection between the questions and RO and RQ is highlighted in Table 4-10 and Table 4-11.

• Research Question	Question in the interviews
In the context of the research object, how can managers operationalize strategy and translate it into key performance indicators that synchronize processes and drive the required employee behaviour?	1.) 2.)
How can a company clarify the employees' role, through their performance, in value creation?	3.) 6.)
What are motivators for employees that drive behaviour, in their role in the organization, and how can these motivators be part of a PMS?	4.) 5.) 8.) 9.) 12.)
What key performance indicators can be defined, taking organizational requirements and employee motivation into account, to reinforce the process of alignment with the strategic organizational goal?	7.) 8.) 9.) 10.) 11.) 12.)

Table 4-10: RQ corresponding interview questions (Appendix A: Questions for the interviews)

Research Objectives	
To develop key elements of efficient performance management in relation to strategy.	1.) 2.) 4.) 5.)
To appraise the strategic goal of the specific organisation and link and translate it into key performance indicators (KPIs).	3.) 5.) 6.) 8.) 9.) 11.) 10.) 12.)
To construct a concept to align employee motivational parameters and company requirements to fulfil the strategic goal.	Deducted from the interviews
To create a toolbox process to implement a performance measurement system that supports internal alignment and employee behaviour with the strategic organizational goal.	Inducted from literature and primary research

Table 4-11: RO corresponding interview questions (Appendix A: Questions for the interviews)

4.6.11 Summary of the section

In the specific application, the current system of manufacturing is interlinked with the generation of KPIs and the Theory of Constraints. The research is done on different levels of the organization and therefore the tools applied have to match the organizational setup as well as the research objectives and the original hypothesis (Yin, 2012).

In the initial phase key questions of performance management and its relation to the strategy of the company have to be developed. The strategy of the company is clear to the senior executives but how does this strategy in their opinion deploy into the organization and define the daily operations of the individuals? Therefore an interview with a senior executive establishes the base line for the research and the development of a case study (Yin, 2012) and the focus group questioning (Krueger et al., 2009). The semi-structured interviews and focus group approach were chosen because of the better understanding which can be gained in respect to a complex phenomenon such as an improvement effort or change process. There are

numerous contributing factors and interconnections which do not allow for an unambiguous research design (Hudson et al., 2001). The research is divided into several stages which initially collect information on the influence of strategy deployment on performance management and resulting employee behaviour. Based on this information a topology with the use of TOC is conceptualized.

The research has the objective of evaluating the organization and proposing future steps. This is done by case study research (Easterby-Smith et al., 2012; Easterby-Smith et al., 1991; Gray, 2009). As a constructivist, the data generation is executed first through semi-structured interviews with individuals, followed by focus groups consisting of mixed groups of employees. The mixing of different hierarchical silos challenges assumptions of individuals in the group and assists in exposing individuals to opinions from different departments. The management of the company consisting of engineering, production, quality and HR are interviewed individually in semi-structured interviews (Easterby-Smith et al., 2012; Gray, 2009) to explore their alignment. Given the size of the company a total of around 35-40 people could be interviewed. In addition, the company organized a supply chain day with key personnel in which problems and solutions, in line with the TOC approach of problem-solving, were compiled. Literature suggests that triangulation is a valid approach, therefore questionnaires for basic behavioural assessments (Lencioni, 2002) on team functioning were used. Suppliers were invited to share their view of the business in a one-day supplier meeting. The intended result of the research is to create and apply a toolbox taking into account the generated information and to ensure the creation of a performance management tool that facilitates the alignment of the company's strategic needs and human motivation. It is hoped that the combination of a performance management system with motivational factors will improve the alignment of the organization with the strategic company goal. The

toolbox, or process, must translate strategy into key actions and activities for the organization to positively influence revenue and profit.

4.7 Sample & Sample selection

4.7.1 Purpose of the section

In this section, the sample selection within the researched organization is discussed. The research has to uncover opinions about the state of the organization and its challenges, by correlating information given and engaging with multiple levels of the organization (Easterby-Smith et al., 2012; Easterby-Smith et al., 1991).

4.7.2 Sampling and Sample Selection

The researcher must define a population and state its size if possible. Further, it has to be determined how the selection of the sample size was chosen and if it is a single or multi-stage sampling (Creswell, 2009). A justification for the selection process of individuals or groups is required, which could be random within a population or specific on certain criteria (Creswell, 2009). The sample size has to be calculated with a sample size formula (Creswell, 2009). Qualitative research usually decides on purposive non-probability samples (Gray, 2009), because it seeks insight into particular aspects within a specific context. This requires the selection of participants who are concerned with the specific topic. Often this comprises only a small number of people which can contribute to the investigation of the phenomena. It is also possible that the sample changes during the research as the researcher drills down and realizes that different contributions are required (Gray, 2009).

A wide range of sampling strategies are available (Gray, 2009; Patton, 2002):

Sampling Strategy	Description
Comprehensive sampling	**Examines every case or instance in a given population (e.g. suicides amongst insurance sales people)**
Intensity sampling	**Looks for information – rich cases and ones that are more typical than those at the extreme**
Deviant case sampling	**Selects at two extremes (e.g. punctual and unpunctual staff) and tries to identify factors that influence these predispositions. Can yield focused information but poses dangers in the generalization from extreme cases**
Maximum variation sampling	**Seeks to look for a wide range of variations and patterns across the sample. Includes examining outlier cases to see if the main pattern still holds**
Homogeneous sampling	**The opposite of maximum variation, seeks homogeneous groups of people to be studied in depth. Focus group interviews are typically conducted with such homogeneous groups**
Typical case sampling	**Highlights what is normal or average in order to illuminate the whole population. Since generalizing is involved, it becomes important to substantiate that the sample is typical, using other sources (e.g. statistical data or other findings)**
Stratified purposeful sampling	**Selecting a strategy (e.g. infant schools, secondary schools and colleges) or purposefully choosing cases (schools / colleges) with each**
Critical case sampling	**Similar to intensity sampling, but the focus is on one case or site that is deemed to be critical or crucial**
Snowball sampling	**A first group of participants is used to nominate subsequent individuals or groups for study**
Criterion sampling	**The sample is selected on the basis of the prime focus of the study (e.g. early retirement); hence, all cases would be chosen to meet this criterion**
Theory-based sampling	**A more formal type of criterion sampling, cases are chosen on the basis that they represent a theoretical construct**
Confirming and disconfirming cases	**Often a second stage sampling strategy, where cases are chosen on the basis that they can confirm or disconfirm emerging patterns from the first stage**
Purposive random sampling	**From a large possible set of choices, a limited number are selected randomly**
Comparable case selection	**Individuals, sites and groups representing the same relevant characteristic are chosen over a time period**
Politically important cases	**A focus on key, politically important cases because these are more likely to be noticed by policy makers and the results of the study more likely to be implemented**

Table 4-12: Sampling strategies in qualitative research (Gray, 2009; Patton, 2002)

The research focuses on one specific unit, whose products are unique in terms of industry, size and engineering effort. A strategy change has driven the requirements from a service provider to a manufacturing company. A critical case sampling seems therefore appropriate.

The researched company was selected because it is the biggest unit within my responsibility and has just transitioned from a service supplier to a manufacturing company. For the past 20 years the company provided services to Tier 1 suppliers to EPC (Engineering-Procurement-Construction) in the oil and gas industry. Three years before the study it was decided to transition into a manufacturing company being a Tier 1 to the EPCs itself. The supply chain and administrative requirements consequently became significantly more complex. The company grew with double digit numbers but often failed to deliver the required lead time and quality.

The company employs approximately 70 people of whom 35 work in project management and the remainder in production. A sample of 37 people was invited to be interviewed across all functions of the company. A significant sample ensures that a significant cross-section of information and opinions is achieved. Managers were interviewed individually (Table 4-13).

The sample strategy is therefore a mixture of critical case and confirming/disconfirming case sampling. The research is focused on a specific manufacturing site and at the same time uses theories from literature to inquire about this organization.

	PARTICIPANT	ROLE
1	ANAS	PLANT MANAGER
2	TERO	DESIGN MANAGER
3	INGRID	QUALITY MANAGER
4	MONA	HR

Table 4-13: Management Participants

Of the 37 people, 23 participated (Table 4-14) in the focus group interviews. For office (10), production (9) and supervisors (4), the participants were mixed. The production workers were interviewed together due to their limited availability.

	Participant 1	Participant 2	Participant 3	
1	Jerker	Jörgen	Hussain	3
2	Pär	Susanne	Daniel	3
3		Johan	Jukka	2
4	Wendy	Anna	Kjell	3
5	Ingrid	Rebecka	Robert P	3
6	Mia	Anne	Jimmie	3
7	Martin	Ulf	An-Carol	3
8	Veronica S	Niclas	Angelica	3
				23

Production	
Office	
Supervisor	

Table 4-14: Interview Participants Focus Groups

4.8 Data Analysis

4.8.1 Purpose of the section

This section guides the data analysis based on the research questions. Miles et al. (2014) separate data analysis into data condensation, data display and conclusion drawing and verification. During the process of research, a wide range of data was collected, e.g. field notes, interview transcripts, documents or other materials. The condensation of data is part of the analysis process as it transforms the data into information that contains answers to the research questions (Miles et al., 2014). The data has to be reviewed frequently and decisions taken on which issues gain or lose relevance or need refining or drilling down (Silverman, 2011). The condensation is a continuous process which only ends when the final report is finished (Miles et al., 2014). Data display or labelling is a process to sort the information in a comprehensive manner to support the analysis. The data is preferably transformed into visual form to focus on the essential and relevant information to achieve a robust qualitative analysis (Miles et al., 2014; Silverman, 2011). While the researcher may draw conclusions from the acquired data it is essential that these are verified in a systematic manner. The research process and methods have to be well documented so that they can be reviewed by the researcher and also peers (Miles et al., 2014). The three processes are not sequential but require frequent review to refine methods and data (Miles et al., 2014). In qualitative data analysis the content analysis method is most commonly used. There are three procedures to categorize: common classes, special classes and theoretical classes. Common classes refer to everyday thinking in, for example, hierarchy, gender or age. Special classes refer to group, communities, language and theoretical classes which arise within the data acquisition process (Gray, 2009).

Specifically, this research attempts to understand the current situation of the employees and the organization. It is therefore necessary to identify patterns of the absence of common understandings of performance and expectations in the understanding of the individuals. Within the thematic coding (Figure 4-4) the analysis looks for agreement which would mean a repetition of statements, and equally it looks for confusion, which would be hinted at by a high number of different statements on a specific subject. In the analysis a current state of the organization can be assumed regarding alignments and priorities perceived by the employees. In particular, these are the topics and reoccurring themes that are important to the individuals and drive their efforts, to be compared to the organizational goal. Are there differences, what are they, and can a plan subsequently be derived for how to align both?

4.8.2 Research questions and comments

- In the context of the research object, how can managers operationalize strategy and translate it into key performance indicators that synchronize processes and drive the required employee behaviour?

- Interview discussions are therefore targets for the knowledge of strategy, goals and KPIs of the organization and how these relate to and influence employees' work.

- How can a company clarify the employee's role, through their performance, in value creation?

- The interview discussion relates to cooperation and understanding of organizational requirements.

- What are the motivators for employees that drive behaviour in their role in the organization, and how can these motivators be part of a PMMS?

- The interview discussion relates to the motivation of the employees to come to work.

- What key performance indicators can be defined, taking organizational requirements and employee motivation into account, to reinforce the alignment process with the strategic organizational goal?

- The interview discussion targets opinions on what the important indicators are for the company and its employees to improve their job performance.

4.8.3 Analysis

The interviews were recorded and consequently transcribed by a third party. An additional verification was not possible with the participants due to my departure from the company. The interviews were coded in NVivo thematically in terms of strategy, application of strategy, measurement of performance and motivation for work. The thematic coding identifies common ideas and key elements. The outline for the themes for the specific research are shown in Figure 4-4. This data provided empirical input to the theoretical framework developed in the literature research. The comparison of empirical and theoretical data identifies system constraints.

(Removed)
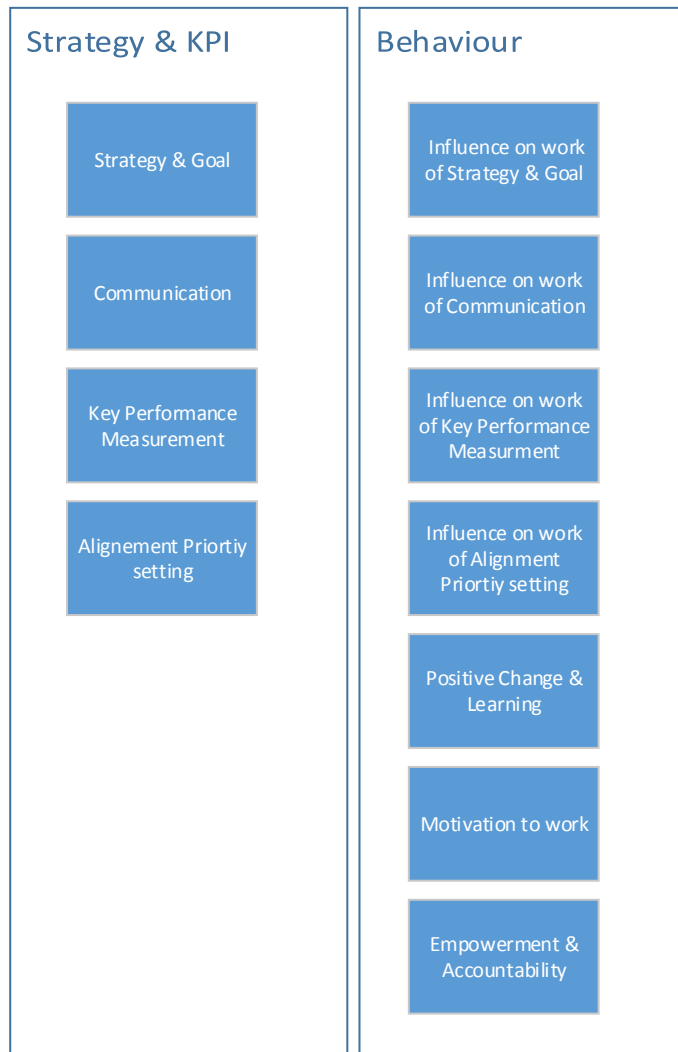
Figure 4-4: Thematic topics for coding

Observational notes and the notes of the researcher were also examined and coded to provide data for triangulation. To gain more insight into the behavioural aspects of the company a questionnaire with specific questions about the collaboration within the organization and suppliers was administered. The behavioural questionnaire is based on Lencioni (2002) and refers to the ability of an organization to work as a team.

4.8.4 Summary of the section

The interview discussions focus on strategy, the organizational goal, KPIs and their influence on work of the employees. The discussion should take an account of the current situation and provide guidelines for how to improve on the current situation.

The findings must be compared with the results of the literature review which provided a summary of current knowledge on subjects like performance measurement and behaviour. The discussions are transcribed and coded with NVIVO. The results are presented graphically according to the research questions.

4.9 Reliability & Validity

4.9.1 Purpose of the section

In this section, the reliability and validity of the findings will be analysed. The main issue of generalization of the findings to other applications within a similar context must be examined.

4.9.2 Background of Reliability and Validity

Depending on the chosen philosophical stance the researcher employs different methodologies to obtain research results. According to Flick (2014) the research has the following purpose:

- To clearly isolate cause and effects
- To properly operationalize theoretical relations
- To measure and quantify phenomena
- To create research designs which allow a generalization of findings
- To formulate general laws

Depending on reliability and validity, general laws can be deducted from the cases studied. Validity can be separated into internal and external validity. Internal validity refers to the influence a researcher makes by his participation in the research. The subjectivity of the researcher might influence the outcomes. The combination of subjectivity and influence on the research phenomena results in data that might not be replicated by other researchers. The researcher therefore has to critically reflect on these issues to provide context (Gray, 2009).

External validity defines the opportunity to generalize the findings to other situations. There is the nomothetic or law-like stance which in a positivist paradigm implies that the findings must be transferable. This was dismissed by Lincoln et al. (1985) because there cannot be a generalization that is truly universal due to local conditions. They proposed the term "naturalistic generalization" which is based on an empirical approach including personal first-hand experiences (Gray, 2009). The results of individual cases help to build a working hypothesis for future research which may be tested through application in consecutive research. Lincoln et al. (2002) rejected direct transferability due to the specificity of the cases, which the reader may infer as a possible application in a similar context. Inference must not be confused with generalisation because of the context and time-bound factor (Lincoln et al., 2002). Instead of generalizing, the transferability of results from one situation to another should be tested (Gray, 2009).

Reliability should guarantee the stability of the research or that another researcher could reconstruct similar findings. To improve reliability, quantitative research relies on triangulation because multiple sources make confirmation easier. There are four types of triangulation (Gray, 2009):

- Data triangulation: Data is collected using several sampling strategies on the same phenomena

- Investigator triangulation: Data is collected by more than one observer

- Multiple triangulation: The investigation uses multiple methods, data types, observers and theories.

Methodological triangulation: There are two types. In the 'within' method the researcher uses different data gathering techniques within the same method. In the 'between' method the researcher gathers data by different methods. Methodological triangulation and in particular the between method is used because a combination

of semi-structured interviews, focus group interviews and surveys is used. Some researchers argue that "trustworthiness" is more important than concerns over reliability and validity (Gray, 2009).

Lincoln et al. (1985, p. 328) suggested five techniques for increased trustworthiness criteria:

Criterion Area	Technique	This Research
Credibility	(1) Activities in the field that increase the probability of high credibility. (a) Prolonged engagement (b) Persistent observation (c) Triangulation (sources, methods and investigators) (2) Peer debriefing (3) Negative case analysis (4) Referential adequacy (5) Member checks	The researcher was part of the organisation for 3 years (a) and was part of the events described (b). It was also possible to establish a trustful relationship with the participants. The researcher had access to different levels of the organization and different data acquisition methods were used to obtain the primary data (c) Parts of the thesis were published in peer reviewed journals. (2). The raw data was recorded and transcribed (4).
Transferability	(6) Thick description	As described earlier there is a limitation to transferability except for the inference.
Dependability	(7a) The dependability audit, including the audit trail	For the purpose of the thesis, an overlap between literature and primary data was examined.
Confirmability	(7b) the confirmability audit, including the audit trail	A journal excerpt was provided with the thesis.
All of the above	(8) the reflective journal	A journal excerpt was provided with the thesis.

Table 4-15: Summary of techniques for establishing trustworthiness (Lincoln et al., 1985, p. 328) and relevance to thesis

- Transferability: the sampling should expose pertinent content when cases are compared for similarity, and descriptions must unveil similarities between them (Gray, 2009).

- Dependability by using auditable material in the data (Gray, 2009).

- Confirmability, a review of the data and the researchers interpretation has to show connections (Gray, 2009).

- Credibility established by multi-method triangulation and testing of findings with participants (Gray, 2009).

Reliability and validity in this specific research might not be of importance because there cannot be an assumption made whether different people at a different time would generate similar findings (Gray, 2009; Thomas, 2011). The information collected is very specific to the researched context and its validity in a wider context can only be established by field testing of the theory that is deducted from this research (Tsang, 2014). The information though can be compared with the collected information with respect to the literature research. The literature research summarized several approaches to PMMS and also showed that current research contains conflicts that make it difficult for practitioners to reliably derive guidelines for successful management practices. The research within this thesis is an attempt to find a guideline or toolbox for how to proceed in a practical management situation to establish solid measurements and ensure the alignment of the organization with the company goal. The company goal in this context is the sustainability of the organization to generate cash now and in the future, while all other activities are a means to achieve the goal. This must not be confused with efforts to extract every last cent out of the company on a short-term basis but to generate sustainable business which can excel in its field of operation.

Reliability of information depends on the context of the research. There are constraining parameters which bias information within this context and the current situation of the company. The priorities of the participants may shift as the organisational context shifts from e.g. managing growth to managing a crisis. A changing context also changes priorities for employees as well as for the company,

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which then has to revise its priorities and consequently its PMMS. The information obtained in interviews is never without bias because the people obviously had discussions about events within the organization and might have had a certain consensus on topics or subjects even before coming to the interviews.

4.9.3 Summary of the section

The acquired data can only be seen as valid for the specific unit under research because the situation is very specific and the results may not claim validity beyond the scope of the work (Tsang, 2014). To achieve validity beyond this scope, the findings have to be transferred to other units of the organization or replicated and compared in other companies (Chreim, Williams & Hinings, 2007). The transfer of the findings would also confirm the reliability of the information given by the participants. The interviews are very specific to the situation and are biased by internal and external inputs. The interviews can only be seen as a snapshot for the specific situation. This does not mean that the statements cannot be put into a broader perspective. In particular, if the participants speak about knowledge of strategy and performance management, the level of knowledge can be taken as indicators for generalization.

4.10 Ethics & Risk

4.10.1 Purpose of the section

This section defines the framework of ethics and its application within the research project.

4.10.2 Background on ethics

Codes of ethics are formulated to give guidance to the researcher and regulate the relations with people within the scope of the research. Participants should not face any personal consequences or be forced into participation. The participants must consent and voluntarily participate in the research. The decision must be supported by clear communications about the purpose of the research and how the results will be treated later on (Flick, 2014). Therefore, every participant in this research was informed in writing before the interviews that their contribution is voluntary and no specifics are shared with peers or in the company, e.g. with subordinates or senior management. Participants must be made aware that summarized and anonymous information is published with a two-year time frame. For me it is important that information regarding individual participants is not published or given to the company (Creswell, 2009; Easterby-Smith et al., 2012; Easterby-Smith et al., 1991; Gray, 2009). I should be aware that due to my managerial position, participants' statements might be biased. I have to probe with questions to validate statements (Krueger et al., 2009) and, based on statements, identify bias and major agreements of the participants. The *Handbook of Principles and Procedures* stating the University's research ethics guide this research.

4.10.3 Application

The participants were informed about a possibility of participating in the focus groups for this research. There were 23 participants out of the 37 who chose to

participate in the study. The management team of 4 participated entirely in this process.

4.10.4 Risks within the Research

For me the risk is that the research might not be finalized due to a change of employment which then delays or changes the scope of the research. The management of the company might decide that my proposals are not to be implemented and thus theory validation becomes difficult. The organization researched is obviously part of the project, and success or failure or the proposed system might determine financial gain or loss.

In 2014, I left the company and therefore the application within the context of the research was no longer possible.

4.10.5 Summary of the section

The participants actively chose to participate in the research and were informed about the context and content of the interviews and discussions. The statements might be biased because of the role of the researcher in the organization but due to the number of participants it is possible to uncover the thinking within the organization about the research topic. The researcher is no longer part of the organization.

4.11 Summary of the chapter

The research is developed on a constructionist approach which uses the following methodology and methods. The organization under research is in the situation of change to adapt to the new market demand induced by a choice to enter a certain market segment. The literature research embodies existing frameworks of methodologies and characteristics of implementation, deployment and use of PMMS. The combinations of frameworks and behavioural aspects of performance management may not be combined

within a quantitative research method because of the complexity of the system variables and their interdependence.

Therefore, a **case study research methodology** is chosen to approach the subject. The market development is not constrained by the market but by internal processes. Therefore different internal stakeholders should give their input on how to improve and change their current mode of operation to adapt to the new demands. Initial input is obtained by **a semi-structured interview with the CEO (**Appendix C: Interview with Stephen Harris, CEO Bodycote). The opinions and views on performance and the state of the company in respect to the goal of the company are obtained from stakeholders **by focus group interviews**. The participants also speak about their motivation and drivers to come to work.

The literature research has provided a framework of optimum processes to develop, implement and sustain PMMS. It also refers to behavioural challenges within the realm of performance management. Combining this information should give options on the process, which can be applied within the researched organization.

Based on this information a performance management system is operationalized and consequently shows a change in the organizational performance (Gray, 2009).

The aim of the research is to identify the gap between corporate strategy and operations in relation to human motivational factors and attempts to combine strategy, PMMS and human behaviour. It is challenging for an organization to align its top-down strategy with the horizontal flow of value creation (Schragenheim et al., 2000). The objective of performance measurement is generally to measure key performance indicators and report them upwards to check alignment with organizational strategy (Schragenheim et al., 2000). The issue with local indicators of individual processes is that those responsible for the process strive for its optimization and not that of the system (Cox et al., 2010; Goldratt, Eliyahu, 1990,

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2009; Goldratt, Eliyahu et al., 1992; Goldratt, Eliyahu et al., 1986). This stems from the assumption that if individual processes are optimized the entire system should work at its peak (Goldratt, Eliyahu et al., 1992). Professional practice, however, shows that this is not the case and therefore a toolbox for performance management must be developed to enable employees to focus on a more systemic view and not one that is as 'atomistic' and limited to the processes with which they are directly involved (Goldratt, Eliyahu, 1990).

The research focuses on a business unit within my corporation specialized in the manufacturing of powder metallurgical components for a variety of markets, in particular the oil and gas subsea industry. A strategic shift occurred about three years ago from a process service provider to a full-fledged parts manufacturer. This represented a major change in strategy and resulted in altered requirements for employees. Because of this change, and the concomitant requirements, the company experienced a major crisis that resulted in late deliveries and many quality flaws. I joined the company at a stage when decisions were already made and the strategy rollout had already begun. Nevertheless, it was clear that the company did not have any PMMS that supported the decision-making process within the organization. This research examines how the crisis was overcome and consequently the efforts of implementing measures to secure future performance.

The value creation process within an organization is complex but how do employees then know that their performance is aligned to the strategy and goal of the organization? In corporate presentations strategy is often highlighted as a means of achieving the organization's goal. The question arises how employees know, understand and act in line with such strategy. The organization has to clarify the role and contribution of its employees in the process of value creation.

Compared to the high-level approach of Kaplan et al. (1996) and Neely, A. et al. (2002) the deployment should focus on the execution levels of the organization in

combining a classical scorecard approach and the Theory of Constraints (Cox et al., 2010; Goldratt et al., 1986; Goldratt, Eliyahu, 1990, 2009; Schragenheim, 1999; Schragenheim et al., 2000). The purpose of the research is to find a general guideline for the deployment of performance indicators on different levels of the organization which reflect the strategic direction of the corporation. The KPIs have to represent the strategy of the company but also have to represent a communication tool with the employees which relates to their work. As discussed earlier, based on the information available people trigger behaviour (Henderson, 2011) to improve the performance of the system.

From the initial hypothesis or theory, the researcher developed a questionnaire with a set of questions (Appendix A: Questions for the interviews):

   a. Individuals and groups in the company have not understood the strategy of the company.

   b. Individuals and groups in the company do not know how to transfer the strategy, if understood, into actions.

   c. Individuals and groups do not know how performance should be measured to ensure the successful execution of the strategy.

   d. Individuals and groups do not work as a team jointly to resolve their current issues.

   e. Individuals and groups give indications on motivations and behaviour.

For the assessment of the opinions on how the current situation has developed through the actions and shortcomings of the past a questionnaire is administered to 27 of the employees.

On the behaviour side, in order to assess the state of the organization a questionnaire (Lencioni, 2002) with behavioural questions is administered.

The data gathering relies on semi-structured interviews and focus groups depending on the level of the organization. A questionnaire is used to collect additional data and enable triangulation of data sources within the research. This also increases the reliability and validity of the research. The data collected is thematically coded in relation to the findings of the literature research. From the criteria established in the literature research and the prerequisite tree compared to a current state, transitional actions can be established. A generalization from a single research project is not possible because of the specific nature of the issues. Further testing in other organizations might reveal common denominators for a generalization.

5 Results of the interviews

5.1 Introduction

The interviews were conducted with a semi-structured approach. The collected data was coded with NVivo looking for keywords or statements with respect to the guideline questions given to the participants prior to the actual interviews. The participants were mixed from different departments. A total of 70 people work in the facility; 37 were invited and 27 participated in the personal and focus group interviews. The participants were also chosen by their ability to conduct the interview in English. The purpose of the interviews and discussions is the assessment of the current understanding of strategy, key performance indicators and individual contributions to the company goal as well as the motivational factors which drive the performance of the individual.

	PARTICIPANT	ROLE
1	**ANAS**	**PLANT MANAGER**
2	**TERO**	**DESIGN MANAGER**
3	**INGRID**	**QUALITY MANAGER**
4	**MONA**	**HR MANAGER**

Table 5-1: Management Participants

Focus Group	Participant 1	Participant 2	Participant 3	
1	Jerker	Jörgen	Hussain	3
2	Pär	Susanne	Daniel	3
3		Johan	Jukka	2
4	Wendy	Anna	Kjell	3
5	Ingrid	Rebecka	Robert P	3
6	Mia	Anne	Jimmie	3
7	Martin	Ulf	An-Carol	3
8	Veronica S	Niclas	Angelica	3

Production	
Office	
Supervisor	

23

Table 5-2 : Interview Participants in Focus Groups

The results are linked in with the research questions (Appendix A: Questions for the interviews). As a starting point, it was necessary to assess the current state of the organization in respect to the understanding of the organizational goal and its strategy to achieve this goal. It is important to examine the individuals' understanding of the goal and of the underlying strategy. Only then is there the opportunity to introduce a PMMS which supports the strategy.

Questions for the interviews can be reviewed in: Appendix A: Questions for the interviews.

Transcripts of the interviews are in Appendix B: Transcripts of the interviews.

5.2 Understanding of the organizational goal and strategy

An essential part of deploying a PMMS is the clear understanding of the organizational goal and the strategy to achieve this goal. This was summarized in Thommes et al. (2014a):

1. The company goal: There has to be clarity on the goal of the organization.

2. The strategy: What are the key activities and key targets to achieve the goal?

3. Performance management: Define the key performance indicators on macro and micro levels.

4. Communicate: The purpose and goal of the organization to generate trust.

5. Empower and engage: Define the authority in decision-making.

6. Define and agree on performance measurement: Mutually define a limited set of KPIs for the organization, groups and individuals.

7. Feedback: Rely on frequent personal feedback and employee self-reflection.

8. Reward: Intrinsic and extrinsic rewards that are considered fair to achieve high performance.

5.3 Organizational goal for managers and employees

Question 1: Ask for the organizational goal of the company to gauge the understanding of the employees. The understanding of the goal (Cox et al., 2010; Schragenheim, 1999) is essential in order to create a link with the performance management system as required in our research objective #2 (RO). The efficiency of performance management can only be examined if the organization is in agreement about the strategy (RO#1)

The majority of managers and employees agree on the fact that a commercial organisation exists for one reason, which is to generate money. It is therefore clear that there is an organizational agreement on the organizational goal.

The members of the organization have a clear view on why the organization exists. This goal is clearly stated in the literature, in particular by Goldratt, E. et al. (1986). It was not clearly stated within research that employees have this understanding about their commercial organization; it always seemed an underlying assumption.
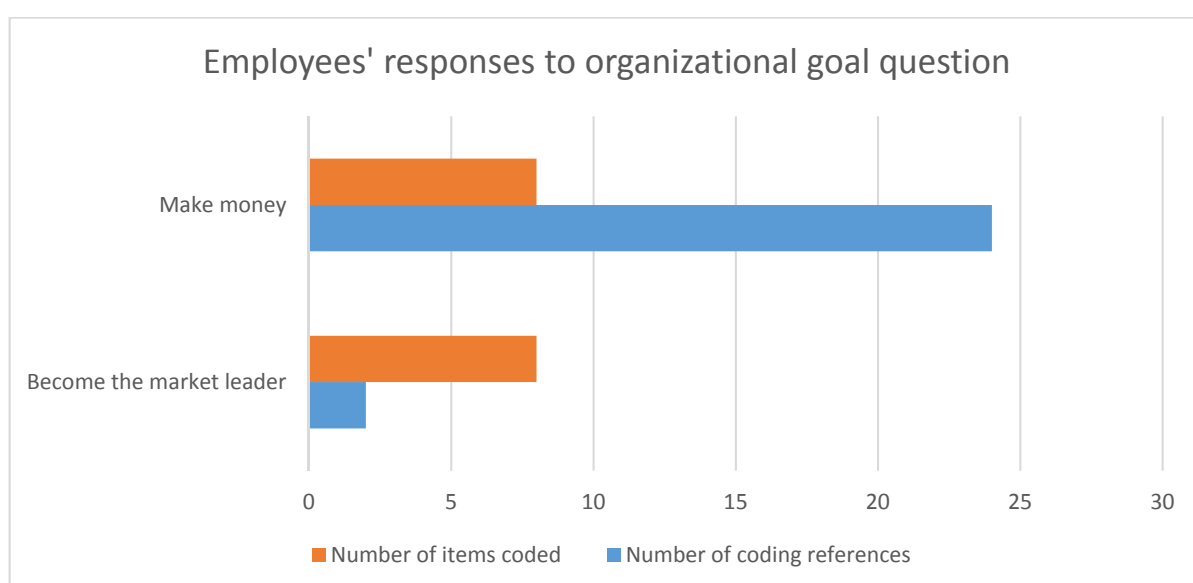
Graph 5-1: Employees' responses to the definition of the organizational goal

In question 3 the participants were asked which indicators are important to the corporation to achieve the organizational goal. The question is strongly interlinked with research question 1 about how organizations operationalize strategy and synchronize processes (Schragenheim et al., 2000). Despite the fact that the organizational goal is clear the majority of employees (Graph 5-1) could not correlate or name corporate KPIs and their relationship with the goal. They could not define whether the generic goals stated earlier are valid for their organization.

"Of course, the objective is to get so much money we can as possible." (La Branch & Thommes, 2014 ;Interview 130816_002)
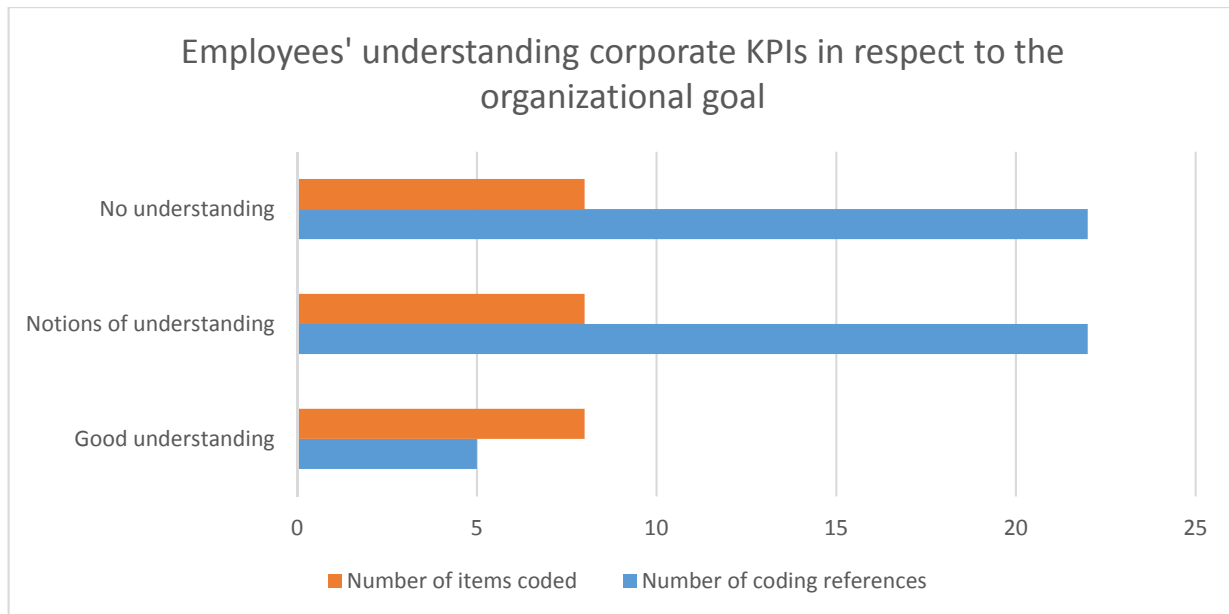
Graph 5-2: Employees' remarks on the applicability of generic goals to their own organization
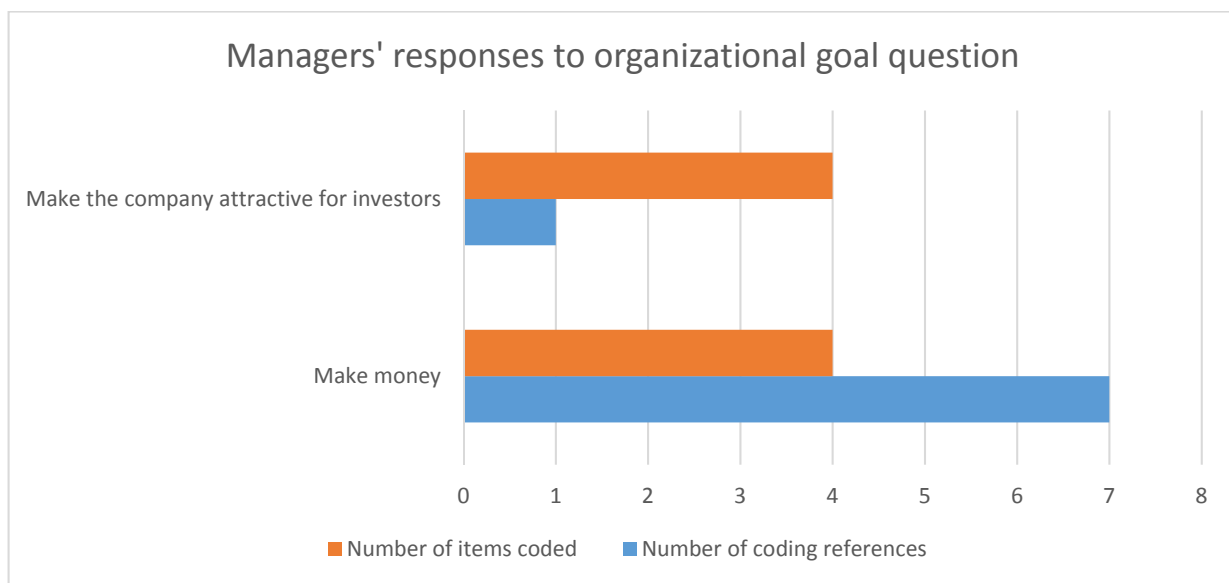
Graph 5-3: Managers' responses to the definition of the organizational goal

Despite the fact that managers (Graph 5-3) named two items as generic organizational goals it seems to be unclear if this is the goal of the researched organization. This is similar to the employees (Graph 5-2) and confirms that there is a communication gap with respect to the actual goal of the organization and how the goal is to be achieved.

"And the feeling that I have is that we are reporting numbers, but we're not analysing numbers because we don't even have time to analyse the numbers because then it's time to report another number or another number or another number" **(La Branch et al., 2014 ; Interview120816_002)**
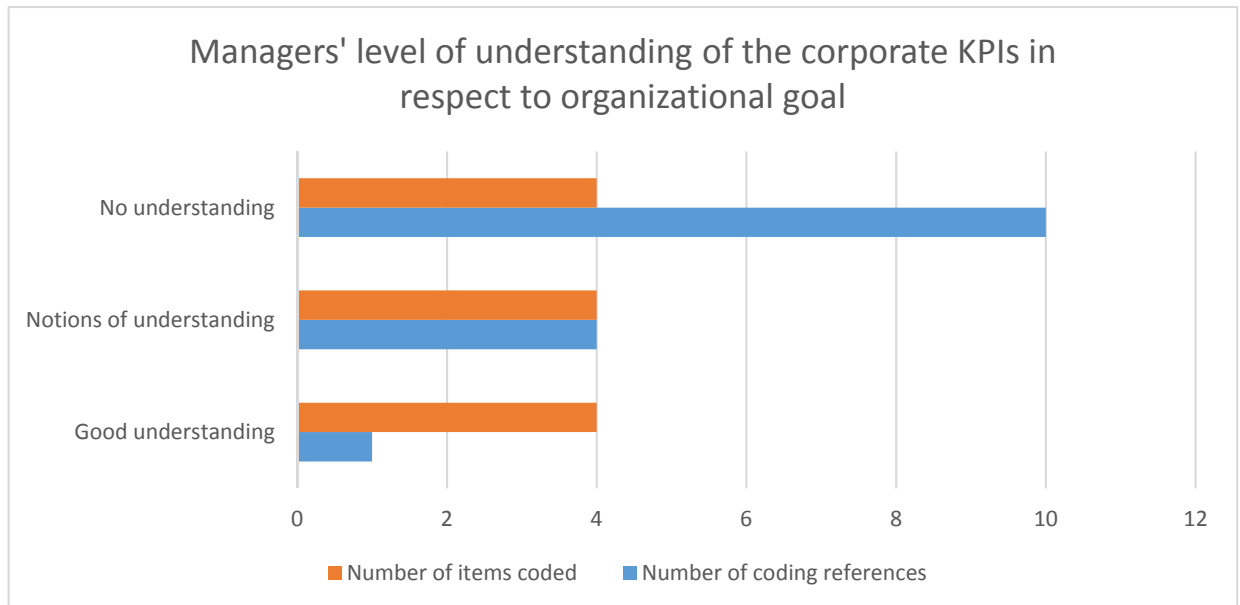
Graph 5-4: Managers' responses to the applicability of the generic goals to their own organizations

The corporate indicators are not widely shared within the organization. There are notions shared within the local management team (Graph 5-4) and probably not known to the employees. The question in respect to the corporate KPIs evaluates the process as stated in the research question #1 (RQ). Some people were aware of some KPIs but the majority could not, during the interview, state important KPIs which relate to the organizational goal.

Communication of goals is important as well as the understanding of how to operationalize them. Even though there might be an understanding of the organizational goal it cannot be assumed that employees as well as managers understand the requirements in terms of KPIs connected to them. They clearly understand the goal but cannot relate this to the operation by the means of KPIs as of the time of the interviews.
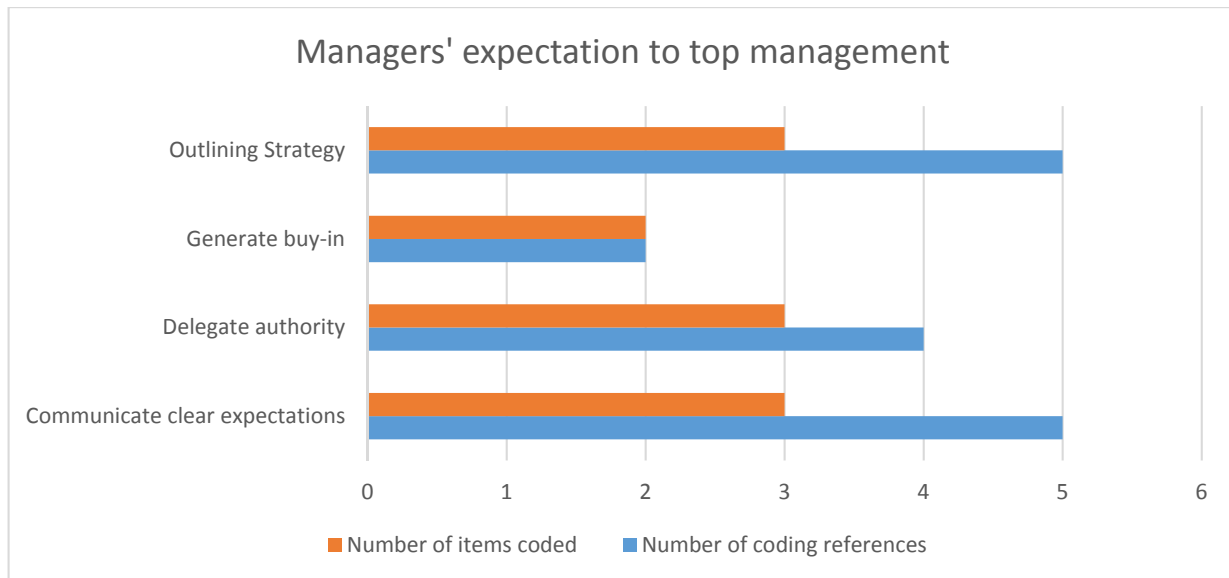
Graph 5-5: Managers' expectation of the organizational leadership

Graph 5-5 shows the managers' expectation towards the top management.

These elements can be found in literature and confirm the research.

5.4 When asked about the top management's responsibility managers stated four major items.

Due to their lack of exposure employees had limited opinions in response to question 4.

Managers' expectations are formulated quite clearly (Graph 5-5). To achieve the results required they need a clear outline of the strategy presented in a convincing manner to create organizational buy-in. Communication of clear expectations that can be transferred into measurable KPIs and the delegation of authority to act upon the measurements are seen as a requirement (Grey, 2013; Thommes & Bowden, 2015). As stated in RQ2, clarity defines the employees'/managers' role within the process of value creation. Authority, or as stated in literature autonomy to take actions upon the KPIs, relates to RQ3 as a motivational factor. Managers within the unit seem to have clarity on what is required to achieve the organizational goal.

5.5 The meaning and purpose of strategy

In question 2 the participants should define strategy. In the literature research, it was stated earlier that the purpose of strategy is to adapt the organization to the ever-changing environment in which it has to be developed and deployed.

The understanding of strategy is important because without it nothing can be operationalized into KPIs. Understanding of strategy is the origin of performance management. RQ1-4 cannot be answered without prior assessment of strategic knowledge. In this specific question, the participants were asked about the meaning of strategy in general.

5.6 Responses to the question of meaning of strategy

Meaning of strategy to employees
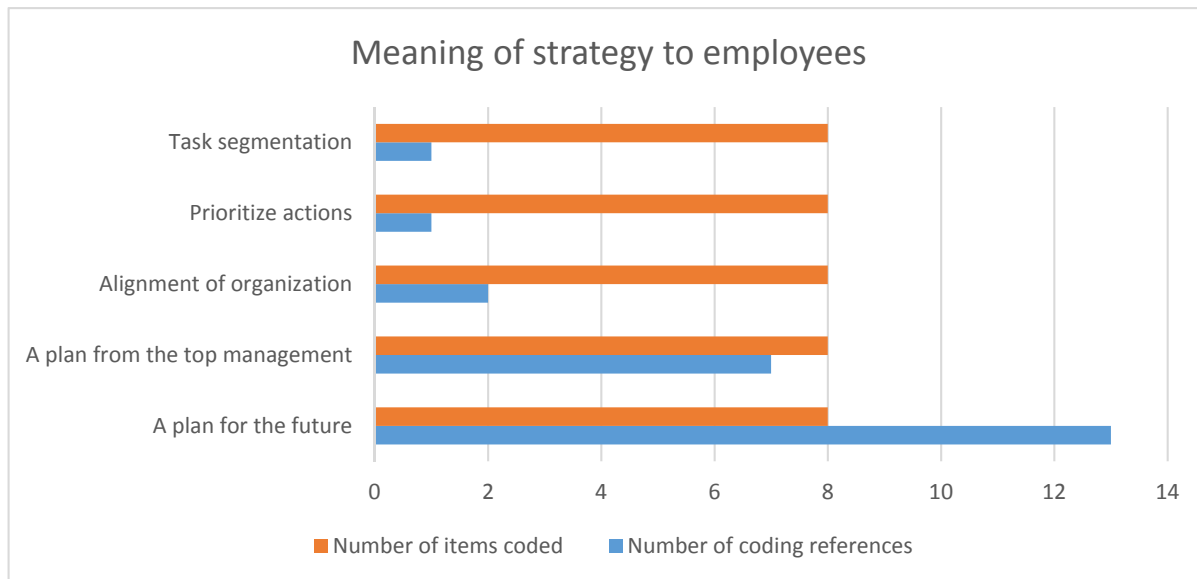
Graph 5-6: Employees' responses to the definition of strategy

Meaning of strategy to managers
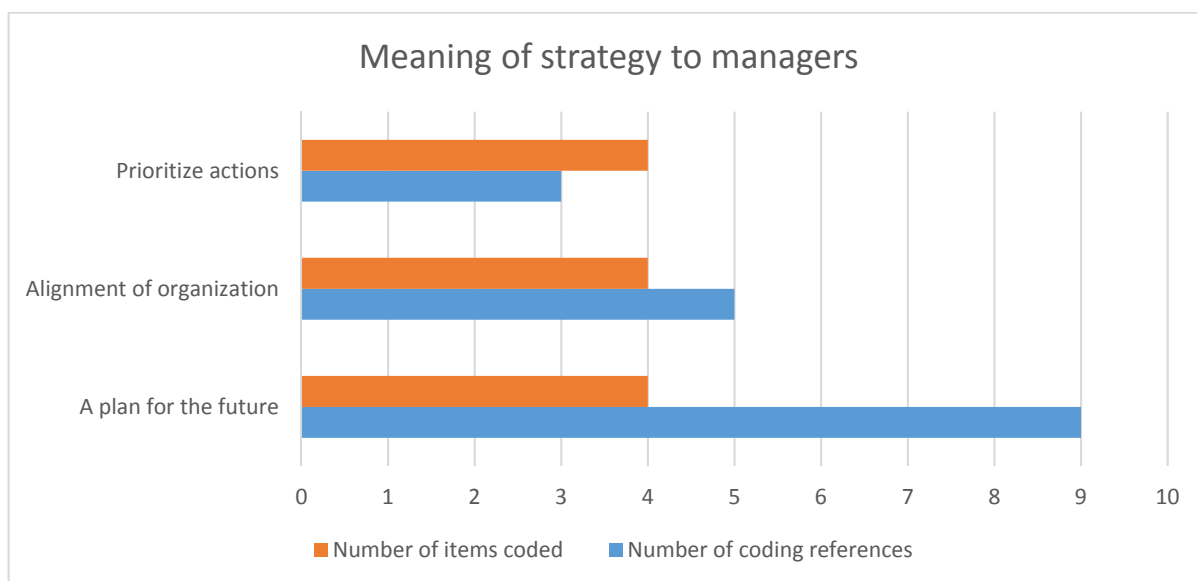
Graph 5-7: Managers' responses to the definition of strategy

Most employees (Graph 5-6) and managers (Graph 5-7) agree on the fact that a strategy is a plan for the future. Furthermore, both parties agree on the fact that strategy is about alignment. The employees add that the strategy should come from the top management. The prioritization of actions is an element that is also brought up by both parties, which relates back to the need for the clear communication of expectations.

"Strategy is something that helps us to look further into the future than just to day-to-day problem. So, I define strategy as somewhere where we define where we want to be in two years or three years. There's different horizons for strategies." (La Branch et al., 2014; Interview 130813_001)

Literature describes strategy development as a top management task (Kaplan et al., 1996). The reference to how strategy is perceived by employees is not part of the process. The results show a clear need by employees and managers for a plan for the future developed by the top management. The plan not only outlines the big picture but will align the organization towards a common goal by a clear prioritization of actions and further clear expectations towards the members of the company (Kaplan et al., 1996).

5.7   Knowledge of the strategy of the organization

Question 5 targets the understanding of corporate strategy. The issue to investigate is whether the members of the organization have knowledge of the strategy in respect to their company. "No understanding" refers to the person not knowing the strategy as well as their inability to explain it. "Notions of understanding" refers to the fact that the person might know strategic elements but does not know if it is right or wrong. Sometimes there were assumptions about strategy or the absence thereof, which resulted in high levels of personal frustration.
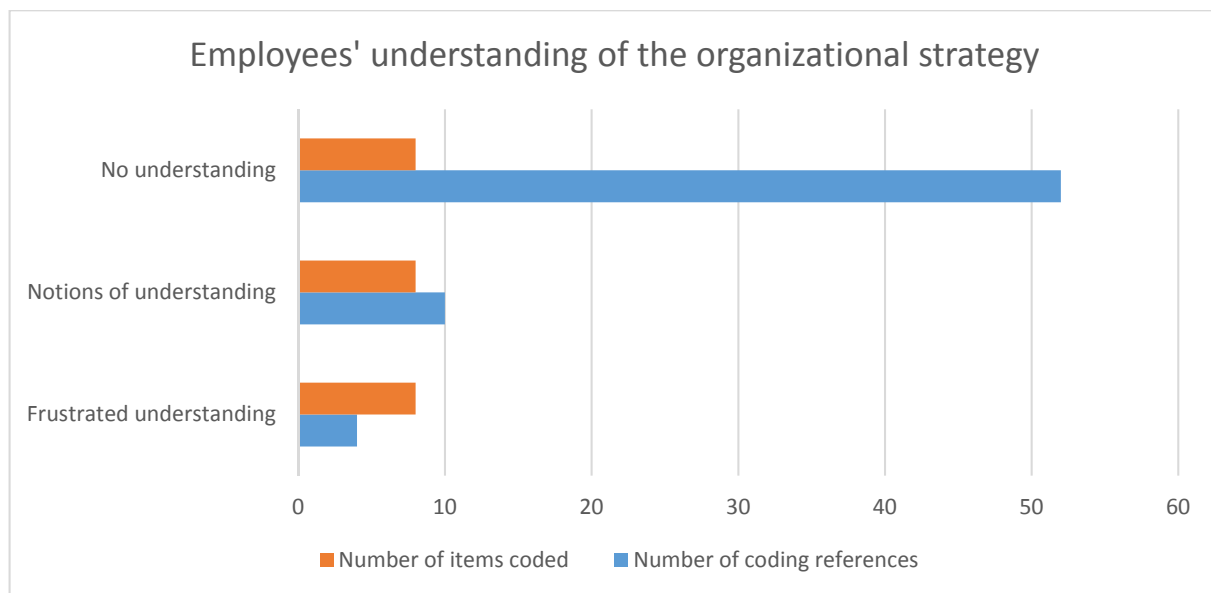
Graph 5-8: Employees' knowledge and understanding of the organisational strategy
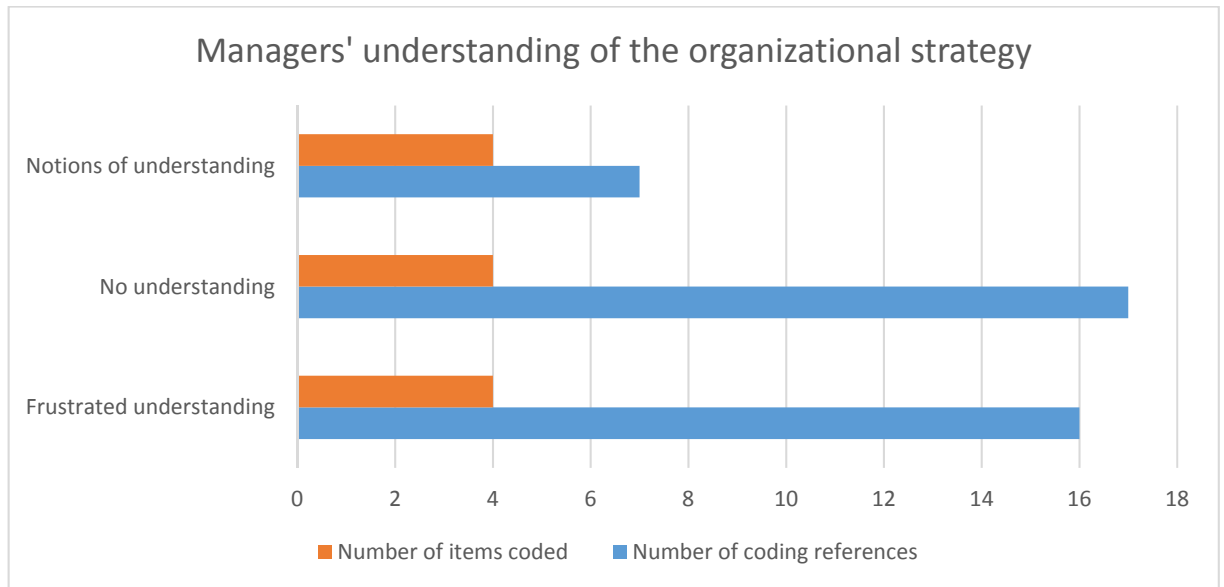
Graph 5-9: Managers' knowledge and understanding of the organizational strategy

For the managers (Graph 5-9), more than the employees (Graph 5-8), the lack of understanding or frustrated understanding resulted (Graph 5-11 & Graph 5-12) in a partial or full disagreement with the strategic assumptions. At this point the research did not validate assumptions interviewees made on strategy or the absence thereof. The interviewees stated that they did not understand how their business fits in the rest of the organization strategically. Employees did not seem to be as concerned with the strategy deployment.

"Do you understand the corporation's strategy? No, I don't know. I don't know what's our strategy if I have to be honest." (La Branch et al., 2014 ;Interview 131029_001)

The absence of clarity in communication of a strategy not only leaves the employees and managers blind but it also creates frustration about the situation (Eccles, 1991; Ittner et al., 1998). This refers to RQ3 which relates to the issue of motivators. Absence of a plan for the future shifts focus from performance management and driving behaviour to support the goal, to questioning top management's decisions (Boyce, 2012; Kaplan et al., 2001a;

Vollmer, 2014). This results in a disagreement about the performance management deployment, as can be seen in the Graph 5-10 and Graph 5-11.
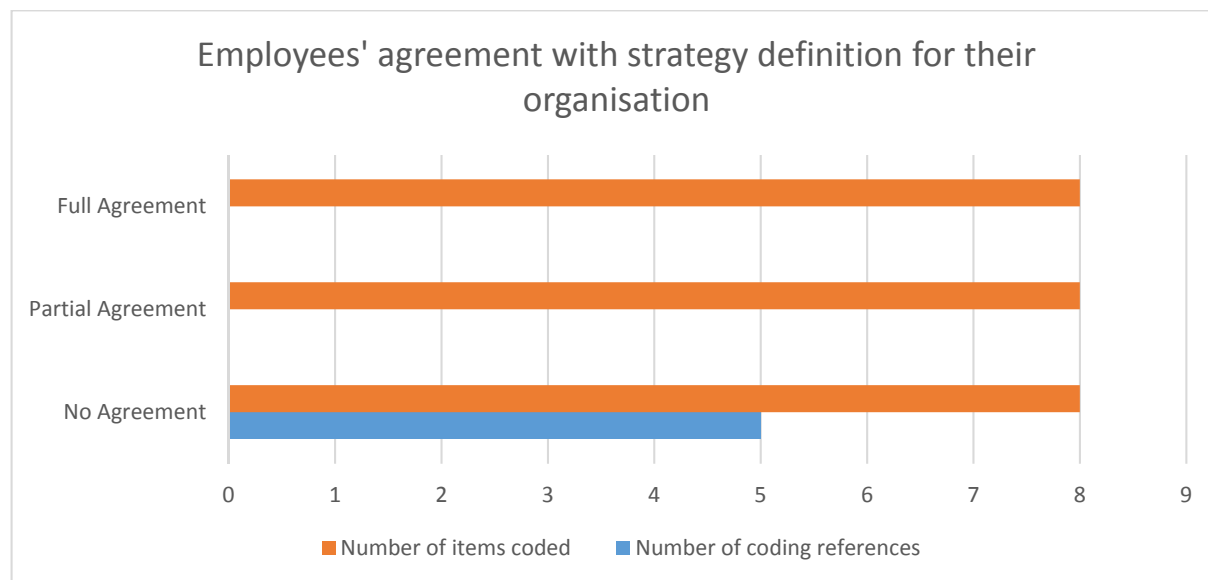
Graph 5-10: Employees' agreement with strategy for their organisation
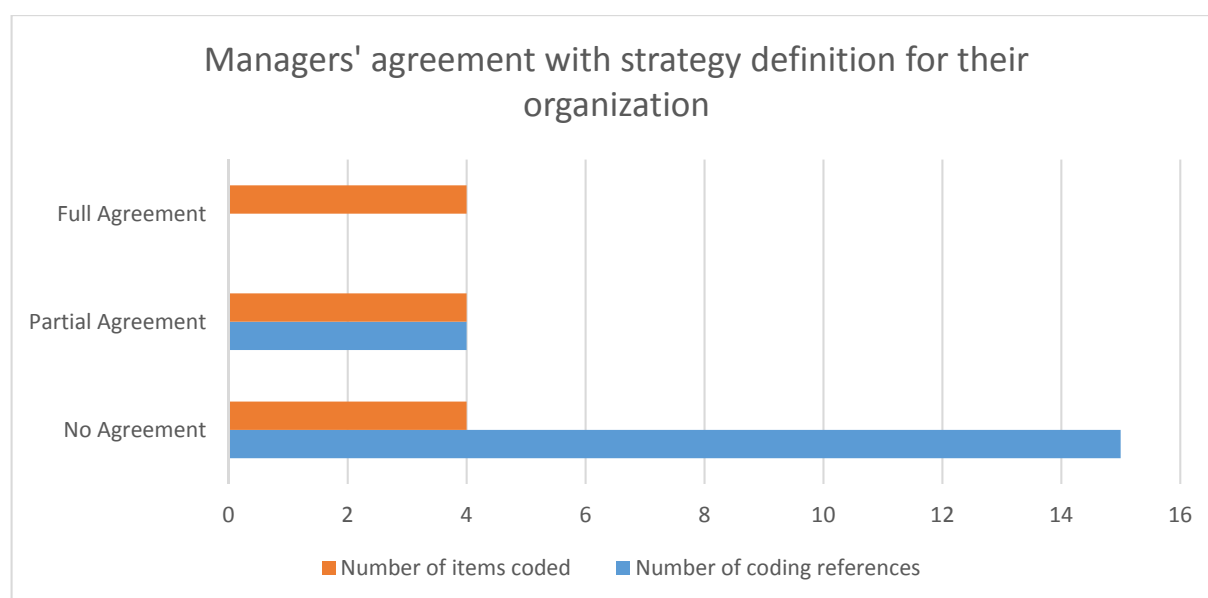
Graph 5-11: Managers' agreement with strategy for their organisation

"They should have a great impact on it, but I think it hasn't really been clear to a lot of employees from the upper levels" (La Branch et al., 2014; Interview 131029_001).
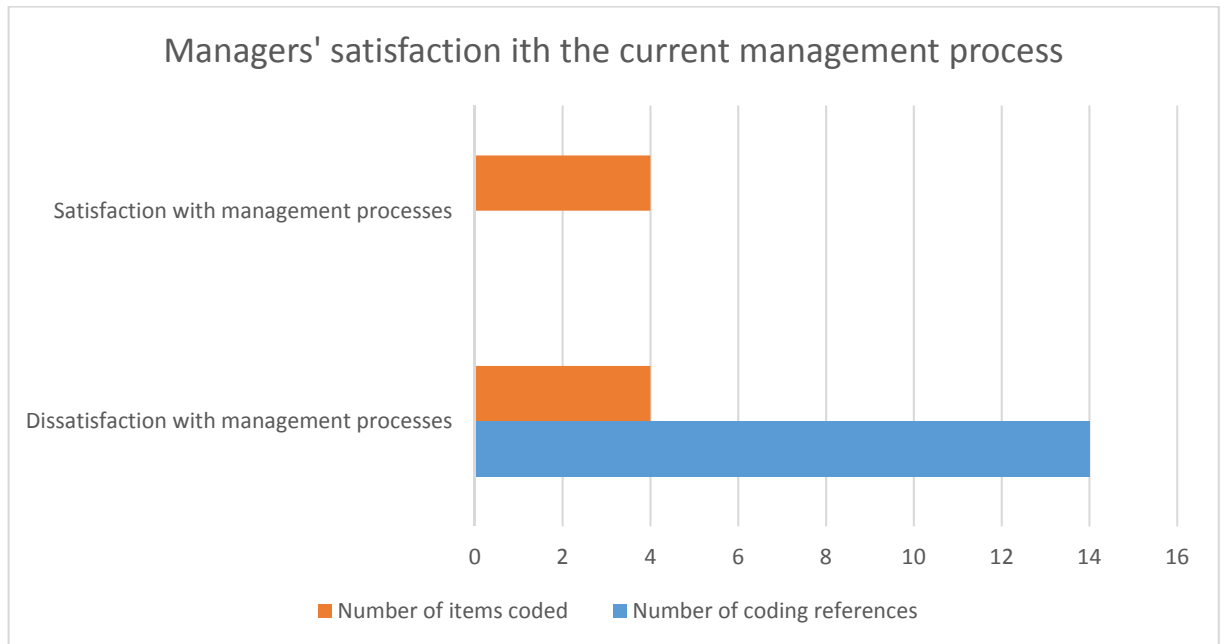
Graph 5-12: Managers' satisfaction with existing management processes

Literature implies that the majority of strategic initiatives fail (Bourne, Mike et al., 2002; Torben, 2014). The answers in Graph 5-10, Graph 5-11 and Graph 5-12 show that the absence of clarity in communication leads to disagreement and rejection of the PMMS. This provides insight into a possible reason why initiatives fail.

Question 6 is to examine the influence of strategy on the individual performance. As there is limited knowledge on strategy in the organization there are no conclusive answers to this question. The same is true for question 7.

"So, taking our own destiny in our hands perhaps […] I mean, okay, if we don't get the guidelines, let's do our best and together hopefully point in that direction as we see it" (La Branch et al., 2014 ; Interview 1300816_003)

5.8 Knowledge of Key Performance Indicators

Question 8 & 9 inquire about the KPIs applicable to the individual and their peers. The interview targets information about the participants' knowledge of the KPIs of the organization which are important to top management. The answers might be assumptions about the KPIs but during the interview it appeared that the participants were not supplied with the correct information. Therefore, all levels of knowledge refer to assumptions the participants make about their knowledge.
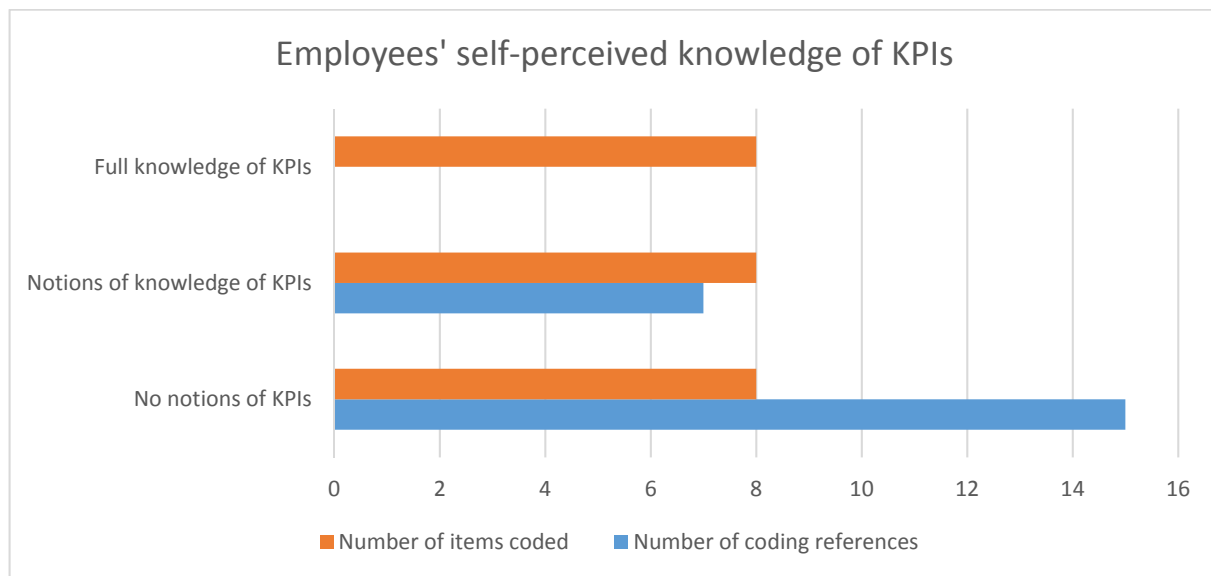
Graph 5-13: Employees' self-perceived knowledge of KPIs
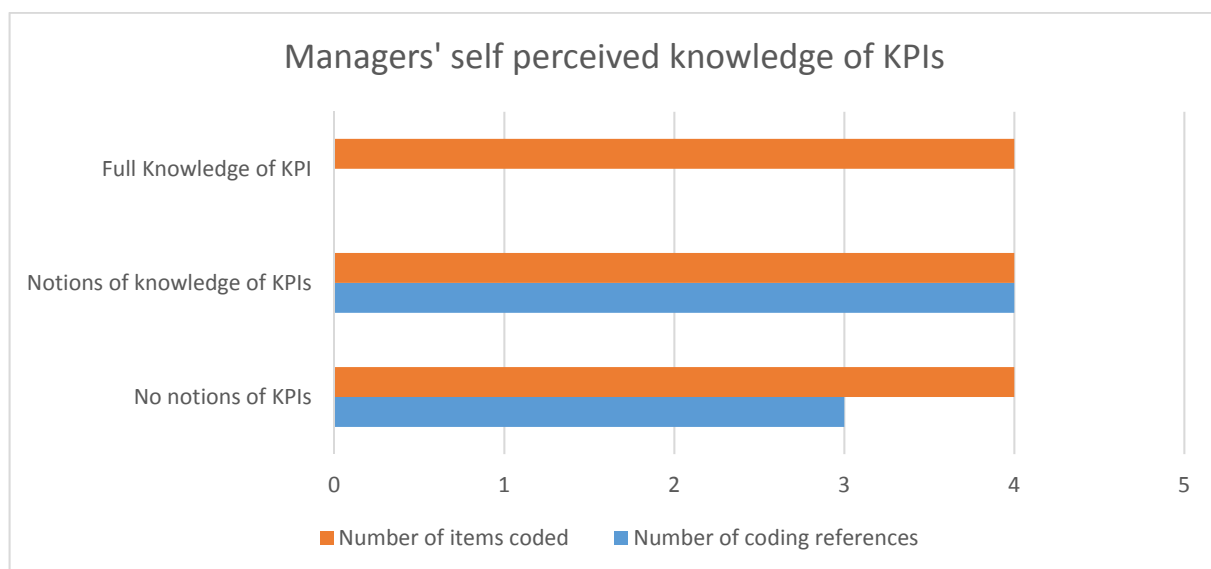
Graph 5-14: Managers' self-perceived knowledge of KPIs

Managers (Graph 5-14) have notions of the KPIs of the business while employees (Graph 5-13) do not know any KPIs which are important and why they are important. This results in a self-defined PMMS.

One employee summarized as follows: "The measures presented on the shop-floor are only for management" (La Branch et al., 2014, Interview 131108_001) and "We are defining our own KPIs" (La Branch et al., 2014, Interview 131108_001)

The absence of strategy, its communication and the resulting frustration reveals that there is only limited knowledge of the KPIs which are important to the business. In the literature Vollmer (2014) implies that if there is an absence of clarity (Atkinson, Waterhouse, et al., 1997) in performance management at any level of the process people start ignoring the system and define own frameworks (Ittner et al., 1998; Nørreklit, 2000; Santos et al., 2002; Schneiderman, 1999). In extreme cases, they do the opposite of what is required (Taylor, J., 2014; Vollmer, 2014). The research shows that this effect exists.

"So, instead of whining here because of lack of guidance from top management, take the destiny in our own hands by performing well." (La Branch et al., 2014 ; Interview 130816_003)

5.9 Deployment of KPIs

The question about KPIs expanded into the deployment of KPIs and how it should be done. The managers' view on deployment is that there should be KPIs for each department which contribute to the overall performance. The targets are based on these KPIs. The KPI deployment as well as the target setting should be a top-down process according to the managers.
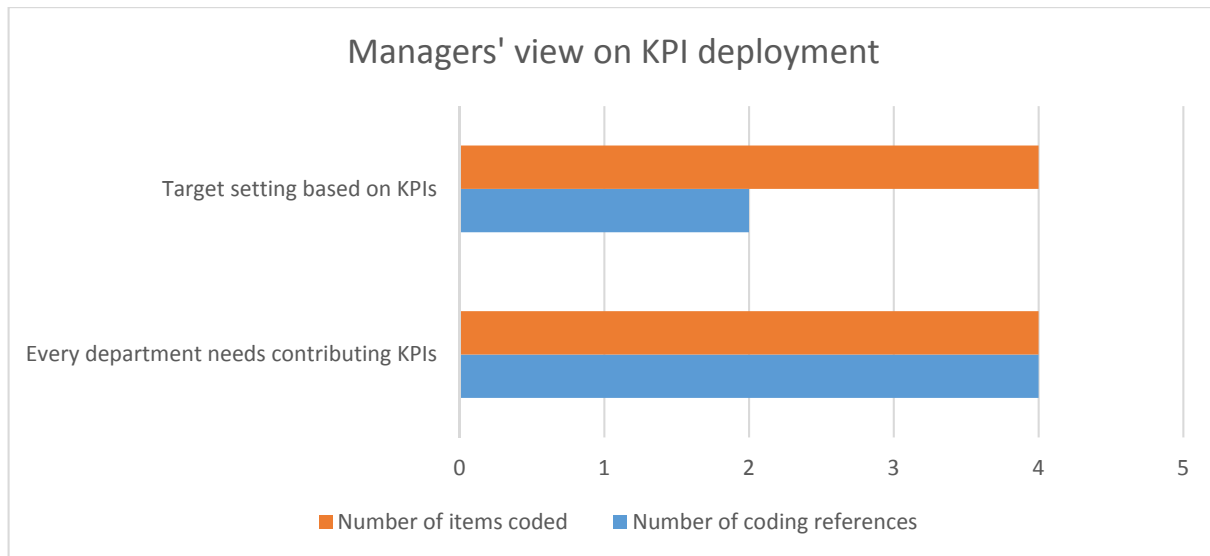
Graph 5-15: Managers' view on KPI deployment
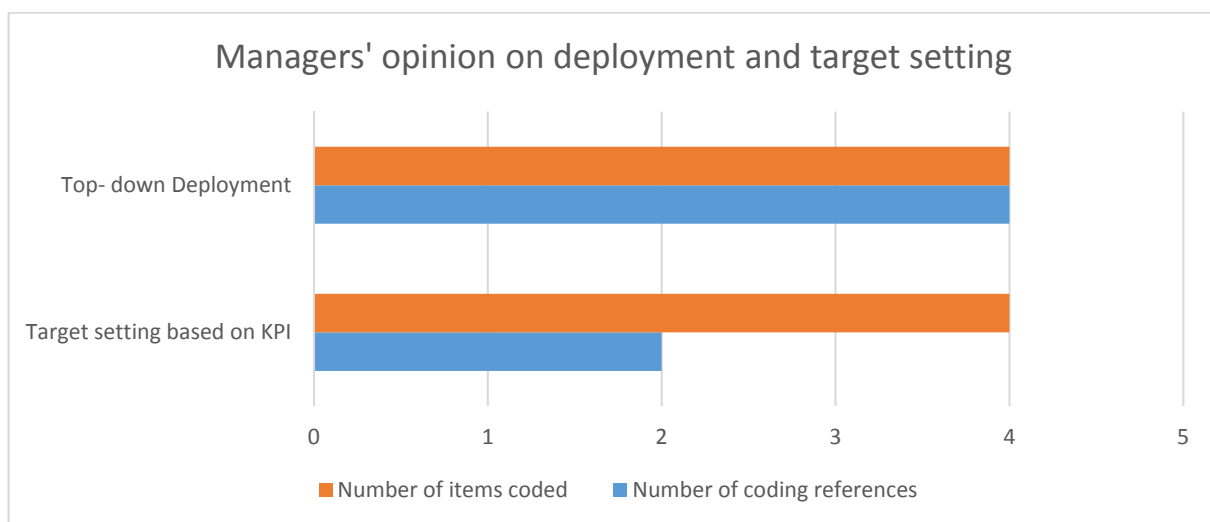
Graph 5-16: Managers' opinion on deployment and target setting

Kaplan et al. (1996) advocated for a deployment from the top down with every department having contributed KPIs on which targets are set. It seems that the managers agree on that (Graph 5-15, Graph 5-16). Interestingly enough this is in the context of a dysfunctional system where everybody has problems to define KPIs as can be seen in the next paragraph.

"And hopefully, these targets should come from our senior -- from the strategy session, which means that this is coming from the top, coming to plant management level, and then going down to the different departments,

and follow up these indicators on a weekly basis I think is appropriate so you can see indications." (La Branch et al., 2014 ; Interview 130813_001)

5.10 What is the assumption about which KPIs the organization is using?

Question 11 inquiries about specific KPIs which according to managers or employees are used to measure the performance of the organization. Both managers and employees named a wide range of KPIs but there is no consistency in their communication. The managers (Graph 5-17) named 25 indicators without identifying KPIs. So it is not clear if the KPI is leading, only lagging a result, or an actionable item.
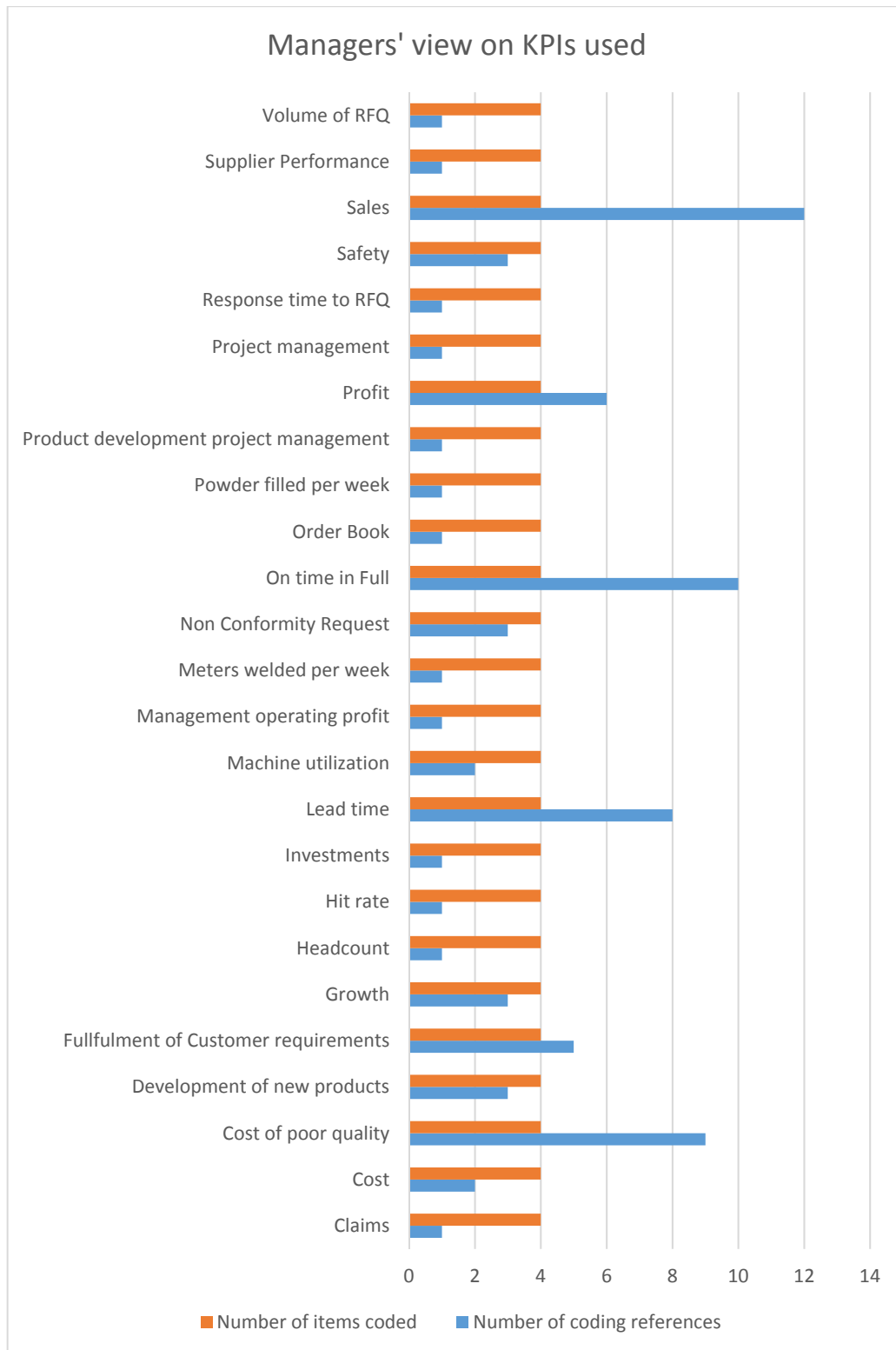
Graph 5-17: Managers' assumptions on the use of KPIs in their organization

Literature describes a lack of clarity as a reason for failure of performance measurement and management systems (Bourne, Mike et al., 2000; Santos et al., 2002; Schneiderman, 1999). The data collected during research indicates that even on the management level the KPIs and how they correlate (Santos et al., 2002) with the organizational goal are not clear. The definition of which KPIs really matter (Lima et al., 2009; Marr, 2012b) is essential to success (Neely, Andy, 1999; Schneiderman, 1999).

For the managers, it seems that there are five indicators which are important for them.

1. **Sales (Revenue)**
2. **On time in full delivery**
3. **Cost of poor quality, as a quality indicator**
4. **Lead time, as a service to the customer**

This gives an indication where the managers would or do prioritize their actions in their daily operation. Some indicators refer to similar measurements but use a different terminology. Therefore, the communications are not clear.

Employees named 32 indicators which seemed to be important for the business. There was also no prioritization of the indicators or the identification of KPIs (Graph 5-18).
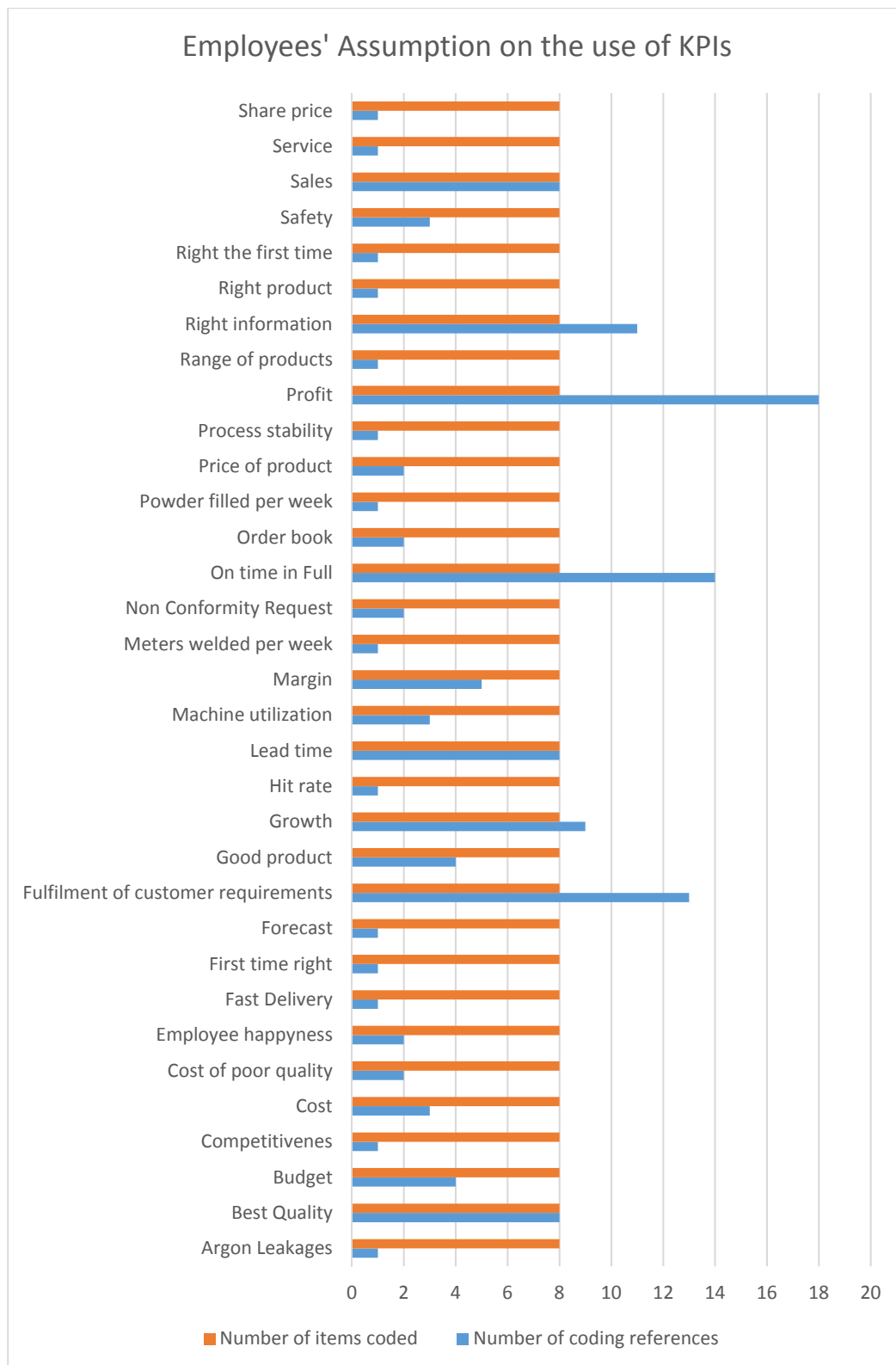
Graph 5-18: Employees' assumptions on the use of KPIs in their organization

"So, I think it feels like that we don't really know why we're having all the KPIs.

And we probably -- maybe in the end, it is the same KPI. But there are a lot of

different people involved in getting those reported." (La Branch et al., 2014 ;

Interview 130813_001)

Communication was identified as a key success factor for the implementation of PMMS (Neely, Andy, 1999; Schneiderman, 1999). This requires the use of common language which precisely states the nature of the measurements or key action. This cannot be found in this organization and it definitely contributes to difficulties in its execution.

For employees, the most important indicators are:

1. Profit

2. On time in full delivery

3. Fulfil customer requirements

4. Growth

5. Lead time

This indicates where employees see important measures for the company but none of these measures can at this point be connected to their daily activities.

Research has showed that employees often do not have clarity about their contribution to the organizational goal (Holmberg, 2000; Neely, Andy, 1999; Schneiderman, 1999). The top five indicators mentioned by employees do not directly relate to their work; e.g. profit, how does the worker executing a certain task contribute to profit? Literature states that this correlation (Holmberg, 2000; Neely, Andy, 1999; Schneiderman, 1999) is often neglected or impossible to communicate (Thommes et al., 2015).

5.11 The agreement of managers and employees on target setting and targets

The target setting should drive the alignment of the organization towards the organizational goal. The organization requires agreement on the target setting process as well as the targets. A total of 8 focus groups and 4 managers were interviewed. All interviews were coded and if the references were zero the total number of interviews is still referred to. If there was no clear statement, the coded reference was not counted. As a result, for employees, in Graph 5-19 there is a total of 8 coding references but only in 3 did the participants clearly state that they disagreed with the targets, although this occurred 12 times. Managers mentioned disagreement 17 times (Graph 5-21). In no interview did the participants state that they were in agreement. The agreement or disagreement was not an explicit question at this time but during the conversations on questions 6, 7 & 8 the topic was discussed. This probably happened because of dissatisfaction with the management process of KPI definition within the organization. Targets given to the organization were considered unachievable (Graph 5-19, Graph 5-21).
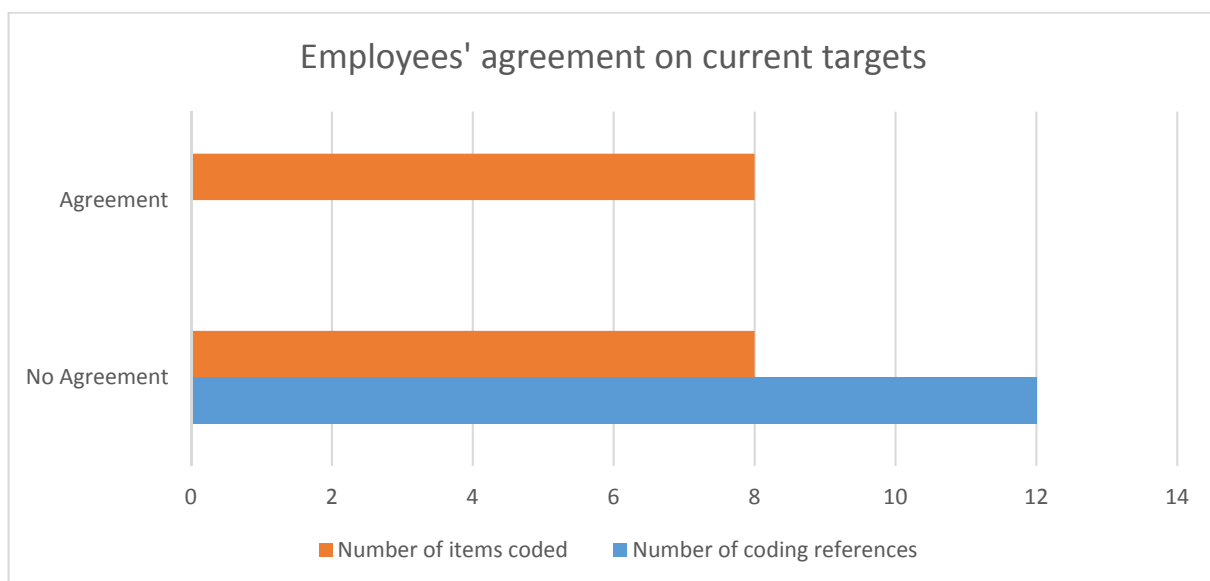
Graph 5-19: Employees' agreement on current targets
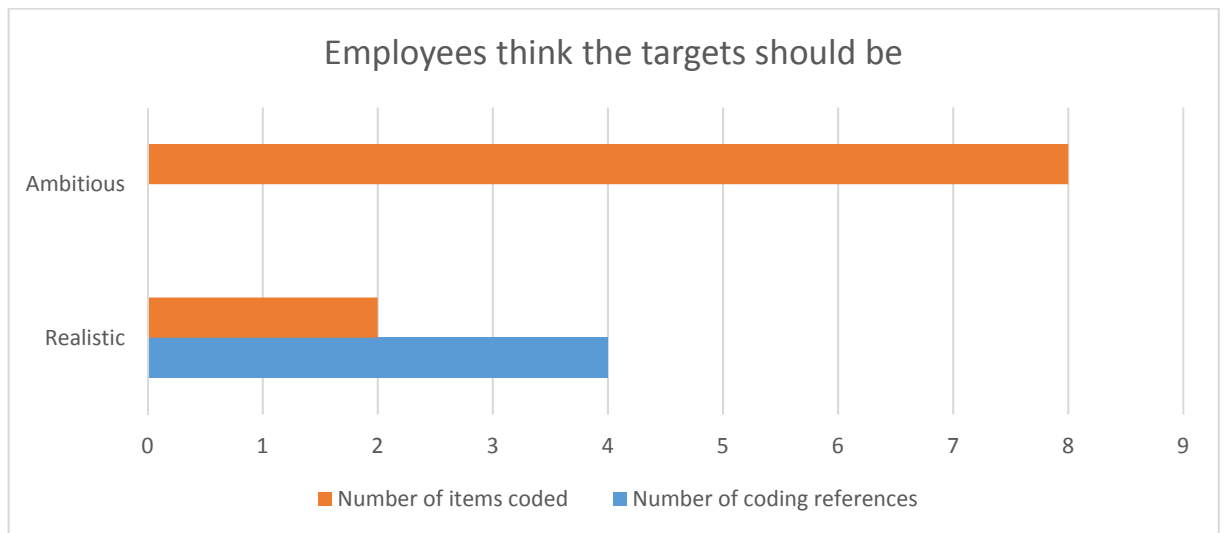
Graph 5-20: Employees think targets should be
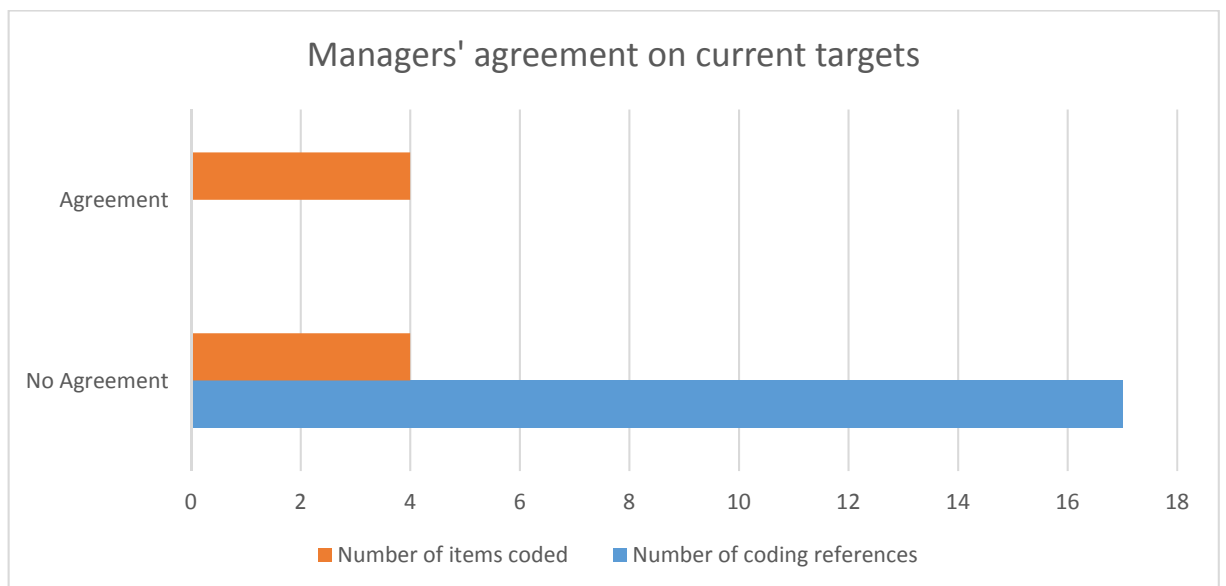
Graph 5-21: Managers' agreement on current targets
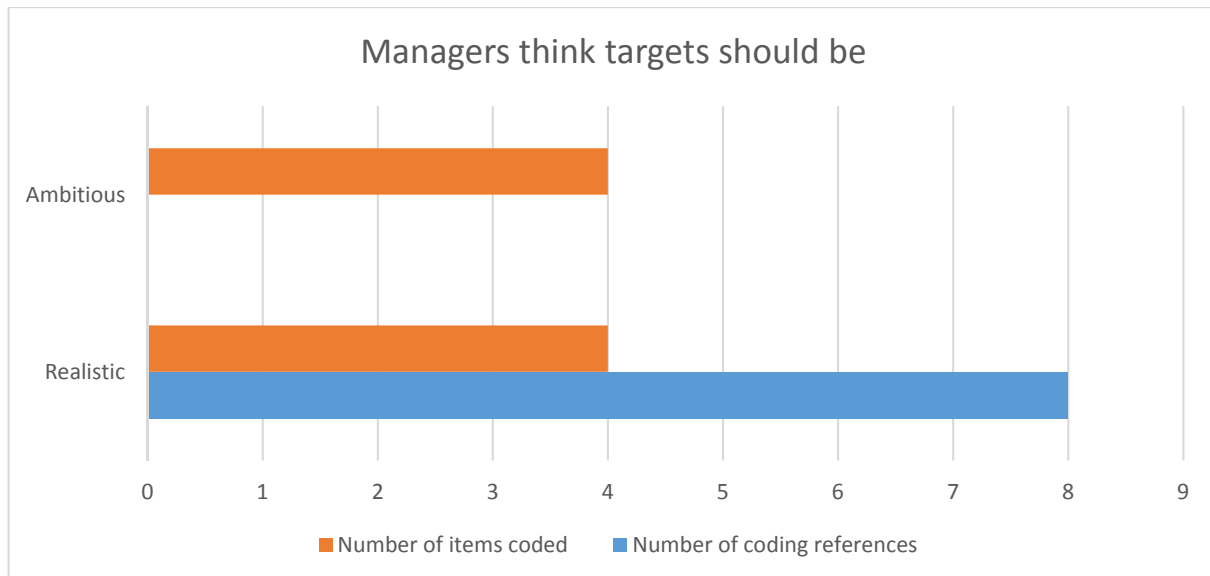
Graph 5-22: Managers think the targets should be

Both managers (Graph 5-22) and employees (Graph 5-20) think that targets should be realistic, possibly because there was a history of failing to achieve the set targets.

Literature and research states that employees who do not agree on the targets will not participate in their achievement, or in the worst case will work in opposition of these targets (Vollmer, 2014). Literature also states that targets should be ambitious but in our case the employees and managers state that targets should be realistic. This is a clear opposition which is probably related to the fact that the managers and employees do not consider the management process satisfactory and their targets unachievable. "A mere 7% of employees fully understand their company's business strategies and what's expected of them in order to help achieve company goals" (Kaplan et al., 2001a).

"I set my own priorities. Not just my own, I think I set my own together with, of course, the closest colleagues" (La Branch et al., 2014 ; Interview 130812_002)

5.12 Behavioural impact of disagreed targets

Employees (Graph 5-19) and managers (Graph 5-21) do not agree on the targets given to them and both parties state that this has a negative impact (Graph 5-23, Graph 5-24) on their motivation to achieve these targets. Managers state their dissatisfaction more often. This might be related to the fact that a portion of their pay is related to targets which were considered unrealistic, as can be seen in Graph 5-25.
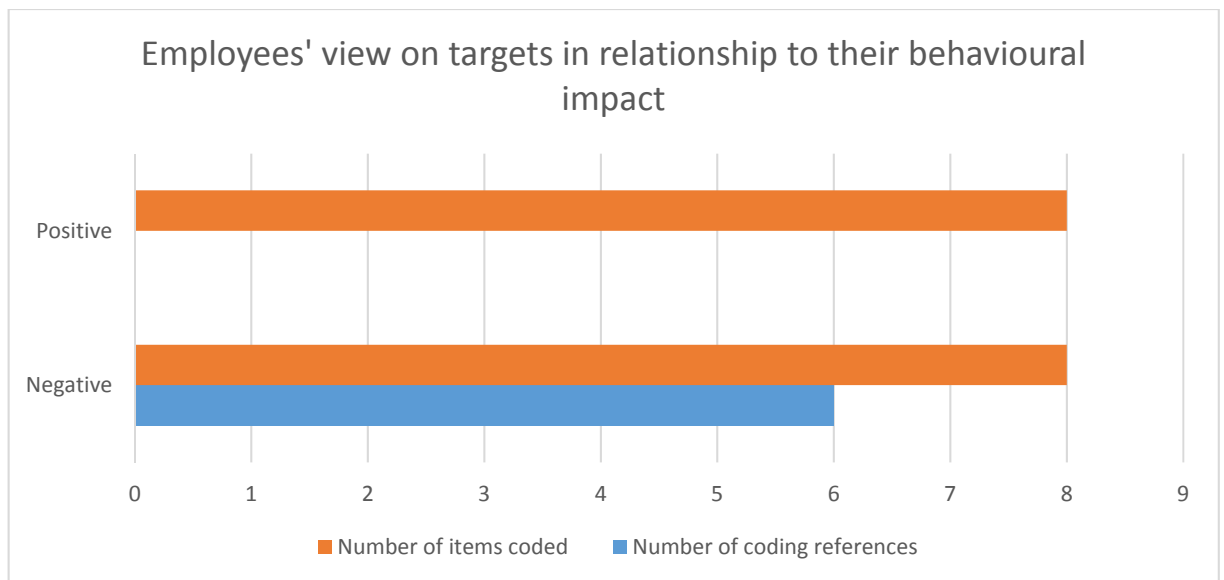
Graph 5-23: Employees' view on targets in relationship to their behavioural impact
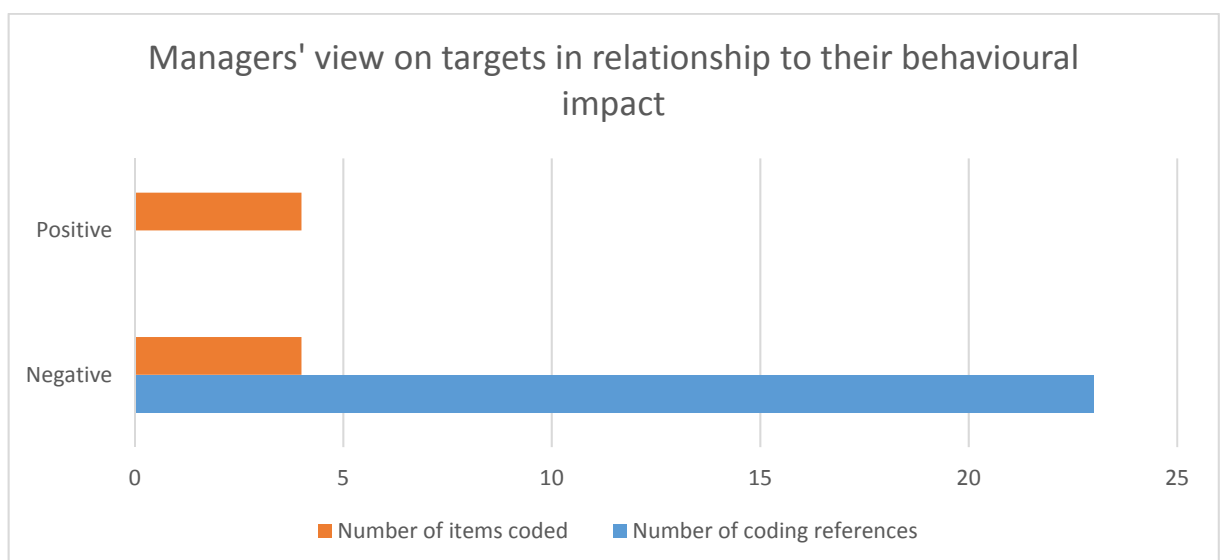
Graph 5-24: Managers' view on targets in relationship to their behavioural impact
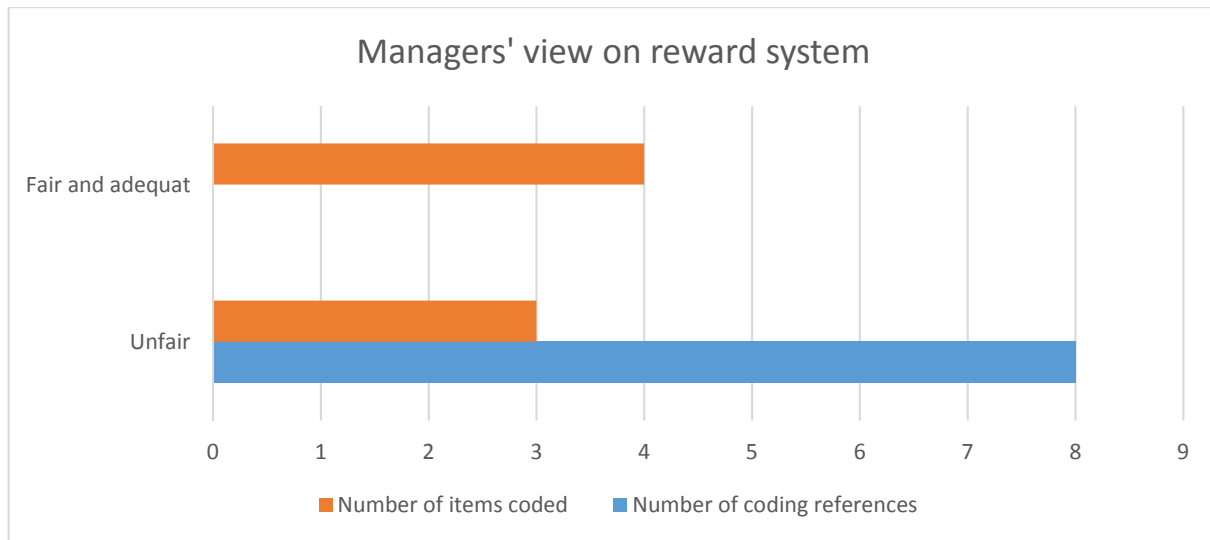
Graph 5-25: Managers' view on reward system

Managers comment on the letter stating the target related to the bonus:

"Well, they're totally out of this world. I mean, so if a letter like that -- if the purpose is to empower me or make me a better person or engage me more, then I think the meaning of that letter is totally opposite because, I mean, it's impossible to reach those figures. So, I mean, it's -- from the start, you're lost already from the start." (La Branch et al., 2014 ; Interview130816_003)

The employees have no performance-based reward system so they have no judgements on the reward systems.

Literature refers to intrinsic and extrinsic rewards for employees and managers to drive behaviour (Thommes et al., 2015). Ensuring the focused behaviour of employees is the most challenging factor for an organization because as individuals and groups people might pursue personal goals, e.g. personal enhancement, salary, bonus or feuds with other individuals and groups, which are in contradiction to the organizational goal (Gabriel, 2012; Grey, 2013; Huczynski et al., 2001; Jordheim, 2014). The absence of focus in parts of the organization jeopardizes the functioning of performance management (Grey, 2013). The data shows how the top management and local

management are misaligned. Top managers therefore have to answer on how to achieve the company goal and how their employees are motivated to support the strategic plan.

5.13 What is the impact of KPIs in this organization?

Questions 9 & 10 refer to the impact of KPIs on the work of the employees. At this point it is clear that there is a chasm between what the top management wants and what the managers and employees deem possible of delivering.
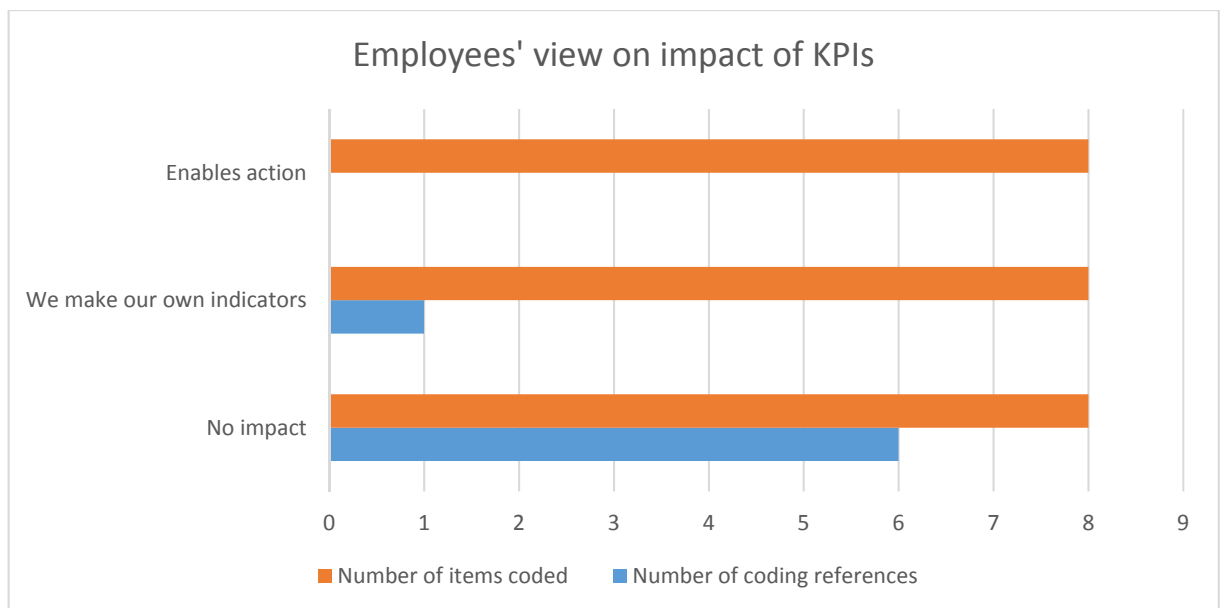
Graph 5-26: Employees' view on impact of KPIs
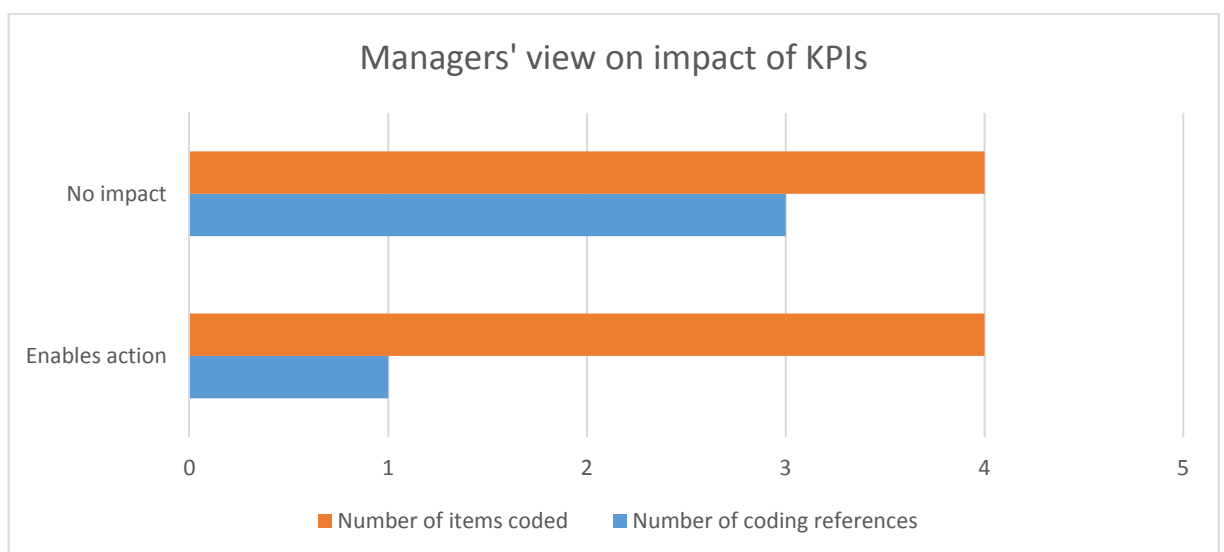
Graph 5-27: Managers' view on impact of KPIs

Both groups state that the KPIs given to them do not impact their work (Graph 5-26, Graph 5-27). Literature states clearly that KPIs should drive behaviour and enable action by all members of the organization (Kaplan et al., 2001a). The majority of employees and managers are not influenced by corporate indicators. That does not mean that they do work without KPIs or targets but only that they establish their own parallel system. This process is documented in literature (Pink, 2010; Vollmer, 2012). Rewards do not motivate the employees and managers to independently achieve targets which they consider unreachable, if the assumption is justified.

5.14 Motivational Factors

Question 13 targets the motivation to come to work and was not part of the original brief. Literature links behaviour with motivational factors. There are different models from Maslow (1943), McClelland (1983), Alderfer (1972); Wanous et al. (1983); Wanous et al. (1977), Skinner, B. F. (1965), Porter, L. W. et al. (1968); Vroom (1964), Deci (1972), Herzberg et al. (1993) to (Gostick et al., 2014). These have basic or hygienic requirements like money and security. The second degree is "autonomy", "mastery" and "challenge" (Armache, 2013; Bowen et al., 1992, 1995; Ji-Eun, 2012; Ken, 2014; Pink, 2010). Further, "purpose" represents the need to be part of something more important than oneself. The motivational factors are an interpretation of comments made by the participants, so that e.g. "learn something new" or "improve myself" were coded into mastery/challenge.
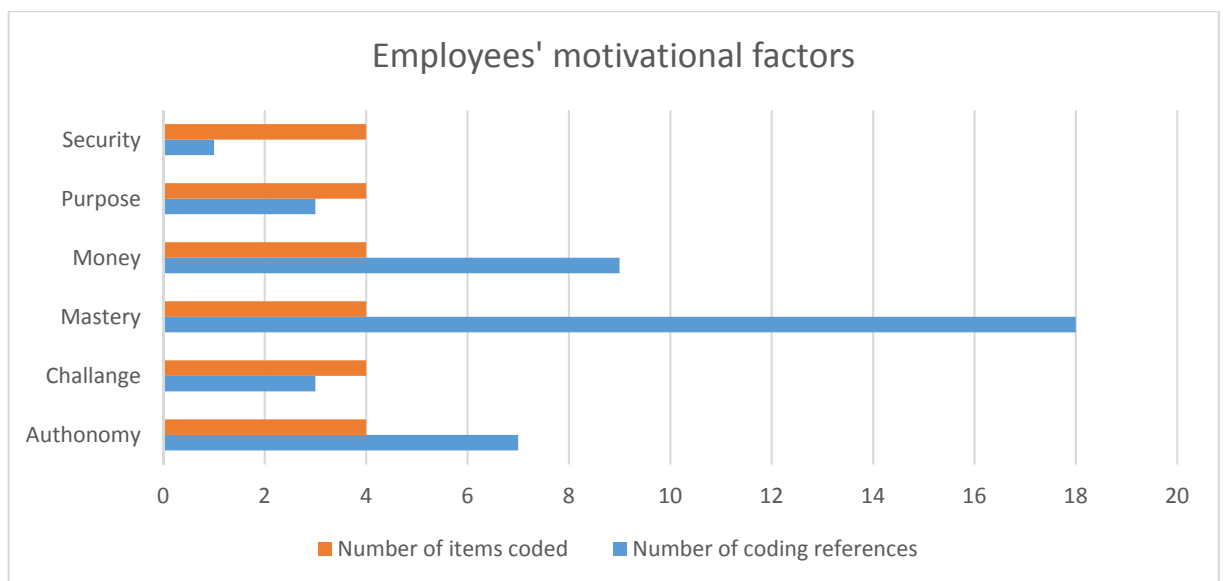
Graph 5-28: Employees' motivational factors

The data collected confirms that motivational factors (Graph 5-28) **(Armache, 2013; Bowen et al., 1992, 1995; Ji-Eun, 2012; Ken, 2014; Pink, 2010) stated in the literature research are valid for employees of the researched organization. The most important factor for the employees seems to be the ability to improve themselves in their jobs, followed by the salary (Tampu, 2015) and**

the autonomy to manage their work. It is a mixture of Herzberg et al. (1993) and (Gostick et al., 2014).
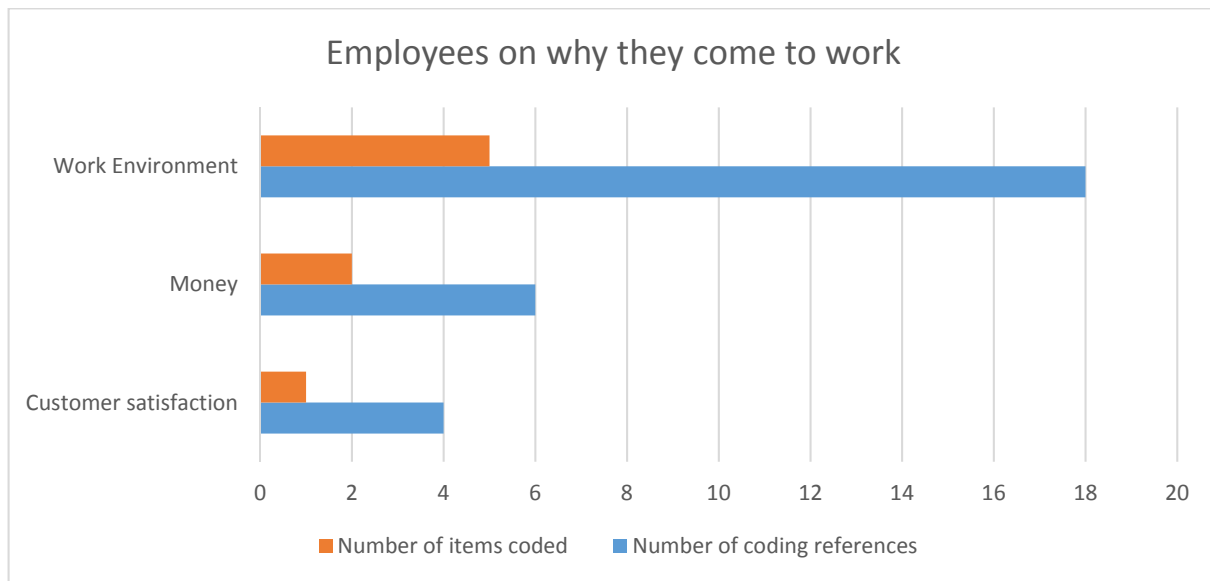
Graph 5-29: Employee on why they come to work

Direct answers to the question why employees come to work (Graph 5-29) referred primarily to the work environment (Tampu, 2015), after that money, and finally customer satisfaction. The work environment seemed to be very important in respect to the relationship with their peers and managers.

"to have a good teamwork together, to have an interesting job, and to earn money" (La Branch et al., 2014; Interview 121011_001)
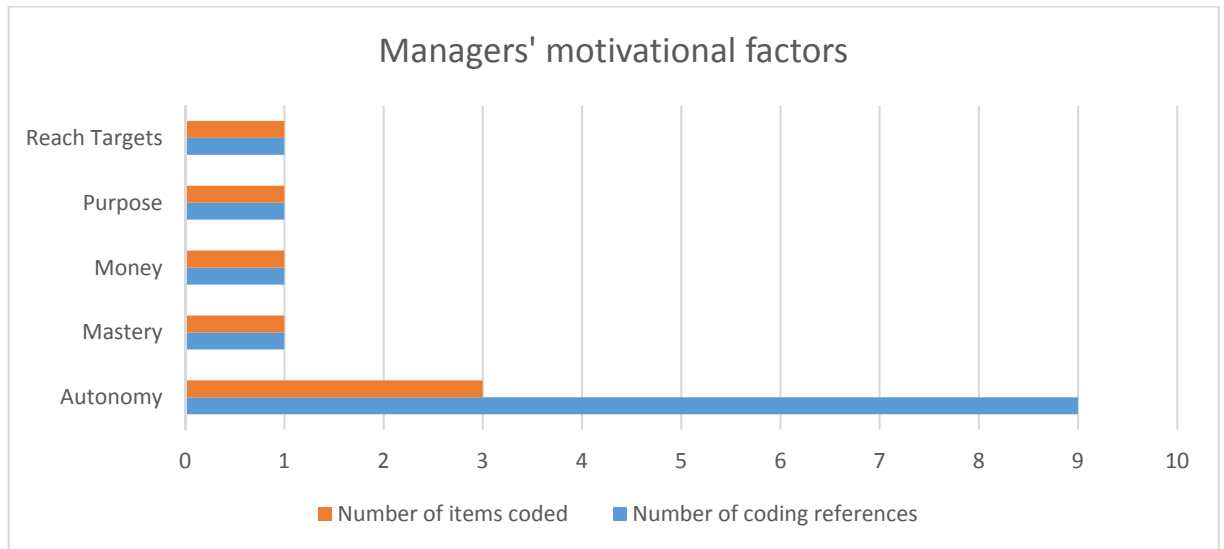
Graph 5-30: Managers' motivational factors

Managers' prime motivator is the autonomy (Graph 5-30) they are given to execute their work. Other factors seemed to be secondary.

The autonomy to manage their work was identified in literature as an important factor (Gostick et al., 2009; Gostick et al., 2014; Grey, 2013; Vollmer, 2012). The data collected seems to provide insight into how important this factor is for managers. However, their comments indicate that it is important because it does not exist and is therefore not a motivator but a source of demotivation. This confirms that certain factors do not directly influence by their presence but heavily demotivate by their absence (Pink, 2010). Interestingly, this research hints that this is not limited to hygienic (extrinsic) factors only but also intrinsic factors. Motivational or perceived factors change over time. This also indicates that changes in the environment influence the importance of motivators (Carolyn, 1997; Herzberg et al., 1993).

"and I think we have in Bodycote the opposite problem is that there's too much detail orientated and often in questions which don't have much business impact. So, sometimes, you have to let people make their decisions, and if the decision is wrong, they have to come over and tell them that and let them learn from that and move forward. But if you're constantly questioning

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people and even before the decision is made and then people won't grow in their roles" (La Branch et al., 2014 ; Interview 130813_001)

5.15 Organizational alignment

Do the managers and employees feel that the processes are aligned with the help of the existing KPI? The results are a combination of the discussion in respect to questions 8, 9 & 10. The data is limited because of the lack of knowledge of strategy and KPIs related to the strategy. The coded elements are related to incoherence in statements related to what is important for the business execution.
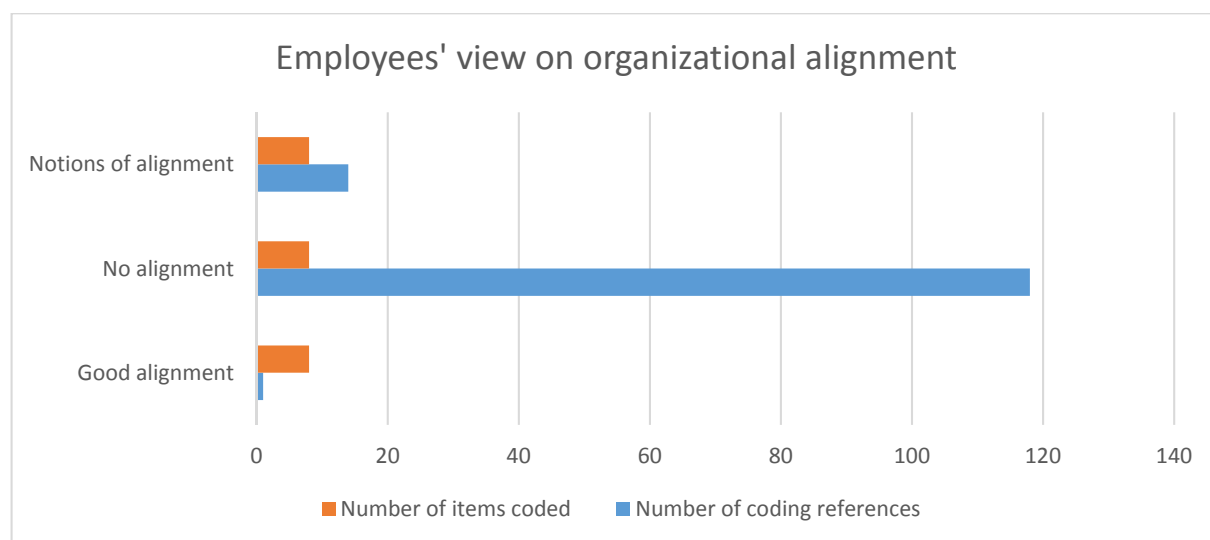
Graph 5-31: Employees' view on organizational alignment
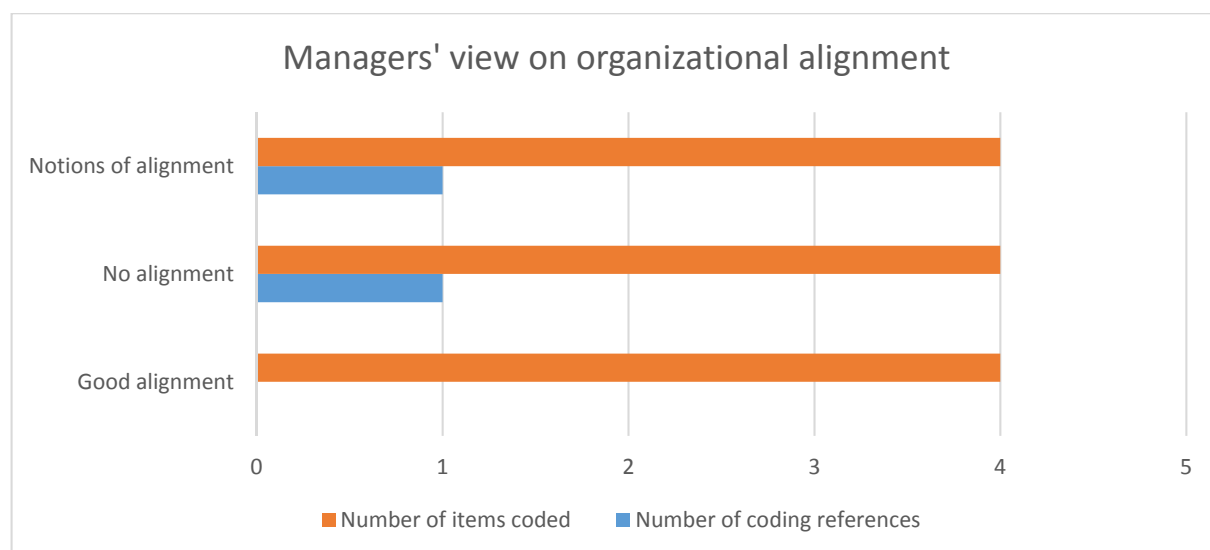
Graph 5-32: Managers' view on organizational alignment

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Earlier the data showed that the strategy and its KPIs are not operationalized within the organization. It is therefore no surprise that there is no alignment within the employees (Graph 5-31) and managers (Graph 5-32) because priorities **are not clear. This confirms literature in respect to strategy deployment (Banks et al., 1979; Cox et al., 2010; Kennerley et al., 2002; Neely, Andy, 1999; Schragenheim et al., 2000; Sinclair et al., 1995b).**

5.16 View of employees on the influence of KPIs

Questions 6, 7 & 8 ask for the KPI and how performance is measured. Employees commented significantly more on the influence of KPIs on their work (Graph 5-31) in comparison to the managers who seemed to be more occupied by the strategic direction. As a result, the managers did not comment on any KPIs and their influence on their work.

5.17 Influence of KPIs on Priority setting
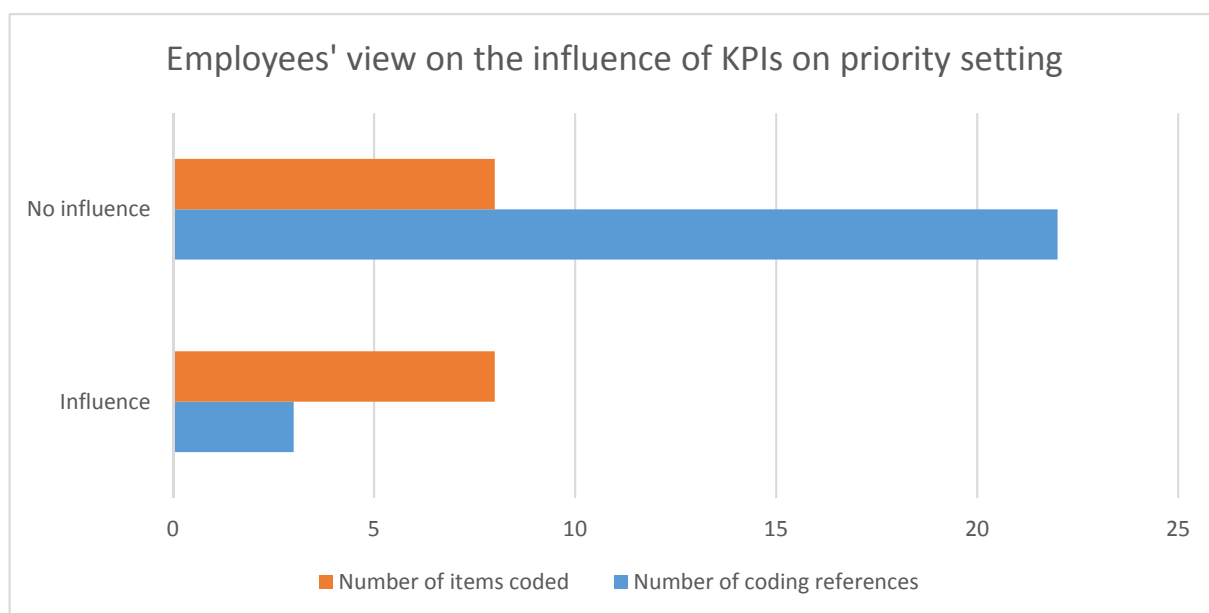
Graph 5-33: Employees' view on the influence of KPIs on priority setting

5.18 Influence of employees' work in relation to the KPI measurement system
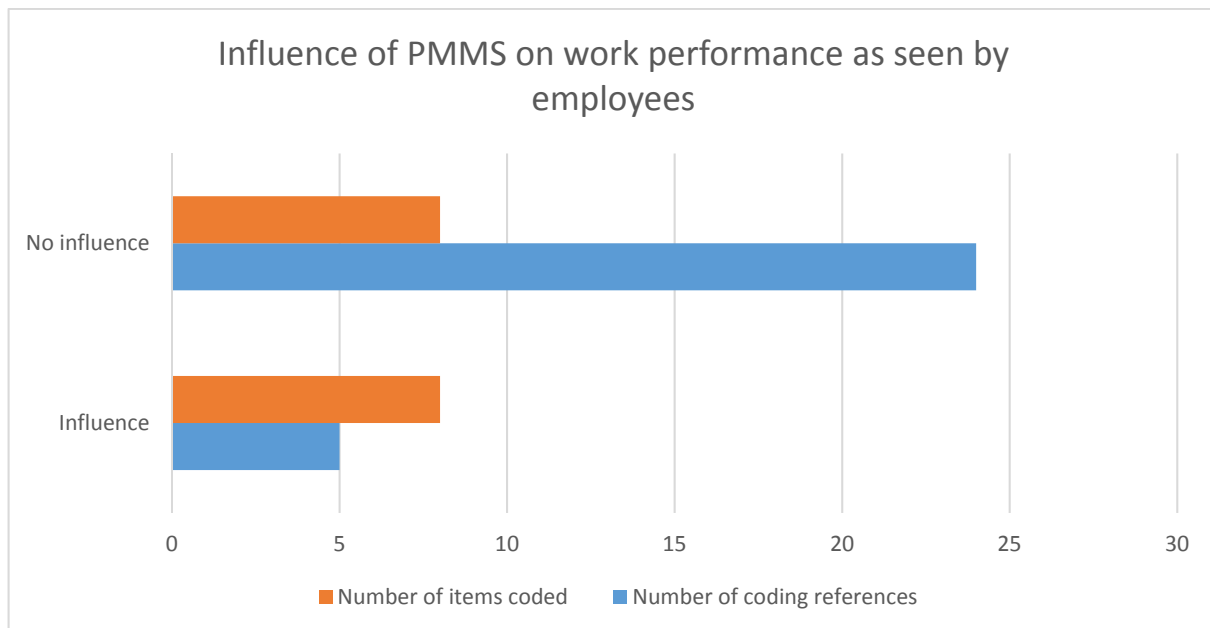
Graph 5-34: Influence of PMMS on work performance as seen by employees

Literature describes the frequent failure of performance management systems (Bourne, Mike et al., 2002; Torben, 2014). The primary data (Graph 5-34) shows a chasm between the top management and the local management. The strategy for the business unit researched seems not to be clear (Lima et al., 2009; Marr, 2012b). Consequently, unclear strategies cannot be operationalized at a local level. The managers do not agree with their targets because they neither understand nor agree on how these targets will be achieved. Therefore, this organization develops its own targets and a parallel performance management system (Nørreklit, 2000). There is probably clarity on these parallel measurements for the local team while the corporate measures do not influence the actions and behaviour of the local unit. As a result, expectations for the employees seem to be unclear (Graph 5-35) and a large number of KPIs cannot be managed (Goldratt, E. et al., 1986; Schragenheim, 1999). Lack of clarity of expectations is a major concern for

the employees (Graph 5-35). Schragenheim et al. (2000) called this dysfunction the "Nero Effect".

5.19 Clarity of expectations for employees

Employees' view on the clarity of expectations communicated
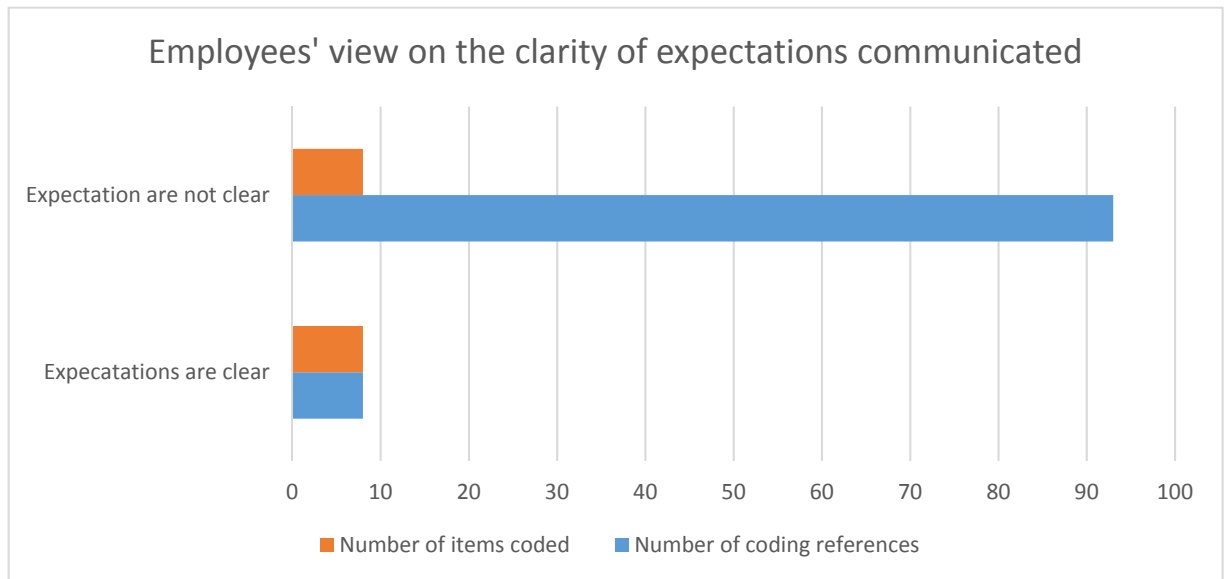
Graph 5-35: Influence on employees work in relation to the KPI measurement system

5.20 Summary

The results of the interviews show there is a significant gap between the literature and the results found in the interviews with managers and employees. The employees' focus is clearly on the execution level where clear communication of expectations correlating to the strategy is demanded. A strategy seems to be unknown to wide parts of the organization. The managers seem to have minimum understanding of the organization's strategy due to the lack of communication. There is a variety of KPIs which are seen important for both the managers and the employees but due to their great number a focused approach throughout the organization is not visible. The managers seem to be dissatisfied with the communication and employees dissatisfied with the lack of communication of priorities. Neither seem to agree on the targets that are given to them by senior

management. The targets seem to be perceived as unrealistic and managers have increased dissatisfaction with how their rewards are attached to unrealistic objectives. As the objectives are considered unrealistic the PMMS system becomes inefficient and people define their own targets which they consider achievable. The absence of a clear communication of strategy and relevant KPIs seems to lead to the creation of a world of parallel performance measurement where managers and employees work towards targets they consider reasonable. In the next section the results are discussed in detail. Literature often refers to the failure of performance management systems and these results describe an example for such a failure where the absence of strategy or its communication leads to an ambiguous situation in which top management gives targets to the middle management but fails to establish clarity as to how these targets can be realized. There seems to be no exchange to define key actions to enable the organization to achieve these goals. As a result, the operationalization of the strategy cannot take place because the managers cannot give clarity of expectations to their employees and consequently everybody defines their own priorities. This might lead to results in the short term but jeopardizes any long-term development. At this point it can be expected that the company will fail to perform, based on the findings from literature compared with the primary data in terms of success factors for implementation and their absence in the researched unit.

6 Discussion

6.1 Introduction

Previously the results of the interviews were presented and in this chapter the results will be linked with the research objectives. The chapter is organized per the research objectives. The key elements are based on the literature review and the results, belief systems, strategy, key performance measurement and management system and behaviour.

1. To develop key elements of efficient performance management in relation to strategy.

2. To appraise the strategic goal of the specific organisation and link and translate it into key performance indicators (KPIs).

3. To construct a concept to align employees' motivational parameters and company requirements to fulfil the strategic goal.

4. To create a toolbox process to implement a performance measurement system that supports internal alignment and employee behaviour with the strategic organizational goal.

In this chapter, the results of the interviews are reviewed and compared with the prerequisite tree established in the literature review for the implementation and operationalization of a successful performance management and management system. The current situation of the researched organization is reviewed and a tool box proposal derived from the previous findings.

6.2 Develop key elements of efficient performance management in relation to strategy

6.2.1 Introduction

For the development of key elements of efficient performance measurement and management systems, literature has provided insight into how systems must be developed and deployed. In this section these elements are summarized and compared to the researched organization. deWaal (2010) referred to the key word "belief system", which is what people believe about their organization, and Henri (2006) established the connections between an organization's values, its practices and routines and the effects on performance measurement (Abdelrahman et al., 2016; Soleman et al., 2017). Beliefs and values drive the behaviour of employees and are therefore the connection between PMMS and employee behaviour. In this section, the shortcomings in the missing connection between performance management and behaviour are discussed and the key elements of successful implementation are highlighted. At the end of the section it should be clear how PMMS in combination with behavioural aspects can result in the failure of any strategic initiative. In the following section key elements of the primary research are reviewed and key elements that seem to be important to the members of the researched organisation re defined. After that these elements are compared with the findings of the literature research.

6.2.2 Organizational goal and strategy in the researched organization

The organizational goal is clear to the managers and employees because they defined it as making profit. Over this there seems to be agreement within the organization. The same is valid for the purpose of strategy which is defined as a plan for the future. This plan is expected to be communicated from the top

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management (interview question 9) down to the employees. In the researched organization the strategy seems not to be clear, as can be seen from the following statements:

"Do you understand the corporation's strategy? No, I don't know. I don't know what's our strategy if I have to be honest." (La Branch et al., 2014 ;Interview 131029_001)

"They should have a great impact on it, but I think it hasn't really been clear to a lot of employees from the upper levels." (La Branch et al., 2014; Interview 131029_001)

"The question was if I'm aware of the strategy, the presentation that was done. No, I'm not. I have not seen -- I have not received that doc-- presentation, nor have I seen that presentation either. So -- and this is -- this has been this way previously years also. The strategy is not clear for us working locally on this -- in this plant. I can only speak for this." (La Branch et al., 2014; Interview 13013_001)

"I'm not clear about the strategy for Bodycote." (La Branch et al., 2014; Interview 130813_002)

The employees clearly state that they do not know the strategy per questions 6 & 7 of the interview. There are two key elements which stand out:

1. **The definition of the goal: It seems that the organisation agrees on the goal as per question 1 of the interview. The members of the organization have a clear view on why the organization exists. This goal is clearly stated in the literature, in particular by Goldratt, E. et al. (1986). It was not clearly stated within the research that employees and managers have this understanding about a commercial organization, but it always seemed an underlying assumption.**

2. **The strategy: Employees and managers understand the concept of strategy (interview question 2).**

"Strategy is something that help us to look further into the future than just to day-to-day problem. So, I define strategy as somewhere where we define where we want to be in two years or three years. There's different horizons for strategies." (La Branch et al., 2014; Interview 130813_001)

"And hopefully, these targets should come from our senior -- from the strategy session, which means that this is coming from the top, coming to plant management level, and then going down to the different departments, and follow up these indicators on a weekly basis I think is appropriate so you can see indications." (La Branch et al., 2014 ; Interview 130813_001)

There seems to be no clear definition of a strategy that can be operationalized on a local level. It seems also that top management is confused about the strategy, as can be seen in comments of Stephen Harris, CEO of Bodycote:

"[…] that Stephen Harris has high expectations on PF (the researched business unit, remark of the author). Obviously, I was interested in what his view on that is. And basically, it is that we did put ourselves in a tough situation when we put all our emphasis into the oil and gas sector. And his perspective was, 'You did it to yourself; solve the problem'." (La Branch et al., 2014; Interview 130813_001)

The lack of awareness of the strategy results in a lack of understanding of the performance measurement and management system (Question 3: Business indicators). The problems of strategy, its operationalization and the clash of the belief system result in a failure of the PMMS. Question 11 referred to the KPIs which the company uses and the answers showed a high number of

KPIs. In answers to questions 6, 7 & 8 employees stated that the KPIs do not have any influence on their work. KPIs and Targets are means of communication towards the organization and should give feedback on the progress of strategic initiatives. In the researched organization, it seems that there is confusion on what is measured and the importance of the measure, as well as the introduction of target.

"I think it feels like that we don't really know why we're having all the KPIs. And we probably -- maybe in the end, it is the same KPI. But there are a lot of different people involved in getting those reported." (La Branch et al., 2014; Interview 130816_002)

"the feeling that I have is that we are reporting numbers, but we're not analysing numbers because we don't even have time to analyse the numbers because then it's time to report another number or another number or another number" (La Branch et al., 2014; Interview 130816_002). "But I think there's a lack in Bodycote, I mean, how it's -- how the goals and strategies are communicated downstream in our organization. So, for me, it's very vague […]" (La Branch et al., 2014; Interview 130816_003)

"Well, they're [the targets, remark of the author] totally out of this world. I mean, so if a letter like that -- if the purpose is to empower me or make me a better person or engage me more, then I think the meaning of that letter is totally opposite because, I mean, it's impossible to reach those figures. So, I mean, it's -- from the start, you're lost already from the start." (La Branch et al., 2014; Interview 130816_003)

"[…] when we get the numbers that we can't even change ourselves and we are supposed to be the people who know, and if you don't listen to the people

who know, that is not really driving motivation." (La Branch et al., 2014; 130816_002)

"I think we have also a problem with decision-making. It takes too much time, extremely too much time to make a decision. I know that you cannot take decisions in a rush. But that's [...] there should be a balance." (La Branch et al., 2014; Interview 131029_001)

" I feel there's an absence of goals and also strategies together, I mean, in the management team, for example, and with my […] perhaps my closest colleagues, […] I think we have quite a similar view of things." (La Branch et al., 2014; Interview 130816_003)

"And the feeling that I have is that we are reporting numbers, but we're not analysing numbers because we don't even have time to analyse the numbers because then it's time to report another number or another number or another number." (La Branch et al., 2014 ; Interview120816_002)

The organization clearly has difficulties in providing clarity in its communication of strategy and its operationalization as well as target setting and related feedback. KPIs seem to be only communicated towards the top without receiving feedback. The high number of KPIs named by the members of the organization indicates that there is much reporting but that interpretation takes place at the top level without closing the loop to the operation side.

Communication of goals is important as well as the understanding on how they are operationalized. Even though there might be an understanding of the organizational goal it cannot be assumed that employees as well as managers understand the requirements in terms of KPIs connected to them. They

clearly understand the goal but cannot relate this to the operation by the means of KPIs as of the time of the interviews.

Five more elements were identified in the interview process:

3. **Belief system: The high number of measurements and the lack of feedback indicates that the PMMS exists to control the organization.**

4. **Renewal: It seems that the number of measurements is increasing at an equal rate.**

5. **Communication: The quality of communication does not establish trust between the local operation and the top management.**

6. **The PMMS is not agreed upon mutually and is imposed by the top management. The target setting process seems to be working in a similar manner.**

7. **Empower and engage: The local organization believes that they cannot influence the PMMS process and they are asked to execute orders coming from the top.**

6.2.3 Behavioural influence of performance management systems in the researched company

In the interviews within the researched company it became clear that the employees and managers do not trust the top management and do not understand the processes imposed on them. This has created an environment where corporate directives in terms of PMMS are ignored wherever possible and parallel systems are created. The influence of PMMS on personnel behaviour was discussed within questions 6, 7 & 8.

One employee summarized as follows: "The measures presented on the shop floor are only for management." (La Branch et al., 2014, Interview 131108_001) and "We are defining our own KPIs." (La Branch et al., 2014, Interview 131108_001)

"So, instead of whining here because of lack of guidance from top management, take the destiny in our own hands by performing well." (La Branch et al., 2014 ; Interview 130816_003)

"I set my own priorities. Not just my own, I think I set my own together with, of course, the closest colleagues." (La Branch et al., 2014 ; Interview 130812_002)

"Well, they're totally out of this world. I mean, so if a letter like that -- if the purpose is to empower me or make me a better person or engage me more, then I think the meaning of that letter is totally opposite because, I mean, it's impossible to reach those figures. So, I mean, it's -- from the start, you're lost already from the start." (La Branch et al., 2014 ; Interview130816_003)

In 6.2.2 key elements of the perforce management in relation to the researched company were defined. In this section, the behavioural impact of these key elements in respect to their execution within the company is reviewed. The results in Chapter

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5 indicate that the state of the PMMS has resulted in a devaluation of strategy and performance management. Employees and managers have created their own systems which they feel are taking them in the right direction but do not reflect the requirements of top management.

6.2.4 Summary of sections 6.2.2 & 6.2.3

In the discussion of the results the interview coding is translated into Undesired Effects (UDE) and Critical Root Causes (CRC) in line with Dettmer (2007). The UDE/CRC are summarized in a current reality tree (CRT). The CRT interlinks issues identified with a logical chain of cause and effect.

6.2.4.1 The organizational goal

The goal of the organization seems to be clear for most of the managers and employees. A commercial organization exists to generate money and on this managers and employees agree, despite it seeming to be unclear how this is achieved in their organization. There are always notional right answers on how the process must work to achieve the goal but there seems to be confusion as to how activities and processes are aligned to achieve the goal on the operational side. This is valid for both employees and managers. The undesired effect (UDE) from the interviews is that processes and actions are not consciously aligned with the organizational goal.

> **UDE/CRC**
>
> Employees' / Managers' actions are not aligned to achieve the organizational goal

> **UDE/CRC**
>
> Managers do not understand the strategy for their BU

> **UDE/CRC**
>
> Managers / Employees create their own objectives

6.2.4.2 Strategy and its deployment in the organization

In principle, the interviewees agree that a strategy is a plan for the future, that this plan should be provided by the top management, and that it defines where they want to develop the organization to. From there the local

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management defines a local strategy and takes key actions to achieve this goal on the local level in line with the overall organization. This can be seen in the answers to interview questions 1 & 2.

It became clear that the management on the local level was not exposed to communication of a corporate strategy. The managers believe that there is no strategy for their business unit. Most of them do not understand how their work fits into the greater picture and how they can contribute to the success of the organisation.

UDE/CRC
Corporate performance measure does not yield required results

The researched organization is not aware of a company strategy or its definition for the business unit, as can be seen in the answers to question 5. The managers are not sure about the strategy of their business unit but have been exposed to a corporate strategy which seems to be difficult to reconcile with the business unit's strategy. The managers are very concerned about the absence of clear guidelines in respect to their objectives and it seems that they filled the void with actions they deemed to fit best with their general assumptions of strategy and the organizational goal.

UDE/CRC
Employees do not understand how they can participate in the

UDE/CRC
KPI system is only focused on financial figures

UDE/CRC
Managers and employees create a parallel PMMS

The strategy definition for most the interviewed persons is a plan for the future. The managers expect the top management to give guidance in respect of the definition of strategy for their specific unit. A general strategy seems not to fulfil the requirements of middle management because of the lack of clarity which then cannot be translated into directed action.

The managers in the researched organization are not in a position to operationalize the corporate strategy. The reason for this is twofold:

1. The corporate strategy is not clear.

2. The corporate strategy failed to prepare the organization previously with definitions of key actions for the challenges to come.

Consequently, the trust of the local managers and employees faded, resulting in a frustration with the requirements coming from the head office. The absence led to an effort based on a parallel performance management system to find a way to resolve the mistakes of the past while executing major contracts for the oil and gas industry. Strategy was never operationalized on a BU level and resulting actions within the BU to synchronize processes and drive employee behaviour were left to local managers without clear guidelines (Thommes, 2013).

6.2.4.3 On KPIs and performance management and measurement systems

Despite the absence of a clear strategy which could support the local efforts of operationalization to achieve the organizational goal, targets are given to the business unit. These targets are of a purely financial nature in terms of sales figures and profit. These targets cannot be influenced by the local unit. The targets therefore have no underlying assumptions on how to achieve these objectives.

In our specific case the guidance for the local management was a financial budget communicated to the management early in 2012 for 2013. In previous years, the targets assumed an organic growth by 100%. The targets were based on aggressive

UDE/CRC

Managers & employees do not trust their Top management

UDE/CRC

The company is not achieving its financial potential goals

UDE/CRC

Managers have no autonomy to influence targets for their BU

UDE/CRC

Managers & employees set their own targets

UDE/CRC

Managers & employees are not clear on priorities

interpolation of previous years but now the turnover was at substantially lower levels. The imposition of the targets as well as the absence of an operationalization of this objective led to a frustrated understanding of the strategy by the local management. Most of the employees do not believe that these targets are reachable and therefore actively or passively reject the targets given by the top management. Managers feel that they do not have influence on the definition of these targets. As a result, they do not support the related KPIs which are limited to the monthly sales figures. The situation was amplified by the fact that the company has failed to deliver the required results in a previous year based on this top-down target setting. The employees felt that they were set up for failure and in particular the reward system for managers was devalued, because targets became unachievable.

The setting of purely financial targets without a plan for their operationalization leads to a lack of clarity of priorities. Employees and managers need clarity on expectations in order to achieve the required performance. Employees must have actionable information of expectation. In the researched organization, the expectations are vague and this can be seen in the number of KPIs which were mentioned in the interviews. In our case managers and employees are not sure how to participate in the achievement of the goal. Employees may not be able to trust their managers because of the absence of guidance. Employees, according to the interview, are eager to achieve mastery but without expectations the definition of good performance is difficult. On the other hand, managers need feedback on how the unit performs against the targets set. If the managers do not agree on the objectives set, the system breaks down as the organization is in disagreement. The

managers and employees set themselves targets within their possibilities and create a parallel system for measuring performance. The requirements of the corporation are not operationalized because the local management team cannot relate to the targets and feels that this information would drive the performance of employees. The majority of employees would not understand how to influence revenue figures if there are, for example, corresponding order intakes. The gap between the target and the lack of actions required resulted in the absence of trust in the top management of the corporation. Therefore the measures applied by the corporation did not result in the required performance, leading to a shortfall in the financial results.

Obviously, the head office realized the deviation and introduced more and more measures for increased performance control. More and more analysts were involved to investigate local numbers and they created more and more reporting efforts for the local managers. This resulted in a wide measurement approach in a situation in which the researched organization needed focus to resolve inherited challenges (Thommes, 2013). With a high level of reporting and uncorrelated measurement requirements, execution becomes more and more difficult because the importance of different measures becomes unclear.

The performance measurements that directly reflect the value creation process seem not to be clearly communicated in the organization. The increasing number of measures creates the question where the priorities are. In particular, on the shop floor the measures should be actionable by the team

UDE
The company is not achieving its financial goals

UDE
Corporate performance measure does not yield required results

UDE
Parallel performance management exists in the organization

UDE
Targets were given top down without consulting the local management

UDE
Managers & employees do not trust their top management

executing and defining clearly the day-to-day expectation. The interviewees named a large number of assumed KPIs. The large number indicates that there is no common language defining the KPIs nor the importance of the KPI for the employee and how the employee influenced the number. It was stated that the numbers are only for the management. There is a clear breakdown in the organization between the strategy, its operationalization in PMMS and the behaviour it should drive.

During this discussion, several UDE/CRC were identified. To create a current reality tree for the organization, it must be decided if the finding is a UDE or a CRC. A UDE is a very prominent indicator that there is a problem within the system (Dettmer, 2007). For our system, visible defects are the five UDEs:

1. Failure to achieve the financial goal, because it is the organizational goal of any commercial undertaking.

2. The existence of a parallel performance management system. It indicates the gap between the business unit operations and the corporation strategy. The literature reviewed showed that dysfunctional strategy implementations often generate parallel performance management systems which in the worst case act in contradiction to the corporate efforts.

3. The corporate performance measurement system does not yield the required results.

4. The business targets were established without consulting the local management. This refers to the implementation challenges in respect to buy-in and alignment, to which literature refers as crucial for success.

5. Managers do not trust the top management, because literature has shown the importance of trust for the success of the organization.

The remaining points can be classified as Critical Root Cause (CRC): CRCs describe a causal relationship which leads to the UDEs. There can be several layers of CRCs which should form a logical chain to describe a system's behaviour creating the current situation that is desired to be changed. Some of the CRCs are in the span of control of our organization and some might not be (Dettmer, 2007). In this case the company will not achieve the financial results that are required from the corporation. From this starting point a Current Reality Tree (CRT) is constructed in the next section.

CRC

KPI system is only focused on financial figures

CRC

Employees do not understand how they can participate in the achievement of the goal

CRC

Managers & employees are not clear on priorities

CRC

The company is not achieving its financial goals

CRC

Managers have no autonomy to influence targets for their BU

6.2.4.4 Current Reality Tree

The reason for constructing a current reality tree (CRT) is to determine the changes necessary. It should support the analysis process by tracing system deficiencies back towards one or more basic causes (Dettmer, 2007; Goldratt, Eliyahu, 2009; Goldratt, E. et al., 1986). Between each item in the tree is a cause-and-effect relation. The tree was build out of the elements in the previous section.
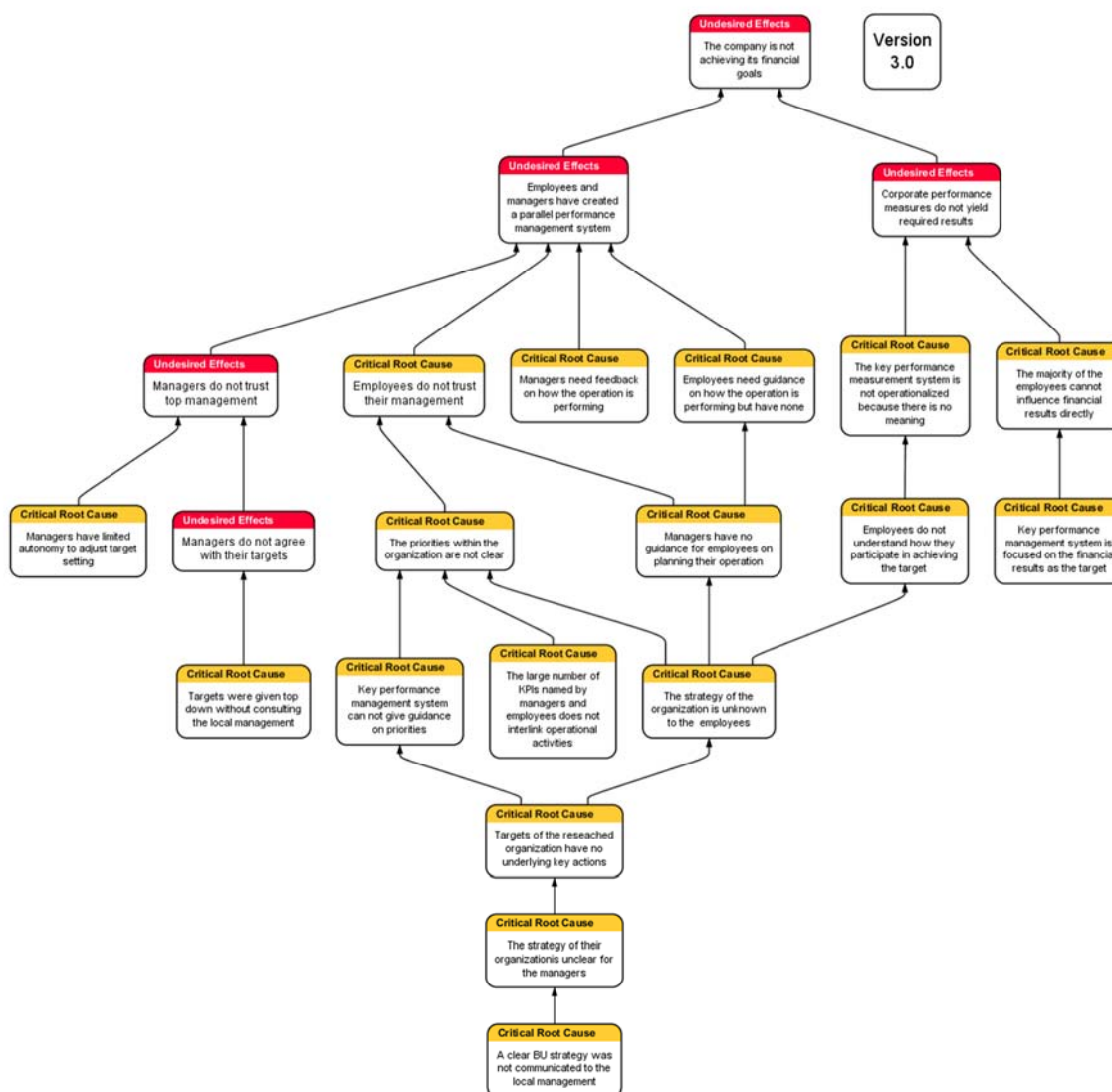
Figure 6-1: Summary of the findings in the Current Reality Tree
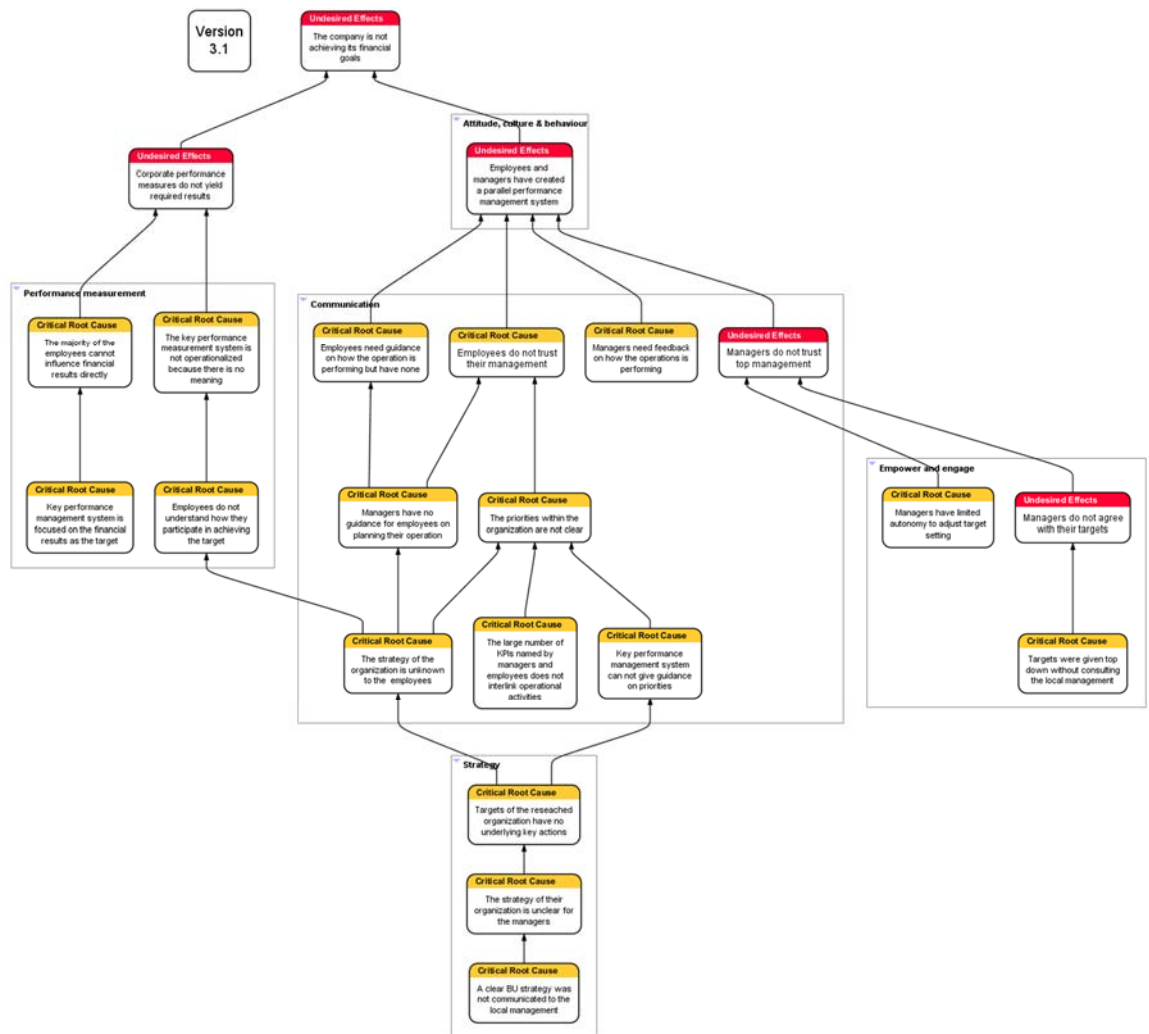
Figure 6-2: Current Reality Tree sorted to key elements

There is a logical chain of strategy, PMMS and behaviour which interrelates the key elements of successful PMMS.

6.2.5 Key elements of successful PMMS from literature

These have been summarized in Figure 6-3. This figure was developed out of information collected in the literature review. The key elements of performance management systems can be summarized as in Thommes et al. (2015) but "renewal" (Gallos, 2006; Meyer et al., 1994) and the belief system of the organization (deWaal, 2010) have to be added:

- **The company goal: There must be clarity on the organizational goal.**

- **The strategy: What are the key activities and key targets to achieve the goal?**

- **Belief system: Does the organization have the same assumptions about the functioning or purpose of the organization? Beliefs will drive behaviour (Barrick et al., 2015; deWaal, 2010).**

- **Performance management: Define the key performance indicators on macro and micro levels.**

- **Communicate: The purpose and goal of the organization are to generate trust.**

- **Empower and engage: Define the authority in decision-making. It is important for the organization to assess what type of organization it is (X or Y).**

- **Define and agree on performance measurement and target setting: Mutually define a limited set of KPIs for the organization, groups and individuals.**

- **Feedback: Rely on frequent personal feedback and employee self-reflection.**

- **Reward: Mixed intrinsic and extrinsic rewards which are considered fair achieve high performance.**

- **Renewal: the system has to renew itself (Meyer et al., 1994).**
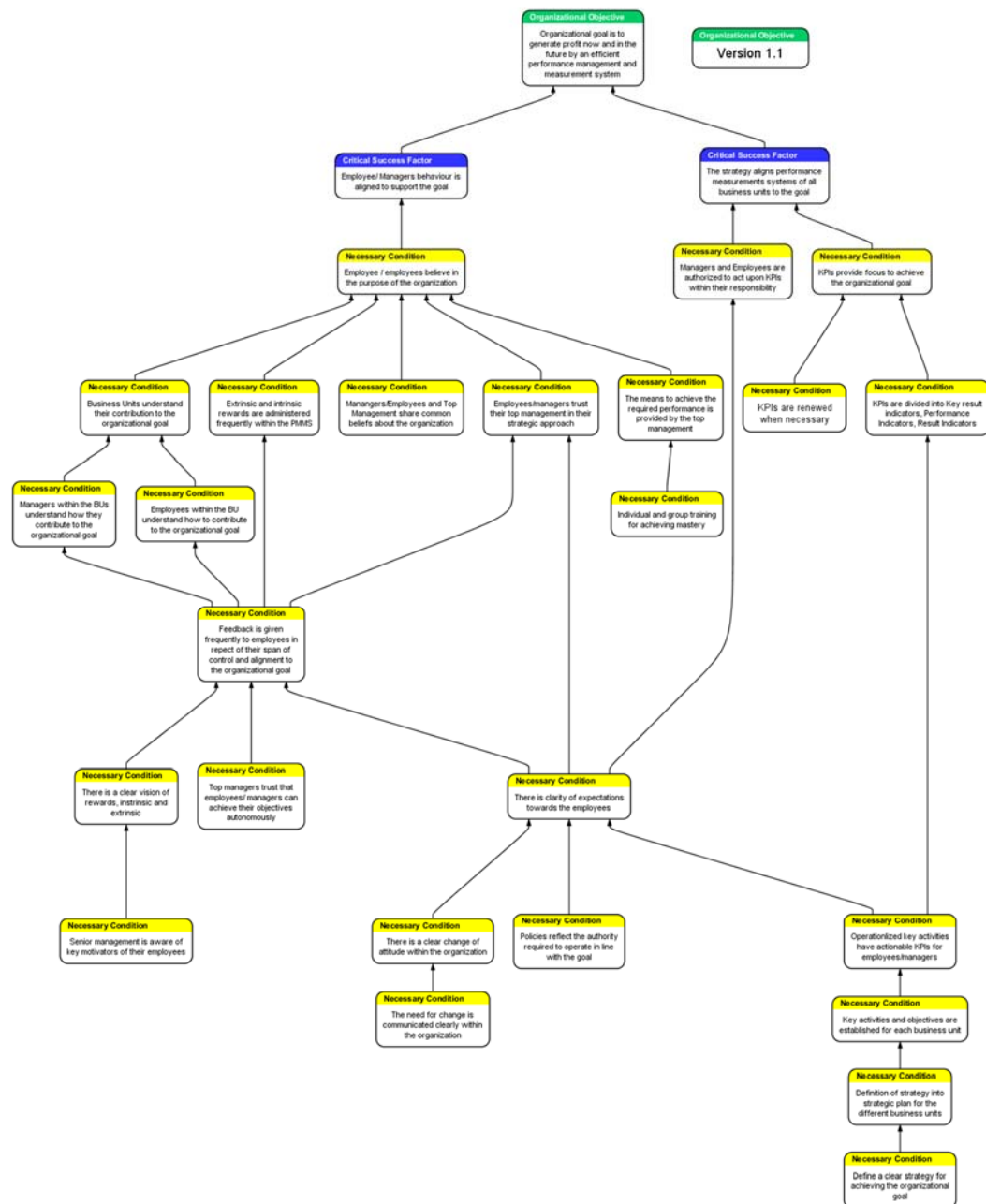
Figure 6-3: Intermediate Objectives Map taken from literature review

Figure 6-3 which was developed in the literature research can be sorted per key elements.
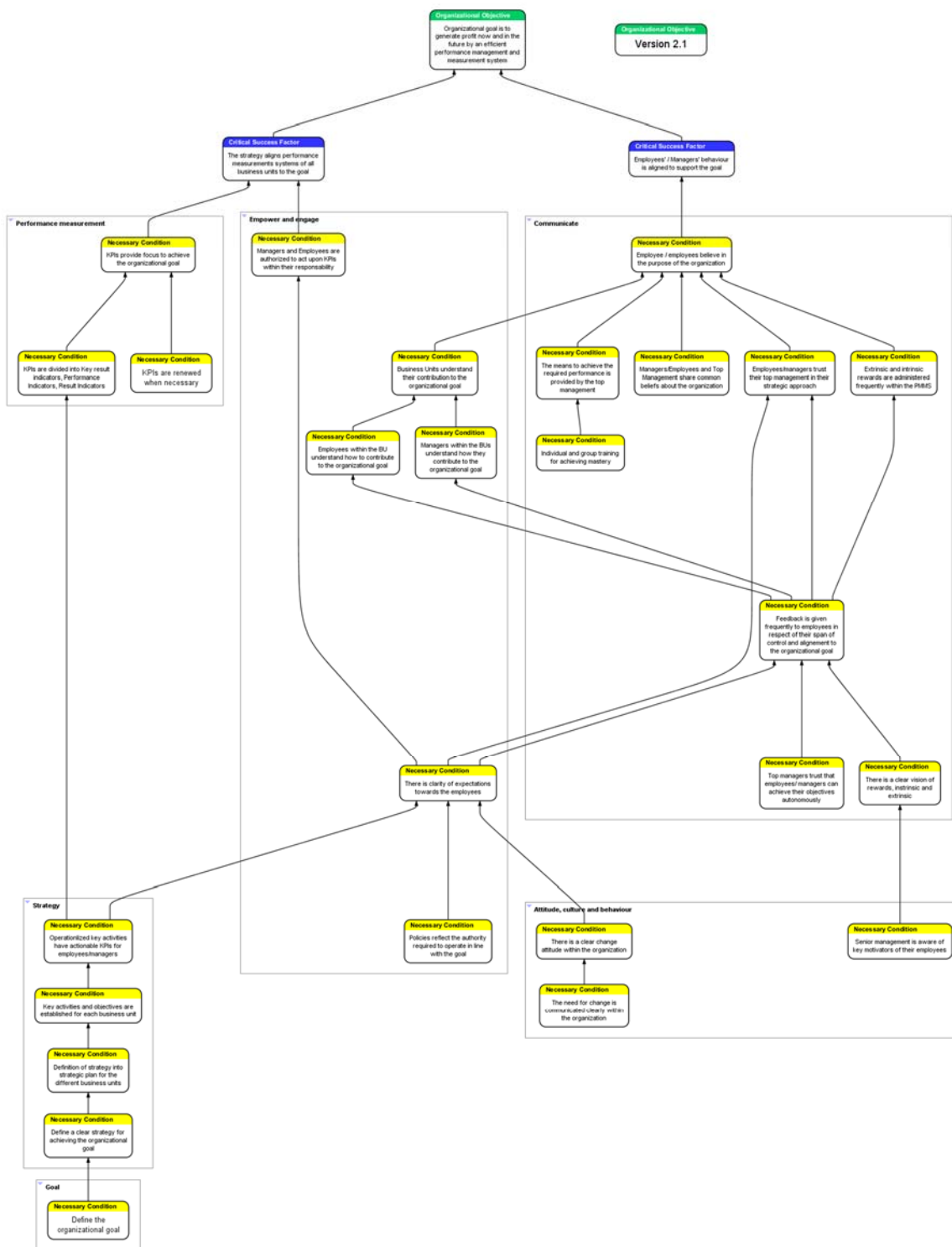
Figure 6-4: Intermediate map sorted to criteria

Figure 6-4 is developed towards the top, which is the successful operation of a PMMS. Goal, strategy and beliefs must be addressed at an early stage of the strategy deployment process. Further trust must be established by top management by means of efficient communication, enabling the employees by empowering them

to achieve their objectives. Performance measurement only supports the efforts of change or improvement and does not initiate.

There is a strong overlap in findings between the literature and primary research, confirming the interdependency between PMMS and behaviour which influences the company performance.

6.2.6 Additional shortcomings of PMMS systems: a summary from the literature review

There are conflicting approaches between the recent PMMS such as the Balanced Scorecard and the Theory of Constraints. The BSC tries to encompass all the activities of an organization in an equally important manner, dividing them only between leading and lagging indicators. Generally, it is suggested that each unit of the organization should develop its own set of KPIs from the top down (Kaplan et al., 1996). This creates a complex system which per literature causes difficulty in correlating individual KPIs with the organizational result. It is also reported that the number of KPIs in such organizations often increases, thereby creating uncertainty for the relevance of individual indicators. The management is often overwhelmed by the number of KPIs and questions priorities in this situation. Differently from that, the TOC suggest that at any given moment an organisation may not have an infinite number of challenges and the task of management is to define and resolve these issues in a structured manner (Goldratt, Eliyahu, 2006). The TOC suggests using focus steps to define the problem and provides tools to resolve them. This, on the contrary, requires only a limited set of KPIs to be developed from the base up to show their impact on the organizational goal. If one problem is resolved the focus steps should be repeated to shift the attention towards the next pressing issues. This also ensures the relevance of the KPI system. KPIs must be actionable for the individual or group of people applying them. Individuals and groups must understand how they influence the indicators and how the indicators contribute to the overall

goal of the organization. Goldratt, E. et al. (1986) argue that the optimization of local KPIs does not automatically improve the system's performance. Within the PMMS KPIs must often be traded off per the system's requirements (Vernadat et al., 2013). That means that a decrease in a local measurement can be accepted if the overall performance is improved. The challenge for every PMMS is to guide the actions of the management. This can only be done if the strategy is clear to the organization and can be operationalized in correlated KPIs within the PMMS. Operationalization is only possible if the organization shares the same beliefs about the functioning of the organization. Many KPIs are only measures of results and do not give guidance to act. Therefore, there should be a clear hierarchy within the PMMS of indicators enabling action on the appropriate levels. The literature review (2.6) established that indicators have a shelf life and might lose relevance. Organizations often increase the number of measures without questioning the relevance of the existing measures or indicators. In the researched organization, a significant number of measures were named and that indicated a problem in operationalization. The employees do not speak the same language when it comes to PMMS and they did not discriminate regarding their importance.

6.2.7 Behavioural aspects of performance management systems: summary from literature review

Every organizational leader must define for himself what type of organization suits his way of working best. The type may vary on a spectrum from controlling to democratic. It is important that the top management honestly assesses their type of management, because   its type has a great influence on employee behaviour. A controlling organization distrusts its employees to do the required work to achieve their contribution to the organizational goal. A democratic organization trusts its employees to independently achieve their objectives (DeGroot, 2012; Pink, 2010; Vollmer, 2012). Every employee has a motivational identity which determines his

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performance at work (Gostick et al., 2014). While the employee's identity determines a motivational value set, the organizational type either fosters or suppresses the motivational identity. "For Karl Marx, men and women construct their being through productive activities" (Csikszentmihalyi, 2008, p. 149). The communication within the organization and top management behaviour establish trust within it.

6.2.8 Possible reasons why performance initiatives fail

The strategy of an organization depends on what the current beliefs and context are, which means acknowledging that strategy has to take into account the current state of the organization (Bradt et al., 2011). The organization needs different strategies depending on its state, so for example if the company is "facing disaster" a "shock" is needed to save the company. Therefore, the need for change is great but if the company has manoeuvred itself into severe problems the readiness for change is low (Bradt et al., 2011).

From the top down managers and employees define their relationship and as a result a belief system that determines the performance of the organization. It determines where they start in respect to the need for change (Bradt et al., 2011). Change results in the need for a performance management system which is introduced or refurbished and it is important to know that people resist change due to their beliefs. Beliefs can be so strong that even overwhelming evidence may not sway them. The psychological explanation is that the brain engages in a process of "motivated reasoning". Instead of rationally seeking information for clarification and evaluation, people look for information that confirms their existing beliefs. The resistance to change manifests itself (Gostick & Elton, 2012) by:

- Counter arguing: Employees discredit a new way of thinking.
- Attitude bolstering: Employees bring up arguments which support their current belief, ignoring any different approach.
- Selective exposure: Employees ignore or avoid new information completely.
- Disputing rationality: Employees resort to the argument that their opinion does not need to be based on facts.

To protect our beliefs, the brain defends them with a process called "inferred justification". People invent causal relationships necessary to justify their current

beliefs. One reason is that the mind wants to relieve tension and cognitive dissonance when presented with new, conflicting information. Employees who are caught up in these belief conflicts spare no effort in undermining company initiatives (Vollmer, 2014).

Part of the belief system is the type of organization. In strong Type X/1 organizations the KPIs are used to control employees and therefore action upon the results is always imposed from the top. In Type Y/1 organizations, the PMMS should catalyse action on all levels. The results achieved depend on the type of organization (DeGroot, 2012; Pink, 2010; Vollmer, 2012).

Any change in an organizational context does therefore not start with the definition of strategy or PMMS but from an evaluation of the beliefs and the readiness to change. In this specific research, employees and managers stated that targets were imposed upon them and information on strategy was not given. This indicates a type X/1 organization.

6.2.9 Summary of this section

In this section, the key elements of PMMS in respect of the researched company and literature review were investigated. Further, the impact on behaviour within the organization was examined and connected to the research. The key elements in primary data as well as the literature research are**:**

- **The company goal**
- **The strategy**
- **Belief system**
- **Performance management**
- **Communication**
- **Empowering and engaging**
- **Defining and agreeing on performance measurement and target setting**
- **Feedback**
- **Reward**
- **Renewal**

These elements were found in the primary data as well as in the literature, so one contribution to knowledge is the confirmation of research within the primary data collected in the researched organization.

In addition, the impact of PMMS was investigated in respect to the researched organization and then connected to previous research. It was established (Lundberg, 2007; Schneiderman, 1999; Torben, 2014) that many PMMS initiatives fail to produce results. Torben (2014) refers to the "gap between strategy and execution". In the primary data, it became clear that the strategy was absent within the researched organisation and therefore the employees and managers closed the gap by establishing their own PMMS which they found adequate for the situation. This effect was described in Vollmer (2014). The researched organization was also

in disagreement on the targets given to them. The literature review showed that the target setting for measures is challenging and can be harmful as the group or individual has to be in agreement with the goal, which requires clarity about the goal (Meekings et al., 2010) and consequently to define how to achieve the goal by defining a strategy.

There are many proposals for the implementation of PMMS, but the success of a PMMS initiative starts with establishing clarity on beliefs of the organization: What do the employees believe? Are these beliefs in line with the initiative? Is the organization ready to embrace the initiative (Bradt et al., 2011)? This clarity is subsequently followed by the items described earlier in the section, assuming that there is clarity on the goal and strategy.

The section has brought together elements from strategy, PMMS and behaviour based on literature, and has demonstrated the connection between PMMS and behaviour. Behavioural aspects stand at the beginning of every change process, in particular the beliefs employees have about themselves as individuals, as a group and their role in the organization, as well as their relation to the corporate structure. The absence of clear strategy leaves the employee without guidance and creates parallel systems which render PMMS ineffective. The primary research confirms the literature.

6.3 Appraise the strategic goal of the specific organisation and link and translate it into key performance indicators (KPIs).

6.3.1 Introduction

The interviews revealed that the organization and its members do not understand the top management strategy. The employees clearly state that they do not know the strategy per interview questions 6 & 7. As a result, there is no trust between the top management and the researched business unit (Kaplan et al., 2001a; Vollmer, 2014). It is therefore difficult to give any conclusive guidance which comprehensively covers a KPI deployment based on top management input.

The organization is in turmoil (Graph 6-1). The strategic decisions taken prior to the research had led to a crisis with customers as well as within the corporation. The strategic goal was defined without thoroughly investigating the requirements for the organization to execute. The basis for the change in the strategy goal was the shift from being a service provider to becoming a Tier 1 supplier to the oil and gas industry. The requirements for Tier 1 supply were substantially underestimated and as a result the company did not deliver to the requirements. The organization is in need of change to survive in the market (Thommes, 2013). The employees clearly state that they do not know the strategy, according to questions 6 & 7 of the interview.

"Do you understand the corporation's strategy? No, I don't know. I don't know what's our strategy if I have to be honest." (La Branch et al., 2014 ;Interview 131029_001)

"They should have a great impact on it, but I think it hasn't really been clear to a lot of employees from the upper levels." (La Branch et al., 2014; Interview 131029_001)

"The question was if I'm aware of the strategy, the presentation that was done. No, I'm not. I have not seen -- I have not received that doc-- presentation, nor have I seen that presentation either. So -- and this is -- this has been this way previously years also. The strategy is not clear for us working locally on this -- in this plant. I can only speak for this." *(La Branch et al., 2014; Interview 13013_001)*

"I'm not clear about the strategy for Bodycote." *(La Branch et al., 2014; Interview 130813_002)*

During a workshop with the management team of the organization the following core conflict in respect of the state of the organization was defined by the 22 participants and Pinnacle Strategies.
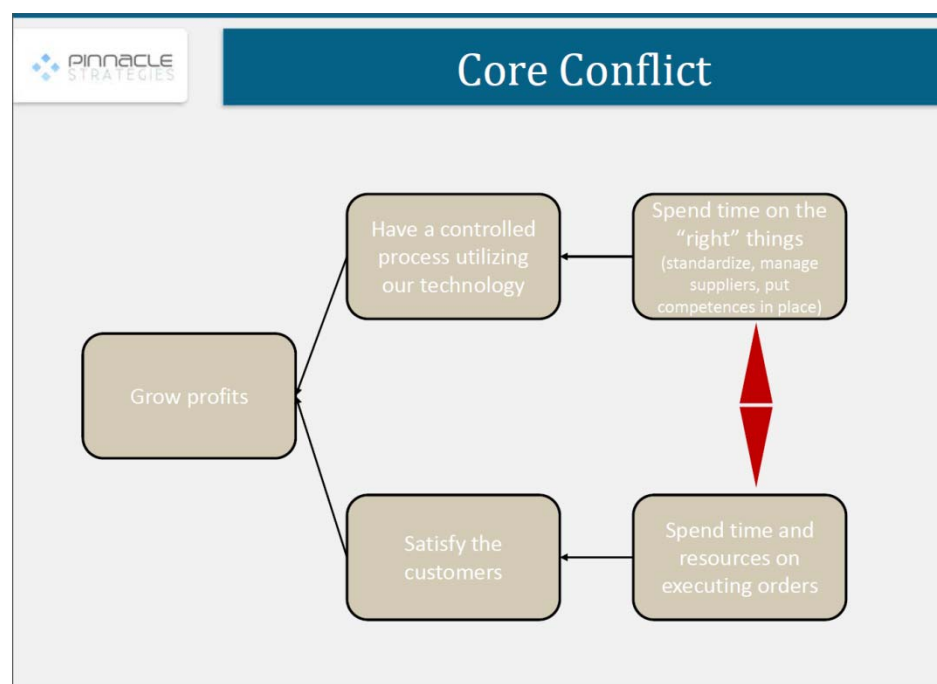
Figure 6-5: Core conflict defined by the employees of the BU (Mansour, 2013)

There is a trade-off between the short term and long term which must be managed as described in literature (Nørreklit, 2000; Santos et al., 2002).

Literature describes strategy development as a top management task (Kaplan et al., 1996). The reference to how strategy is perceived by employees is not part of the process. The results show a clear need by employees and

managers for a plan for the future to be developed by the top management. The plan must not only outline the big picture but also align the organization towards a common goal by a clear prioritization of actions and further clear expectations towards the members of the company (Kaplan et al., 1996).

Not all measurements are relevant at any given time or have to be acted upon KPIs (Hudson et al., 2001; TCii, 2011). Based on this workshop and Figure 6-4, the local team took the following initiatives.

6.3.2 Initiatives taken and related KPIs

The company does not achieve the required financial results and employees must decide whether to fix the system or execute the orders. The company does not deliver the existing orders and they are accumulating in October 2012. The reason for this was the company's inability to execute per customer requirements:

"Some years ago, you have taken the decision to go -- a really strategic decision, or this company has taken a strategic decision to go in a certain area in -- of industry. As a result, we have seen in the last 12 months that we're really struggling through a lot of issues or -- how can I say that -- really turbulent times, where we are exposed to a lot of problems. Despite the fact that the decision was taken maybe three or four years ago, it seems that we were not well prepared for the present. Why would you think that has happened?"

"I think that we didn't -- could say we didn't do our homework before we got into this business. We didn't know the challenges. So, maybe we rushed into something that was more difficult than we thought from the beginning. Obviously, this -- it was that way. So, we should've perhaps investigated more. What will this affect what? What competences do we need? What do we have to put in place before we go into this business? And that perhaps we didn't

do well enough at least. And that is why we're suffering now a lot." (La Branch et al., 2014, 130816_003)
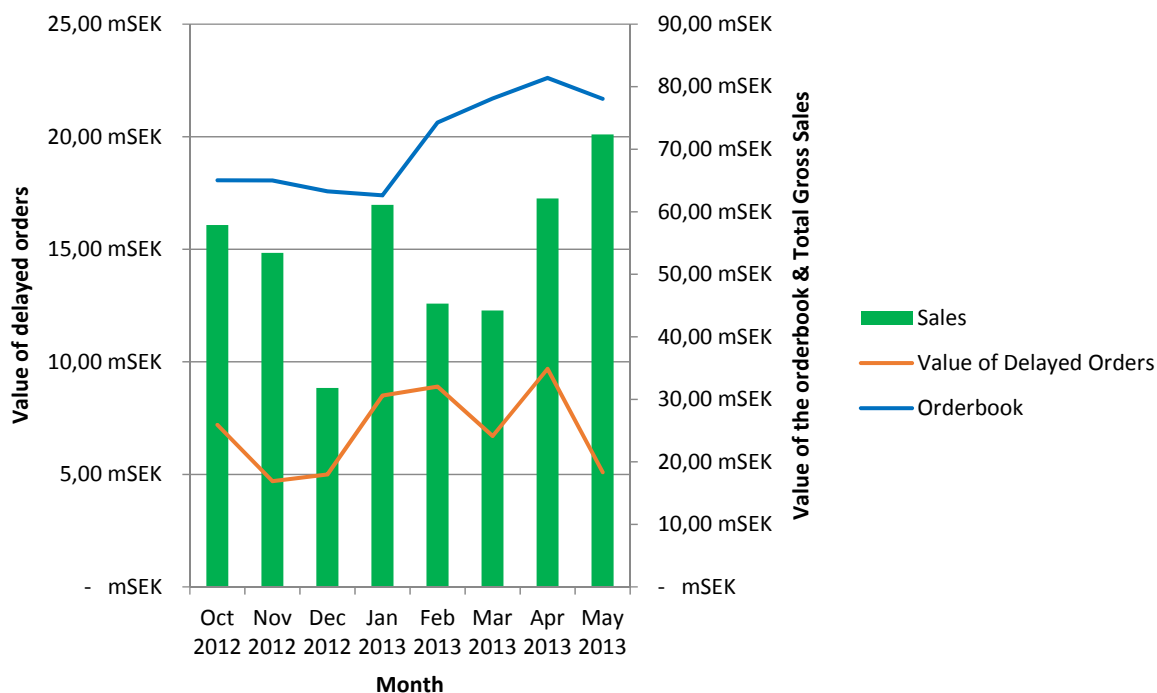
Graph 6-1: Sales, order book and value of delayed orders 08/2012 – 05/2013

The organization must overcome the current crisis before any long-term strategy can be deployed. In Graph 6-1, 40 per cent of the order book is delayed, which means that it should have generated revenue already and occupies resources needed for new orders. The aim in December 2012 for the organization is survival and resolution of the current orders and this is translated into the following indicators:

- Sales planned for the month

- Number of hold-points for every order held for invoicing

- Responsibility for the resolution of the hold points

- Planned date of resolution

Business improvements 2013

	Project	
Project	Lean activities	
Project start	18th of February 2013	
Resp.	Mona Mansour	

% Done	Project	Department	Timeline	Notes
100	Daily control	Management team	February w. 8	
100	Daily control	HIP, Argon, Dimensional control	March w.10	
100	Daily control	QA/Materials/NDE	March w.12	
100	Daily control	Sheet metal/welding	April	
100	Daily control	Filling/Evacuation	April	
100	Daily control	M. team Production	April	
100	Daily control	Design	April	
100	Value stream mapping	Sales HSS	May 2013	
100	Value stram mapping	Sales NNS	May 2013	
100	Strategic Supply Chain workshop	M.Team & Suppliers	Aug 2013	Pinnacle Strategies
100	Strategic Supply Chain workshop	Internal	Aug 2013	Pinnacle Strategies
75	Standardized work methods	Pre production process Quality & Materials	Sept 2013	
5	Standardized work methods	Pre production process Design	Oct 2013	

Table 6-1: Business Improvement short term (Mansour, 2013)

The approach is a real focused approach to resolve the crisis, with detailed steps (Table 6-1). For several months, the team was only operating with these indicators. There were certainly other measurements but these were only checked as to whether they were within the limits. In May 2013 the total order book value dropped for the first time since Dec 2012 and showed that the focused approach had resulted in a resolution of the crisis. As a result, the organization was able to overcome its pressing problems.

After that, as resources were freed up the organization was able to concentrate and adapt the processes to the new environment. Therefore three cornerstones for the strategic process were defined (Mansour, 2013):

- Value for the Customer

- Respect for the Competence of the Employees

- Profit for the Company

Graph 6-2 shows the financial targets for the company. The interviews in which the participants stated that they did not agree with the targets given to them and that

the company had consistently failed to deliver these results took place in late 2013. They referred to a crisis that lasted for 8 months from late 2012 to mid-2013 (Graph 6-1). The indication of problems was the decreasing turnover from 2011 to 2012. During 2013 the targets were decreased (Graph 6-2) but the unit showed improvements and significant growth. In 2014 the unit exceeded the budgets as a result of improvements made to the processes.
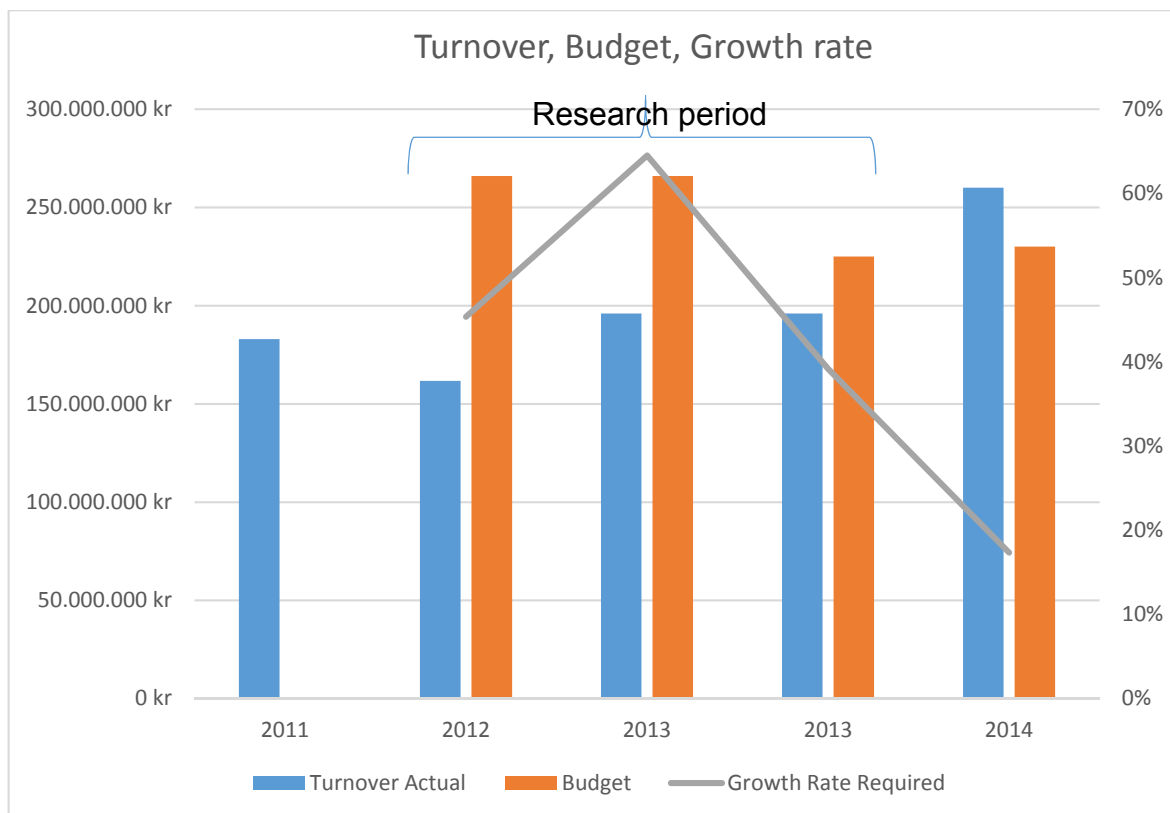
Graph 6-2: Financial Targets of the researched unit

The team defined the key elements for future success, shown in Table 6-2:

Feature		Customer advantage	USP & SP	Evidence
(Bodycote as a company and in offers)		**(What is the advantage to the customer?)**		**(Facts and examples from customers)**
Materials	Micro structure	Security, less risk of failures	USP	Well documented
	HISC			
	NDT			
	Duplex			
Production advantages	Short lead-time	Increased possibility to get an order from end customer	SP	Well proven delivery times
	On time delivery	Customer can meet booked commitments	SP	Statistics

Feature		Customer advantage	USP & SP	Evidence
(Bodycote as a company and in offers)		(What is the advantage to the customer?)		(Facts and examples from customers)
	Strong in small batch size, one-off	"Low" price and short delivery time. Easier to get the end customer order	SP	Showing the manufacturing process
	High production capacity. In-house	Security to place bigger orders. Short lead time	SP	Show the manufacturing process
	Flexibility, design, volume	Shorter lead time. Handle changes. Batch mix. A+B+C, A+B+C	USP	Show the manufacturing process
Product advantages	Design complexity	Possible to make "impossible" designs. Cost savings. Better quality	USP	Performed deliveries to customer
	Material and weight savings	Cost reduction in purchase, machining, handling	USP	Performed deliveries to customer

Feature	Customer advantage	USP & SP	Evidence
(Bodycote as a company and in offers)	**(What is the advantage to the customer?)**		**(Facts and examples from customers)**
Weld reduction	Less risk for breakage, less control, cost and time reduction	USP	Performed deliveries to customer
Compound structure	Better product properties. Cost saving to end user. Longer life time	USP	Performed deliveries to customer
Seminars, customer education	Learn about new technology. Cost, quality, etc.	USP	Have done more than 10 seminars
Design for HIP	Possible to make "impossible" designs. Cost savings. Better quality	UUSP	Real deliveries to customer
	Cost reduction in purchase, machining, handling		

(The first column, spanning the lower rows, reads vertically: **In-house competence**)

Feature		Customer advantage	USP & SP	Evidence
(Bodycote as a company and in offers)		**(What is the advantage to the customer?)**		**(Facts and examples from customers)**
		Less risk of breakage, less control, cost and time reduction		
	Material competence	Example: Know how to combine materials to perform and reduce cost	UUSP	Many examples of real deliveries

Table 6-2: Key elements of success for the unit (Mansour, 2013)

These were translated into key actions which operationalize the strategy into measurable activities to support the organizational goal (Figure 6-6):

Ideas to Implement the Injection

Idea	Impact	Effort	Priority
Improve execution to free up resources through clear and stable priorities for (customer and development) projects	High	High	B
Prioritize RFQs (differentiate between high and low risk RFQs) and communicate to customers	High	Low	A
Implement a common schedule/MPS	High	High	B
Introduce more standardized documents internally	Low	High	C
Introduce more standardized documents towards customers	High	High	B
Implement a document handling system	High	High	B
Always create a clean start in a mandatory and effective "PPM"	High	Low	A
Analyze NCRs for reasons and take appropriate actions on recurring reasons	High	High	B
Better supplier management (unclear what tis would be!)	High	Tbd	
Standardize processes	High	High	B

Figure 6-6: Key activities for long-term improvement (Mansour, 2013)

By doing so the team gradually closed the gap between the identified chasm between execution and adaptation to new requirements.

6.3.3 Summary of the section

The researched company was in a crisis because the delivery of orders was delayed due to a lack of processes reflecting its new business strategy of becoming a manufacturing company instead of a service provider. To remedy the situation focus was given to delivering outstanding orders in a "firefighting" way and later to defining the key elements of the strategy and operationalizing it into key actions. The crisis KPIs were continued to keep the team focused on delivery but the tasks were extended by key initiatives.

Consequently, the results of the company improved in 2013. It returned to a growth situation and it was possible to beat the targets in 2014.

There is a trade-off between the short term and long term which must be managed as described in literature (Nørreklit, 2000; Santos et al., 2002). Not all measurements are relevant at any given time or have to be acted upon KPIs (Hudson et al., 2001; TCii, 2011). The closer the indicator describes the value creation process the clearer it has to describe the expectation. Literature suggests a separation of KPIs into passive and active (Aström, 2012). The passive must only be acted upon if a critical state is reached. The active on the other hand are currently critical for achieving the organizational goal. This also emphasizes the importance of specific targets and gives clarity to the employees.

Despite there being no trust between the top management and the researched business unit (Kaplan et al., 2001a; Vollmer, 2014) the undermining of corporate efforts cannot be observed in this case as suggested by (Vollmer, 2014). The teamwork within the researched organization seems to be good. Therefore, a test by Lencioni (2002) was administered to the interviewees and it showed that as a team they operate above averagely.

A key criterion seems to be trust in this list. Lencioni (2002) introduced a framework to assess the state of an organization based on behavioural criteria to measure employment engagement:

Graph 6-3: Hierarchy of behavioural issues leading to underperforming

At this point the research was evaluating whether the local team was not working together and that would be the reason that the targets were not achieved. The teamwork was assessed by a framework provided by Lencioni (2002):

1. Absence of trust: If team members fear to show weaknesses within the team no trust is created within.

2. Fear of conflict: The organization has the desire to preserve an artificial harmony which prevents a productive discussion.

3. Lack of commitment: The team members do not stick to team decisions due to the absence of clarity and/or buy-in.

4. Avoidance of accountability: The avoidance of interpersonal friction resulting in the team members not holding one other accountable.

5. Inattention to results: Individuals prioritize the individual goals and diminish the possibilities of common success.

The framework is reminiscent of Maslow (1943) pyramid of needs, but translated into an organizational setting it moves from needs of the individual those of the organization. The framework asks 15 questions of the team members (Lencioni, 2002):

1. Team Members are passionate and unguarded in their discussion of issues.
2. Team members call out one another's deficiencies or unproductive behaviours.
3. Team members know what their peers are working on and how they contribute to the collective good of the team.
4. Team members quickly and genuinely apologize to one another when they say or do something inappropriate or possibly damaging to the team.
5. Team members willingly make sacrifices (such as budget, turf, head count) in their departments or areas of expertise for the good of the team.
6. Team members openly admit their weaknesses and mistakes.
7. Team meetings are compelling and not boring.
8. Team members leave meetings confident that their peers are completely committed to the decisions that were agreed on, even if there was initial disagreement.
9. Morale is significantly affected by the failure to achieve team goals.
10. During team meetings, the most important and difficult issues are put on the table to be resolved.
11. Team members are deeply concerned about the prospect of letting down their peers.
12. Team members know about one another's personal lives and are comfortable discussing them.
13. Team members end discussions with clear and specific resolutions and calls to action.
14. Team members challenge one another about their plans and approaches.
15. Team members are slow to seek credit for their own contributions, but quick to point out those of others.

The results are as documented:

	Rarely	Sometimes	Usually	Total
1	5	6	11	22
2	6	13	3	22
3	4	6	12	22
4	2	9	11	22
5	2	10	10	22
6	5	8	9	22
7	3	7	12	22
8	2	7	13	22
9	2	13	7	22
10	5	5	12	22
11	5	11	6	22
12	0	11	11	22
13	5	8	9	22
14	1	14	7	22
15	2	11	9	22

Table 6-3: Results of 5 dysfunctions of a team

The questions are grouped according Lencioni (2002):

Dysfunction 1: Absence of Trust

Statement 4:	7.3
Statement 6:	6.8
Statement 12:	6.8
	6.9

Dysfunction 3: Lack of Commitment

Statement 3:	7.1
Statement 8:	7.5
Statement 13:	7.0
	7.2

Dysfunction 5: Inattention to Results

Statement 5:	7.2
Statement 9:	7.5
Statement 15:	7.1
	7.2

Dysfunction 2: Fear of Conflict

Statement 1:	6.9
Statement 7:	7.3
Statement 10:	6.5
	6.9

Dysfunction 4 : Avoidance of Accountability

Statement 2:	6.1
Statement 11:	7.5
Statement 14:	7.1
	6.9

Table 6-4: Results on teamwork

The framework assesses the state of cooperation within the team and its ability to achieve the required results in cooperation. The questionnaire was administered to 22 participants anonymously after a workshop. With two exceptions, the participants were also part of the focus groups. The questionnaire was administered with a Likert scale: Agree (1) – Strongly disagree (6).

5 Dysfunctions of the Team: Results of the questionnaire
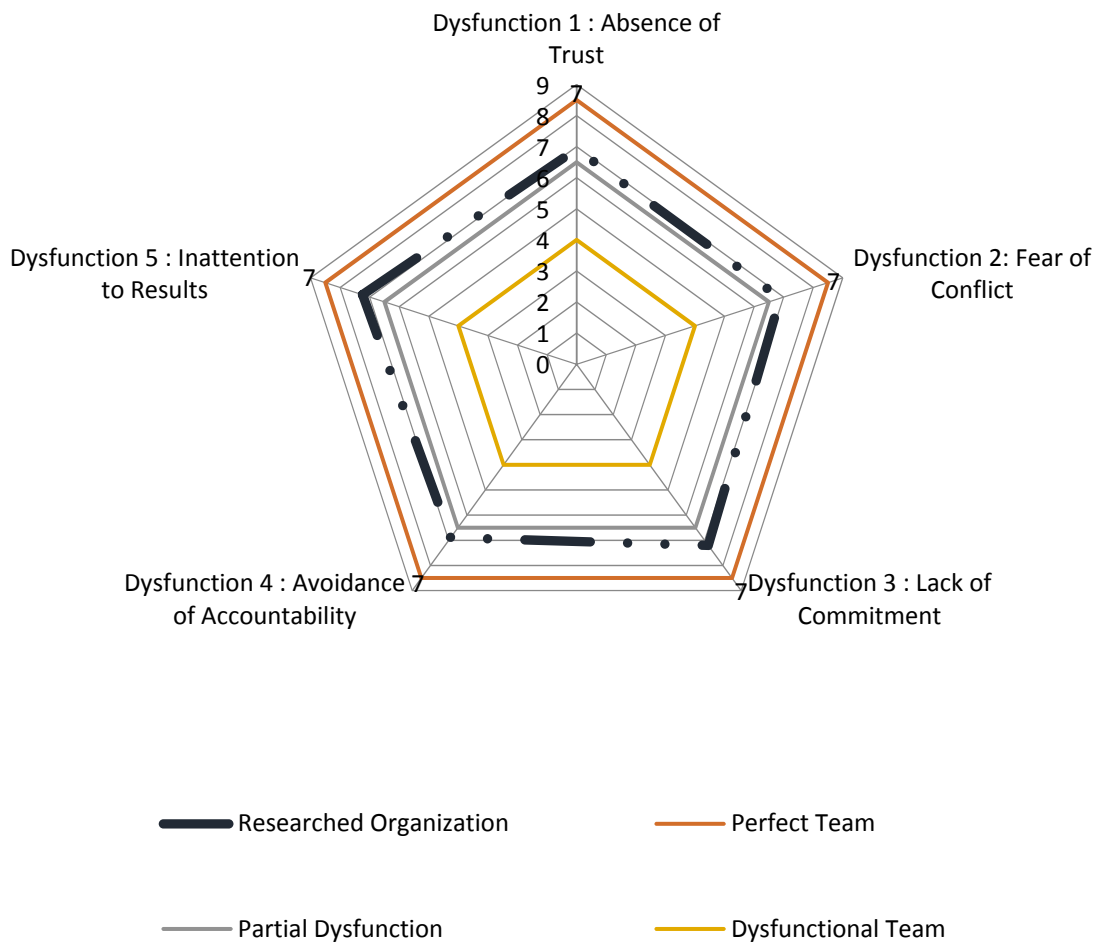
Graph 6-4: 5 Dysfunctions of a team: results for the researched organization

The result of the questionnaire seems to indicate that the team is above the median on this performance scale.

Because of this it might be concluded in this specific case that interpersonal relations within the company are a key driver for the employees to improve the business. It could be considered the "purpose" motivator.

The lack of strategy deployment in the researched unit led to distrust within the corporate organization. In the absence of clear guidance this group of employees defined their own system which was very focused on resolving the current crisis. Their purpose (motivator) could have been their interpersonal relationships because according to the questionnaire (Graph 6-4) they did work together very efficiently as a team. They applied a focused approach, which is in line with Goldratt, E. et al. (1986) and TOC, to resolve their operational challenges.

6.4 Construct a concept to align employee motivational parameters and company requirements to fulfil the strategic goal

6.4.1 Introduction

In this section, the motivational factors within the primary data are investigated and compared to literature. Literature provides many motivational theories:

According to motivational theory there are basic needs which have to be satisfied (Maslow, 1943). The needs build on each other, which means that without satisfying the pre-potent needs others may not appear. Needs may not arise from the satisfaction of another need but gradually emerge from slow degrees of nothingness (Maslow, 1943). Reinforcement Theory (Skinner, B. F., 1965) refers to a causal relationship between behaviour and its consequences. ERG (Existence, Relatedness and Growth) theory (Alderfer, 1972; Wanous et al., 1983; Wanous et al., 1977) refers to a set of three needs: existence, relatedness and growth. Cognitive evaluation theory (Deci, 1972; Deci et al., 1985; Ryan, 1982) suggests that people work best towards the goal if it is consistent with their interests and core values (Bowen et al., 1995; Robbins et al., 2010). The organization must enable this by offering extrinsic and intrinsic rewards. The Expectancy theory of motivation (Porter, L. W. et al., 1968; Vroom, 1964) explains why an individual chooses one behaviour over another. The organization must enable this by offering extrinsic and intrinsic rewards. In a business environment McClelland's "theory of needs" (McClelland, 1983) refers to three needs: first, the need for achievement, which is the drive to success in relation to a standard; second, the need for power, which refers to the person's ability to manipulate others; and finally the need for affiliation, which refers to the desire to have good and conflict-free relationships (Robbins et al., 2010). Herzberg's two-factor theory distinguishes hygienic and motivational factors. Hygienic factors do not create motivation and are mostly extrinsic factors,

but their absence or perceived negativity may lead to a decline in motivation. The motivational factors, mostly intrinsic, enable the motivational process (Herzberg et al., 1993; Pink, 2010). Gostick et al. (2014) summarized intrinsic motivators as interesting work, challenge, responsibility, autonomy, mastery and purpose, but these are too abstract to grasp the core of human motivation.

6.4.2 Motivation in the primary research

For the primary research the motivators were identified as autonomy, mastery, purpose, work environment, feedback and reward, because they seemed to be clearly identified in the primary research.

For managers, the main driver determining their motivation seems to be the autonomy they may exercise in their job, which determines their motivation. Comments on top management:

"and I think we have in Bodycote the opposite problem is that there's too much detail orientated and often in questions which don't have much business impact. So, sometimes, you have to let people make their decisions, and if the decision is wrong, they have to come over and tell them that and let them learn from that and move forward. But if you're constantly questioning people and even before the decision is made and then people won't grow in their roles" (La Branch et al., 2014 ; Interview 130813_001)

"I think we have also problem with decision-making. It takes too much time, extremely too much time to make a decision. I know that you cannot take decisions in a rush. But that's [...] there should be a balance." (La Branch et al., 2014; Interview 131029_001)

"I think we have that problem that it's too much micro-management" (La Branch et al., 2014; Interview 130813_001)

It seems that the importance of autonomy does not stem from the absence of autonomy more than the need for it. Due to the importance of the lack of autonomy other possible motivators disappear. The absence of strategy which justifies the targets given to the managers does not instil purpose and renders the PMMS ineffective (Graph 5-27).

"I feel there's an absence of goals and also strategies together, I mean, in the management team, for example, and with my […] perhaps my closest colleagues, […] I think we have quite a similar view of things" (La Branch et al., 2014; Interview 130816_003)

"So, taking our own destiny in our hands perhaps […] I mean, okay, if we don't get the guidelines, let's do our best and together hopefully point that direction as we see it" (La Branch et al., 2014 ; Interview 1300816_003)

"Well, they're [targets, Author] totally out of this world. I mean, so if a letter like that -- if the purpose is to empower me or make me a better person or engage me more, then I think the meaning of that letter is totally opposite because, I mean, it's impossible to reach those figures. So, I mean, it's -- from the start, you're lost already from the start." (La Branch et al., 2014; Interview 120816_003).

Employees do not think that the PMMS is effective and do not orient their work or behaviour towards the PMMS. They chose to internally agree on achievable targets which as a consensus are considered right.

For the employees, the main motivator is mastery, money and autonomy. They also find it important that they have good relations at their workplace.

"to have a good teamwork together, to have an interesting job, and to earn money" (La Branch et al., 2014; Interview 121011_001)

In the employee interviews the following motivational parameters were identified:

1. **Mastery: Learning of new skills**

2. **Autonomy: The ability to take decisions**

3. **Bonus, salary and reward**

4. **Work environment**

6.4.3   Motivation in primary research

In the research only major motivators were identified. For the proposed framework, Herzberg's two-factor theory (Herzberg et al., 1993), which uses hygienic and motivational factors that influence behaviour, serves as the starting point. The reason for this is that most motivational theories refer to extrinsic and intrinsic motivators. Yet literature also shows that motivators are not only extrinsic or intrinsic but whether they are mainly hygienic has to be examined (Herzberg et al., 1993; Pink, 2010). For example, job security or salary are hygienic motivators, which means that if improved they do not permanently improve performance or align behaviour. But if they are decreased or removed they have a fundamentally negative impact on behaviour.

Examples of hygienic factors are:

1. Job safety
2. Salary
3. Salary increases
4. Bonus
5. Personal growth
6. Other extrinsic factors

These hygienic factors, if present, do not create motivation and improved alignment of behaviour. But if taken away they substantially negatively influence behaviour,

e.g. people adapt their work to lower levels or do their job hunting during the working hours instead of serving the company.

Herzberg refers to motivational factors as do other researchers. The motivational factors go beyond the hygienic factors and fulfil higher needs (Maslow, 1943). In modern management, senior leadership strives for the empowerment of employees (Kaplan et al., 1993; Neely, Andy, 1999) to take charge of their area of influence and manage it to support the success of the organization. Individual performance is considered a keystone to organizational success (Aguinis et al., 2011). This suggests that an analysis of individual motivators would be required for each employee (Gostick et al., 2009; Schwarz, 2015).

McGregor (2005) and Henri (2006) discussed the connections between organizational values as practised and routines and the effects on the use of PMMS. Organizations (Type X/1) that predominantly use the PMMS as means of control limit the autonomy given to the managers and employees.

Literature suggests that aligned positive behaviour goes beyond the job description (Gostick et al., 2009). Motivators related to positive behaviour are:

1. Purpose: The assumption of working for something bigger than oneself.
2. Autonomy: The authority to manage a certain sphere of influence independently.
3. Mastery: The learning and mastery of new challenges which keep the work interesting.
4. Work environment: The relations within the organization.
5. Appreciation and reward: Feedback on the work done. Reward if the feedback was positive.

Literature states that the absence of fulfilment of motivators is replaced by need for fulfilment of another motivator (Herzberg et al., 1993; Kim, 2006). The fulfilment or

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the need for fulfilment guides behaviour, as will the absence of fulfilment. This can explain why some motivators were clearly identified by the interviewees and others did not appear. Employees have a need for affiliation, which refers to the desire to have good and conflict-free relationships (Robbins et al., 2010). The challenge for performance management is to identify key motivators. Gostick et al. (2014) summarized intrinsic motivators as being interesting work, challenge, responsibility, autonomy, mastery and purpose.

6.4.4 Summary of the section

Literature and primary research have provided motivational factors. Literature has provided a framework to divide motivational factors into motivational and hygienic factors. The importance of this is that the hygienic factors do not contribute to higher motivation and therefore to performance if they are improved. However, if they are decreased or removed they strongly hamper motivation and, as a result, the performance. The motivational factors are related to the work environment which empowers employees and interpersonal relationships. In primary research, most elements from literature were found, as seen in Table 6-5 and Table 6-6. Motivational and hygienic factors feed into behaviour which drives the PMMS or, in our case, does not support the official system.

Motivator in Literature	Primary Research
1. Mastery	Present
2. Autonomy	Present
3. Purpose	Not present
4. Work environment	Present
5. Appreciation and reward	In terms of bonus and targets

Table 6-5: Motivators

Motivator in Literature	Primary Research
6. Job safety	Not present
7. Salary	Present
8. Salary increases	Not present
9. Personal growth	Not present
10. Bonus	Present
11. Other extrinsic factors	Not present

Table 6-6: Hygienic Motivators

Some elements are not present because their fulfilment or non-fulfilment triggers other needs and therefore other motivators gain in importance. At the time of the interview, primary research provided a photo of a current state of

mind. At this stage it became clear that the top management must review its approach towards the motivational factors to align the company requirements with the motivational parameters, taking into account the two-factor theory and how to overcome issues identified during the interviews.

Looking at the motivators of the interviewed employees it could be argued that there are common denominators in motivators which drive their behaviour. An organization does not have to maximize employee satisfaction but provide a minimum satisfaction level to elicit the commitment required (Schragenheim, 1999).

To align the motivational requirements to the strategy of the organization by a conceptual framework based on literature and research results, the following steps have to be considered:

1. Awareness of the top management if there is a gap between the beliefs regarding the organization. If top management thinks that change is required and the remainder of the organization thinks that all is well, key strategic initiatives might not be successful. It should be ensured that top and operational management can be level on the same sets of beliefs about the company. It is not really clear what the challenges are and if the organization from top to bottom agrees on how to progress in the future.

2. Is the organization receptive to new strategic initiatives? Change is often imposed on organizations by an outside force. In this case the organization was not able to deliver on its promises and therefore initially failed to deliver financial results. The top management must create a "sense of urgency" with the local management by clearly communicating a strategy for the future. It must answer why change is needed and give purpose to the organization. In this case the company

wanted to move from a service supplier to a Tier 1 supplier to harvest the intermediate's margins to grow the business and be the biggest supplier of HIP components to the oil and gas industry. Give purpose: beat the competitor.

3. Does the organization believe in the necessity to change the way of working? People`s beliefs about the situation may vary as well as the approaches to the solution. TOC-Marketing-Group (2015) describes this process as layers of resistance (Figure 6-7) which can be encountered when engaging in any change.
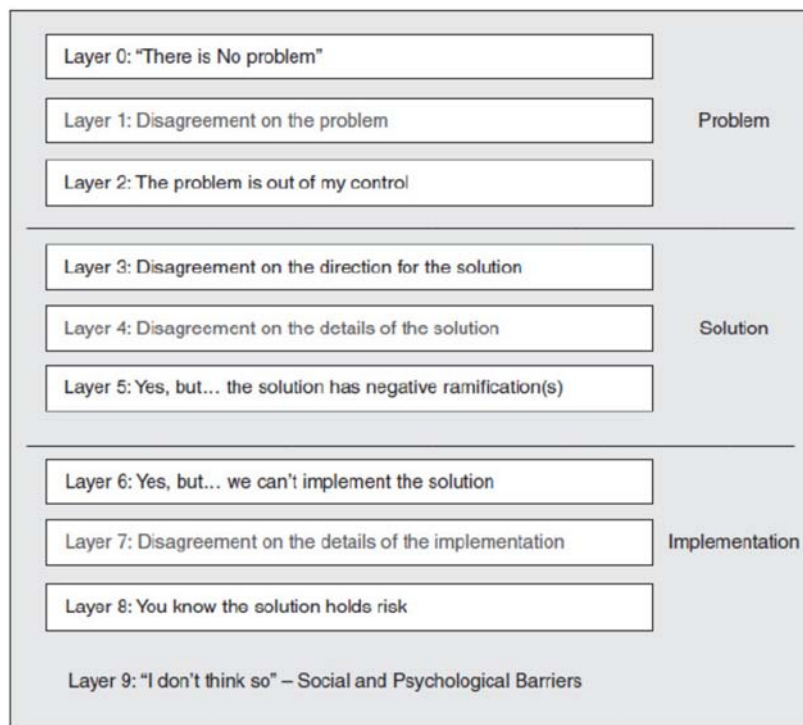
Figure 6-7: Layers of resistance (TOC-Marketing-Group, 2015)

As already stated, beliefs can be so strong that even overwhelming evidence to the contrary may not sway them. The psychological explanation is that the brain engages in a process of "motivated reasoning". Instead of rationally seeking information for clarification and evaluation, people look for information that confirms their existing belief.

The resistance to change manifests itself (Gostick et al., 2012) in:

- **Counter-arguing: Employees discredit a new way of thinking.**

- **Attitude bolstering: Employees bring up arguments that support their current beliefs, ignoring any different approach.**

- **Selective exposure: Employees ignore or avoid new information completely.**

- **Disputing rationality: Employees resort to the argument that their opinion does not need to be based on facts.**

To protect our beliefs, the brain defends them with a process called "inferred justification". People invent causal relationships necessary to justify their current belief. One reason is that the mind wants to relieve tension and cognitive dissonance when presented with new information which is in conflict with the old. Employees who are caught up in these belief conflicts spare no effort to undermine company initiatives (Vollmer, 2014).

4. **Achieve mastery: The strategic initiative required a revamping of the organization, its way of operating and fulfilling customer requirements. The company went from its comfortable second-row supply to the frontline. There the requirements were substantially more demanding. That gave the employees the opportunity to learn and develop new skills. New team members could augment the skill sets of the organisation and together employees could achieve mastery of new processes and technologies.**

5. **The management as part of a strategic operationalization must set clear expectations at all levels of the organization. People need clarity on**

how they contribute to the organizational goal. Clarity of individual and group expectations allows employees to engage in the process. Engagement requires the top management to define the autonomy of individuals or groups.

6. **Clarity on objectives and translating them into meaningful measurements allows for a common measurement system. Based on this, progress can be measured and feedback and rewards can be given. This process establishes trust within the organization.**

Consequently, the alignment of behaviour with strategy is a two-level framework in which the first level enablers are:

1. Purpose

2. Mastery

3. Autonomy

4. Work environment

These motivators are tools for the organization to be successful. They are not sufficient to achieve a higher level of performance. To achieve this, a second level of motivators is required. Let us call them catalysts because they do not have any impact without the existence of the first level.

The catalysts, on a secondary level, which reinforce the enablers are:

1. Belief System

2. Clarity

3. Trust

4. Feedback

5. Reward and Appreciation

For the build of a toolbox for performance measurement and management that supports the organizational goal by aligning the employees, it is necessary to start with the catalysts. In the next section, a framework is created combining motivation, behaviour and performance measurement and management systems supporting the organizational goal.

6.5 Create a toolbox process to implement a performance measurement system that supports internal alignment and employee behaviour with the strategic organizational goal

6.5.1 Introduction

An attempt is made to derive a conceptual framework based on primary research and literature. This comprises strategy, its operationalization and the impact on behaviour and motivation. The framework should give guidelines for a toolbox process that helps managers to get started in a new organization.

6.5.2 Conceptual Framework

At the beginning of this research the value of PMMS was questioned. Research shows that many initiatives fail to provide the required results (Bourne, Mike et al., 2002; De Flander, 2013; Kotter, 1995; Lundberg, 2007; Schneiderman, 1999; Torben, 2014). During the literature review it was observed that the PMMS efforts rarely consider the behavioural aspects of management while behavioural research gives no guidance on the influence of motivation on PMMS. In both areas of research ample research has been done to enable modern management to achieve higher levels of performance but the connection between behaviour, motivation and PMMS has not been studied sufficiently. Research has identified key elements of implementation processes but has not aligned them with the motivational aspects of employees. What the interests of employees are to participate in improving the performance of the organization and how to deal with the complexity of PMMS systems like a BSC or similar are questions that top management has to answer.

6.5.3 Step 1. Belief System

Top management, managers and employees see their organization in particular ways. This is determined by the type of organisation (McGregor, 2005), whether controlling or empowering, and assumptions on performance challenges and their resolution may create a misalignment of the belief system.

Belief systems already exist and drive the behaviour of employees. It is therefore important to examine what the employees and managers believe about themselves as individuals, as a group, and their relationship with the top management of the corporation.

Prepare a questionnaire including the understanding of strategy, how strategy is translated into results. Inquire about constraints which hamper the business as well the strengths of the current offering. Determine how the different levels of the organization perceive the type of the organization. Are measurements used to control or instil action? Do the employees agree on the measurements that are important for their work? An assessment is important because the belief system enables and disables motivation, which drives behaviour.

From a behavioural perspective, whether the employees are in line with the strategy or have defined their own way of doing business must be examined. It is necessary to investigate gaps or chasms between top management and the local management. The main issues from the primary research are the use of KPIs, decision-making processes and the distribution of authority (autonomy), as well as the opportunity to develop new processes and solutions (mastery). On an individual level the motivational factors that make the individuals come to work and deliver results must be examined. Does the organization share a common belief about itself or is there a degree of resistance? If there is a chasm of beliefs, a high risk of failure for any strategic initiative is to be identified.

Possible questions for assessing belief systems based on primary research and literature review are:

For top management

1. Can you explain the strategy for the company?

2. What are the main challenges for the company?

3. Do you think that the employees understand the strategy?

4. What are the key initiatives taken to support the strategy?

5. What are the KPIs you consider most important?

6. What KPIs are not as important?

7. Do you have the right people?

8. Are your employees taking enough initiatives to improve processes?

9. Do you think everybody agrees with the strategy?

10. How do you set targets, budgets, objectives?

11. How do you communicate success or failure?

12. What is the frequency?

For employees and managers

1. Can you explain the strategy of the company?

2. What has changed in recent years?

3. How is this strategy implemented?

    a. Can you define key initiatives to support the strategy?

    b. What is your role in its implementation?

    c. What are the results you have achieved?

    d. What are the challenges for the company?

4. Do you agree with the initiatives taken by the corporation?

    a. If yes, explain how these initiatives impact the company.

      b. If no, what are the disagreements you have with the corporation?

5. What are the important KPIs for you?

      a. How do the KPIs influence your work?

      b. How do they influence the work of others?

6.5.4 Step 2. Motivation drives behaviour

"Catalysts" of motivation were previously defined. It is necessary to assess the existence of these factors and how they are implemented in the company. In an interview, whether hygienic factors are addressed, and how, should be investigated. Do people have clarity on expectations and related feedback, are salaries adequate and how are bonuses awarded? All "catalysts" are motivators which do not necessarily improve motivation when increased but significantly hamper it if removed. An organization does not have to maximize employee satisfaction but provide a minimum satisfaction level to elicit the commitment required (Schragenheim, 1999). A performance review based on KPIs (KRIs) to emphasize the importance of key initiatives has to be created and feedback given according to the results. Communication must be consistent with the results, and clarity and repeated expectations must be provided. Feedback is an essential part of motivation if you frequently use the exchange with the employees to emphasize the good achievements and openly discuss problems that have occurred.

At a primary stage the status of the catalysts must be assessed, for example with the following questions:

For top management

1. How do you administer salary increases?

2. What was the average increase in recent years?

3. Are they individual or the same for everybody?

4. How do you decide on bonuses?

5. How do you define targets for bonuses?

6. Do you think that people are satisfied with the current remuneration?

7. Were there any staff reductions in recent years?

For employees and managers

1. Do you think the payments are competitive?

2. Are the bonuses and related targets fair?

3. How are targets defined? Is the process transparent?

4. Were there any changes in staff recently?

Further, the motivational enablers should be assessed. From primary research and the literature review tt was learned that mastery, purpose, autonomy and the work environment are important motivators. Therefore, interviews within the organization need to inquire for these motivators:

For top management

1. Do you encourage initiatives from your employees?

2. Are the employees authorized to take decisions within certain parameters?

3. What do you do to increase employees' skills?

4. How do you perceive the interpersonal relationships within the organization? Are there any conflicts?

5. Do you think the employees do the maximum they can?

6. Do employees feel pride in working for your corporation?

For employees and managers

1. Why do you come to work?

2. Do you feel you have the authority to take decisions necessary for doing your job?

3. Do you have the possibility of learning new skills? What did you learn recently?

4. What could you do better?

5. What could the company do better in training?

6. What could the company do better in giving you autonomy?

6.5.5 Step 3. Strategy

Define the strategy to achieve the organizational goal and define key initiatives which enable the development of the company. These initiatives are monitored with key performance indicators or active literature. Literature suggests separating the KPIs into passive and active (Aström, 2012). The passive must only be acted upon if a critical state is reached. The active, on the other hand, are currently critical for achievement of the organizational goal. Passive processes that sustain the business are monitored as result indicators and performance indicators. Indicators must be operationalized and deployed within the organization. The closer the indicator describes the value creation process, the more clearly it must describe the expectation. This also emphasizes the importance of specific targets and gives clarity to the employees. This group of indicators is monitored if they meet the required ranges but they are only acted upon if they diverge from the threshold. Understanding of strategy is covered in 6.5.3.

6.5.6 Step 4. Trust in leadership

Trust is established by a transparent process in strategy creation and communication. In this toolbox process this issue must be examined:

For top management

a. Do you trust that employees are telling you the truth?

b. When was the last time a problem was communicated to you?

c. Do you receive negative or positive feedback from outside of the organization?

d. Are there conflicts between top and middle management?

e. Does middle management act according to the strategy?

f. Do middle managers achieve their targets independently or do they often require top management input?

For employees and managers

a. Do you trust the top management to make the right decisions?

b. Can you seek help from the top management if it is needed?

c. When was the last time you looked for help?

d. What do you think about the targets given to you?

e. Did you achieve them?

f. Do you understand what you have to do?

6.5.7 Step 5. PMMS

Key Performance Indicators are actionable and tell staff and management what to do to drastically increase performance (TCii, 2011). That requires a positive correlation between the indicator and the organizational goal. Literature shows that there are different philosophies on performance management. Kaplan et al. (1992) and others promote a deployment of indicators within the organization, which means that the number of indicators from top to bottom is substantial. It was learned that employees have problems in correlating their indicators to the overall goal of the organization. They optimize their indicators without considering the company's overall performance. Problems in execution often lead to an increase of indicators and research shows that a majority of organizations never drop indicators. Goldratt, E. et al. (1986) and others believe that a system is not constrained by many

obstacles and therefore the focus on removing the obstacle and moving on to the next increases the system's performance. Transferring the concept of active and passive indicators (Aström, 2012) or the indicator onion (TCii, 2011) would bridge the gap between the Balanced Scorecard, Performance Pyramid and others with the Theory of Constraints and facilitate the renewal of PMMS and achieve clarity of priorities.

For top management

1. How do you deploy KPIs?

2. What are important KPIs?

3. Do you separate KPIs and RIs or PIs?

4. Do employees act upon KPIs? Does the KPI drive behaviour?

5. What could be done better in the KPI, PI and RI?

6. Do you think that performance measurement triggers action?

For employees and managers

1. How do KPIs influence your work?

2. What are the most important KPIs?

3. What other indicators would you like to see?

4. What indicators are obsolete?

5. How would you measure your peers?

6. How would you measure other departments?

7. Do indicators trigger action?
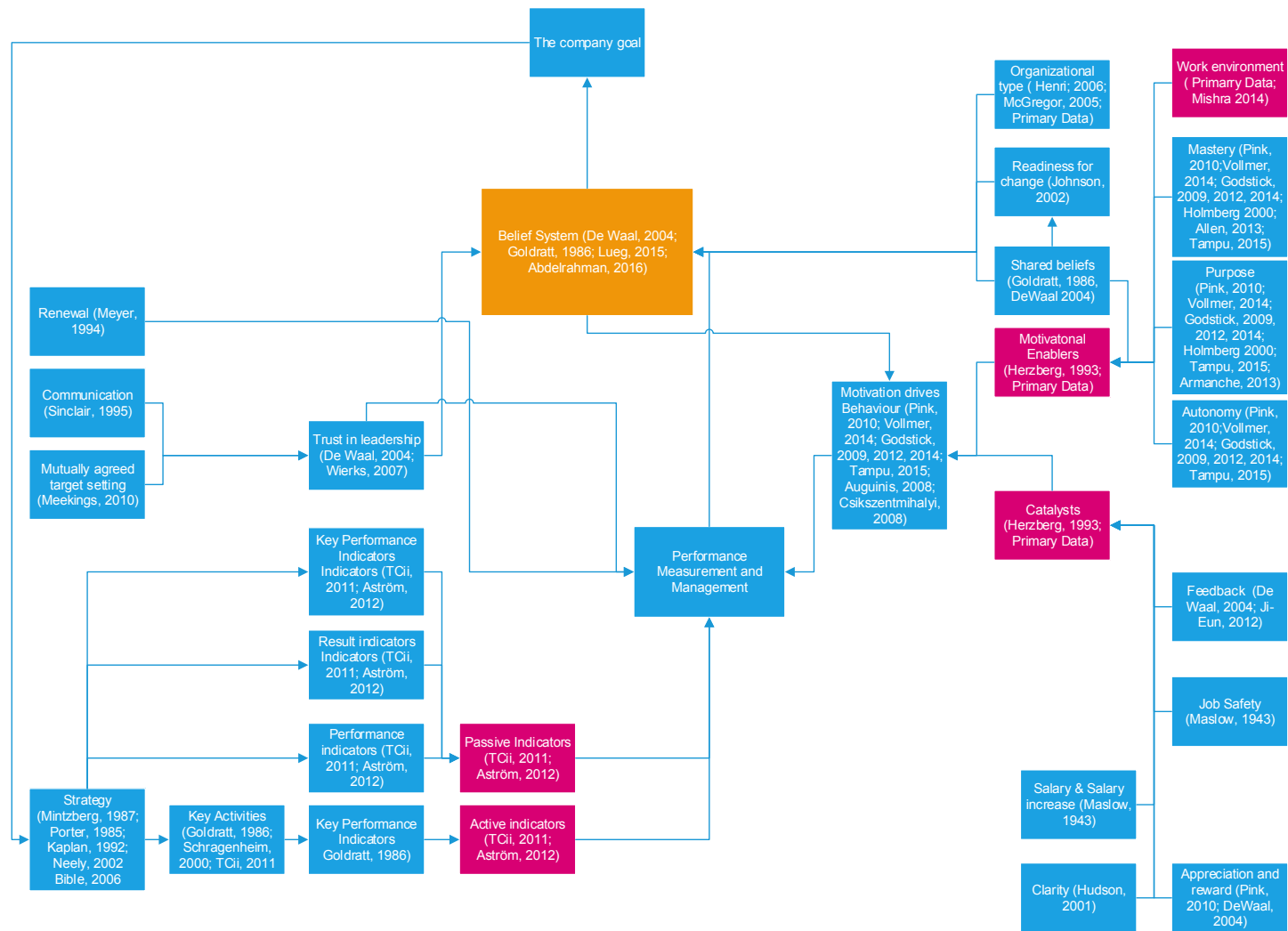
Table 6-7: Conceptual Framework revisited

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6.5.8 Measurements definition: Combining TOC and BSC

From primary research and the literature review it was learned that the number of measures creates complexity for the employees and managers in charge of the process. The correlation between measures and the organizational goal often lacks clarity. The measures often become irrelevant for the operational side because they do not give guidance on important aspects and expected developments. Dividing measures into active (KPI) and passive (KRI, PI, RI) indicators was therefore suggested. This provides a focused approach on the operational level. Primary research and actions taken in the company show that this provides clarity for the employees and managers if expectations are clearly defined. As for the operation itself, KPIs are determined according to the strategy but operationalized by using the TOC (focused) approach. The KPIs must be actionable by steps that can be taken by the person in charge. The essential step is to divide the KPIs and limit the number of measurements to provide focus. The KPIs are the only measures reviewed on a frequent basis to emphasize their strategic importance.

Passive indicators provide insight on the sustainability of the operation. They measure results and performance or processes as well as results directly related to the strategic and organizational goal itself. They must be correlated to the KPIs and be a result of them. For these indicators, thresholds must be defined to ensure that they only need to be monitored. Actions only occur if the measure is outside the threshold.

This approach combines the BSC and TOC, provides a global picture of the operation for top management and gives guidelines for the operation (Figure 6-8).
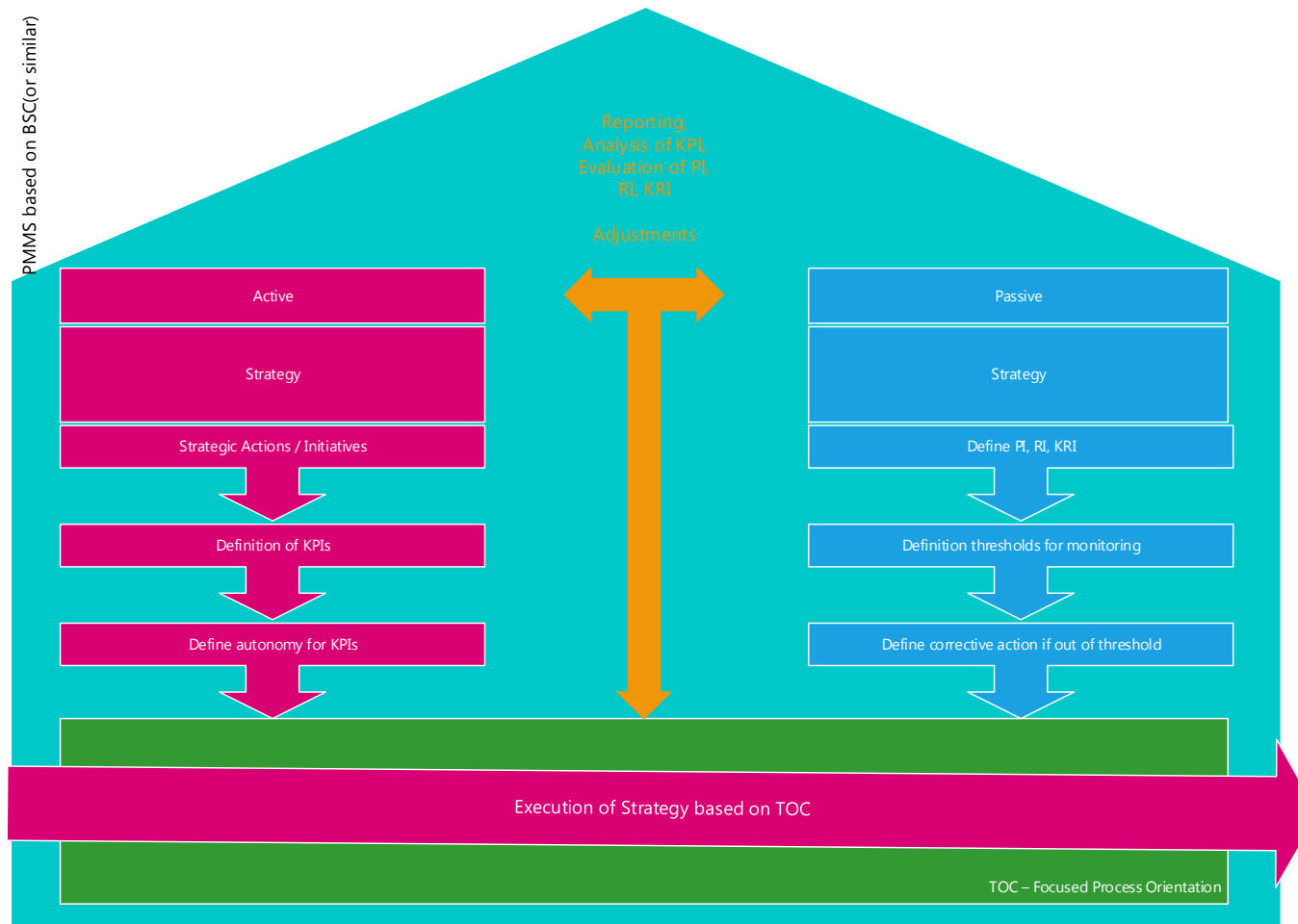
Figure 6-8: Passive and Active Measurement: the combination of TOC and BSC

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6.6 Summary of the section

In this chapter, the key elements of efficient PMMS were discussed based on primary data from the researched organization and compared with the findings from literature. Key elements from primary research corresponded with the findings from literature and confirmed the research results. The challenge however is that despite the agreement on these elements, literature suggests that initiatives fail to provide the necessary results and sustainability over time. The reason for this might be answered in the primary research data which indicates that implementation guidelines do not emphasize behavioural aspects of management. The data from primary research suggests that the managers and employees do not know the strategy of the company and therefore do not understand the value of the reporting they must undertake. Further, the employees established their own performance management system because they do not agree on the targets given to them by the corporation. Literature suggests that this behaviour is in line with research (Pink, 2010; Vollmer, 2014). This behaviour is grounded in the fact that motivational factors, catalysts and enablers, have been neglected in the deployment process of the targets. Lack of autonomy for managers, top-down target deployment and lack of involvement creates misalignment between top management and the local management which results in an absence of trust. Thus, the company is not performing as expected by top management.

In the absence of a clear strategy and resulting key initiatives the local management took a focused approach to resolve burning issues, and as soon as these were resolved moved to a process improvement mode to ensure sustainability. The notion of active and passive KPIs (Aström, 2012) or KPI, RI and PIs (TCii, 2011) was instrumental in order to resolve the burning issues, while for the process

improvements key initiatives with detailed actions and follow-up were driving performance.

Primary research showed that employees and managers named motivators which were important to them. It is important to understand that motivators have limited validity. They are replaced, if they are fulfilled or not, by other motivators. At the stage of the research the essential motivator for managers was the lack of autonomy which created dissatisfaction with the top management. For the employee, mastery as well as salary was a key element of motivation. For both groups the work environment and relations with their peers were important. Primary research confirms literature in terms of motivators (Table 6-5 & Table 6-6).

Combining the key elements of efficient performance management, behaviour and motivation resulted in a toolbox proposal for how to investigate an organization and prepare for PMMS. The five-step process and proposed questions should provide input on the efficient implementation of a PMMS in an organization, taking into account not only strategy but also behavioural aspects to ensure the success of the system. It was established that belief systems either support the improvement efforts or can be a major obstacle. It is therefore necessary to investigate the beliefs of all levels of the organization to identify misalignments that would hamper the implementation process by discrediting strategy. Further, the motivators, both enablers and catalysers, have to be examined through interviews. Risks of motivation resulting in non-supporting behaviour have to be identified early in the process to ensure correction before a strategy is presented. The same is valid to establish trust in the leadership to ensure that no parallel systems are created.

PMMS has to reflect the key initiatives for development while other indicators are monitored only to ensure sustainability for the development process. It is essential to focus the organization towards key initiatives, as research suggests that too many

indicators automatically result in trade-off or confusion on priorities. This is confirmed by primary research which indicates that employees are not clear on KPIs.

In the next chapter a personal evaluation of the research is presented.

7   Reflective commentary

7.1   Introduction

When I started the project, I was puzzled by the lack of efficiency of performance management systems. I worked in several organizations which applied systems to manage performance by introducing key performance indicators relating to their business. Often these systems were not achieving promising results or, as they encompassed many aspects of the business improvement, results could be seen on one indicator while others fell. That meant that there was no progress made because the underlying assumption of the systems built was that every aspect of the business has to improve so that the overall goal of the organization is reached. Discussions with people often left me thinking that they do not believe in the system they are measured by and seem to develop their own interpretations of the required actions to achieve what they think is the goal for their span of influence. They also seem to learn quickly what they can get away with and what not, and therefore emphasized certain topics and took actions to obtain the minimum results which put them on the safe side. These were the first aspects where I started to question the influence of performance measurement systems on organizational and individual behaviour. At a later stage I was measuring with a balanced scorecard for the business and it became clear to me that it was almost impossible to correlate the different numbers, and it seemed that if one was improved others stagnated or declined. In respect to the final result which was sales and profit, the indicators seemed not to have any impact, at least within the variation I saw then. I then also started to think that there have to be indicators which drive the business and others which might be of more informational nature. It was also the fact that in the team nobody seemed to be worried about varying from the KPIs as long as the final results were acceptable, or even when they were not they had good reasons for not

correlating to the measures. Their behaviour was not driven by the measures taken and I came to the conclusion that we simply measure the wrong things. **(This relates to research questions # 2 & #3.)** At that time the company was sold and I moved on to other projects, so I could never answer the question for the company or myself. Soon afterwards I worked in another company and a similar situation arose but at that time effort was taken to focus the team towards a limited number of measures supporting the financial stability of the company to ensure delivery and cash flow. We engaged in every business close enough to our manufacturing footprint and over a short period of time we were in numerous industries. This spread our resources wide and we were required to increase our workforce and invest in machines and material. That did not result in achieving our goal because the variety of requirements due to the wide industrial service we wanted to provide resulted in a decrease in profit instead of increasing it. It is clear to me that we were missing a strategy determining what the company should be and which services we wanted to provide. (**This relates back to research objective #1.)** We were a premium supplier in a market where premium supply had not yet been seen as worth paying for. The market still preferred low pricing in combination with low quality and late delivery instead of valuing a full-service supplier. I think we were entering the market too early and with a value proposition nobody wanted to pay for at that time. The lack of a clear statement of who we wanted to be and how we wanted to reach this target was clouded by the focus on key performance measurements which drove us in a direction that could only increase our problems. We did not have any indicator which told us that the road we had taken would not result in success. The strategy was not linked to what the company could successfully do and therefore the measurements became meaningless and were just documenting the problem that arose over time. Further, the employees started to doubt the process and the value of the measurement. (**This relates to the research questions #3 & #4.)** The

mistakes were made at a very early stage and were entirely preventable if acted upon but there were indicators missing that would have shown the problem.

As a result, I define strategy for me as plan for the future that takes into account what you are good at today, then capitalizes on these strengths to generate resources necessary to enable the achievement of what you want to be tomorrow. I now think that in the past I did not have this understanding. This changed during my time at Bodycote.

During my time at Bodycote I was exposed to a controlling leadership style which left me curious about how such leadership style influences the behaviour of people. The company had just made a significant change in strategy to become a Tier 1 supplier to the oil and gas industry. We had a product that was in demand from the industry and we had growth in double digits. What the company did not have was any clue of what their decision entailed. There was a clear strategic outline what to become but there was no definition what had to be done. There was an absence of key actions and performance measurement on how to achieve this strategic change. (**This relates to the research objective #1.)** For a long time there were underlying issues, which resulted in a major crisis in terms of delivery performance and revenue. The research presented in this thesis took place during the crisis.

I joined the organization when the strategic change was already on the way. The absurdity in this situation was that my supervisor was responsible for the production site mainly concerned by the strategic change. During the first months, it became clear that he did not want me to get closely involved in the matters of the plant. The budget for the first year of my employment with the company doubled the sales targets of the organization. This was retrospectively an important event because as we see later, what we believe about our abilities to achieve targets is very important. Nobody believed in these. (**This relates to research questions #3 & #4)**. Actually,

nobody but my supervisor knew until we had to fly to Boston every month to explain why our targets were not reached. The targets were not reached because we did not have a plan for the future. In relation to the thesis, it was clear what the target was but we did not define key actions and related KPIs to measure our success or failure. The preparation is also related to timing. Budget cycles are normally done on a calendar year. Our budget was established by the end of the year, which eventually gave no time to prepare key actions. If the target is to double the sales within an industry with a delivery time of three months or longer, key actions have to be in place much earlier than January 1st or business indicators would need to show that you are already on the right track. That means you already have defined the right indicators. Retrospectively, there was a substantial gap between the strategy and its operationalization **(this relates to RQ #1)**. To amplify the problem, the stock market had been informed that the numbers were going to double in the coming year. As the numbers did not materialize the grip of corporate control tightened and we spent much time justifying the failure to deliver and making plans for how to overcome the problem. We, my boss, the sales director and I, willingly delivered the plan, which everybody knew would not materialize. By mid-year the gap was so substantial that it was clear that the numbers would not be reached. Despite this the head office still insisted on another plan for how to correct the issue and reach the numbers, which even the most optimistic employee did not believe in anymore. There was nothing wrong with the effort that was put in but with the shift in product portfolio, which we could not compensate for immediately with new products of the new strategy. My boss said to me then:

"Let's hope we get lucky and the markets will pick up."

At that time "Luck" replaced management efforts. **(This relates to RQ #1,#2, #3 & #4.)** The constant failure was obviously reported back to the employees and the mood within sank. **(This relates to RQ #3 & #4.)** In October my boss left the

company, leaving the sales director and me in charge of the organization. It became soon clear that he was applying luck for many management processes. The organization was at no point ready to execute any serious orders from the oil and gas industry. We failed to deliver the required numbers and Stephen Harris spoke about capacity problems in the analysts' conference, but the causes were deeper. Despite having a product in demand, we did not have the certifications to deliver these products to the market. The certificates acquired were faulty or invalid for certain types of deliveries. Materials chosen did not provide the required mechanical properties. We had a backlog of orders which simply could not be delivered under these conditions. The team in the facility had chosen to hide these facts, probably because they had relied on my boss to resolve them. Some months before this happened I joined the DBA programme of the University of Gloucestershire. After my boss left I was informed that despite the failure to deliver the results for the current year, the company still maintained the target for the next year. As stated earlier, to double the sales within a year the business indicators must show early on that this is possible. The indicator for our business was the order book or backlog and we did not have the order book but instead many production problems. At that point, nobody believed that we could reach the target and the year had not even started. Nobody trusted the top management any more. During the coming month, the interviews for the thesis were done. There was a rift going through the organization and a blame game was going on as to who was responsible for the failure to deliver. Despite that, the team managed to deliver big orders to the customers and within six months the tide had turned. We managed to address the short-term requirements and resolve issues with qualification and certification. It was possible to shift from short-term actions to mid-term actions. The execution of the strategy required the introduction of short-term measures that were basically daily targets. The targets were not in line with the budget, but they which were considered

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realistic. Normally this indicates that there is no alignment of the organization. As problems got resolved we could focus on process instead of daily measurements and how we could deliver the right quality at the right time by applying a process that could be followed. The result of the work was that the turnover in that year was the highest in the history of the company and the order book and the consecutive year surpassed this result in achieving the budget.

7.2 Reflective commentary on thesis work

The introduction showed the challenges I faced over the years with performance management systems and behaviour. I would argue that I had a positivist view of the world, which implied that measured data should consequently result in adequate behaviour. The reality over the years showed that the opposite was the case and the thesis is my attempt to create guidelines or a toolbox to create, examine and renew performance management systems. The most surprising fact is that a significant amount of research was and is done in respect to performance management systems. The research shows on one hand how these systems should be developed and implemented, but also that most of the initiatives fail to provide the required results. This was also in line with my experience in different organizations. The problem here is that literature is not clear about the reasons for failure. During the research, Gordon pointed out that there is a behavioural aspect to performance management, which might explain the gap. Following the literature review and the interviews in the company it is my opinion that there is an aspect of performance management that is not explainable by a positivist view. The literature review shows several spheres of performance management. The first is the belief system, related behaviour and culture. The top management has to decide what type of organization they want to develop into. Second is the behavioural aspect of performance management. Every employee has a motivational pack that determines their performance at work. While the employee's identity is a

determinant, the motivational value set the organizational type either fosters or suppresses the motivational identity.

Every organizational leader has to define for himself what type of organization suits his way of working best. The type may vary on a spectrum from controlling to democratic. It is important that the top management honestly assesses their type of management, because the type has a great influence on the employees' behaviour. A controlling organization distrusts its employees to do the required work to achieve their contribution to the organizational goal. The democratic organization trusts its employees to independently achieve their objectives. "For Karl Marx, men and women construct their being through productive activities" (Csikszentmihalyi, 2008, p. 149). This struck me as there must be a process where organizations manage to demotivate their staff. The issue became clear to me in the process of reviewing motivational factors in the literature research. People and groups within the organizations might understand the goal of the organization but they have their own set of motivational drivers which might conflict with the organizational requirements. The organization is suddenly out of alignment with a conflict of beliefs. The organization makes assumptions about itself on all levels. From the top down, managers and employees define their relationship and as a result a belief system that determines the performance of the organization. If a performance management system is introduced or refurbished it is important to know that people resist change due to their beliefs. Beliefs can be so strong that even overwhelming evidence may not sway them. The psychological explanation is that the brain engages in a process of "motivated reasoning". Instead of rationally seeking information for clarification and evaluation, people look for information that confirms their existing belief. The resistance to change manifests itself (Gostick et al., 2012) in:

- Counter-arguing: Employees discredit a new way of thinking.

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- Attitude bolstering: Employees bring up arguments which support their current belief, ignoring any different approach.
- Selective exposure: Employees ignore or avoid new information completely.
- Disputing rationality: Employees resort to the argument that their opinion does not need to be based on facts.

To protect our beliefs, the brain defends them with a process called "inferred justification". People invent causal relationships necessary to justify their current belief. One reason is that the mind wants to relieve tension and cognitive dissonance when presented with new information which is in conflict with the beliefs of the old employees, who being caught up in these belief conflicts spare no effort and motivation to undermine company initiatives (Vollmer, 2014). It is therefore essential for any PMMS to create a reason for a need for change which can be communicated and understood. For a toolbox, this is an essential component to define what beliefs are shared in the organization. I worked with an organization that believed internally at their headquarters that they were leading the market. The outside sales force on the other hand experienced being driven away from the marketplace by other companies. This did not happen in a landslide but gradually the position eroded. While working there I underestimated the power of this belief of being the number 1. People on any level were incapable of rethinking their position. It seemed that nothing could change their mind and it did not. All evidence of the erosion process was ignored, as stated by Gostick et al. (2012). In their small view of the world they were the best and they successfully ignored the information from outside that there might be a larger issue on the horizon. Is the organization's belief that they need to change crucial to any efforts taken subsequently? In the researched company, there was no doubt that the management from top to bottom believed that there had to be a change. The customers were basically rioting in front of the gates, the revenue and profit numbers were devastating. There was no problem with communicating that there had to be a change in direction.

I was also surprised about the influence of belief systems. Individuals and groups have belief systems about themselves which determines their ability to adapt. I experienced this during my work with a small company here in a remote location in Germany. They believed that they are a top technology company in their field. If you talked with anybody outside of this company a totally different picture was painted. The belief in what they think they are was driving their every action despite clear input that the position in the market was changing. Beliefs drive behaviour and can drive performance or be obstacles for the success of strategy deployment. What people believe about themselves, their peers and their organization determines their involvement in any performance measurement and management system. The employees of the researched unit believed that they were a market leader in their process but they did not see where this could take them.

Even if the organization believes that change is required this does not mean that the organization is aligned. Some years ago I was introduced by Ravi Gilani to the six layers of resistance (TOC-Marketing-Group, 2015):
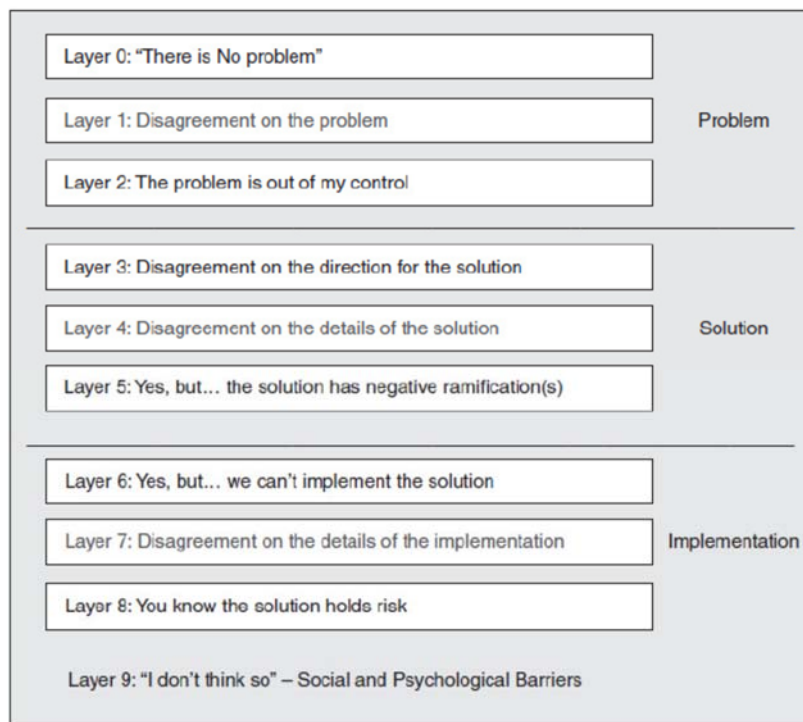
Figure 7-1: Layers of resistance (TOC-Marketing-Group, 2015)

So even if an organization agrees that a change is required that does not mean agreement on how the change has to be achieved. In the researched company we disagreed on all and everything from points 1 to 5. At this stage I was curious about how we operated as a team and I found the questionnaire of Lencioni (2002) to assess if there might be a dysfunction in our team work. The results were above average and so I was reassured that we could tackle the problem.

During the interviews, it became evident to me that we did not speak a common language in respect to the strategy and how this strategy was operationalized in the organization. There was no common ground in vocabulary and expectations. Despite the fact that the participants received a brief before the meeting they seemed not to have spent much time in reflecting on the topics. Retrospectively I think I would change the methodology and introduce a questionnaire prior to the interviews to initiate a thinking process which might result in a richer discussion in semi-structured interviews. Nevertheless, some of the interviews were rich in comments and showed the gaps management has not been able to bridge. It seemed that the organization operates independently from any concerns of strategy, targets and results. This can be partly explained by the management style of my former boss who liked to keep people in the dark and limited their exposure to corporate structures to a minimum. I am still not sure if it was just more comfortable for the employees not to be involved in the strategy and its operationalization.

During the crisis, it became very clear to me that there are objectives of different urgency and I do think that as we enter the conclusion this topic comes up again. There are immediate actions to be taken to ensure survival. A crisis is not the worst scenario to introduce change within the organization. The team and I could agree on the following indicators for immediate survival:

"The sales numbers have to come up and this will be done by shipping the orders which were already delayed. For this we establish a KPI board which indicate the

value, and therefore the priority of the project. The value is correlated to the reasons why these orders are not shipped, so-called hold points. These hold points were actual points which were stuck to the board. Every hold point was assigned to the departments where it was stuck for resolution. Every department broke down their activities into specific boards with all the required steps necessary for delivery. By doing this it became visible for everyone in the department where the project was stuck and which priority it had. The objective was to keep it simple and actionable for the employees and easy to monitor for the supervisor. This is interestingly in line with some of the literature about the number of indicators and their relation to the results (Bungay, 2011). At the same time the team and I identified all activities with importance but which are not necessary for the current crisis. These we tracked on a secondary list which was visible only to the people working on it. This was done to avoid lack of focus on the key activities. The mistakes which we made in the process of solving the crisis were part of our common learning and used in a value stream mapping."

The most astonishing factor during the research was the fact that there is much research available on performance management and behaviour, but this is not interlinked. Sometimes, during the literature research, I got the impression that these are independent fields of research. The main flaw is "There is a gap what science knows and business does" (Aldag, 2012; Pink, 2010, p. 203). I would argue that I was never trained to deal with behavioural aspects of management. The MBA programmes made me believe that based on logical thinking processes and relevant numbers, people must act according to what is good for the company. I think my frustration in respect to the performance management systems, which finally led to this thesis, is grounded in the absence of management tools. I experienced the performance management systems as mostly cumbersome and unfocused on what the organization wants to achieve. During the crisis situation in the researched

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organization it became evident that there is a trade-off situation between what has to be done right away and mid- and long-term actions. The management of the crisis had the effect that immediate actionable issues were resolved and the resolution of these problems resulted in good results for two subsequent years. What was forgotten by the top management was the horizon beyond the two years because the results covered up underlying problems of the business. Here a strategy by top management should have come in to define on a macro level how to develop the company. The company had two record sales years and in year 3 the sales sank so significantly that top management had to shift from a growth scenario to a restructuring programme, resulting in layoffs. Here top management did not see problems which during the interview became quite apparent. The employees clearly asked the question of direction. These questions were never answered from the top and therefore the company was navigating as well as the middle management was authorized to. The company had KPIs and measured results yet despite that fell out of the sky when market realities changed. Top management had not relied on local management to resolve the operational side of the business and simply neglected the subsequent time.

In respect of the methodology of the research I initially expected more input. The participants had difficulties in verbalizing their thoughts regarding the topics. Retrospectively I might have produced a questionnaire addressing the topics of the later interview to initiate a thought process by the participants. There might have been more input in respect to these KPIs. The participants seemed to be surprised that somebody was actually asking for their opinions.

7.3 Summary

The thesis clarified to me why performance management systems often do not achieve the results they were built for. Firstly, it is certain that managers today have

not been sufficiently educated to consider the interaction of PMMS and behavioural impacts. Even for me this connection was not clear, and in particular how much research was done on the performance and behaviour side. Research rarely connects the two fields. What the research shows me is that there is a strong connection between strategy development, its communication to the organization, its operationalization and execution. All these are embedded in behavioural and motivational aspects. The research shows that top management must clarify their expectations for the future and establish trust within the organization for this plan for the future. I have seen during the interviews that a breakdown of a strategy implementation process creates a chasm and the company or unit is then an independent system with its own performance management. For me, the breakdown of the strategic process to define key activities beyond operational challenges contributes to the failure of performance measurement and management systems. The middle management operates the business without clarity beyond short-term challenges, which can lead to short-term success but long-term failure. During the research it was not that apparent to me that the answer on a post-crisis strategy was missing and so the company failed to perform when external factors changed. Perhaps during the research I should have separated the strategy into internal and external factors but in respect to the limited knowledge of internal strategies, responses towards external influences would have been even less knowledgeable.

The primary research shows the importance of strategy and its communication through the organization. In absence of clarity the operationalization of strategy into a PMMS is not possible. The employees adapt to the situation and, in this case, develop a parallel system which they see as adequate for their situation. The employees and managers of the researched unit did not believe that the top management helped them to properly address issues but were unrealistic in their approach towards

performance. This hampered the trust that would be necessary to engage in an efficient operationalization of strategy. In the process the corporation increased control by increasing the reporting requirements and amplified the distrust, as reporting did not result in action. The corporation did not follow the key elements defined in 6.2.5 and created a disruption in the process. The local employees and manager clearly stated their expectations towards motivational factors and they were in line with the definitions found in literature. The research confirms the literature in both fields of strategy and PMMS as well as behaviour. The research bought these fields together and established a logical chain in defining IOT from literature and CRTs from primary research showing a strong overlap of key elements. The primary research shows that PMMS do not automatically drive or align behaviour and indicates that before engaging in change processes the belief systems of the organization have to be examined. The beliefs within the organization influence the effectiveness of the PMMS and the results obtained. The data acquired gives an insight into a company in a crisis and additionally provides first-hand insight into the inside management perspective. This can be considered the main contribution of this work and useful for further research.

In the next chapter the findings are summarized and key elements highlighted.

8 Conclusion

8.1 Introduction

The project was started because of my experience in the corporate world with performance management systems and their limitations to obtain the expected results. In the research proposal, the following was outlined:

The aim of the research is to identify the gap between corporate strategy and operations in relation to human motivational factors and propose a system of synchronization between processes. It is challenging for an organization to align its top-down strategy with the horizontal flow of value creation (Schragenheim et al., 2000). The objective of performance measurement is generally to measure key performance indicators and report them upwards to check alignment with organizational strategy (Schragenheim et al., 2000). The issue with the local indicators of individual processes is that those responsible for the process will strive for *its* optimization and not that of the *system* (Cox et al., 2010; Goldratt, Eliyahu, 1990, 2009; Goldratt, Eliyahu et al., 1992; Goldratt, Eliyahu et al., 1986). This stems from the assumption that if individual processes are optimized the entire system should work at its peak (Goldratt, Eliyahu et al., 1992). Professional practice, however, shows that this is not the case and therefore a toolbox for performance management should be developed to enable employees to focus on a more systemic view and not one that is as 'atomistic' and limited to the processes with which they are directly involved (Goldratt, Eliyahu, 1990).

The research focuses on a business unit within my previous corporation specialized in the manufacturing of powder metallurgical components for a variety of markets, but mainly the oil and gas subsea industry. A strategic shift occurred about three years ago from being a process service provider to a fully-fledged parts manufacturer. This represented a major change in strategy and resulted in altered

requirements for employees. Because of this change and the concomitant requirements, the company experienced a major crisis that resulted in late deliveries and many quality flaws. I joined the company at a stage when decisions were already made and the strategy rollout had already begun. Nevertheless, it was clear that the company did not have any performance management systems that supported the decision-making process within the organization. This research investigated how the crisis was overcome and consequently the efforts of implementing measures to secure future performance. The value creation process within an organization is complex but how do employees know that their performance is aligned to the strategy and goal of the organization? In corporate presentations strategy is often highlighted as a means of achieving the organization's goal. The question arises how employees know, understand and act in line with such strategy. The organization has to clarify the role and contribution of their employees in the process of value creation.

During the research, it became clear that the research must go beyond the pure investigation of PMMS and also include human behaviour and motivation. A significant number of motivational models and their relationship to behaviour were reviewed in the literature review. During the interviews the questions attempted to identify commonalities between the theory and results of the primary research.

The research had the objective of inducing change in the organization and therefore emphasizes action. The need for change is best supported by Action Research (Easterby-Smith et al., 2012; Easterby-Smith et al., 1991; Gray, 2009). As a critical realist, the data generation is executed first through semi-structured interviews with individuals, followed by focus groups consisting of mixed groups of employees. The mixing of different hierarchical silos challenges the assumptions of individuals in the group and assists in exposing individuals to opinions from different departments. The management of the company, consisting of engineering, production, quality and

HR, were interviewed individually in semi-structured interviews (Easterby-Smith et al., 2012; Gray, 2009) to explore their alignment. In addition, the company organized a supply chain day with key personnel regarding problems and solutions, in line with the TOC approach of problem-solving. Literature suggests that triangulation is a valid approach and consequently questionnaires for basic behavioural assessments (Lencioni, 2002) on team functioning were used.

The intended result of the research was to create and apply a toolbox considering the generated information and ensure the creation of a performance management tool that facilitates aligning company strategic needs with human motivation. The combination of a performance management system with motivational factors improves the alignment of the organization with the strategic company goal. For the researched business unit, this means more monthly sales and profit and maintaining quality and customer satisfaction. The toolbox, or process, must translate strategy into key actions and activities for the organization to positively influence revenue and profit.

8.2 Research limitations

The research is focused on the specific organization and in this process an attempt was made to investigate commonalities between primary research and findings from literature. Although there is a strong overlap of theory and primary results the findings are specific to the organization. Earlier it was established that the specific situation of an organization determines the interdependency of PMMS, behaviour and motivation. It was also determined that motivators are not a constant but vary depending on the fulfilment or non-fulfilment of motivational needs. Motivation is therefore a very organization-specific condition. In the primary research the individuals, on a macro level, share motivators, but research shows that individuals may have a more complex motivational need, which also depends on the fulfilment

or non-fulfilment of the needs. The research did not focus on the individual motivators.

Furthermore, the researcher left the organization before the end of 2014, which made it impossible to investigate the state of the organization after the adjustments were made. As discussed earlier, the focused approach that was taken resulted in significant financial improvements. This however does not prove that the implementations achieved long-term sustainability. Therefore, the reliability can only be established for the years 2013 and 2014.

In 2015 the oil and gas market plunged and had a negative impact on the researched company by decreasing revenue and profit. The research and results are therefore limited to the timeframe 2013-14. The change of outside conditions supports the literature that strategic actions and resulting PMMS have to be reviewed regularly and priority setting has to be adjusted on a frequent basis.

Moreover, the results of the research would have been aligned with the overall strategy of the corporation and used to convince the top management to rethink their management processes. As stated earlier, the company employs 40 analysts whose only purpose is to scrutinize numbers. To introduce a system of active and passive KPIs as PMMS would be a cultural shift from giving importance to everything to providing focus on execution.

The strategy and PMMS chasm between the corporation and its local unit was only investigated from the perspective of the local managers and employees. The primary data and the results can help the top management to better understand local challenges.

8.3 Contribution to knowledge

8.3.1 Literature

The literature review showed that there is a lack of connection between strategy, performance management, behaviour and related motivation. Most studies assume that performance management drives behaviour. The balanced scorecard, performance pyramid and similar systems imply that by simply implementing them PMMS improves as a result. Research shows that many of these initiatives fail to provide the expected results. At the start of every improvement or change efforts there is a strategy which defines the new state the organization should move to. This is then translated into a PMMS with KPIs and incentives for the members of the organization. Many researchers and practitioners have developed processes for the implementation of strategy and PMMS and these efforts have often failed to produce the required results. There is little research available that suggests a motivational or behavioural analysis as a part of the implementation process. Primary research showed that a disagreement or lack of knowledge of strategy and the purpose of PMMS dissociates strategy from performance management and renders the systems ineffective. It has to be assumed that behaviour and motivation are already present before any change or implementation efforts are taken. Earlier the state of an organization was introduced to assess the willingness to change but a further connection to strategy or PMMS was not made.

Literature therefore indicates that the complexity of human behaviour and motivation and the relative simplicity of PMMS seem to be neglected in strategy deployment, despite the fact that within an existing organization they pre-exist before any change or implementation effort. Behaviour and motivation are complex because they vary from group to group and individual to individual as well as varying over time as was stated in literature. On the other hand, primary research showed that the group of

managers shared motivational factors, as did the employees. That could imply that at a certain state of the organization groups will share a common behaviour and motivation. It does not imply that individuals share the same motivators, as these could be more differentiated.

The literature research can be used as a guideline for practitioners and students alike to provide insight into performance management because it provides information on both PMMS and human behaviour.

8.3.2 Methodology

The critical realist approach for this research yields a new perspective on performance management and human behaviour because it hints at a major challenge in PMMS. The statement that "Reality is socially constructed" guides this research and could be an explanation for why PMMS often fail to provide results. In the study the belief system or state of the organization was discussed. The underlying beliefs of the different members of the organization influence the results. Common beliefs and a shared perception of reality, which is socially constructed by the members, determine the organizational performance. Primary research showed that the local management did not agree on the top management's directives and therefore created parallel systems. The organization was in misalignment, which resulted in a gap between achieved and demanded results. Relying on interviews as primary source of information gave insight into the beliefs of the local organization.

A majority of studies on PMMS and behaviour and motivation rely on quantitative methods and therefore can only investigate a limited set of parameters which are predefined. In this research, a qualitative method was used to establish a comprehensive view on key elements which are common to all members of the organization. The research also suggests in the discussion of the results that semi-

structured interviews investigate key elements, defined based on primary research, to establish a baseline for the strategy and PMMS implementation. This research also shows that qualitative results can yield insights in the functioning of the organisation and identify patterns that can be used to define a comprehensive process of strategy implementation. The research used a quantitative method to enquire about the team work within the researched organization. The combination of both methods led to a deeper understanding of why despite the misalignment between top management and local management, the organization achieved significant improvements in results.

8.3.3 Management contribution

For managers, the research is of interest because it was carried out on an organization that was in difficulties and needed a new direction. In addition, the research showed the importance of investigating belief systems and the state of the organization before starting a PMMS implantation based on a new strategy. If a manager joins a new organization which he/she plans to shape in a different manner these beliefs have to be investigated prior to a change effort. Research suggests that even if the process of setting up the PMMS is successful the PMMS often fail to deliver results because people simply continue as they always did. The behaviour and its motivation were present before any performance management. Management literature suggests that measurements drive behaviour. Primary research shows that this is partially true. In our case people started to ignore corporate PMMS and created a parallel system, ignoring the "official" ones. Literature suggests that managers in a change process must create "buy-in" from the organization to avoid negative effects. Research shows that a misalignment of PMMS does not yield results but motivates employees to stay passive or engage in behaviour that produces the opposite of the demanded results.

The primary research shows the impact of the absence of strategy on the organization in crisis and a lack of focus by top management to resolve it.

8.3.4 Academic contribution

The research provided first-hand insight into the state of an organization in crisis regarding PMMS and behaviour. The results were falling and many orders were held up in a system which was not built to deliver to the customers' requirements. The interviews show a state of mind within the organization at a critical point. They show the understanding or lack thereof of strategy and its implementation within the organization. Data collected give information on how employees and managers perceive the critical situation and define their relationship with top management at this point in time. The primary research confirmed prior research on PMMS and human behaviour and motivation. The corporate PMMS did not guide or result in any improvement because it became irrelevant to the employees and managers. They started to build their own systems to overcome the problems they faced. Contrary to research which suggests that employees in this situation, will either do nothing or aggravate the situation, the opposite was observed. The people came together and resolved the problems they faced. Primary research showed that the atmosphere at the workplace was a major motivator for managers and employees alike. It could be argued that the good personal relationships gave them purpose in overcoming the challenges. The data collected on teamwork showed that the team work within the researched organization was over-average. Workplace atmosphere and teamwork seem to be contributing factors to how the organization overcame its challenges. The teamwork was reinforced by introducing a system that focused the efforts on specific tasks and a system of communication which broke the information down into clear actions for every employee in each department. Literature has provided us with key elements of successful PMMS implementation which can be partially found in this process. Further literature suggested that PMMS should be

comprehensive. Criticism of this approach stated that people cannot correlate individual indicators and are confused on priorities. The primary research shows that there is indeed confusion on the importance of individual indicators. The focused approach, on the other hand, provided clarity on execution and results. Other indicators were disregarded as long as they were in the accepted range.

The primary research also confirmed research on behaviour and motivation. For managers autonomy was a primary motivator, while employees emphasized mastery. Both were macro motivators found in literature. The importance of autonomy was based on the fact that managers did not feel they had enough autonomy. This confirms prior research that one motivator is replaced by another with its fulfilment or lack of fulfilment, because its importance is not founded in its presence but in its absence. Motivation and behaviour exist before every change of strategy and corresponding PMMS.

8.4 Implications to management

In this work, the key elements of successful PMMS were developed as well as providing a guideline for managers for implementation efforts. To examine the state of beliefs within an organization is a key for successful transition in a strategic process. Any organization shares beliefs about itself and its performance. Earlier a questionnaire-type investigation about the state of the organization was proposed. This was necessary to initially define and clarify where the organization and its employees were positioned in respect to any strategic change. The members of the organization often did not agree on the problem, the solution and its implementation. TOC-Marketing-Group (2015) describes this process as layers of resistance which can be encountered when engaging in any change.
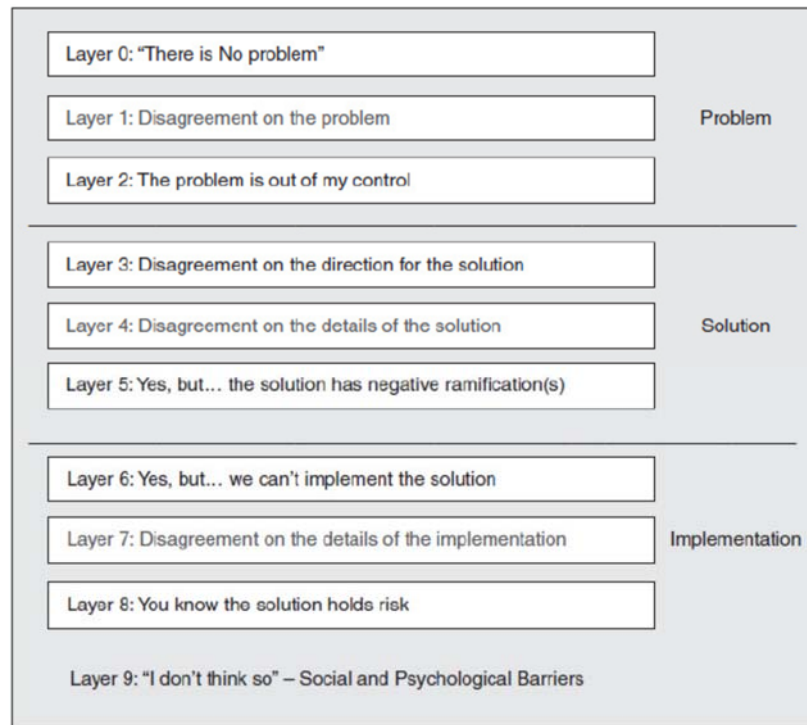
Figure 8-1: Layers of resistance (TOC-Marketing-Group, 2015)

Beliefs can be so strong that even overwhelming evidence may not sway them. The psychological explanation is that the brain engages in a process of "motivated reasoning". Instead of rationally seeking information for clarification and evaluation, people look for information that confirms their existing belief. To protect our beliefs, the brain defends them with a process called "inferred justification". People invent causal relationships necessary to justify their current belief. One reason is that the mind wants to relieve tension and cognitive dissonance when presented with new information which is in conflict with the old. Employees who are caught up in these belief conflicts spare no effort to undermine company initiatives (Vollmer, 2014). Managers in charge of solving the problem have to overcome it and find a solution and manage the implementation challenge to generate alignment within the organization. A majority of the employees and managers have to be in agreement on these three components to achieve this alignment. The PMMS has to reflect the key elements of the strategic effort and define KPIs accordingly. These KPIs must be actionable for the people responsible. Primary research shows that autonomy was a key element for the managers and it is therefore important that the

responsibility comes with the necessary authority to act. Other indicators are performance indicators or result indicators and should be disregarded in the management process as long as they are within predefined required thresholds. This provides focus on the key actions supporting the strategy implementation. Literature showed that managers lose clarity on priorities when their set of KPIs, PIs and RIs are too large and conflicting. Primary research confirmed that managers did not understand why such large quantities of data had to be provided to the corporation as this data never seemed to trigger any actions. The focused approach showed significant improvement in company performance in the researched organization. The value creation process must be managed with great clarity in expectations. It has to be kept in mind that it is a management task to create a definition of the future state of the organization and its business and purposefully introduce this vision to the organization. The strategy definition is not a focused approach and is therefore a conflicting execution.

PMMS systems have to be adapted and most companies do so in adding more and more indicators and measurements. Primary data showed that employees were confused about the large amounts of numbers and their importance. It seems that the PMMS exist in the particular organization to exercise control. The growing amount of reporting and the absence of feedback indicates a high level of control. Renewal of the PMMS is important for ensuring the efficiency of a PMMS and focusing the efforts on the key elements to provide clarity on execution.

The key elements of PMMS implementation can be summarized as in Thommes et al. (2015) but renewal (Meyer et al., 1994) and the belief of the organization (deWaal, 2010) has to be added:

- The company goal: There must be clarity on the organizational goal.

- The strategy: What are the key activities and key targets to achieve the goal?

- Belief system: Does the organization have the same assumptions about the functioning or purpose of the organization? Beliefs drive behaviour (deWaal, 2010).

- Performance management: Define the key performance indicators on macro and micro levels.

- Communicate: The purpose and goal of the organization to generate trust.

- Empower and engage: Define the authority in decision-making. It is important for the organization to assess what type of organization it is (X/1 or Y/2).

- Define and agree on performance measurement and target setting: Mutually define a limited set of KPIs for the organization, groups and individuals.

- Feedback: Rely on frequent personal feedback and employee self-reflection.

- Reward: Intrinsic and extrinsic rewards that are considered fairly mixed achieve high performance.

- Renewal: The system has to renew itself (Meyer et al., 1994).

Primary research has shown that a group of people, on a macro level, share similar motivators. For the managers and employees, the work environment and in particular the interpersonal relationships are a primary motivator. In a situation where data shows that there is a disruption between the corporate management and the local organization the interpersonal relationships seem to give purpose to the local team. The absence of trust between top and local management, as a result of a lack of strategy or lack of communication, resulted in the development of an independent parallel management system.

In the data two motivators were found which also appear in literature. Autonomy and mastery are motivators for the managers and employees respectively. As mentioned

earlier, autonomy seems to be important not because it is given to the managers but due to its absence. This also indicates that the corporation defines itself by significant control. All managers feel that the management process of setting targets does not motivate them. Again, this indicates that the improvement process which arose out of the crisis is independent from the beliefs of the corporation.

Measurements can drive behaviour but the research shows that the implementation process defines the success of the PMMS. Beliefs on any level of the organization determine behaviour and motivation and they precede any change effort. Literature shows that systems either concentrate on the strategy deployment and PMMS or on the motivation and behaviour. This study attempted to combine PMMS and its behavioural aspects in an organization in crisis.

In the discussion chapter, it was attempted to give guidance on how to identify beliefs, motivators and behaviour in an implementation process for new PMMS to improve organizational performance.

8.5 Proposal for future research

The primary research was collected at a certain point in time and is therefore a snapshot of a specific situation. The company was in a crisis with delivery problems and angry customers and as a result failing to deliver the financial expectations of the corporation. The research focused on the local management and employees at a given point in time but it was learned that motivation and behaviour change over time.

The questions of the toolbox questionnaire need to be structured and consequently lead to actions that can be implemented an organization. This requires a field application within the same or another organization. The field study must document the motivators, knowledge of strategy, and consequently the impact of PMMS. The investigation should encompass the top management in addition to the local unit

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and compare the information to see if there is an alignment of beliefs between the top and the local organization. Application in another organization would be a step to generalize the findings and create reliability for the initial research.

The findings of the initial research have to be translated into a PMMS system taking into account the definitions of active and passive indicators or KPIs, PIs and RIs. The management process needs to be restructured to use this approach and reduce the number of KPIs used for management as well as secondary measures that are only for monitoring and not action. After the transition to such a system the impact can be examined.

The primary research has only taken a snapshot of a situation. At the time of the research only some motivators were identified in the interviews but literature suggests the existence of more. It is therefore necessary to repeat the toolbox assessment within several periods. The repetition would track the change in motivators and behaviour and would provide an answer the question of whether in a changing environment, motivators and resulting behaviour would change. This requires that input from the top management changes to a clear communication of strategy and as a result would probably increase trust and alignment between corporate and local management.

The motivators for the local management and employees should be examined with a questionnaire to establish individual motivators and appraise the fit with the group motivators.

The application of the proposed approach in a different organization would increase the validity and reliability of the findings. More importantly, a successful application would give indications and guidelines for other implementation efforts, as it was learned that most PMMS efforts fail to deliver the required results.

Belief systems, in respect to motivation and behaviour, have to be investigated prior to strategy deployment and operationalization into PMMS.

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9 Appendix A: Questions for the interviews

In connection with my Doctor in Business Administration Thesis I would like to conduct a **face to face semi-structured interview** with you to gain insights in your view on the topic.

The thesis with the title:

Performance management to enhance and sustain the success of a medium sized manufacturing organization: From Strategy to Measure

The research is under the auspices of the University of Gloucestershire, UK and under the supervision of Gordon Bowen, Director, T_{hames} V_{alley} B_{usiness} A_{dvisors} L_{imited}.

Has the following outline:

"Adapt or Die" according to Jung (2012) the ability of companies to adapt to a changing environment is a question of survival. While the average life expectancy of a company today is 40 to 50 years it becomes essential that current methods are constantly reviewed and adapted to ensure the continued success of the enterprise (Jung, 2012).

In modern management senior leadership is striving for the empowerment of employees (Kaplan et al., 1993; Neely, Andy, 1999) to take charge of their area of influence and manage it to support the success of the organization as a whole. In this work a process shall be proposed for developing and deploying strategy through the organization. The research, of which this work is part of, shall develop a holistic model of multi-layered performance measures and management system by presenting a theory derived from focus group survey and a consequent generalization of the development and deployment process of the model (Easterby-Smith et al., 2012). To successfully investigate measures for performance it is necessary to establish the requirements of the organization. These requirements are generally expressed by a strategy and a strategic plan. The strategic plan is an ideal situation to translate it into key performance indicator measures (KPIs) and they are a means of communication in the organization on performance. The issue is how do we have structure measures of KPIs on different level of the organization to serve the overall strategy of the company? The KPIs should be Specific, Measurable, Achievable, Realistic and Time-Bound (SMART) and therefore under the control of the person or group of persons which is/are measured. It can be argued that measures which are important for the CEO are not equally important to the machine operator and vice versa. Therefore, a KPI

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tree starting from the strategic plan downwards to the last person executing a small portion of the operational work has to be developed. A review process to ensure the validity of our measures will be proposed to ensure that the organization's need is met today and in the future. The known performance management systems, like the Balanced Score Card (Kaplan et al., 1996) or the Performance Prism are focusing on macro level performance. The questions arising are how to develop a process for the deployment of the company's strategic priorities and convert them into operational indicators for different levels of the organization including small operational unit.

I therefore would like to conduct a semi – structured interview with you. A semi-structured interview states that there will only be guidelines regarding the topic and the discussion is rather open. It refers to an expression of opinions and views regarding the subject. The interview though shall be recorded and transcribed.

The participation in this **interview is voluntarily and confidential** but might be published as part of a statistical data analysis in a thesis in 2016

Guideline for the interview:

What is the objective of an organization like Bodycote?

How do you define strategy?

On a sub-divisional level what are the main business indicators for HIP PF?

In your opinion what is the role of senior leadership in corporate performance?

Do you understand the corporation's strategy? What is your understanding of the corporation's strategy?

How does your understanding of strategy influence your work?

How do you think you are participating in the execution of the strategy? How active are you in the execution of the strategy? How could you be more active in the execution of the strategy?

What measures or KPI would you like to be measured with? Why?

How would you measure your colleagues? Why are you taking this approach?

As a company do we do the right thing? Give reasons for your answer.

How would you improve the current performance?

Which measures would you use in different departments? Explain your rationale behind the measures for the different departments.

10 Appendix B: Transcripts of the interviews

10.1 130429_001

[Start of recorded material]

Interviewer: All right. Thank you, [130429_001], for having us today.

130429_001:   Okay. So, the goal of the enterprise, the most important goal of the enterprise is to create shareholder value. Notice I use the word shareholder, not stakeholder --

Interviewer: Right.

130429_001:   -- which is interesting to some people. As far as I'm concerned, that's what we're here for, to make money.

Interviewer: All right.

130429_001:   So, the question is, what then translates into, so what is the strategy of the company in order to do that to create the shareholder value? And that's where actually creating value for all stakeholders comes into play because, if you don't create value for employees and customers and suppliers, then you can never create money for shareholders.

Interviewer: Right.

130429_001:   So, important distinction in my mind is something I've always worked with.

Interviewer: Okay.

130429_001:   So, our strategy for creating value is really quite simple in terms of the fact that the business is already in existence. It's been built up over many years. It's not a question of completely changing what we do. It's a question of taking the assets that we have, which we're over-endowed with. We have a lot of assets that are underutilized --

Interviewer: Right.

130429_001:   -- and not being made use of in order to create value in the business. If you think about it, we've got GBP1.8 billion of gross assets.

Interviewer: Right.

130429_001:   It's a big number.

Interviewer:	It's a big number.

130429_001:	And yet we only make profits, EBITDA, of something like 150 million, which is tiny --

Interviewer:	Yeah.

130429_001:	-- compared to the assets that we've got. So, we're kind of sitting here with a gift from our forefathers of massive amounts of assets and underutilized.

So, the question is, how do we utilize those assets to actually create value in the near term? And then once we've started doing that, it would be a case of, how do we then do a longer-term growth of the business, grow --

Interviewer:	Right.

130429_001:	-- the value in the business?

Interviewer:	Okay.

130429_001:	Right? So, we're in a mode at the moment of short- to medium-term creation of value out of the existing assets that we've got and thereafter in terms of expanding pretty much along the lines of what we already do. Okay?

Interviewer:	Okay.

130429_001:	So, yeah, we could go on for hours in terms of what the detail --

Interviewer:	Yeah.

130429_001:	What do you want to do for that?

Interviewer:	So, what is the -- the focus, as I see in lately was more in heat treatment than --

130429_001:	Yeah.

Interviewer:	-- anywhere else.

130429_001:	Not true. If you want to try and operationalize the strategy, then I've given you the sort of overarching picture. The main parts of the strategy are breaking the business down into those markets that are more attractive versus those markets that are less attractive.

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	The most attractive markets that we've determined in the medium term are aerospace and energy.
Interviewer:	Right.
130429_001:	Aerospace and energy then has been organized in the business into three technology strands, heat treatment, surface technology, and HIP. And we've decided that our prioritization for expansion and investment is in those three strands. So, it's not about heat treatment. It's about aerospace and energy. And that means heat treatment, HIP, and surface technology.
	What it's not about is investing in the markets which are less attractive, which are basically the commodity end of automotive, the commodity end of heavy truck, and the commodity end of general industrial.
	There are pieces in those markets that we do like, but generally speaking, the vast majority of them we don't. All right?
Interviewer:	So, you do a market segmentation independently of the process you would apply to the market.
130429_001:	Exactly. Market segmentation where the market's going, what markets are most attractive. It has to be something that's easily understood, both internally and externally as to why those markets are the ones that we've chosen.
Interviewer:	Right.
130429_001:	And then we've aligned the company along the axis that allows us to capitalize on those markets, and so our three global divisions of HIP, surface technology, and heat treatment. And then it's a case of investing and growing those.
	The business in years gone by in the past was organized geographically.
Interviewer:	Right.
130429_001:	There were local managers in local countries, and that was it. They did everything. So, for instance, in Germany, we had -- the business was Germany only, controlled all of the business in Germany for every market segment with every technology. Frankly speaking, it was a failure.
Interviewer:	All right.
130429_001:	What happened was that it under-capitalized the opportunities in the region, concentrating more on those parts of the business that the senior management felt comfortable with --
Interviewer:	Right.

130429_001:	-- rather than those parts of the business that deserved the most attention.
	When we broke it up, Germany now is in fact not recognized as one single territory. There are three different divisions active in Germany. And each of those divisions is actually pursuing its own market segment --
Interviewer:	Right.
130429_001:	-- technologies. So, there are other aspects to the strategies of developing new technologies and expanding into emerging markets. Fundamentally, it's about attacking, exploiting aerospace and energy markets right now, market segmentation standpoint.
	What's next? How to make sure the business unit strategies align with the company strategy.
Interviewer:	Exactly.
130429_001:	The first thing is to make everybody aware of what the company strategy is. So, that was done in 2010 originally. It's very simple. It boils down to a half a dozen key issues, which have been drummed in time and time again to be, every year, we do a refresh of that, but we don't change the key principles.
	Each of the divisions then is asked to produce strategies along those lines. They're not constrained and told that they can't do anything else. They're told the general areas, but when they come to present their strategies to senior management, those aspects of their business that aren't aligned with the strategy get kicked out, and they get screamed at.
Interviewer:	Right.
130429_001:	So, you could try and do something different, but if it's not on the money, you're in trouble, but the reason why we don't constrain it ahead of time is, occasionally, people come up with very good ideas, and we don't want to kill them at birth.
Interviewer:	Right.
130429_001:	So, we only kill them when they're a little bit older if they're not in line with what we want to do. Does that make sense?
Interviewer:	Yes, it does.
130429_001:	So, we have a little bit of creativity, but not too much.
Interviewer:	Not too much.

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130429_001:	At the end of the day then, those strategic plans are monetized because the initial plans are not done with financials first and foremost in mind. They're done --
Interviewer:	Right.
130429_001:	-- in terms of markets' general strategic advantages. After those -- that piece of work has been done, then they've monetized in terms of people have to put financial figures on top of it for four years out.
	Those financials then are transferred into a one-year budget. And the one-year budget is very heavily monitored with a whole bunch of KPIs on it.
	In terms of the longer-term strategy, we don't actually have KPIs that are two, three, four years out. The KPIs that we use are only in the year coming. And one of the reasons for that is that I think it's very difficult to set a strategy and to keep it rigid.
Interviewer:	Right.
130429_001:	Strategies have to change with the environment --
Interviewer:	Right.
130429_001:	-- and have to change with the times. So, it's important to make sure that you don't try and rigidly plan too far out.
Interviewer:	Right. How far out would you see -- you have to see results on the strategy implementation?
130429_001:	Depends what it is.
Interviewer:	Probably in terms of monetary revenue?
130429_001:	Yeah, it depends what it is. So, what you've got to avoid is, every time anybody wants to do something that doesn't make money, they call it strategic --
Interviewer:	Right.
130429_001:	-- because it's a popular way of doing things, yeah. If somebody comes to me with a strategic acquisition, that means they really don't think it's going to make any money.
Interviewer:	Right.

130429_001:	If they come to me with a strategic investment, that probably means they don't think it's going to make any money. So, anything that's got the label strategic on it gets thrown out. That's the first lesson.
	But in terms of actually the time horizons that we use, we're blessed with a business that can make extremely good returns very quickly. So, tactical investments are tasked with making a good return, in our case, 20 percent return on investment in the first full year of operations --
Interviewer:	Right.
130429_001:	-- which is normally two years after inception. That's building a factory, buying a company, whatever.
	So, in your second year of op-- second year after inception, you should be making 20 percent return. And pretty much all of our investments have done that.
Interviewer:	Right.
130429_001:	Something that is naturally longer term is things like strategic expansion or building a position in the technology. So, you have one example in your area, which is HIP product fabrication.
	Clear, HIP PF is not something that we're looking that we have to make a massive killing year one. The fact of the matter is it has been making good money, but we're investing a lot of the money into revenue expenditure anyway. So, we're tolerate of longer-term returns there.
	But if I couldn't see something that was going to be making excellent returns within five years, I probably would not be --
Interviewer:	Right.
130429_001:	-- thinking about doing it.
Interviewer:	Okay.
130429_001:	So, lot of people would think that's short term. It's not about short term, is it? Problem is, if you lay plans, in my experience, that take you out more than five years, the world will have changed by the time you get there, and your plans will be wrong.
	So, past five years, all you've got is a general vision, general goal, but plans shouldn't last more than four to five years.
	Now, in my other company, because I mean, I work for a paper company as well, we do 30-year plans, but that's because trees take a long time to grow.

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Interviewer:	Right.
130429_001:	Okay?
Interviewer:	Different business.
130429_001:	Different business, yeah.
Interviewer:	The -- so, summarizing it would say that we have to see a positive trend within the first three years of the inception to justify further investment in the area.
130429_001:	Well, I wouldn't even let it go that long. I mean, I'd want to see improvements in the business and achieving traction, moving forward every quarter.
Interviewer:	Right.
130429_001:	I wouldn't wait three years to see traction. If I can't see the right things happening in the first quarter, then something's wrong. And if it's one quarter away, it can't be the plan is wrong. That's too quick for a plan to go wrong; means the people are wrong.
Interviewer:	Right.
130429_001:	So, and the other interesting thing about strategy in my mind is a lot of people say it, but it's absolutely true: thinking out the plan is the easy bit. Getting people to do it or to do something is the difficult bit. So, actually, so long as you've got a focus and direction that everybody's onboard with, you'll do an awful lot better than sitting around thinking about a better plan or a better strategy. It's really about getting motivated people on the ground and moving.
Interviewer:	Right.
130429_001:	So, you can tell I'm not the purist when it comes to strategy.
Interviewer:	No, not really. Not really, no.
130429_001:	It's almost any strategy's okay. Just get good people.
Interviewer:	Okay.
130429_001:	And that's not going to help your paper, but --
Interviewer:	No. No, it's a good view. So, how do you determine success? You said quarterly results are determining your success?

130429_001:	Moving the right direction in the quarter and then, on a quarterly basis, you have to keep moving forward. And you could have setbacks, but you have to know what's happening on a short-term basis.
	And in terms of what is a success or not, it's very easy to judge in my mind because it's monetized. It's, what's your return on investment? And if you can't beat your cost of capital, it's a failure. That's clear. If you can't get a return that is very high because you're -- if it's a chosen strategy, it's something you're focusing the resources of the company on. It therefore should get better than your average rate of return.
	So, our average rate of return on the company at the moment is 19.6 percent. So, anything that we focus on to invest in should be giving us over a period of three to five years a better return than that.
Interviewer:	All right. The average cost of capital would be 10-ish or something?
130429_001:	Before tax, if you can understand that notion because we're -- it's actually about 8.5 percent really after tax.
Interviewer:	Right.
130429_001:	Thank you. If you want to hang up, we'll go inside.
Interviewer:	Yeah.
130429_001:	We'll keep going.
Interviewer:	We're measuring -- well, you have determined the measure of success, but how would you as the Chief Executive Officer think about -- how do you make it understandable for the last person on the shop floor what he has to do to contribute to the success of the company, or how would you do it?
130429_001:	Yeah. So, the first thing I think to understand is that never mind the person on the shop floor, which is -- person on the shop floor's important, but they're no different from anybody in the company. And if you're going to communicate to a lot of people in many countries in many languages, then however difficult you think your strategy is, it has to be explainable in one page, big writing in one page.
Interviewer:	Right.
130429_001:	If it's more than one page, then nobody's going to understand it. And in fact, our strategy, as I said, it comes down to six sentences when you look at it laid out. It's very straightforward. It's very simple.
	And then after that, it's really a question of making sure every level of management understands what it is so that it goes all the way down

	through the company. And then we actually use traditional communication methods, including sort of Website and videos and all that kind of thing.
Interviewer:	Right.
130429_001:	But how it relates to a particular person and their role is done through cascading objectives. So, I have a set of objectives which are absolutely in line with the company strategy. All my direct reports have objectives which are based on that. And then the -- thank you.
Female Voice:	You're welcome.
130429_001:	And then it goes all the way down until you get to the shop floor managers. It doesn't go any lower than that in terms of objectives, but their job is to make sure that they educate the shop floor.
	Having said that, by the time you get to the shop floor because our facilities are very small, there's not a lot that can happen in one facility that can cause us to go off target because, as you know yourself, [Interviewer], most of our labor is actually physical and manual labor.
Interviewer:	Right.
130429_001:	We don't have teams of engineers and teams of technologists. In fact, piece of the business that you're in, which is HIP PF, is probably the most complicated that we've got.
Interviewer:	Right. It is. It is. I confirm.
130429_001:	And even that's easy. So, I mean --
Interviewer:	Yeah. Okay. We can have an argument. And from a HIP or HIP PF perspective, what are the key guidelines or indicators or visions you have for the HIP and HIP PF business?
130429_001:	So, the HIP PF business comes into -- well, it's a subset of our strategy, which is the piece which is investing in new technologies or differentiated technologies. Most of Bodycote is not differentiated. Most of Bodycote is in a commodity market. There we have few technologies that are differentiated.
	Having said that, even though we exist in a commodity market, we do generate returns of nearly 20 percent, which is more than most industrial companies.
Interviewer:	Right.
130429_001:	So, there's something about it. And there's long reasons to why that is the case, but whatever.

The HIP PF side, so HIP PF is a technology which is young. It's something which Bodycote -- I used to say it belonged to us and only us. It's not quite true, but it's nearly true. We're about the only commercial operation in the world that does this kind of stuff, mostly I think because we recognized that it was a market to go for. The technology's been around, but nobody really recognized it as something that you could make a business out of.

So far, our progress in HIP PF has been more along the lines of doing what we were familiar with and what came through the door rather than actually guiding ourselves proactively.

So, we got business when this business started up in oil and gas, and so we carried on doing that. But in fact, if you do a deep dive into that, you'll probably find that's not the best place to put our efforts for many, many reasons. It's just that it's an easier place to go because people in that industry are more familiar with the technology.

But we've invested a huge amount of effort going into oil and gas rather than standing back and saying, "Well, what's the best market for us to go for?" And we've probably made a mistake in that.

But in the early days of this -- and we're about four years into it -- it's more important in my mind to get a team of people in place that understand the technology and understand how to run the business mechanically than actually really deciding on the end market because there's plenty of opportunity.

Interviewer: Right.

130429_001: And there's opportunity coming at us every day. And our biggest task is filtering out what we shouldn't be doing rather than trying to find something to do. But we're going to be moving into a new phase in HIP PF. We need a much better understanding of where the market is and what to go for because we're moving from a low-cost beef-it-up operation to now really starting to invest very, very heavily.

So, the management of investment going forward's going to be much greater than we've done to date. Therefore, we better know what we're doing and to a much higher degree of accuracy.

Interviewer: Okay. So, how do you feel about the current performance of PF?

130429_001: I don't like it. It's not good enough. We have underestimated the difficulties. And we've overinvested in the wrong parts of the business. I mean, our flagship facility's at Surahammar. We've not sorted out our physical plant properly. We got ourselves into a silly situation, where we waited for our equipment to be out of warranty before we made a claim on the manufacturer, unbelievable, but there you go.

If it was only worth EUR100, fine, but it's a very expensive piece of equipment. So, we're now into a bit of backfilling in that respect. We've

put a lot of people on the ground. We've not really got a great functioning organization yet.

It sounds negative, but at the end of the day, when you're exploiting a new technology, it's always like that. So, I'm not crying, right? But I'm not -- I haven't put the flags out saying what a fantastic job because we haven't got there yet.

Interviewer: Right. You speak a lot about people. Do you think you have the right people in place?

130429_001:   Not yet.

Interviewer: That's a very short answer.

130429_001:   That's what you need. We are recruiting. So, we have some of the right people.

Interviewer: The --

130429_001:   When you think about it, you can answer the question yourself. We've got good people in operations. What we don't have are good people in sales, marketing, contracting, and the like. I mean, we've got one guy who seems to be okay, but you can then -- in terms of sales and marketing, but we don't have the contract management skills. We don't have the commercial skills. And frankly, our sales force is tiny and immature. So, we need to recruit more people --

Interviewer: Right.

130429_001:   -- and high-quality people.

Interviewer: Yeah.

130429_001:   You're never going to make a journalist, [Interviewer].

Interviewer: No, I will never. I don't want -- it's not my intention, funny answer. You know, [130429_001], I'm with the company for two years now. And I'm -- I think my major challenge is also people, and how do I convince them to keep them onboard? And this is what I'm struggling today. It is a very difficult situation today for me to keep them aligned in the organization. Can I switch it off?

130429_001:   Yeah, you can.

Interviewer: I think I have what I needed --

130429_001:   I do.

Interviewer: -- for that one.

[End of recorded material]

10.2   130813_001

[Start of recorded material]

Interviewer: This is the interview with [130813_001] regarding the thesis and the guidelines I have submitted earlier. Well, thank you, [130813_001] for joining me for this interview.

130813_001:   I'm happy to be here.

Interviewer: And yeah, we were -- I sent you the guideline, and we -- I write a thesis about performance management and how employees perceive strategy and how this should translate into key performance management measurements and how performing should be managed in different areas of the company.

                        And at the end of the study, I take Surahammar as an example because we have very limited knowledge about how performance is managed and how we implement these things into our system. And we are just at the start of creating something.

                        So, you have gotten a set of key questions, which strive down from strategy, how you perceive strategy and how this acts in the daily operation. So, we basically start at a general discussion about how strategy is -- how you perceive strategy of the company. And it's structured in a semi-structured interview, which --

130813_001:   Okay.

Interviewer: -- well, the questions are just guidelines where you are actually free to derive from the questions --

130813_001:   Okay.

Interviewer: -- as you want and what is important for you. But there are some key things which we -- which I would like to address, and the first thing is really about strategy and how you perceive strategy, and what is the goal of an organization, like Bodycote?

                        All right. So, the floor is all yours.

130813_001:   Well, the strategy -- I look at strategy in -- on different levels. I'm going to try to speak loudly. I know my voice can be tricky to capture sometimes.

                        And if you look at Bodycote as an organization, and if you look at it at -- from top level, Bodycote is a service provider. So, the strategy is, in my perception, based on how to be continuing to be a world leader as a service provider, which makes sense since this is the majority of the business.

Are you worried it's not working, or -- ?

Interviewer: Yeah. No, it's okay.

130813_001: Working?

Interviewer: Yeah.

130813_001: All right. So, as an --

Interviewer: World class and --

130813_001: Exactly. It's the heat treatment and the service that is focused. So, this means that Bodycote's target is to continue to develop this to have quick service to customer, to have short lead times, and not necessarily much complex processes.

There are exceptions, some processes in the Bodycote organization, which are a little bit more complex, but the majority of the -- what -- of what the Bodycote provides to the customer is a service.

So, the -- and this going down in the organization is creating a problem in the parts where you have more complexity in your chain, which is, of course, where I'm sitting, we're leading the site in Surahammar is that you get -- there's a -- it's difficult to connect a local strategy to a globe -- to an organizational, which is for the whole organization, when the businesses are so different.

So, I think that that shows, when you have a business which have several different areas, that they are significant defined areas, they should have different strategies, which I don't think we have.

And I think the reason for that being is that the parts that are not in service are so small. So, they affect on the results when it comes to revenue and [MOP] and the profit and have some effect, but the majority is coming from the service side. So, that's why you create one big strategy, and the other ones have to, yeah, follow without any clear guidelines.

Interviewer: So, what do you think is the objective of an organization like Bodycote? So, what is its purpose?

130813_001: Its --

Interviewer: Why does it exist?

130813_001: Its purpose is to make money. And the means to make money is that they have -- provide customers something that they're better than anyone else. And that is in service in heat treatment. And they've done it by having -- they're big, which means they can be present with our global customers and different market sectors all over the world.

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So, I think our strategy is to be close to the customer, and we're big, which means that our customers can use Bodycote for all or the majority of all different sites around especially, I guess, Western Europe and North America, but also South America and Asia.

But I think my perception is that objective is to -- is all companies make money, and we do that by making sure that we have something that our competitors don't have. And it's size mainly.

Interviewer: Okay. How -- for you, how do you define strategy for yourself, or what -- how -- what do you understand under the -- with the word strategy?

130813_001: Strategy is something that help us to look further into the future than just to day-to-day problem. So, I define strategy as somewhere where we define where we want to be in two years or three years. There's different horizons for strategies.

And where -- with an example saying that we want to be in this market sector in three years and then based on that strategy to do the action. So, strategy is an important tool for -- especially as a manager to keep -- to looking a little bit further than just the day-to-day business and the quarter reports as to have a strategy, have a view on where we want to reach. That's --

Interviewer: Okay. We are working in a subdivision or in a division of Bodycote which is called HIP and in particular in a subdivision which is called HIP PF. What do you think are the main business indicators today when people look at the performance of the subdivision?

130813_001: I think there's two. It's sales and profit. I think -- and growth, but that is measured when you measure profit and growth. I think that's the two major ones that are reviewed. And then you have coming after that -- they're looking at cost, cost of poor quality, and -- but that is affecting the MOP.

You're looking at people cost is also an important indicator because also that's a crucial part of keeping the MOP up, and also looking at delivery performance from our senior management point of view is to be able to push orders through the door is also one indicator. But it all boils down to revenue, sales, and profit. So, I think that's the key indicator.

Interviewer: If you speak about senior managers or senior leadership, what is their influence on the performance of the company? Do they actually have an influence on the performance?

130813_001: We're talking about -- specifically about Bodycote, not in general. Is it a question about generally how senior management, or is it -- ?

Interviewer: It could be general, or if you want to be more specific.

130813_001: I would say that, in general, at -- the impact that a senior manager should have is outlining the strategy, giving his or her managers authorities

within boundaries to do things. So, it's -- I think that's the most efficient way a manager, a senior manager can affect the business because, since this person often has a wide range of -- a lot of people reporting underneath his or her organization, and also, it's going to be very difficult to be involved in all details.

So, I think it's important there's a clear strategy. There's a budget which you can agree on. And then after that, the -- when that is in agreement, it should be up to the manager down the organization to make decisions and to make business move forward upon agreement. If we're reach -- if you're reaching budget, you're allowed to hire people according to this because -- so, I think that is important is that the manager has an overview of the whole picture and not go into much detail because that just delays the process and creates frustrations with the managers lower down in the organization.

So -- and I think we have in Bodycote the opposite problem is that there's too much detail orientated and often in questions which don't have much business impact. So, sometimes, you have to let people make their decisions, and if the decision is wrong, they have to come over and tell them that and let them learn from that and move forward. But if you're constantly questioning people and even before the decision is made and then people won't grow in their roles.

So, I think we have that problem that it's too much micromanagement for -- from too high level. So --

Interviewer: In January, Stephen Harris has explained Bodycote's strategy. I don't know if you understood what he was saying -- or what are the key points you have taken away from the presentation he has given?

130813_001: The -- my takeaway, especially since it's been a couple of months ago, almost half a year, so the things you remember is obviously the takeaway from the meeting.

Interviewer: Yeah.

130813_001: And as -- first was a general take -- points I take away, and this is the same -- been over the past three meetings that have been -- the annual meeting has is that we as an organization have to be able to react relatively quick when we see changes in business. And especially when sales go down, we have to control our costs because the expectations from the market is that Bodycote is still a bit slow in reacting. So, we want to exceed these expectations.

So, even if business is not going as we want, we must make sure that we act rapidly when we see changes in that. And then that was a clear message for me. And this is how the share market, stock market works. So, that's nothing new.

And second of all was that Stephen Harris has high expectations on PF. Obviously, I was interested in what his view on that is. And basically is that we did put ourselves in a tough situation when we put all our emphasis into oil and gas sector. And his perspective was, "You did it to yourself; solve the problem."

So, I didn't hear any ideas on how to get out of that or exactly what market sectors to go into. It seemed more like, "I expect you to grow. You chose oil and gas. Make it work." That was my takeaway from his strategy.

Interviewer: Two months ago, there was the strategy session of HIP PF in London, where HIP PF presented their strategy or an outline for a strategy for the coming years. So, are you aware of the details of your division -- subdivision of strategy? Okay.

130813_001: Let's start. The question was if I'm aware of the strategy, the presentation that was done. No, I'm not. I have not seen -- I have not received that doc-- presentation, nor have I seen that presentation either. So -- and this is -- this has been this way previously years also. The strategy is not clear for us working locally on this -- in this plant. I can only speak for this.

Interviewer: Okay. The next question was targeting how the strategy influences your work. So, I have to rephrase. How does the absence of the knowledge of strategy influence your work?

130813_001: The absence creates challenges because we want to -- I and my team here in Surahammar, the management team, want to be able to have a long-term perspective where we make decisions, make budgets, and development projects and other areas that we need to have a look at on a longer term.

And the absence of a strategy gives us a very difficult situation. And that is basically that we need to try to react to what we see working with customers. So, we -- there is a lot of good basic knowledge on the market, on existing market.

So, what we can do is that we can create our activities based on the existing markets. But on new markets, it's going to be difficult because there is no decision taken on which markets we can go in. And there is cost related to that. And it's difficult for a site -- for me to motivate to senior management why we're spending money on markets there has been no official decision taken to go into.

So, that put us in a situation all the strategic thinking we're doing is on existing markets where we've learned from mistakes, and we need to adjust, and we need to make studies. And that way, it's possible to motivate these kinds of actions.

So, it puts us in a situation where we can't move into new markets because there is no strategy for that. We can -- all of our action is limited to the current business we're running.

Interviewer: The -- despite everything, there was a clear decision taken to go into oil and gas, not only as a service provider, but also as a part provider, like a full-scope provider. It was a strategic decision because it entailed a lot of problems. So, how would you think you participated in the execution of the strategy? And how active are you in the execution? And could you be more active in things which you see lacking?

130813_001: When we -- I was part of the management team when we made the -- when the decision was taken and supported the decision that we go into oil and gas. In reality, it was the same decision, but it was from another perspective. It was to relieve ourselves from Sandvik, to cap that collaboration. I think that was the base for our analysis from the beginning because we knew they made money whilst we had to fire people. And they were working in the oil and gas market. So, that's how we ended up going to the oil and gas.

We did a risk assessment. Looking at -- looking back at it now, I think it was poorly done. I think we could have done more investigation. So, we could have anticipated some of the problems that we've encountered on -- encountered these past two years. Not all of them, but some of them I think we could have avoided if we've done the risk assessment more thoroughly and used the channels of information we actually did have at that point.

But -- and we start moving forward from that. And pretty early, we encountered a lot of issues, a major issue with our -- one of our qualification certificates. And that created a lot of work, rework, and reanalyzing issues.

So, we put -- I put a lot of emphasis on trying to resolve issues now. And knowing that probably there's going to come more issues down the road, but with the limited resources we had, we put everything onto resolving issues today. And the management team, we were aware of that, that there will come more problems.

And we might have acted differently if we could have brought in more resources, but we were at the point where we're still coming from a recession. So, resources was something limited to get approved. So, we knew that we have to resolve issues with the available resources.

And this has continued this way for a year and a half until maybe just quarter one this year. Finally, I think, despite a lot of problems we had, I think we are in a position where we have the resources, the right people, and the right place, and I think where we have a risk assessment process which is starting to work.

It doesn't -- it's not completely working yet locally at least. So, what I have done to resolve these issues are to keep focus on the biggest issues because we've actively put some issues aside because we can't be focused on everything.

So, as a manager, I've tried to focus on the big issues to get business through the door so we can deliver to the customer. And now, from quarter one and two this year, we finally are in balance. And now, we're looking at working proactively for the first time since we entered this business.

And the main reason is that we got -- we slipped behind in the beginning. And then we've been one step behind all the time. And now, I think we're finally even so we can work proactively.

	So, looking back, I think we could've done a better job -- the better -- if we had done a better foundation, the building would have been more stable. But we didn't. So, that's --
Interviewer:	The company has experienced lots of volatility in revenue. As a company which is as a stock market, what would you think the shareholder's expectation is in terms of revenue?
130813_001:	Just to clarify, volatility, does that mean that it's -- ?
Interviewer:	Up and down, and you cannot really --
130813_001:	It's unsecure.
Interviewer:	-- predict --
130813_001:	Yeah.
Interviewer:	-- the future while it seems to be typical that customers in the oil and gas market do not care so much if it's delivered one day -- one week later or two weeks later, while maybe the expectation is different for us. I don't know if it's clear.
130813_001:	I think, if you would own stocks and look at this, I think you should be shocked because I would expect the shareholders being investing in a service company which have a good turnaround time on products, so you shouldn't have -- there's one thing if you have a problem a month or a couple of weeks. But as you said, we've had this month after month after month, which shows the complexity of the market.
	And I'm not sure if the shareholders are aware or aware of the risks of this kind of business. So, it really doesn't fit into the overall Bodycote business, this kind of business. So, if the shareholders will go into details and compare our business to other, I would expect them to be very surprised.
	And if I was a shareholder investing in Bodycote, I would not want to have a business like PF because then I would preferably invest in business which are more risk because this is more risk, and you don't know how much money you're taking in.
	I mean, we have a variety of 100 percent basically --
Interviewer:	Yeah.
130813_001:	-- increase between month to month. And that's very unstable. And I don't think that is what Bodycote represents. It's not a development business. You can expect this from a business that is growing. Then you have shareholders that are patient and understand that, this month, we're losing money. Next month, we're making money. And that's the natural dynamic when a business is growing.

But when you have a stable service provider as Bodycote, world's largest heat treater, I don't think that is what the shareholders expect.

Interviewer: So, I think I agree with you that the shareholder probably looks for stability in revenue and, even if you forecast the revenue, that you are meeting within a certain range. What do you think has to be done to make the PF business more predictable?

130813_001: I think there's work to be done in several areas. The first area is in sales and marketing, to have a clear understanding on what we can expect. And I understand it's quite a difficult challenge because we're seeing customers increasing their sales from one year to another of a factor of five, six other customers who was a major customer last year basically placed an order this year.

So, this is quite the challenge for the sales team to understand the business, the market, so trying to predict the customers' behavior. So, I think that's the first thing. To get stability is to understanding the customers.

The second thing is our supply chain, to create a stable supply chain, which I think we're getting quite close to because we've -- over the past two, three years, there's -- we've basically doubled or tripled our lead times in the supply chain that doesn't exist.

So, I think that is very important. That is a stability which creates a comfort and security for the customer that there is a stable supply chain and also a quality and materials knowledge to -- for the customer to be safe, secure that Bodycote has the knowledge to execute orders.

And if there's issues, the customer does get support from Bodycote to resolve this because, even though the business will be stable, it still will be issues. Other -- and the other thinking would be not realistic.

And the supply chain I think is manageable. And also, when it comes to the material department knowledge, the big challenge is the sales, is to understanding our customers and what growth because it's a big difference if a customer will grow 50 percent or 250 percent. That gives -- and especially if it's one of our largest customer.

So, I think that's the big challenge is understanding the customers.

Interviewer: Okay. The -- so, the -- to gain stability for you is to improve the execution of the projects within the oil and gas industry.

130813_001: Yeah.

Interviewer: Would you see other options, like diversifying?

130813_001:	Yes, I would. But that's what -- that's the input that needs to come from sales is that we see opportunity. I think that is a very valid point is to create diversity in our portfolio, but of products. But that -- of that boils down to having a sales or -- either preferably, it comes in input from sales that gives the senior management to opportunity to do a strategy saying these are the markets.
	But you will still have, going into new market sectors, there is always, keep in mind, a risk that you re-experience all the problems we had when we went into oil and gas, but maybe in other ways.
	So, it's very important to have -- to keep the stability, even if you go into new markets, that you learn from mistakes that has been done and the nature of them so we don't repeat them. So, we go into new markets, and that has to end up to good -- you have to end up with good analysis so you know exactly at least as much as possible which you're heading at.
	So, yes, I agree. To diversify the business would be -- as for any business because, if you have a downturn in one business, market sector, you want to be able to live on the other ones. And preferably, if you're really skilled, you find the market sectors that are not connected to each other, which means, if one market goes down, the other one won't be affected.
	That would be the dream scenario for a company to be able to lean on different market sector depending on more how the business climate is.
Interviewer:	Okay. If execution of strategy also leads to key performance indicators to see how the business is actually running, so what KPIs would you like to be measured with and why?
130813_001:	Delivery performance, which means delivery on time because that is our commitment to customers. I think lead time is also important because I think, if you plan to look at OTIF, it means that you can increase your lead time losing business but increasing your OTIF. So, delivery on time, lead time, cost of quality, of poor quality, I think is very important.
	Now, I'm talking about the general KPIs, but -- and obviously, these KPIs need to be broken down into each department.
	I would be interested into the utilization or the capital-intense investments, which are HIP units. If I would be looking at -- from a plan point of view, I would be looking on those.
	And probably, since this is some high-tech development project we're working with, I would also be interested in finding a key performance indicator that measures how well we execute the development project with customers primarily because that is an important indicator on growing business. That's actually the only key KPI I'm not quite sure how to measure. But I would be interested to be able to follow it in a sense.
Interviewer:	Revenue.

130813_001:	I'm sorry.

Interviewer:	I'm just throwing it out.

130813_001:	Revenue. I was thinking from an operational point of view. Of course, I would be following revenue. I would be obviously following profit. I would be following people cost because I know everyone else is following that because that's it. It's a good indicator that can show you in general if you're heading the right way. Are there any other financials? No, nothing.

Interviewer:	Yeah, there's no right and wrong answer.

130813_001:	No, no, no, but obviously, the revenue's important.

Interviewer:	Yeah. So, how would you measure your colleagues? And why do you -- the right approach? I mean, you're heading basically the organization. How would you measure your colleagues, the different departments' quality, materials, continued improvement, sales?

130813_001:	Talking about individuals, or are we talking about departments when you're talking about measure -- ?

Interviewer:	Up to you, individual or departments.

130813_001:	I would start with the department. The -- what were the departments, I would take these KPIs we were discussing and discuss -- sitting down with each manager for the department and having a discussion how and what -- how they affect the different KPIs and that -- in that sense translate these KPIs to local KPIs. For sales, for example, be interested in -- to have a target for -- to measure, for example, how long it takes from you receive an RFQ until you send a quote, and the hit rate, obviously, and the volume of RFQs and the volume of -- and so on because that would directly affect the sales to revenue, whilst maybe the delivery performance is not so much affected by the sales team. So, I would take each department and each head of department and sit down with them and review all the targets for the -- for us as a company and then see how that can be related to that department because that is the only way you can have these targets. And hopefully, these targets should come from our senior -- from the strategy session, which means that this is coming from the top, coming to plant management level, and then going down to the different departments, and follow up these indicators on a weekly basis I think is appropriate so you can see indications. A month is a bit rough. Based on these indicators, I would have -- for the managers reporting to me, they would have these targets for the department would be their goals. This is what we want to achieve. And that would translate to

some actions rather than just saying that OTIF need to be 95 percent, what actions we need to change, supplier. We need to change supplier in this area. We need to hire a new person in the purchasing department or other examples.

So, I would break down the goals for departments, for the manager there. And I would expect the manager in her and his turn to break down those for his or hers employees.

And by that, you're creating a chain where goals are coming from the top boiling down to individual goals which are eventually connected to the top goals. So, that's how -- that is how I would like to do it. That is not how it's done. But this is how I would like to have it.

And then it's very important to start this process in the right time. So, you should start this around this time of year, the -- from top manager coming down. So, by the end of the year, everyone has their targets set.

I think mistakes some companies does, not only here, in other areas, that you set targets when the year has started, which is wrong, is wrong way to do it.

Interviewer:	I wrote in a question. You have received your targets this year. And we had a discussion before this interview. They are related to sales, to profit, to cash flow, and to personal objectives. You have seen their textual budget, which we have done in -- or the company has done in some kind of process.

The targets, as we have discussed, have seemed to be a little bit overly optimistic as the budget. So, what do you think is an impact of this kind of target setting? Although we measure revenue, profit, and cash flow, which are important indicators, how would you think that the type or the way these targets were set influence your behaviour or the end behaviour of your colleagues?

130813_001:	When it comes to my behaviour, it's a quite negative impact on my behaviour because I don't care about the targets. I know they're there. I know I'm not receiving any. I know that, in despite of my performance, there is not going to be any reward. So, this means I'll just put all of that process aside.

I don't bother to get engaged into the -- even the personal targets because, even if I achieve them or not, there's no -- there is no positive or negative impact. So, I see that as time wasted to spend any of that.

So, I prefer to use my time to operational tasks rather than spending time on these kinds of issues which won't generate anything positive for me or for the business because, if you set the target which is impossible to reach, there is tough targets, but if everyone working with the business is saying, "This is not possible," that is creating some frustration, which is very negative for our organization.

And at the end of the day, no one is interested working towards the target. We're setting up our own targets, even though we know we're not going

to get any reward. But to have an all-time high month, to have an all-time high profit or all-time high in sales, that is our targets. But that is just internal that we try to keep people motivated.

But in the long run, what the consequences is, all the high-level managers, the competent technicians, and the competent people will leave because this is done for the second year in a row where you set targets which is not achievable. And that will have a long-term negative impact on business because no person in their sane mind would stay during these circumstances. So, it has a very negative impact.

Interviewer: So, would you then say, as a company, we do the right thing with setting targets, or how would you improve the targets that -- ?

130813_001: We -- I would set targets which are realistic. There is no problem having tough targets, but it has to be realistic. And the targets are set to some -- to things that a lot of people can't affect. It's solely based on the group, the subdivisional group. So, it's the PF in our case. And it's a growing business.

So, I would set target that is realistic. And especially, you have to have a psychological view of all of this is that, if the whole business is making money and you have all people making extra money except for the people that are working with the R&D, which basically this is, how are you going to be keeping these people around?

It's one thing if the business, if we as a company were losing money. There would be an understanding from people. But we have to keep our costs down.

But the only -- the perception for people now is that we're getting tricked out of our money. And that does create -- so I think Bodycote is making a big mistake saving very little money creating a lot of problems.

Interviewer: There is a more detailed question about, how would you -- I mean, you have touched the surface, but how would you measure different departments? You said already you would cascade the measures down and that they have to correlate to the overall objective of the company. But how would you actually do that? How would you correlate the impact of one indicator to the goal, for example? How would you measure the welding department towards the goal?

130813_001: I would -- if we take the welding department as an example, it's that we have a -- for OTIF, for example, we expect that we have 98 percent in delivery performance. If we have that as a target, so as minimum, I would expect from welding to have 98 from -- when you measure OTIF.

So, this means that, when -- they have to be finished with their work according to the plan that we set up. So, that would be an indicator that, if we can get that, if we have that target for each department, it means that, if each department, especially the last one, the department's coming in the end.

If they reach 98 percent, I mean, the welding department can have 80 percent of their performance, but we can still have 100 percent to the customer because there's a sufficient time. But I think it's more to have the attitude that everyone need to bring the same performance to the table. So, if everyone is bringing 98 percent to the table, we will achieve 98 percent.

If we were looking at cost of poor quality, we will measure. We're setting a target that it needs to be a certain amount percent of our revenue that will translate into a fixed amount of money and, in that case, try to look historically and try to split up with key numbers to see that the amount of poor quality for welding is this historically, and this is how we wanted to -- this is how much we would decrease.

So, I would look in a lot of cases also in history because it needs to be realistic. If we would have 10 percent of delivery performance, you can't set 98 percent. And you can't set 98 percent for the whole company. It has to be realistic goals that we can achieve this year, not -- the targets for this year can't be strategic targets the years ahead. So, I would also have a look at history, see if it is -- is it realistic?

If -- to make sure -- if we set targets that are too high, people -- and people, they will end up in the same situation I am in -- where I know we won't reach sales. I don't care about the targets.

If I would set targets too high, I'm making exactly the same mistake. So, I would look at history also to set the right amount targets. And I would look -- actually, reasoning with the managers at each department to find what kind of indicator will affect this.

I can't say there's -- in some cases, it's pretty straightforward. In other cases, it might not be a perfect indicator, but it's still something to start with. So, I think it's some time to discuss with especially the heads of departments and see their point of view.

And probably, I would also discuss with my manager where it's to create a view from different levels in the organization. Does this make sense? So, in that case, you're getting information from above. You're getting information from my level in -- underneath.

Interviewer: You are working with a long supply chain. That means --

130813_001: Sorry.

Interviewer: -- you buy raw material, then do transformation of this raw material. And afterwards, there's a lot of value addition still coming. So, how would you measure the performance of your supply chain? And how would you establish a process or improve the supply chain?

130813_001: I have some -- directly, I'm thinking of a couple of key KPIs. And we have with our suppliers NCRs, how many NCRs are created towards our customers because of their problems. They're -- they can create problems without that ending up as an NCR to all their customers. But it

would be an NCR from our point of view to them. So, that would be the cost, the poor quality. I would measure that. I think it's very important.

I would measure then for delivery performance. What do they promise? And I would control that to make sure the lead time is reasonable. And that should be settled in agreements, where we agree that heat treatment supplier will supply us with four heat treatment cycles.

If we start ordering 10 of them, I would not hold that against them that that's going to be a delivery. But I would hold them responsible towards what commitment they're making to us. So, with all big suppliers, it needs to be clearly stated what is their expectation of lead times because experience I've seen from my experience is that suppliers tend to keep their delivery performance high by just increasing lead time. And that is not acceptable when you're working on a project basis and the lead time is already committed to the customer.

And I would -- moving forward, also make sure that we have a split supply on everything that is possible. In our case, there would be one area that's going to be difficult, and that's the pickling. And I think that's -- that is acceptable, but have one operation, but that is strictly controlled with contracts instead, what we expect from them and the prices.

But otherwise, I would make sure to have at least a split supply on everything to make sure we get the best quality, the best price, and the best delivery, and also introduce a system where you have the big suppliers would get a -- at least a monthly or maybe a biweekly evaluation on their performance. I don't think that would be done for all suppliers, but the major suppliers, maybe the five, seven biggest suppliers.

And there, you have -- you make an audit with them on a yearly or six-month period. So, we really go into depth with these suppliers and work with them to develop. And I would make -- similar to the strategy sessions we're going to have this week, invite them on a yearly or two -- every two years, invite and have sessions so the supplier would understand their role in the chain.

It's very easy for a supplier to see us as a customer and not understanding our part of -- their part in the chain and eventually Bodycote's part in the chain of delivering an oil and gas system.

So, I would initiate. And that is actually some of the things that are already initiated, but that's still not up and running. But I think that's the way to go is to have clear key performance indicators, split supply, and regular evaluation of the suppliers so they get feedback.

We just -- we don't just stop ordering from them. We tell them that your cost -- you're more expensive. You have poor -- more poor quality, and you have -- your performance is -- delivery performance is bad. We're not going to get any orders. Next order, you're losing.

So, they have a chance to change. So, we have a dialogue rather than just stop purchasing from someone because that's -- when we don't get the orders, our customer cancel, or my first question is, "Why? Why did

they cancel it? What can we do better?" and get that feedback. So, that's how I would like to work with suppliers.

Interviewer: Okay. Do you want -- do you have to add something more? I reached the end of my questionnaire here.

130813_001:   No. I think we've --

Interviewer: What is your expectation for tomorrow's session and the day after?

130813_001:   My expectation is that we have -- tomorrow's session, I would expect us to do what I think we're missing, is to establish an over -- our overview of markets we might be able to go into because I think we have -- [Ralf Erik] is going to be present, isn't he? I think so.

But I think we're going to have the right people there who can at least give us the input to indicate what markets would be interesting and what do we need to do to develop current markets. So, I think, the first day, we would be able to establish that.

And that would reflect on what needs to be done in sales and what needs to be done in design, in supply, and quality and material. So, at least, I expect us to have a common ground that we agree on this is what we want to achieve, which we don't have today because I don't have anything to communicate. I haven't received anything that I'm sure of that I can commune-- that I would say that is strategic.

So, that's my expectation Thursday that we at least -- I don't know how -- it's only a day, and we're going to be a lot of people. So, I'm realistic saying that it's not going to be perfect. But I think we'll have a common ground.

And I think it's important that it's not too detailed. So, it's too spend too much time on one specific item and we don't finish. I think it's important that we at least try to cover the whole picture and try to go through the whole -- all the different processes and try to at least -- and always capture the questions we have.

And then to -- on the day after, I expect us to listen to our suppliers first before we present our strategy or present our -- give them a chance to give us feedback on what is working and what is not working because it's very easy when you present a vision that people see the possibilities in that and might forget what is the problem today.

So, I think that, firstly, with our suppliers, this is a chance for them to say, in general, not too much in detail, what is not working. And then we can explain to them how the chain is working, how our supply chain looks, how they affect that.

And after that, we might be -- tell them what changes we want to do but also discuss with them what changes because, when they see how our chain looks like, they might have a better understanding why some things -- some information's coming late. Why is the sawing being at the last

minute? Well, that's because the heat treatment certificate, as soon as we get that, that's when we can saw.

So, in that perspective, you can create an understanding for the chain. And hopefully, you will loosen some of their frustration because I think our suppliers do feel sometimes frustrations because of the stability we've had this year with all the issues, and find the general solutions, but also to be a kickoff for them to start thinking in this way and letting the supply chain continue the work because I don't think all the solutions will come on Thursday. I think it will give them a chance to think, to understand the problem better, and then continue with that.

So, that's -- I mean, that is what I'm generally expecting from these two meetings. So, let's see how that ends up. This is the first time we have a session like this, especially with the supplier. So, it's going to be very interesting. I think it's a very interesting initiative and see how -- what the outcome would be from that.

Interviewer: All right. Thank you very much.

130813_001:   Thank you.

[End of recorded material]

10.3   130813_002

[Start of recorded material]

Interviewer: Okay. Well, thank you, [130813_002], for participating in this study. The study deals with performance management. That means how a company managed performance and, in particular, how Bodycote AB, HIP AB is managing performance and what people understand about the company or not.

130813_002:   Yeah.

Interviewer: And I have given some guidelines in this quest-- in this document I gave you previously to give some guidance how I would like to conduct the interview.

The form is some kind of semi-structured interview. That means, although there are questions, we can have -- we can derive from the questions if you think there's a specific area --

130813_002:   Okay.

Interviewer: -- you want to discuss.

To end, I always ask -- I have always this question, how think -- how people think, what if the objective of an organization, like, for example,

Bodycote, where you are working today, and why is it actually there to exist? And I think from there, I will leave it to you if -- what you want to say about these topics --

130813_002:   Yeah, I can --

Interviewer: -- or not.

130813_002:   Yes, we can start. This is what I think and what I -- I think the objective is to earn money.

Interviewer: Okay.

130813_002:   Yeah.

Interviewer: Yeah?

130813_002:   For the owners.

Interviewer: Okay.

130813_002:   Yeah, and we will do it in a good way with good -- yes, environmental objectives and also with interesting products. So -- and the strategy, I think it's very important to have a good strategy in this area so we can -- and this is unclear for me today exactly what is our strategy. So, I think I should -- I would like to have more information.

Interviewer: Okay.

130813_002:   Yeah.

Interviewer: The -- that means, at -- I asked the same question to other people. At no point, somebody actually explained to you what is the strategy of the company and in which direction the company wants to develop.

130813_002:   Yeah. But yeah, we -- but I am not understanding very clear that we decide to -- yes, we have oil in -- and gas. And we will also have other more basic standard products with a lower risk. But maybe our products, the people -- the company, our customer, they pay money because they need better material. And it's also connected to high risk for their -- this is the drive force for them to pay more. Otherwise, they could by usual steel or forgings or something like that.

Interviewer: Right.

130813_002:   So, I think it's some -- with our HIP products, I think it's often connected with higher-risk products, but not always maybe, but to a large extent.

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Interviewer:	Like oil and gas, nuclear, for example?
130813_002:	Yeah, exactly. But you can have this -- you also have speed steel and tools. And there, you maybe have lower risk.
Interviewer:	Right.
130813_002:	Yeah, so -- but I don't know if it's the same possibility to grow in this -- in that area. I don't know. I don't have enough information about that or knowledge.
Interviewer:	In the interview, I -- it's you who tells me something. I will not really answer all these questions.
130813_002:	Yeah, I understand.
Interviewer:	So, how do you define strategy?
130813_002:	Strategy, it's a way to make the company to go in the same direction. And you have a strategy to reach to make a lot of people going in the same direction and be able to make decisions in small questions without always asking your manager or because you know the direction is. So, you can understand if you take this decision, it will make you to go in the same direction.
	So, I think it's very good and very important to have a clear strategy and also to make investments and to, yes, see that we are working in the same direction.
	And if we do not have a clear strategy, maybe we lose time and possibilities because we are so spread out and working with different things because you're -- it's not clear what to focus on. So, I think this is a very important question or area.
Interviewer:	If you look at PF as a subdivision, what do you think our main business indicators are today?
130813_002:	I think it's how many -- how much we sell for as -- yes, I think this is the main indicators and also with profit. And then you have, like, delivery times and cost of poor quality, but they are lower down.
Interviewer:	Okay. If you look at the senior leaders in the organization, what do you think is their influence on the performance of the company, or a general question?
130813_002:	Yeah, yes. I think they have important role to decide a strategy, to decide, and not be involved maybe in every small questions or decisions, to more make the bigger picture and decide this is what we will focus on.
Interviewer:	So, give more guidelines?

130813_002:	Yeah, and like, as an example, if -- to decide oil and gas is the most important, and maybe aerospace is not the most important thing for Surahammar, and maybe we should not work with ISO9000 or AS9100 because this is not the focus for Surahammar, to make the decision and so we can work with the right things because we cannot do everything, which pop ups.
	And if -- I think this is what I would like to have from the senior leadership because I think the most important is to make -- to define what to focus on and to make prioritizations. And then we need to know what we should focus on.
Interviewer:	Okay. So, when you started later in the year, but I asked you the question, do you understand the strategy of Bodycote? And what is your understanding of the strategy?
130813_002:	I'm not clear about the strategy for Bodycote.
Interviewer:	Okay.
130813_002:	What I'm trying to -- is to reach our goals to deliver what we have promised today. And I understand that we are, yes, in the oil and gas and also other areas, but I'm not fully clear what the strategy is. So, maybe you can help me later.
Interviewer:	Yes.
130813_002:	Yeah.
Interviewer:	So, how does -- the next question was actually how your understanding of strategy influences your work. But how does the absence of understanding the strategy influence your work?
130813_002:	Yes, that it's become a little bit unclear to make and what to focus on because, if I know more about what our strategy is, it can be easier to make decisions.
Interviewer:	Do you think that there is -- there are too many things or too less things we are focusing on?
130813_002:	Maybe, in my role, I think it's a lot of things, too many things. So, I need more clear what to focus on.
Interviewer:	So, in specific is either we go in oil and gas or we do --
130813_002:	Aerospace --
Interviewer:	-- aerospace.

130813_002:	-- or nuclear or -- yeah. It's one question. And also, what kind of development we will do, outside customer projects and developments in customer projects.
Interviewer:	The next question was really, how would you think is your participation in the execution of strategy?
130813_002:	But --
Interviewer:	And how active are you? And how could you be more active if you feel like you're not active enough? The question here for me is, obviously, as you don't have a feeling you don't understand what is the priority --
130813_002:	Yeah.
Interviewer:	-- what is the result for you then?
130813_002:	Today, I need to ask more questions and to try to find out. And I try to do the best with the information I have. But I'm not sure that I have all information that I need because I have worked in the same position in other companies. And there, I have been more involved in the -- but now, I'm new. So, I -- and -- but now, I know we make a strategy. And we make plans to fulfill. And we try to reach the goals. And I think it's normally works very well. But here -- but maybe I have worked here too short time.
Interviewer:	Okay, or too long? If you think about key performance indicators, how would you like to be measured, and why?
130813_002:	Yes, I would like to be measured how I reach the goals. And this is also to be -- to make improvements and to reach the goals even better. So, I think -- yes, this is the normal way. You put up goals. And you need to see -- measure and see what your -- and you need to make improvements to fulfill what we have.
Interviewer:	So, what's the goals for you, for example?
130813_002:	Yes, the goals can be cost of poor quality, how we introduce -- how we fulfill the requirements for our products, claims and developments for our products also.
	I don't really understand. How would you measure your colleagues?
Interviewer:	Of course, we have -- we say we work towards a goal that is making money. So, everybody has to contribute to this.
130813_002:	Yeah.

Interviewer:	So, you contribute to the certain goal achievement. But how would you see this for your colleagues? To what kind of goals should they work to, or how would you say they contribute to the overall goal?
130813_002:	Yeah, if we have a special goal together for the company and, when we are responsible for different areas, we will have different goals to reach the same goal. And we should measure for how we succeed to make this.
Interviewer:	So, who should give you the goal?
130813_002:	I think the first is that the senior management need to put up the strategy. And then they also have some goals, how much we will sell or -- like an example. And then I see what I can perform and to help the -- to reach the goal.
	So, I can be part to see what kind of goals. But I need to discuss this with the senior management also so we agree what kind of goals.
	Like, yeah, to solve -- I -- exactly what are you asking for?
Interviewer:	For example, we could measure, like, numerical goals, indicators.
130813_002:	Yeah.
Interviewer:	Could be measure.
130813_002:	Yeah.
Interviewer:	So, how -- if we say for --
130813_002:	But --
Interviewer:	-- the quality department, what kind of measures would we apply to measure success and contribution to the overall goal?
130813_002:	Yes, we can have the lead time for the QP --
Interviewer:	Yeah.
130813_002:	-- like or more in detail. And we could have -- and we can have also -- if we decide which development projects, how successful and how in time we fulfill the requirements.
	So, I think this is important questions. And also, if we have specific projects, like to implement a new quality and environmental system, how well we approach.

And so, I think this is -- yeah, some types of goals I think is realistic for our department.

Interviewer: Do you think that, if you achieve your goals as a department or as an individual in your department, does the organization achieve its goal also?

130813_002: Yes, it should.

Interviewer: Okay.

130813_002: Yeah. Because I think, if we start, we need to have what -- normally, you have a strategy, what I'm used to. And you have goals for -- yes, you can have lead time and sales. And then -- and also to sell, you need to have maybe new products or, like, aerospace or what.

And to fulfill, to reach this, we need to have maybe certification like AS9000. And also, we need to have QP plans in -- ready in a short time, yes. I just put in --

Interviewer: All right.

130813_002: Yes, and if we have this as a goal and we succeed to make this, it should help the whole company to reach the goals. Otherwise, we have wrong goals here if they do not help to reach the company's goals.

Interviewer: Okay. You have received some goals. And you have received a letter which is stating what is the impact of --

130813_002: Yeah.

Interviewer: -- of achieving these goals. So, how do you think -- what do you think about the goals which were set to you and the -- in relation to the reward you get -- you achieve?

130813_002: I have -- as I have understood, they are not clear that we will have any reward to reach our goals, but I'm not fully informed how this works. But what I have heard, because the total goals are set too high, so we cannot be rewarded, but we can reach our goals.

And I don't think this is a good way because this is not the normal way I'm used to work. And it was not what I was told when I'm started here.

Interviewer: Yeah, yeah, you go ahead. I know.

130813_002: Yeah, and I think this is not a good way to lead a company because I think it shall be clear. And I don't think it's clear here.

Interviewer: Is it motivating for you or demotivating?

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130813_002:	It's not motivating. But I -- because I think it's not serious from the company to make it in this way because it should be really stick reward if you reach your goals.
	So, I think it's very -- I think it's bad. But I'm -- just now, I'm more focused to make -- to solve the tasks and to make my work. And I do not think so much about to be rewarded --
Interviewer:	Okay.
130813_002:	-- today. But I think it's not good culture in the company to have it in this way because it's better to say that we cannot pay any reward, or we can, but we can have a goal. It's more fair.
Interviewer:	Right. So, what do you think your colleagues think about the goal setting and the possible achievement or not?
130813_002:	I think they more like what I am thinking. It's -- we try to do our best because we are spending a lot of time to make our works. But it's not fair to make a rewarding like this. And a little bit maybe they -- the company cannot make it fair. Why should we, yes, bother about this?
	But I think it's more to give a low -- it more destroys the leadership in Bodycote.
Interviewer:	I didn't understand it, the trust in leadership?
130813_002:	The trust to the leadership, to the senior management. It's -- because I think it's very important to be clear to say that we do not want to pay any money to you this year or something like that than to have too high requirements. Do you understand what I -- ?
Interviewer:	Yes. I got a similar letter. So, I understand what you're saying.
130813_002:	Yeah, yeah. But I don't know if they really understand what -- or maybe we have a different views what is realistic. I do not have this kind of discussions. So, I don't know if --
Interviewer:	Right. So, as a company, if we look at this company, do you think we're doing the right thing, or do we some -- do we do many things wrong? Do we do something wrong that can be improved?
130813_002:	I think -- to be more clear with the strategy and to the -- to take decisions because it's difficult in all levels always to take decisions. But I think this is a very good kind of leadership to dare to take this chance and decide this -- we are going this direction, and we'll try it for two years or three years or something like that.

Maybe you need to take -- to change if something happens, or -- but you must put out the direction. And this is something I'm missing a little bit here.

Interviewer: Yeah, so you don't see any direction except --

130813_002: But maybe I am the --

Interviewer: Yeah.

130813_002: -- wrong -- I do not have got or asked for what informations. So, maybe it's my fault that I have not asked enough.

Interviewer: We speak about you at this --

130813_002: Yeah.

Interviewer: There's no right or wrong answer to the questions, right? You understand that.

130813_002: Yeah. But to be clear, yeah, I miss, but maybe I have not asked all questions. Maybe I have to put more effort in this area.

Interviewer: So, how would you improve this situation?

130813_002: I will ask questions --

Interviewer: Okay.

130813_002: -- and understand -- try to understand this better. And if I'm not able to get more information, I think it's important to try to find -- to decide, yes, now, we are working. I have to make my own decisions together with my colleagues. But maybe this is not the best way to lead --

Interviewer: Right.

130813_002: -- the company.

Interviewer: So, as Bodycote, do you think Bodycote is performing very well or not very well? And how would you measure that?

130813_002: I think maybe it's perform quite well. But it's maybe possible to make it even better. So, I think, if we can more measure -- if we could have a -- yeah, now, we will start with a new budget year. And I maybe will follow a line or machine more clear.

Interviewer:	Okay. How would you measure performance in different departments of this company and why? If you look at other departments, design or production, how would you measure their performance?
130813_002:	Yes, design, I think the same how well we are reaching our customers' requirements with different products and how much rework we need to make.
	And for the supply change, I think to have a clearer -- more clear view of our suppliers because of how well they fulfill their delivery times and cost and rework.
Interviewer:	Do you think everybody understands what they have to do to achieve the goal of the company?
130813_002:	No.
Interviewer:	So, neither employees nor suppliers understand what they have to do to help us to achieve our goals?
130813_002:	I think it's not clear. Maybe for some it's clear. I think you have different kind of -- yes, but for -- I think we can make improvements in this area because maybe we need to be more clear to know. This is what we really need and also to measure and make follow ups and see and to make -- I think there are a lot of things to do.
Interviewer:	Okay. Tomorrow and the day after, we've organized two days where we have some kind of workshop --
130813_002:	Yeah.
Interviewer:	-- first of all with the team here and then with a certain team of the plant and our suppliers.
130813_002:	Yeah.
Interviewer:	So, what is your expectations of this workshop?
130813_002:	I think it's very interesting. And I hope that we will bring up our weaknesses because we are strong in some areas also. And I hope we can see what we can improve. And to work together with our suppliers, I think we need to get them involved in our business and get help from them. And I think we can learn a lot.
	But because all that they know, we see, we have things to work with. So, maybe this is a good way to decide in which -- how we will make the prioritization of the subjects, issues because I think all of us say that we need to make improvements. And we see weaknesses, but how to find where to start, what is the -- where can we do the best improvements?

Interviewer:	Okay. Like, prioritizing improvements, things we want to do? Okay. If you set goals, how do you make sure that they -- people are motivated to achieve them, or your suppliers, or doesn't matter?
130813_002:	I think, to have a close corporation and to make sure they get feedback and to have ongoing discussions. And also, they need to see that they will earn something to make this also because I don't think all suppliers will just work very hard to see that we can achieve our goals because they must see they have some advantage of it also.
Interviewer:	So, how do we make sure they see an advantage?
130813_002:	Maybe to make their -- also their profit better, and they do not need to work so hard but can make it work smarter, more clever so they can see that they can do their work and earn their money because they are also interesting to earn money I think.
Interviewer:	Right. Do you think they have all the information they need to perform well?
130813_002:	No. I think we must be very clear to -- and ask what they need to make the progress. And this is also important for us to understand what they can do and how -- what they need to reach our goal.
	But I think the first is that we need to be very -- we need to have goals together. And we need to tell them, and they need to tell us how we will succeed and do it in the best way because I think the most people will work in the more clever way if they can.
Interviewer:	Okay. We had a lot of problems in the past. Why would you think we had all these problems?
130813_002:	Because we do not really have all knowledge about our products and productions.
Interviewer:	And why is that?
130813_002:	Because we maybe need -- we need to study to understand our customers' requirements better and also to make things in right time. I think this is one important thing because, sometimes, even in the first step, when we offer our products, we need to be clear what is the requirements for the customer and what will they have from us, receive from us.
	And I think maybe we are not always convinced, or we don't know really. We think we know.
Interviewer:	Do you think the customer knows what he wants?
130813_002:	No, not always. So, I think this -- because I think, maybe we have -- we need to be more serious with the HIP products and to real -- because we

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should be the best to know our products, the HIP products. And we should be able to sell them and to tell our customer about the products.

But I don't think we are really there always, that we know enough. And also, I think our customers, they do not know always. So, because sometimes the specifications or requirements are more connected to forgings or other type of materials, not HIP products.

Interviewer: Yeah.

130813_002: And also, the standardization of HIP products. We need to know more about that.

Interviewer: Okay.

130813_002: And I think this is also -- so, this make it a little bit tricky to make things very quick. If we do not have standardized products and we shall offer and we are looking in the lead time and we will do it very, very quick. We don't -- we make the products what we've done -- did the last time. But it's not -- we need to take time to understand more about our products.

Interviewer: Is it the mechanical properties, the geometry of the product or the combination of both?

130813_002: I think it's the combination. I think it's our product-- yes, the production steps together with the dimensions and also the properties, physical properties.

So, this is what I would like to focus a little bit on because I can see after the -- yes, I worked in March, April, May, June, and July or not July, four months.

Interviewer: Yeah.

130813_002: And I can see it clear now. And I have some question there I ask. Why do we not have this information here? And I do not receive any answer.

So, we have not a clear picture of our products. And we are selling them. So, I think it's very important. We must spend times to build up our competence of our products and also work together with our customer to see what they know and understand because they are responsible for the end use of our products.

Interviewer: Yeah. Do you have anything more to add?

130813_002: No.

Interviewer: Okay. Thank you.

130813_002:   Thank you.

[End of recorded material]

10.4   130816_002

[Start of recorded material]

130816_002:   Okay.

Interviewer: And it is moving. So, this is the interview with [130816_002] regarding my thesis. Thank you for joining me today.

130816_002:   Thank you for asking me.

Interviewer: The -- I explained a little bit the background. It is a thesis which is looking into how to develop a performance management system in a mid-sized or medium-sized manufacturing organization.

It goes the way from strategy into the measure what we are going to measure, and how do we want to deploy measures in the organization for performance?

And not everybody can follow the same measures, or maybe they can -- I don't know. But as we have started the process only recently to think about performance, and how do we increase our performance, this would be -- for me, this is one of the first steps to investigate a little bit what people actually think about their work and how they understand strategy and how -- what they think about measuring performance in their own organization.

To find our way into the interview, I suggest that the -- we start at the first question. And that's probably a simple question. What is the objective of an organization like Bodycote?

130816_002:   As I perceive it, like -- ?

Interviewer: As you -- from your point of view, the entire interview. So, there's nothing, no wrong and right in the answers. It is your opinion on the subject basically.

130816_002:   Well, what I feel is actually that Bodycote itself as a company doesn't really know what the objective is. And what I mean with that is that it's kind of mixed messages.

On one hand, we're supposed to grow. We're supposed to invest, which we have done in machines, absolutely.

And on the other hand, we don't want to take that many risks. We're not really sure that this is the way that we want to go.

And I think that is -- the result of that is confusion. How can we expect that people know what they're supposed to do when they get to work if the company doesn't know?

I'm not saying that no one knows. I think it's different depending what level you're on and also depending on what your ambitions are and what you feel when you go to work.

We cannot say that -- of course, everybody needs an objective to go to work, but it's not the same as wanting the company to grow because I think a lot of people, of course, go to work because they have to earn money.

And I mean, if we look back, the objective is not clear. Of course, the objective is to get so much money we can as possible. But how do we do that? That is not clear.

Interviewer: How would define strategy from your point of view? What is strategy for you?

130816_002: A strategy is a long-term plan. A strategy is not something that we are supposed to do within a week, a month, or a half a year. A strategy is a long-term goal which is supposed to be defined by -- I know that the question is coming down below, but also for senior management. The long-term goal with this company, what is that?

And then it's up to the rest of the employees within the company to decide, how do we get there?

And I know -- I mean, as we're here, we have strategy sessions within the company every year I think. And I think that's in June, if I'm not --

Interviewer: Yeah.

130816_002: And then we don't have anything more. How is that communicated? How do we actually know what is decided, or maybe there is nothing decided. I don't know if there is more of discussions. But when do we know what strategy we have? And we shouldn't -- as I see it, if it's a strategy for me, it's a long term, which means that we shouldn't change it every time we have a strategy session.

We should adjust it, but we should -- otherwise, we will never reach the strategy because it's always changing all the time. And that's why I think it's unclear because we don't really know. We don't know the plan. We don't know the -- where we want to go.

Interviewer: Are you aware of the strategy of our subdivision?

130816_002:   No, not clearly, no. I'm aware that we want to grow. We want to grow and be a lot bigger than we are today. But that's something that we're seeing, or that's something that is shown in maybe a report or a PowerPoint. But that's not the same as saying that we've got a clear strategy because, if we don't act as we're saying, it doesn't mean anything.

And I think that's actually what makes it confusing. We know that we want to grow. What company doesn't want to grow? I think that's the biggest -- that's nothing new, but we want to grow a lot.

And I think, sometimes, we want to be this big global company or the big global division, but we want to be there now, but we're not doing anything to come there, to become a global division because we're still small companies within a division.

And within those companies, it's even smaller companies with different departments. So, we've got people working the same way as they have, trying to fight for their place within the company I think.

And I think we haven't really as a company taken that into consideration. What I mean with that is I think it's really positive that we want to be a global company because, in that case, we can learn from each other. No one is the best. And as we have it in our division -- do you mean PF, or do you mean HIP, or just -- I don't know that much about HIP. So, I would talk about PF then.

Interviewer: Yeah.

130816_002:   What, it's about three years ago when they started PF I think? And it's four different plants. And we only have one area where we actually have a global department, are supposed to have a global department, which is sales.

But how has that become global? It hasn't because it's still different companies. We've got a -- we had a sales team that doesn't think globally. And if we're thinking globally in sales, how come we don't think globally in quality, for example, or supply, or we don't really work -- we do one thing, but we don't do it as a whole.

And then again, we cannot just say that, now, you're supposed to be a global team, or now, you're supposed to work globally by forcing people to fight for their plant.

Of course, you fight for your plant. That's where you are employed. That's where your colleagues are. That's where you live. That's -- it's almost by saying that, if you're playing football, you can -- you're supposed to contribute to your club, but you're not measured as a club. You're measured by plant. And that doesn't create teamwork at all.

And I'm not sure that that's the right way. I don't know because I don't know the market that well.

Interviewer: To your perception on -- in PF, what are the main business indicators which measure success of the organization today? And I don't know. Would you agree on these indicators?

130816_002: It depends on if we're talking about the KPIs for -- that is reported every month or if we're talking about the KPIs that is measured via bonus program because that's two different things.

If we look at the KPIs that we are reporting, I mean, it's general KPIs as OTIF and sales and quality and safety. But how much of that is actually included in the proof of your performance if you say if -- in the performance management system?

Interviewer: Would you think -- and that's a later question also -- we are reporting quite a large number of information --

130816_002: Yeah.

Interviewer: -- or data. I don't know what the right name is. Would you think that has any influence on your or your colleagues' behavior?

130816_002: No, absolutely not. I think we're wasting a lot of time on reports. And I'm not really sure that -- because, as I see it, the KPI is supposed to wake you up. It's supposed to have control over your performance during time.

And the feeling that I have is that we are reporting numbers, but we're not analyzing numbers because we don't even have time to analyze the numbers because then it's time to report another number or another number or another number.

So -- and also, it's not the same people collecting data. It can be seven different people wanting almost the same numbers, which means that you cannot get the numbers easily. You have to adjust the numbers every time you report.

So, half the time you're actually reporting to whom and why because I should reflect if my numbers are bad. But the only time I have is to accept that the numbers are bad because we don't even have time to analyze why.

So, I think it feels like that we don't really know why we're having all the KPIs. And we probably -- maybe in the end, it is the same KPI. But there are a lot of different people involved in getting those reported.

And that's also, of course, confusing. Then you don't even care about the numbers. You just -- it feels like the company's more interested in the reports instead of what is in the report.

Interviewer: Okay. What is the role of senior leadership in performance, in corporate performance? How do they drive performance, improve performance, influence performance?

130816_002:   Yeah. I think senior management is supposed to define the strategy. What is the general plan for this company? And by giving the employees in the company or the company a chance to actually reach the goals that they've set or the general plan, of course, we need measurements for that.

But we also need -- the senior management also has to give the company a chance to actually achieve those because, otherwise, it's not achievable.

Interviewer: You have received the targets for this year, which are based on the budget. So, what do you think about the targets, which are based on last year's budget?

130816_002:   You mean the sales targets.

Interviewer: 2013 targets. Basically, these were -- I would think, if they are in the letter to the employees and the bonus is attached to that, I would think that the company emphasizes these four items for the company at this point of time. You have received them. And what do you -- what were your thoughts when you got them?

130816_002:   I threw them away to be honest. It's -- the feeling is that it doesn't mean anything. It -- I mean, the perception is more of you get them, but you don't get them because you know that the -- it's no chance for us to actually reach them.

And it's more of the kind of thing we're making fun. I have a Swedish word for it, but it's -- I mean, if we look at this year's budget, which we knew the numbers of -- was it around New Year's? No, August. August, September last year, and then what's changed --

Interviewer: October --

130816_002:   -- and changed, yeah. And we knew all the time that the numbers set would not be reached from the beginning. I mean, the motivation is just thrown out of the window by doing that because we're not fighting for the company as a whole. We're not fighting for Bodycote.

We're fighting for the company that we work for, which in that case is HIP AB, for that company's survival because, if we -- when we get the numbers that we can't even change ourselves and we are supposed to be the people who knows, and if you don't listen to the people who knows, that is not really driving motivation.

So, it feels like we receive numbers that are not achievable. And we -- they show them all the time. Also in the forecast, it's the same. We don't really -- we still know that we cannot reach them. And that takes, of course, energy. And at the end, no one will want to continue to work for that because then you don't -- I mean, you know that it's not achievable.

Interviewer: Do you think that -- it comes back to the question of senior leadership. Do you think that the senior leadership of this division has understood that,

has understood the problem, is aware of the problem, is at the end acting on the problem? I mean, there are two things --

130816_002:   Yeah.

Interviewer: -- right, the understanding and listening and acting on the problem when issues are brought to their attention. That's also in the scope of what is the role of -- ?

130816_002:   Senior management.

Interviewer: -- senior management?

130816_002:   Yeah. I think the message has been communicated clearly. But I'm not saying -- I'm not sure that it's understood because there have not been an act. And I'm not sure that the senior management really wants to understand because, as soon as you understand, you don't have a choice besides acting. And that's typical for human beings.

I mean, if you have a problem, once you actually accept that it is a problem, you have to do something about it. No one can just accept. But if you ignore a problem, you don't have to act.

So, the feeling is rather ignoring the actual message that is being communicated because it has been communicated. So, I definitely think that -- I mean, senior management is not supposed to be involved in detail. But if there is a problem, they of course have to be involved in detail because they have to understand the problem, and how deep is the problem?

Once they understand, they can decide to act. And once they decide the plan for acting, they can step back again. That's what I think.

Interviewer: So, do you feel ignored?

130816_002:   Absolutely, as a company, as a plant, so to say. But I think it is as a division to be honest because I don't think that my thoughts is different compared to colleagues within the division.

Interviewer: Okay. The next few questions were related to how to understand corporate strategy. The -- I mean, you stated that you don't know the strategy of PF. Did you ever hear the strategy? What is the strategy of Bodycote as a whole?

130816_002:   I think one -- when all the divisions were created, I think that's also about three -- maybe it was when PF started. I know that Bodycote made a DVD and that Stephen Harris and David Landless was involved in. And they informed us what the strategy of changing groups within the company so that some of our businesses will be closer to the customers, and some of our businesses will be more globally. And that's our goal to work.

And I think that was -- that is the strategy to show -- to say that this is the way we want to work. This is our plan for the future. So, yes, but that is about 3.5 years ago.

Interviewer: Okay. The next question is very straightforward. How does your understanding of strategy influence your work? If you don't know it --

130816_002: I don't know.

Interviewer: I'm curious to hear what -- how it influence your work. How do you set priorities?

130816_002: I set my own priorities. Not just my own, I think I set my own together with, of course, the closest colleagues that you can.

And I also think that, since we are a management team here in Surahammar, I think that we should prioritize. But we should, of course, prioritize so it is in the line of the strategy. That is two different things.

So, while we've done this, it's -- but so to -- I wrote a word, confusing. That's what I wrote for that. And I think -- I trust myself. I know that I will never go to work and not do anything. So, you do the best you can. And you do the things that you see is important for now. But that's not the way we want to work as firefighters every day. We want to work ahead and more long term.

But the thing -- since the demands and the requirements are changing all the time, we cannot work long term because we don't really know what we're working towards.

Interviewer: The -- some years ago, you have taken -- and you were probably here -- you have taken a very strategic step by deciding to go in the oil and gas market. The -- it's a very strategic decision because it's -- you decided from going from only supplying a service to go directly into the market.

We have experienced a lot of issues in the last 8 to 12 months, which brings me to the question. The decision to go in oil and gas was taken many years ago. But we have seen the effects or consequences only now. What do you think in the process of the strategic decision to go in oil and gas and the execution of the strategy has happened to bring us in a very turbulent, I would say, challenging -- ?

130816_002: Absolutely.

Interviewer: -- situation, where the company has, well, needed a lot of personal efforts from everybody just to resolve the firefighting? So, what has happened in these two years because that -- you have taken a very strategic decision. But then on the execution, you seem to have failed as a company, as a group --

130816_002: Yeah.

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Interviewer: -- as Bodycote.

130816_002:   I think that, when taking this strategic decision, we didn't really know everything, which is reflecting what we've been doing the last 12 months or maybe more than 12 months to be honest. As you say, I think the effect has been shown 12 months -- during these past 12 months. But that is not due to decisions that was made 12 months ago, rather earlier than that.

And I think there has been too many individual decisions instead of working together to be as proactive as we can. The strategy that was taken is, of course, compared to competitors that we know are doing the same.

But have we worked as a team to actually be proactive and really know what we have to do and what we have to change to be able to reach these objectives? No, because we don't work proactively. And I think that's also something I added. That's the main thing. We do not work proactive. We work after something happens all the time. That's why we're firefighting all the time.

And it's the same with strategy or if we're -- whatever we would like to do, even though it's a small thing or if it's a big change, we need to investigate before. I think it's the same for going into new customers. We need to do research. We need to know what we're doing and also define, "Okay. Do we have enough to do this?"

But what we have been doing is just going. And what I'm saying is that you, of course, have to go also. You cannot just research, research, research, and nothing happens, but you need both. You need to do -- because what we've been doing, and I think -- I hope that we will see the result of that.

But what we have been doing, if we look at the organization, for example, we've been hiring people or hiring competence during the process. But we haven't built up so that we can actually feel that we can take care of this.

And what have we been -- I mean, what will the result have been if we didn't have so much -- so many people that are actually fighting for this company because we do. Otherwise, we could never survive these 12 months.

So, I think that the biggest mistake is that we weren't proactive enough. And I don't think that we're that -- we're not proactive today either because I don't think that we -- it's clear what to be proactive about if you -- I mean, if we don't know where we're going clearly, don't really know what to consider during the way, and that's also when you say senior management. I think that it's important to actually see that, if we -- the management team at Surahammar looks at, I mean, divisional level of senior management, our employees here see us as senior management.

Interviewer: Do we look confused as senior management about what to do?

130816_002:	Here, locally.

Interviewer:	Would the employees say, "We are confused about the objectives"?

130816_002:	That's kind of interesting because I'm not sure of the answer to be honest.

I think what we're trying to do is not to send the message further, if you understand. I mean, if we feel confused, it's important that we don't send that message further. But then again, we're -- it's a small company here. And the frustration sometimes cannot be hidden.

And so, I think it depends on what people we're talking about. But I definitely think there are people looking at us the same way that we're looking at our senior management, which is kind of logical, of course, I mean, if you don't know.

But then I also think that we have a lot of people here that have seen the effort and appreciate that and trust that things will go as it should. So, I think it's kind of mixed actually.

But I also think that, due to the confusion about where we're going, I think that senior management here at Surahammar has been too involved in details, which is probably because we've had that many problems as well. So, I think it's probably a combination.

But again, management should lead the way but not controlling everything.

Interviewer:	In the last 8 to 10 months, we have experienced a lot of problems. So, for me, and it's a little bit -- the question's suggestive, okay, doing a suggestion. The -- from the -- it seems to me that we did not have the time to really fundamentally work on our key problems, but we really put out fires just until before the vacation.

130816_002:	Yeah.

Interviewer:	But what would you -- would you see it in a similar way, or what is your perception of this period between October and August this year?

130816_002:	I totally agree. I totally agree on -- that we're always involved in fighting fires. And probably, that is also -- I mean, we have to be self-critical as well -- is that kind of culture that we've built. We cannot just say that people don't take their own responsibility or initiatives and so on because, why are they not doing that? Are they not allowed to do that? I don't know. I think there might have -- I mean, a lot of things has to do with -- it's new people. And they're not really sure. So, of course, they need to check.

But what I do think is that, also, they have felt that they always have the support. But that feeling cannot be continuously all the time because, in

that case, you always need support. Sometimes, you have to cut and let people loose to actually take responsibility.

So, I think it's a mix. I mean, of course, we have been controlling everything. But I also think that there has been -- I don't think that that has been wrong during the past 12 months because, by getting control, we can then let go of the control.

So, I think that was needed for us. So, I wouldn't -- I don't -- I wouldn't like to change the past when it comes to the management team's involvement because, as it was before, I think there was one person involved in the details. But if the problems are not communicated, no one else knows.

And what I'm referring to is the start of daily management and getting control of our process, getting control of the projects that we have, getting control and talk about the problems.

And we didn't do that before. So, I think it's definitely -- it has been needed, and I think -- and I hope that this will show effect. But now, we got the control. Now, we should be able to start to work with the problems but on a higher level.

| Interviewer: | Here, I have a question. Do you think the extent of problems we have seen was present previously when the General Manager was still here? |

| 130816_002: | Yes. |

| Interviewer: | And could you tell, in your opinion, how these problems were resolved because, I mean, for me, they seemed very, very much overwhelming at the beginning. So, how would he have resolved these issues? I mean, we had -- I think I counted at once at the beginning we had 50 hold points on 30 projects or something, while we were able to -- |

| 130816_002: | Reduce a lot. |

| Interviewer: | -- reduce a lot. So, how did he do -- ? |

| 130816_002: | He didn't because he didn't participate. |

| Interviewer: | So, how was it resolved then? I mean, somewhat, you delivered components then. |

| 130816_002: | That's a good question. It was not delivered through his participation.

And well, I guess that is has been resolved by -- it has have to been resolved a lot by [Fasilda Tuvanis]. I mean, even though it might've been his participating that created some of the problems, he must've resolved problems as well because we were delivering, as you say. |

But I think the problem, again, is that we delivered that project, but we made the same mistake again and again and again. And I think that's a result when there is one person resolving problems and you don't resolve them together because then you're not forced to actually prevent it to the next time you have the project, which I think is the big change now.

And also, if we look back, I mean, we had a lack of quality and material expertise for a lot of time last year, a long time.

And I think that, of course, if we would have had [Engnet's] expertise earlier, I definitely think that it had been helping us more, which I think that we will see the result of now.

I just had a conversation with the material -- and with one of the material engineers in the morning. And he just wanted to express the relief and the confident he has that we will not repeat last year.

And that was really nice to hear, just by saying that -- I mean, the situation was actually -- we had to fight fires that were started a lot earlier. And we drowned. We drowned. The only thing we did was fighting fires everywhere.

But to actually hear by -- from the people with technical expertise saying that we've learned and we feel much more confident that we will not do that mistake again, mistakes will be done. I mean, that's impossible to eliminate all mistakes.

But we cannot promise things we cannot deliver. I mean, if we look at the -- I can't understand when the machining suppliers -- he said that. And the other people were like, "Oh, now, you're getting into something that you might not know." But to be honest, I just wanted to say, "You're right." But we cannot say that in front of everybody. But he was kind of right because, in the past, we have promised things we cannot deliver --

Interviewer: Yeah.

130816_002:   -- and knowing that from the beginning. But what my -- what I'm saying is that we need -- we cannot, in the decisions that we're doing and even though it's a strategy or if it's solving problems or whatever, we cannot be relying on one person. That's not the way we can work. We need to take -- to make decisions together. And even though that person is away or going into another company or whatever, we need to make sure that the competence that we have are staying in our company.

Interviewer: So, we have now done this two-day workshop. Can you tell me what were your expectations before? And how do you see the results of this workshop? It was very intense, for me at least. And -- but I would like to know how you perceived -- what was your expectation? How do you see the results? And then how would you carry that thinking forward into more tangible results or actions? What we really did is -- well, maybe you can elaborate on that.

130816_002:   Well, if we start with day one, the day for internal discussions --

Interviewer:	Maybe your expectations first, what you had and then what were the expectations?
130816_002:	My expectation was high. And I think it was high because, if we look in the past, we've had some events during the year with much more involvement and much more energy. And then, of course, you have high expectations when you're conducting new events, of course.
	For the supplier event, I had no idea because I didn't know the suppliers. I had no idea what the reaction would be. So, I'm -- I think I had expectations for the internal event. But for the external, that was just more to listen and see what -- where we got, to be honest.
	And maybe I lowered my expectation after day one. But -- and also, maybe to -- I think my expectation's also because I'm a person that is quiet. If we have a problem, I have to talk about it and say it, I mean, not just keep it inside of you, just say what the problem is so we can solve it.
	And maybe I'm a bit naïve because I think that more people are do -- are like that because I think it's -- that's the way it should be. And of course, that makes you have high expectations.
	And then maybe you miss things like differences between people, of course. Not everybody wants to speak in front of people. Not everybody can actually put their thoughts into words.
	And of course, you need to adjust the way you want people to give their message to the person. You cannot force people to speak if that's not the way they wanted to give input. And I think that's definitely a lesson to learn for us when we're having big events.
	I mean, if we look at day number one, we just assumed that people would collaborate from after five minutes. We assumed that people would be open after five minutes. We did nothing to actually make them -- to break the ice as we did day -- for the day number two.
	We had -- I mean, that was -- we talked more about breaking the ice for the suppliers. But I think we forgot our organization. And it's probably because we think we should have -- we shouldn't have any ice, if you know --
Interviewer:	Yeah.
130816_002:	But apparently, we do. Not talking friendly or being friends or having social chat, not that, facing the problem.
Interviewer:	There is a book *The Five Dysfunctions of a Team*.
130816_002:	I read that during my education.

Interviewer:	Yeah, and the first dysfunction is actions of trust. And it goes further and further. But the -- I also think on -- would you agree? I'm suggesting, by the way, that there seems to be an absence of trust between each other to open the address -- the dysfunction, perceived or real. I don't know.
130816_002:	Yeah.
Interviewer:	Yeah.
130816_002:	I absolutely think so. And I think we have that in our management team as well. I definitely think we have that in the management team. We are a new team. And what makes it difficult is that we're not -- the entire team is not new. We have a core which has to be split up, of course, because I think that for -- that makes it difficult for others to get in. But a combination is also to show that you want to get in --
Interviewer:	Right.
130816_002:	-- the team if you understand what I mean. And because it's not just -- I think that, if you look at day number one, I think it should have been the people responsible leading the way and showing, "This is the way that we want this day to be." But they didn't know what the day was supposed to be because they feel that, "Okay. Well, what is this? Okay. We have no idea." And that's on us. Maybe we should have talked about it more before so that they could give the energy to their team to actually maybe have time to start discussions on their own before so that we would have more to discuss. I mean, yeah, Ingrid said some things, but to wake her team up. Robert didn't say anything at all, but he had the team member talking anyway.
Interviewer:	I realize that the new people have less problems of participating --
130816_002:	Yeah.
Interviewer:	-- for a strange reason --
130816_002:	Yeah.
Interviewer:	-- while people who have been with the company for longer seem to have issues in sharing opinion.
130816_002:	It's true.
Interviewer:	What do you think about the results you have -- we have acquired?

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130816_002:	Well, back to my expectations again, I think maybe the -- I mean, we came up with ideas. That is not detailed ideas. We need to discuss them further, of course. And that was the goal.

And the question is, how many ideas did we bring up ourselves compared to how many ideas did actually the group give? And I think that's actually why the disappointment is kind of big because I think that there were not that many new ideas.

And it's like you say, if we sold this list, we don't have any problems more. Is that the case? No, I don't think that's the case.

But maybe we have to give them a chance to actually discuss this further down to get even more. I'm not sure about the result because I'm a bit confused, to be honest, because I was really disappointed after the first day. And I think [Kista] felt -- definitely felt that he'd done something wrong. And maybe he did. Maybe he did something wrong.

And that has to be -- I mean, of course, we need to know that because, if -- what could have -- we have done differently?

So, that's why I think it's kind of difficult to say whether we got results or not because I was so disappointed. I was disappointed of the participation.

Interviewer:	Yeah.

130816_002:	But then again, if we look at the result from yesterday, the issues that we discussed, day number one, was exactly the same issues that our suppliers feel, we feel as a supplier towards the situation that we've got with our customers is exactly the same as our suppliers feel.

So, I think we're touching the subject. We're absolutely touching the subject. I think the main thing we need to discuss is, who's going to take the lead to change it?

So, I think we know the problems. We know that it's unclear. We know that we don't really know what we're supposed to do. We are touching the subject. But we're not touching the solution. What are we going to do to change this? What do we need to do?

Interviewer:	Do you think the verbalization and the actually noting down of the problems will initiate change now that -- I mean, knowing something is one thing. But actually, speaking about it and writing it down and having it documented is totally different.

130816_002:	Yeah.

Interviewer:	I mean, I also thought that there is no novelty in the found discussion. I would even argue that the -- you could go to any other company and find the same result. But the question is always for me, "Okay. We know

that, but why don't we act upon it?" What do you think? Will this now trigger the initiative really to do some groundwork -- ?

130816_002:   And that's our --

Interviewer: -- instead of fire working?

130816_002:   That's our responsibility to make sure that it does. It will not happen if we don't show that this is supposed to happen. And I think that is work that the management team is supposed to concentrate on, not making sure that the order is actually going through the process as it should. That should work.

We should work on these things. But like we said, we cannot -- we need to free time from executing the orders to be able to work with these things. So, it's a kind of loop where to start. It's a loop that we need to break. And how do we break that? I think that's the big issue. That's the main -- that's actually I think the main thing that we need to discuss in the management team. How do we break the bad loop that we've got?

And first, I mean, we cannot really concentrate on the development issues unless we free resources to do that. And free resources is -- it's not just the management team. It's everybody. But then we need to trust our process that we will deliver as we have promised so that the time will not go on thinking on whether we will do that, or we have to make sure that we're doing this and this and this.

But then again, I mean, I said it yesterday just to -- as a wake-up call regarding the resources. Do we have the right resources? Is it the right people on the right place? And that's kind of -- I mean, it's got a frightening -- it's kind of frightening I think to start to ask that because, if you say, "No," then you have to change something. So, it's easier to ignore it.

Interviewer: I have a cultural question. And I've participated in many events where we have discussed strategy. This was the first one where I experienced so much silence. Is it -- and I'm wondering if, in Sweden, the culture -- and it's something I cannot answer -- if the culture is to address problems rather freely, or you know, can you point your finger to a problem? Is this culturally accepted as a way of operating?

In particular, if it comes to, as you said, do you have the right resources, that goes directly into you looking at people with names. Culturally, is this accepted that you actually speak, "Okay. That's -- we have to either remove him or give -- find him a training," right?

130816_002:   Yeah. I'm smiling because I would probably have some difficulties answering that since I'm not typical Swedish I think. I think that's why I think it's difficult, but nowhere near putting words on it like that.

I think Swedish people are afraid of conflict in general I say. And I also think that Swedish people are really good at analyzing things, which means that you cannot say an idea if you don't have the correct solution. If the -- if what you're saying is not correct, you don't really say it.

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So, I think people are a bit afraid to speak because they're not really sure that they've got the perfect verbalization of what they want to say. And that might be Swedish.

And again, I'm not sure that it's really common that you sit in such a big group and actually discuss. Maybe it's more easy if you sit three or four people first to start an idea, to continue that, and then present it to a larger group. But then you have the support that you're not the only one saying this.

And I definitely thing that's -- I'm actually -- I think it's Swedish. If we compare it to our colleagues, I mean, how often do actually Swedish people say something on phone conferences with American colleagues? We're not used -- we don't say more than we have to say, or Swedish people don't say more than they have to say I think.

Interviewer: Yeah.

130816_002:   That's why we're kind of bad at socializing. I'm not saying that we're unsocial. But in the Swedish language or the culture, you don't just -- I mean, you don't speak to the person sitting next to you on the bus. If you're going on an elevator, it's like, "Oh, this is inconvenient. It's a lot of people here. I'm not going to say anything," so looking at my phone.

That's kind of typical Swedish, whilst you can go to -- I mean, you just have to travel a bit in Europe. It's -- you're supposed to speak to the person sitting next to you. That's a part of the culture. If you're not doing that, you're unfriendly.

So, I definitely think that we don't start. It's not the initiatives. And that's why I also think that it's so important that, when having -- when we're supposed to have discussions, we need -- I think people need to warm up and know -- I mean, they want to know.

I don't know how many times Ingrid asked me before, "What are we going to do?" And I said, "Well, I can't give you the answer because this will be shown." And what are we, and why? I mean, it's tsh, tsh, tsh. You want structure in everything you're doing.

Since you don't know what question will come up, it's difficult to directly start to discuss that. And that might be cultural.

Interviewer: Yeah.

130816_002:   Or if I listen to what I just said, I guess it is cultural. But that doesn't mean, of course, that it's to everyone. But I think -- I mean, if we just compare our team -- now, I'm mentioning names, but I've already done that. I guess it's your listening on this tape. It's just you listening on this tape.

Interviewer: Yes.

130816_002:	Yeah. No, but I mean, if we compare it, I think me and Tero spoke about that this morning. He says the same. In Finland, you don't speak kind of way. And I can see that, when Tero is with me or Anas, he speaks because he gets influence. We influence him to speak.
	And where we are now is that we've got two more quiet people in the management team, where we get some kind of dysfunction because one doesn't speak at all, at all. One speaks, but probably get interrupted because it's other people speaking more. And when you get interrupted, you can either be quiet, or you just continue with what you want to say without listening to what the other person is saying. So, we get, like, misfunctional communication. So, you're speaking like this I think.
	And I think that's common in all communication, I mean, in all teams. It doesn't matter if it's with customers or suppliers or -- it's just human beings. As you say, it's teams. It's people communicating.
Interviewer:	On a personal level, how would you like to be measured, or how would you like to be measured? What would be success for you?
130816_002:	I want to be measured the same way that my colleagues in the same level are being measured. I don't have, I mean, specific KPIs because, to be honest, I don't really know since it's kind of -- it's not defined, what is actually my objective here?
	But if you're a part of the team, you are supposed to get the same demands as your colleagues because you are supposed to run the company and make sure that the company delivers.
	The only difference is -- I mean, if we look at the management team, the only difference is that you're responsible of different function and different areas. But you should have the same measurements. But your responsibility is to divide that into your function or your area. But we should have common goals and common measurements to make sure that we're actually hitting the target --
Interviewer:	Yeah.
130816_002:	-- so to say.
Interviewer:	And how would you measure your colleagues up and also downwards? And why would you take such an approach?
130816_002:	I think that it doesn't matter if it's colleagues above you or colleagues under you reporting to you. It's still human beings. And I think that, to be able to hit targets, you need to make people feel that they're a part of a team.
	And if you always have individual targets, you don't drive the feel of working together with your team members. So, if I see colleagues ask colleagues on the same level responsible of different functions or different areas, like I said, measured exactly the same.

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And then if we look at teams maybe that I am responsible for, have that discussion together in the team and divide that, what is actually our department's goals and KPIs and objective, and then individually, of course, discuss, "Okay. This is our goal. What is your goals to reach our goal? What do you need to do? What do we have to set targets for you to be able to try to" -- I mean, we need to cut them down because, otherwise, we don't -- if we look at welding, for example, I absolutely think that they, of course, meet department goals to set.

But you cannot say that a welder that, "Oh, yeah, your lead time is too long. Yeah, we need to cut that. It's too long. You can see it here on the -- I mean, you can see it on the board. It's too long." That's not saying anything.

"You were supposed to deliver 10 pieces per day. You only delivered seven pieces." That's something that you can identify with. So, we need to adjust the way we measure people on how they are and what kind of things they're doing. But everybody needs some kind of target because, otherwise, they don't know why they're coming here.

And otherwise, we cannot identify whether we think that this person is actually delivering something to the company. If you don't care about your goal and your target, you have nothing here to do here because then you're not contributing. And everybody needs -- I mean, everybody are contributing somehow because, if you're not, you're not supposed to be here.

So, I'm just -- I think it has to be broken down to the level that the person is actually working.

Interviewer:	Okay. The next question was regarding the company. Do we do the right thing? I assume not.
130816_002:	No, that's what I'll say, or I guess not. I'm saying as a company. I'm saying -- I'm not saying that people are doing wrong. That's not what I'm saying. But I think we, as a team and as a company, can do much better if you know -- if we actually know what we're doing and we're doing it together. We know the goal, and together -- because we will never do the same thing, absolutely not, because we need different areas to be able to reach the targets.

So, I'm not saying that the company would -- I mean, the people in the company are doing wrong. I'm saying, as a company, we need to define more. |
Interviewer:	The next question was about improvement. How would you improve the current performance? I mean, we have touched on many --
130816_002:	Yeah.
Interviewer:	-- things during this --

130816_002:	Well, I wrote some things down. And I think that we need to change our perspective on the current situation and rather start to work with changes preventive and be more proactive.
	And we need to encourage that within the entire organization. I don't say just Surahammar; I mean, from the top. We cannot just accept the way we're doing things. If we want to change strategy, if we want to go into new markets, we want to find new customers, we want to find new applications and continue as we have done before, I mean, that doesn't make sense.
	We cannot change one thing instead of changing another. So, I think that -- I mean, if -- I would like to improve the current performance. It's by working more with the -- of course, doing things right the first time and then work more practically.
	We need to be before everything happens, if that's possible. But I think, in a lot of areas, it is.
Interviewer:	What is keeping you back from doing this?
130816_002:	Teamwork.
Interviewer:	So, it's the absence of teamwork. Do you see, like, a separation, or is it throughout, or -- ?
130816_002:	I think.
Interviewer:	I don't know how you define this teamwork.
130816_002:	Yeah. I know. That's kind of difficult to define. I think we're at so many different levels compared to understanding and perspective. I think we have so many different perspectives. I mean, I can -- if you are technically involved, you of course see your area. I mean, of course, you see that. You see directly connected to -- I mean, if we take materials for example, you of course connect the problems into we haven't then done this research, or we need to find out more about this material, or we need to find -- it's your area that you see.
	And I think what -- the case for me is probably -- I've been visiting different areas during my time here. So, I guess that maybe I've got a more overview of what the problem is.
	I think -- that's what I think. And that's maybe why we talk about different things. When I say, "Are we really sure that we got the right people on the right place," as you said, of course, it's threatening because I'm actually questioning people. And I'm not question -- it's not that I'm questioning other people. I'm included. Are we sure we have the right people on the right place?

And instead of thinking overview, are we sure of that? And like I said, it's not about getting rid of people. It's about maybe moving people around, do a whatever.

I think that a colleague might not understand what I mean because, directly, it's connected to, "Well, they do have that technical competence. So, that should be enough, but maybe not that." I mean, I think we're -- we are not in a situation where we're actually speaking the same language.

Interviewer: For me, it does not sound like that the company or the people are aligned to work on the goal or whatever the goal might be of the company. I don't know what --

130816_002: Yeah, yeah.

Interviewer: -- more the people have their daily routines, their daily -- they're working within their framework.

130816_002: Yeah, and then I think that's what -- why -- and I think that's the case because, if you are responsible of a function or an area that has had a lot of problems or that have been a bottleneck in the process, not identified, but you feel that, of course, you drown in daily work.

And that is the case. Robert and Ingrid are drowning in daily work because -- I mean, it's not strange for Ingrid, as she just started. Now, she's getting -- I mean, she's getting involved in train -- now, she's understanding. Now, she can also change her own process so that she doesn't have to be involved.

So, I think -- I mean, if -- I think that's an explanation for the past. But that's also what I mean that we can't continue like that. Have we built processes that is -- that needs the manager on site every day? We have faith.

Interviewer: If you speak about processes, how do you -- would you measure the success of a process because we learned yesterday -- I mean, despite -- you saw this simple production process. And one takeaway -- I'm not sure -- what were the takeaways for you from this chain of -- which described a bottleneck?

130816_002: The takeaway for me was we're together to solve the problem. Don't solve your own problem. Solve the team's or the company's problem or the supply chain problem.

Interviewer: Right.

130816_002: Don't work individually.

Interviewer: For me, it was very important -- one of the key elements was actually this slide to say that you can improve whatever you want in welding. If the

following processes cannot follow your pace, the improvement was not worth --

130816_002:   Yeah.

Interviewer: I'm not sure -- would you say that has reached somebody, or did people understand that that they more see a company as a system and a supply chain as a system, or what is required to make them see -- ?

130816_002:   You mean the suppliers you mean?

Interviewer: No, also our --

130816_002:   Also ours.

Interviewer: And everybody's part of a chain. I can improve whatever I want in heat treatment. If the machining guy cannot follow, the person here has the problem, or I can [hit] millions of times if I cannot get them through filling. Any improvement at one [hitting] is void.

130816_002:   I'm not sure the message -- I'm not 100 percent sure that the message became clear --

Interviewer: Okay.

130816_002:   -- which might, of course, give us the opportunity to continue that because that's actually the result of yesterday. We said that I think we as a company first need to identify the bottlenecks before we can demand our suppliers to change because we're not sure. Do they -- are they even the bottleneck?

Interviewer: Yeah.

130816_002:   Because it might be a big, big, big, big, big chance that it's us.

Interviewer: Right. How would you figure out where the bottleneck is? We had a comment from Robert. The bottleneck can be everywhere at a given moment of time. But --

130816_002:   Well, we need to --

Interviewer: -- I'm not sure that is really, really true.

130816_002:   Well, we need to start measure. I mean, we need to start to understand -- because if we're saying that, if people deliver on time as planned and the correct information on time, then the lead time will not be a problem. Then we have to measure, are people delivering, or are departments, including suppliers, delivering on time with correct information or not,

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which means that we both have to measure time. But we also need to measure, what are we actually getting on time?

Interviewer: Okay. So, you would say for -- a suggestive question -- that, if we could measure -- if you would lay out a plan for a project for every order we get and everybody gets a delivery date for documentation and they would supply on time, we would -- and somebody or something would then not be delivering on time consistently, we would have found -- ?

130816_002:   No.

Interviewer: -- a bottleneck?

130816_002:   No.

Interviewer: Okay.

130816_002:   No. I think we have found the start to find the bottleneck because, if I would just guess, I think we would see that quality would be a bottleneck. And it's not by saying that they're not doing things on time. I think it's by saying -- I think if we would investigate that bottleneck that they're actually delivering late, it's due to incomplete information. We are promising things that we should have not been promising from the beginning.

We have -- I mean, what I'm saying with bottleneck there, is this bottleneck connected to time? But it's not -- just giving us a hint where to -- why is that so? Why are they late?

Interviewer: And now, I argue --

130816_002:   Yeah.

Interviewer: -- that they don't deliver on time. They are the bottleneck. But they're -- right? I argue, if they don't deliver on time the documentation, whatever the reason, they are the bottleneck.

130816_002:   Yeah.

Interviewer: And then we have to apply these steps he has --

130816_002:   Yeah.

Interviewer: -- done. And we would see --

130816_002:   It's due to other things.

Interviewer: And --

130816_002:	But we need to --

Interviewer:	-- if we would really work on that until we elevate the issue and supply the bottleneck with the support it needs, we should see that maybe the bottleneck moves away to somewhere else.

130816_002:	Yeah.

Interviewer:	Yeah.

130816_002:	That's -- yeah.

Interviewer:	Okay.

| 130816_002: | That's my guess because I'm -- we're not eliminating the bottleneck. It's like Robert says. It's moving. But then we have identified the first at least.

We must start to concentrate somewhere. I'm not saying that we're supposed to concentrate there because, to be honest, I have no idea what happening -- what's happening within the supply department. I have no idea. I know much more of what happens in the quality maintenance department. |
|---|---|

Interviewer:	Why would you think, as another -- if you would think about it differently, how would you get more security where the bottleneck is?

130816_002:	Work closer to supply. I think supply knows.

Interviewer:	Yeah.

130816_002:	And it might be then things that they're responsible of themselves, or did you mean more practical how would we get -- ?

Interviewer:	If we say the bottleneck is moving, there is one other option, to -- it sounds easier, but -- and it maybe is. But there's one other option. Instead of looking for the bottleneck is to choose where the bottleneck has to be.

130816_002:	Where we would like it to be.

Interviewer:	Yeah.

130816_002:	To be able to solve it, or -- ?

Interviewer:	No, just to keep --

130816_002:	-- where we want to have our -- ?
Interviewer:	Yeah.
130816_002:	-- bottleneck?
Interviewer:	It sounds -- first of all, bottleneck sounds maybe negative. But if you know where your constraint is, then you don't have to be -- you're not confused where your next bottleneck is. You know, maybe some takeaway for your next strategy meeting. And I think he was also correct -- I'm suggesting again -- the -- that you cannot have many, many bottlenecks. That would be really, really strange. And he gave two reasons for that. Yeah, so something is really hindering the flow in this process.
130816_002:	Yeah.
Interviewer:	Okay. Do you have anything more because we reached the end of the list?
130816_002:	I feel very negative.
Interviewer:	No, I mean, the achievements are still there, right?
130816_002:	Yeah.
Interviewer:	It's not all negative.
130816_002:	No.
Interviewer:	But I think --
130816_002:	The situation has been negative, but we have the possibility to change that. And I hope that we will take that possibility.
Interviewer:	Right. Okay. Great. Thank you.
130816_002:	Thank you.

[End of recorded material]

10.5   130816_003

[Start of recorded material]

Interviewer:	And the thing is running. Well, [130816_003] --
130816_003:	Yes.
Interviewer:	-- thank you for joining me for this interview. And I know people are -- speak differently when they have the microphone in front of them --
130816_003:	Yeah, that's a risk.
Interviewer:	-- and say different things. But I think, before that, I explained that we want to highlight a little bit, what is the strategy of the company? How does this connect to performance? And in particular on the strategy, how we understand the strategy of the company and -- or not --
130816_003:	Yes.
Interviewer:	-- and what impact that has on your work, and what is the indicators you would use to manage the business better?

To get into the discussion, what do you think is the objective of an organization like Bodycote? The interview is semi-structured. I forgot that. |
130816_003:	Yeah.
Interviewer:	That means I gave some questions, but they don't -- you don't have to really follow it.
130816_003:	[Unintelligible.]
Interviewer:	Yeah. All right. So, what is the objective of an organization like Bodycote?
130816_003:	Well, I guess, as for most companies or I know, I mean, of course, it's to bring revenue for our shareholders and, as you said a couple of days ago, I mean, on a steadily basis also without too much fluctuation. So, I think -- I mean, that's the baseline, to keep our shareholders lucky, happy.
Interviewer:	Happy?
130816_003:	Yeah.
Interviewer:	Okay. And you personally, how would you define the strategy?
130816_003:	Well, some -- I mean, somehow, I mean, that's the way or the guidelines to reach our goal. I mean, this should be a goal somewhere in -- for in that this will help me to give -- gives me directions to meet that goal.
Interviewer:	Do you know the strategy of Bodycote and Bodycote HIP?

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130816_003:	I mean, I don't know truly. It's not fully been communicated if there is some. I mean, I know, for example, you made a strategic plan, which I've seen this spring or the summer or draft for it. But I think there's a lack in Bodycote, I mean, how it's -- how the goals and strategies are communicated downstream in our organization. So, for me, it's very vague, the strategy.
Interviewer:	So, what do you think is the strategy of Bodycote as a group?
130816_003:	I mean, a strategy I guess starts with a goal where we're supposed to be in the future, where we're heading. And that I don't really know. So, for me, I mean, a strategy without goals, I don't know if -- that that is, for me, strategy. I don't know where Bodycote is setting. How will the company look like in five years or so? What fields of business should we approach for ourselves?
	I know the goals regarding sales figures and so on. Okay. That's also a goal. But they're a perhaps also different definition of goals, or I mean, sales figures is the only goal perhaps. So, for me, it's a little bit vague about strategies.
Interviewer:	You were in the last divisional meeting, where Mr. Harris gave a presentation about his strategy. Do you recall anything specific on this?
130816_003:	What I remember, he talked a lot about, I mean, the shareholders, making Bodycote an -- like, an attractive company for investment and for shareholders, and as you also said, give a steady revenue for shareholders so they can trust in PF, in Bodycote, especially PF. And that is mostly what I remember.
	Otherwise, I got a feeling that I get. I heard him two times generally just saying, but I mean, there's a lot of focus on heat treatment, of course, which is the big part, where he's acquired a couple of new companies. So, that part is big part, of course, of Bodycote. So, that's natural. So, that is what I recall more or less.
Interviewer:	At the same meeting, I think the President of HIP has also given her view on the business. Do you recall anything about the strategic impact or line she has given forward, which rests with you as a guideline or something?
130816_003:	I have very bad memory. But what I can recall there is also our increased sales, I mean, our growth, which is to be pretty large from each year to another year. So, that is -- I know a big demand, but we will grow within this couple of years a lot, 20, 30 percent, something like that per year. So, that is what I recall from her presentation.
	But what I'm missing, I mean, if I'm confused, then I wonder how people downstream are, like my department, for example, because I'm sure it's pretty vague for them where we go. So, this is not fully transparent I think. Could also be my bad memory. That's one excuse.

Interviewer:	I asked the same question just some hours ago because confusion, the word confusion came up. So, do you think people working for you here in this factory are confused what Bodycote is actually wanting from them?
130816_003:	Yes, I think so. I mean, how I speak to my department is more like we have a great future. We must really work together and give a good revenue each month and so on. But that's in general terms. I'm not pointing out the direction I would say. I mean, we're working the orders we get into house. I mean, that's our reality. We don't know much about how the orders will -- will it be the same customers or for next year or couple of years?
	So, I'm pretty sure that they are also confused if you should ask them, "What's our goal? Where are we heading? And what is our strategy?" So, we just try to do our best, I mean, delivering those orders we have. We're so focused on the orders in house, on the daily work. So, of course, people aren't perhaps thinking that much. Depends on what lever and who you're talking with.
	I mean, many are just fully occupied with the job we have, the orders. But sometimes, people ask, "What's our goal? What's our markets to go for in the future? And how do we think, or what's their guidelines from the top managers?" So, I think the word confusion is quite right.
Interviewer:	On -- for HIP PF, what do you think the main business indicators are which people look at?
130816_003:	Business -- of course, I'm in sales, of course, and also the order book. If you mean people generally in Surahammar or --
Interviewer:	Yeah, or what -- ?
130816_003:	-- do you think whatever --
Interviewer:	Upwards --
130816_003:	Upwards.
Interviewer:	-- what they're looking at.
130816_003:	The operating profit, of course. Then you also have, like, OTIF for deliveries, cost of poor quality I guess, and also, of course, safety-related KPIs and so on regarding accidents and so on. What do we have more? Perhaps utilization perhaps in -- for HIP units, that's a figure I've seen in reports at least.
Interviewer:	Yeah.
130816_003:	Manpower figures, headcounts, and so on, like total people cost and so. So, I think that is --

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Interviewer: For you personally --

130816_003: Yeah.

Interviewer: -- does any of these indicators drive any of your behaviours?

130816_003: Yes. I mean, of course, I mean, what is interesting to me, what I look at is normally, of course, the monthly sales and also the profit. And of course, we do try to deliver everything to get good figures every month. And of course, safety figures also are important because, of course, safety is the most important and also OTIF because a -- but those are the figures that I think the most. And I think that is also those figures we communicate mostly downwards also, downstream. So, and also quality related, like NCRs, amount of NCRs or the cost of poor quality or the amount of NCRs per million or per order. So --

Interviewer: So, how does it influence your behaviour if so -- ?

130816_003: Well --

Interviewer: -- up or down?

130816_003: Well, I mean, it's more like, if you look at sales and profit, then it's more to bring in that -- I mean, get out the orders as quick as possible, to get the orders out in a month. I mean, it is more like that. I mean, that's the first action. That's in a short period we have. But of course, I mean, if we have had a bad month, of course, I think everybody tries to do whatever we can to make it better this month, the next coming month. So, I think that is more like a concrete figure I mean.

And we kind of -- the way we run it every month then to get the good sales figure for that month, I mean, that is very concrete. Of course, that drives everybody.

Interviewer: Okay. What is your -- to your opinion, what is the role of senior leadership in performance?

130816_003: I mean, their role I think is to try to, how can you say, get the best out of people, I mean, use the skills that the different individuals have in the best way. I mean, that's the most important thing.

Interviewer: So, how do you get the best out people?

130816_003: I don't know if I do, but I try.

Interviewer: So, how do I get the best out of you?

130816_003: Yeah, I mean, I think, of course, you have to know, what are the strengths for each individual? What is -- what are the different individuals of my

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department good at, then try to use that competence in the right way instead of doing wrong stuff or that they're not -- that doesn't suit them.

So, I -- first of all, I think, of course, you know the people's skills. And I don't know yet how good we are. That I don't know. Of course, there is improvement, room for improvement I guess.

So, I think that is -- and of course, this is in relation with -- I mean, giving people things to work with that really develops them and also empowers them without putting a skilled person at the wrong place doing, like, work that could be done by people it was not the skill. So --

Interviewer: Some weeks ago, you received a letter with your annual objectives. In a perfect world, this should trigger for certain behavior I would think. I don't know if you agree. What do you think about the goals you have been given because they come directly from the top?

130816_003: Well, they're totally out of this world. I mean, so if a letter like that -- if the purpose is to empower me or make me a better person or engage me more, then I think the meaning of that letter is totally opposite because, I mean, it's impossible to reach those figures. So, I mean, it's -- from the start, you're lost already from the start.

So, on the contrary, I think it gives a negative effect instead of positive. It should be reachable goals, but they're not from the beginning. So, that's the letter that will not help me to do my work better, my job better, on the contrary perhaps, I'm afraid.

Interviewer: We have spoken about strategy and your understanding about the strategy or the absence thereof. How does your understanding or the absence thereof influence your work today? I mean, you have to have some goals.

130816_003: Yeah.

Interviewer: How do you achieve it? How do you choose what is -- what your goals are then?

130816_003: I mean, of course, I mean, if there's a clear communicative strategy, I mean, that would help me in my daily work in -- on many levels, I mean, from taking small decisions or big decisions. I mean, for example, if I were to hire a new design engineer, with a clear strategy, I can -- if I know that, in three years, we're moving into what the structures that supply or something like that to deliver completely full manifold systems to the customers, then perhaps I should look for a design engineer who knows about welding as an example.

I mean, these guidelines or strategies would help me to go -- walk in the right direction in all steps in everything I do today. Today, I think I do my best, which I think -- hope is the right way. But perhaps it's not. Maybe I'm going the wrong direction, and everybody else is going the --

Interviewer: How do you choose what is right or wrong?

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130816_003:	Well, I mean, with a strategy, with guidelines --
Interviewer:	In your daily work, how would you choose -- how do you choose what is right or wrong?
130816_003:	I mean, the way we -- I mean, we tried to create in Surahammar, as I feel there's an absence of goals and also strategies together, I mean, in the management team, for example, and with my -- perhaps my closest colleagues, which is Anas and Mona, I think we have quite a similar view of things.

So, I mean, okay, if we don't get the guidelines, let's do our best and together hopefully point that direction as we see it. |
| Interviewer: | Okay. The next question I would like to modify. How do you think that the work which is done here is influencing strategy which is elaborated at the corporation? |
| 130816_003: | I think I will steal your words because I -- and that was a good thing you said the other day. I mean, if there's a lack of strategy, I mean, let's help the top management to -- because to create the strategy because, as you said, if we can deliver steadily every month a good revenue, that will drive us in the right direction. Maybe it's we -- us by showing that we are reliable will drive a development through to a good strategy, instead of waiting for something that maybe do not come.

So, taking our own destiny in our hands perhaps a little bit and by that showing that perhaps, I mean, okay, Surahammar's doing good, and they're working with this. Maybe they're in the right direction. That will be our strategy for the whole PF or something like that. So, I think that was a good -- I've been thinking about that for a couple of days.

So, instead of whining here because of lack of guidance from top management, take the destiny in our own hands by performing well. So -- |
Interviewer:	So, what measures or KPIs would you like to be measured with and why?
130816_003:	Well, as we look -- if you look at the design department, which I'm in charge from --
Interviewer:	Yeah.
130816_003:	-- the KPIs I've been thinking of and we have discussed earlier is, for example, since we are part of -- you could say of the delivery or the manufacturing process, so I mean, good measure like delivery performance, like OTIF, lead time perhaps, and also some -- perhaps the KPI for quality, like perhaps NCRs per order or something like that, created NCRs caused by design or deviations.

So, I think delivery performance and lead time perhaps are the -- two of the most important KPIs we could measure or start to measure. |

Interviewer: Okay. How would you measure your colleagues and why?

130816_003: Depends on what colleagues. But I mean, those who are also in the process of manufacturing --

Interviewer: Yeah.

130816_003: -- like, let's say, quality and -- you could have the same KPIs, lead time, delivery performance, and maybe also like some quality-related KPI, more or less the same as the -- for design department.

Interviewer: Right. And if you go on the shop floor, how would you think people -- I -- well, how would they like to be measured, or do they need feedback, or -- ?

130816_003: I think it --

Interviewer: -- I don't know.

130816_003: All KPIs should be very concrete, easy to understand and easy to influence. For like -- for the welders, I don't know if you do it today, but like welded meters per week or something or -- and for the powder fillers, how many tons they filled per week. So, it's easy for them to understand, nothing abstract, but very concrete and that they can act on or react on very quickly.

So, that is important because an abstract KPI will not I think help anybody to be better.

Interviewer: And there, I have a question. The -- we have had a presentation yesterday. And this person showed a chart with a production flow. What is the takeaway you had from this production flow?

130816_003: You mean with the figures -- ?

Interviewer: Yeah.

130816_003: -- 25, 60 -- ?

Interviewer: Yeah.

130816_003: So, well, it was -- for me, I mean, okay, it was quite obvious, I mean, that we have a bottleneck. And of course, that was nothing new for me. But I mean, of course, in a total world, I mean, all these steps or stations should -- could have the same capacity. But we know that there isn't a perfect world.

	So, what's also some kind of new for me was perhaps that it's -- that the other stations should subordinate for the bottleneck more actively perhaps, help out and see that they always deliver enough material to this bottleneck.
	And so, in general, it was not big surprise. But it gives you thinking at least. You start to think about bottlenecks in perhaps another way.
Interviewer:	Do you think it can be translated somewhat to our operation?
130816_003:	Yeah, yes, of course, I think. I mean, but I think we're also quite used to, when you think of bottlenecks, that is in production. It's the HIP unit. It's the powder filling. But if you take a look at the preproduction step, I mean, everything happens at the office. Perhaps that is not the first thing you think about. But so, that is a little bit what I start to think about.
	And maybe could go so -- more difficult to identify than in the production. Production is more concrete. You have figures and people. But you see people. You see they have a lot of work to do or less to do. And it's not that obvious in the office environment.
Interviewer:	Right. Can it be translated into office environment?
130816_003:	Yes.
Interviewer:	Because I think our problem -- I don't know. I'm throwing this out.
130816_003:	I think -- so, I mean, since -- for example, I mean, of course, there's bottlenecks in the office. If you look at, for example, the design department, which one of the first steps in the -- let's say in the manufacturing process, I mean, we can be a bottleneck and have been and will be. So, I think it can be translated.
Interviewer:	As a company, do we do the right thing? And what are the reasons, or do we do something wrong?
130816_003:	Good question. Of course, I mean, we do many right things for sure. I mean, we have had some rough times, but I mean, it starts to look better, and I think we're quite aware of problems we have. I mean, we have a lot of lean events. We have these -- and have these events a couple of -- two recent dates here now also. So, we're quite aware I think what we think our problem is and also what measures to take.
	So, of course, we can do better. We're not only doing the right things for sure because we're seeing all the NCRs and all the red dots on this wall this spring. So --
Interviewer:	Some years ago, you have taken the decision to go -- a really strategic decision, or this company has taken a strategic decision to go in a certain area in -- of industry.

As a result, we have seen in the last 12 months that we're really struggling through a lot of issues or -- how can I say that -- really turbulent times, where we are exposed to a lot of problems. Despite the fact that the decision was taken maybe three or four years ago, it seems that we were not well prepared for the present. Why would you think that has happened?

130816_003: I think that we didn't -- could say we didn't do our homework before we got into this business. We didn't know the challenges. So, maybe we rushed into something that was more difficult than we thought from the beginning. Obviously, this -- it was that way.

So, we should've perhaps investigated more. What will this affect what? What competences do we need? What do we have to put in place before we go into this business? And that perhaps we didn't do well enough at least. And that is why we're suffering now a lot.

Interviewer: The effects actually just became obvious in late 2012. Before that, we did not hear so much about these problems, despite there were probably similar orders. Why would you think that is?

130816_003: Could also be our -- I mean, one contributor in fact, it could also be, I mean, the increased amounts after the deep rise of the Gulf accident. I mean, at the same time as we started with this business almost, this accident happened, which cased high demands, more documentations. So, I think that has also contributed to these problems, so much, much more demand after that accident.

Interviewer: But would you say, when -- before, in 2010, '11, or '09, '10, '11, you did not have these problems which we have seen now in the last eight months or have really, or I tried to gather --

130816_003: Yeah.

Interviewer: -- why we suddenly saw this mushrooming of --

130816_003: Yeah.

Interviewer: -- problems, while -- well, it wasn't the first time we did the [parks].

130816_003: No, but I think, as I said, I mean, a part of that was new -- for lack of hardness I think, new demands that came, like, this year or last year, which weren't there. Also, perhaps, I don't exactly recall what materials we made. But for example, the 4160 material that we chose, which wasn't that good, perhaps we didn't have that many orders of that in the beginning. As I recall, we might have the portion of duplex perhaps was a little bit more in the beginning --

Interviewer: Okay.

130816_003: -- than it's now. Now, it's most super-duplex and not that much duplex. So, maybe that's also switch -- could also be -- I don't know -- could also

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be perhaps in connection with the Gulf accident. I don't know if you went from these more simple materials to -- from duplex to more super-duplex. And then this 4160, which would have been to choose as our main super-duplex grade, really put us in deep crap.

Interviewer: Yeah.

130816_003: So, it could be some explanations for why this bloomed out now.

Interviewer: Yeah. The last two days, we took some time to reflect a little bit on problems and issues and challenges I would call them and try to be -- what was your expectation of this event? And what did you take away, and where were your surprises or disappointments?

130816_003: Okay. Perhaps on the -- on one hand, when you go -- when I went into this exercise, I thought that maybe there is something we do wrong that we haven't identified. And perhaps that was a little bit naïve. But there's something we're -- something obvious we're just not considering that we do wrong.

But on the -- but then showed that there was quite obvious things that we already knew but perhaps we haven't just verbalized it, put it on paper. I don't know. That, I mean, more or less, I mean, it showed that we have poor control of our process, and we should work in a more structured, standardized way. That was the solution, more or less, which is -- sounds very obvious, which everybody knew.

But it was good. I mean, okay, we came to the same conclusions you could say more or less both days, both internally and on the second day we did supply. So, the solution seems to be work more structured, in a more structured way, standardize things, instead of inventing the wheel every day, which we are doing perhaps today.

So, I went in perhaps a little bit naïve and thought there would come some magic thing that we haven't thought about it. But it showed to be -- showed out to be what I already knew.

Interviewer: Do you think you can take the -- now that it is on paper --

130816_003: Yeah.

Interviewer: -- and somewhat documented, do you think we as an organization can take the next step and actually verbalize -- write objectives or tasks towards the findings and actually prove the process going forward, actually take the time to improve on things like process?

130816_003: I mean, I think that we have to do that. What I'm afraid of that we must be very careful so we don't drown in the everyday work, which has been the case so far. We have to allocate resources and time to work with this because it will take time, and we have to put in resources to -- would be a lot of blood, sweat, and tears. But I think there's a very short payback time for this investment if you put the time and effort to stop the work with this. It will free time quite quickly to daily work.

So, yes, I'm sure that we can do something about this, create good actions. But we will have to focus on this.

Interviewer: Do you think that the verbalization of the problem helped the participants to align themselves on the problems, like agree on the problems?

130816_003: Yes, I think so. That's my understanding that --

Interviewer: Yeah.

130816_003: -- that everybody understood and everybody -- as I understood it, everybody agreed on that we had identified the right -- the root cause so to say.

Interviewer: I have a question which puzzles me.

130816_003: Okay.

Interviewer: I have participated in many events. But I have never experienced so much silence --

130816_003: Yeah.

Interviewer: -- in such an event. The participation was a challenge to create interaction. Why do you think that that was?

130816_003: Yeah, I had the same observation. I thought about that. And there could be some explanations. I mean, the first day, our internal activity, I think one thing that could have happened, even though that we know each other, I mean, we're colleagues, but maybe we should have done something similar to the spaghetti competition that we did on the second day because it breaks the ice. It's --

Interviewer: Right.

130816_003: Or perhaps we should've divided when we were looking for these -- broken down the different observations on the yellow papers, on the stickers, divide into two groups or something here or into smaller groups and then go together. So, I think a little bit about how we set up.

Another thing could be -- to be a little bit of self-criticism or could also be -- could it be that our -- the people are working for us, for the management team are used to that we always are the ones that participate. We're the ones -- the talks comes with ideas, that we don't give the -- that their voices aren't heard. They're so used that we -- our voices are the ones bringing things up. I don't know. So, it could be that also, the two things I'd be thinking of.

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Interviewer:	Another thing which struck me is that people who have not been with the company so long were much more outspoken than people who have been with the company for a longer period of time. And I could not find a good explanation either. I don't know if you have any thoughts on that.
130816_003:	But on the other hand, I mean, it's good if they're fresh ones, new eyes so to say because see things and then speak about it or speak out about it. So, I think that is good that they do on one hand.

But why the older ones, why they were so quiet could be perhaps, as I said, they're used that -- I mean, for all -- if you look at the meetings we have, it's around -- it's almost always the same participants, which more or less is the management team members. |
Interviewer:	Yeah.
130816_003:	So, they're used -- not used to interacting things like that because we are always working with these kind of things. They're more occupied in delivering the orders. I don't know. Could be an explanation. But I'm happy that the fresh ones spoke up at least. That is good I think.
Interviewer:	Yeah.
130816_003:	But I would -- I was also surprised that some -- especially some individuals that I thought could be very helpful for us didn't almost say a word, which surprised me.
Interviewer:	I had another question which I did -- which I came up with today --
130816_003:	Yes.
Interviewer:	-- is -- and I don't have the answer either -- that I think certain things are very culturally ingrained, where how people deal with problems. So, I'm not sure. In Sweden, how do people deal with problems? Are they openly addressed, or is it more an acceptance, or how would people deal in Sweden with problems they have to live with?
130816_003:	I thought at least that Sweden were quite open. If something is wrong, then we speak out. That's what I thought. But after this, I'm not sure. But could be on that also to be a little bit self-critical. Maybe we have created an environment where people do not for some -- they are not engaged in what we do perhaps enough to even propose changes or bring things up in the light which aren't good. I don't know. Perhaps we've created a non-engaged culture. I don't know.

But normally, I would say Swedes are quite open with it. There is no -- because we have quite flat organizations. You are not afraid of your bosses. |
| Interviewer: | Right. How do you do to address if it is things which are against individuals? If you see -- if you answered it's by the performance of an individual, how would you address that? |

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130816_003:	Well, I try to be -- I try to -- if I get feedback try to give facts, not to be too vague, practical examples, though. When you did this thing the other week, then I noticed that you should have done it or something, not being too vague.
	But on the other hand, in the Swedish culture, I mean, perhaps we are not that direct giving feedback. In general, I think we are a little bit afraid of conflicts. That's a general --
Interviewer:	Yeah.
130816_003:	-- say, how Swedes are. They're a little bit afraid of conflicts. Perhaps we are not straight as we should be sometimes. We don't -- we beat around the bush instead of directly telling to a person that you do something wrong, can be too vague. So --
Interviewer:	Right. The -- my expectation was actually that people from the logistics department would take more initiative to bring up their frustration because I think they suffer the most in -- they have most of the stress I would -- which -- they are mostly exposed to the stress which is coming out if something goes wrong.
130816_003:	Yeah.
Interviewer:	And I have not seen that either. Actually, I experienced the opposite, that they were really retracted or [eep].
130816_003:	Yeah, I can agree because, also, like the project managers, which have -- should have had a lot more input to this because then we involved with everything, we have input from all departments and from the customers and what the customer things and suppliers and so on. But they were surprisingly quiet. So, that was the purpose to bring product managers because I -- we thought that they should have a lot to contribute with.
Interviewer:	Why would you think that has happened?
130816_003:	That they didn't do that.
Interviewer:	Right. Not even members of the management team did not --
130816_003:	Yeah. I mean, in general, it could be -- if you don't bring up things, could be also -- in general, it could be, for example, that you think that your personally blamed for things. I will not bring this up because it will personally -- I will suffer personally for this. It will -- people will think it's my fault. So, that could be one reason, hiding, perhaps hiding problems --
Interviewer:	Yeah.

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130816_003:	-- instead of bringing them up into the light. Could be also -- I mean, for the members of the logistics team, perhaps -- I don't -- for me, I mean, that's the department I know the least what's happening, how they're working. And so, I know -- I don't know how the environment is there. So, could also be that the members thing -- people working there think that it's no use bringing up because things won't change because it could also be that maybe they have tried. I don't know.
	I've seen that the things they come up with are not taken seriously, are not improved. So, it's no use bringing this up.
Interviewer:	The other astonishing -- I'm not sure if I'm surprised -- but that I feel that there's a certain absence of trust. And there's a certain absence of trust between the people and -- it's maybe twofold. A certain absence of trust maybe can cause the situation also. But I cannot see that there is a team thinking. There were certain comments which were made which were all rejecting on other people.
	I'm -- for example, [Ralf] had some comments which made me think of it as unloading it to responsibilities. And would you think here people -- and I don't speak only about Ralf. But --
130816_003:	Yeah.
Interviewer:	-- how do you think people work as teams or a teamwork in the wider sense that they really work together and communicate together on a business basis? And I don't speak about personal, where they drink coffee. I think that works.
130816_003:	Yeah, works well.
Interviewer:	But how do you think they communicate on a business basis?
130816_003:	As I see it, I mean, the interaction between different departments could vary. For example, I think, if you look at my department, my picture is that they work very well with the quality and materials department, very good connection and solve problems.
	Perhaps it's not as good against the logistics department. It's not that teamwork at all. That isn't -- it's more like, "Now, I'm finished with my work. Here it is." And then we go. There's no -- very little interaction.
	I don't know why it's that way. It could also be that the logistics department is a more diversified perhaps department than the others because you have a lot of functions. You have purchasing. You have planning. You have project managers and so on.
	Like look at the design department. They are all design engineers doing the same job. It's easier to work as a team internally in that department. So, there are differences.

I mean, some departments work well with each other, and some don't. So, we're not -- if you look at the company as a whole, we're not fully working as a team.

And the comment I hear a lot from my people at the design department is about the logistics department, that they say that the logistics department does not work as a team internally. They don't even speak to each other because if they get information to one person, logistics -- if a design engineer gave some information for a member of the logistics department, it's not communicated throughout.

So, I think that group is not -- the logistics department is not homogeneous. They are not, I think, working as full as a team. And that's what I also hear.

So, there is a lot of improvement to do I think in the teamwork.

Interviewer: So, how would you measure the different departments? Is it on on time in full, or how would you drive a behavior which would support the company goal?

130816_003: In general, I mean, as I said earlier, for those involved in the process, in the manufacturing process, I mean, OTIF and lead times could be measured quite easily.

Also, for the logistics department, for example, I mean, manufacturing preparation, you can measure when -- how long it takes to make -- to prepare an order, for example. So, that's what I can come up with. I have not better ideas at the moment I think.

Interviewer: Okay. Do you want to add something, or is it -- ?

130816_003: I think we've covered --

Interviewer: Okay.

130816_003: -- everything.

Interviewer: Great. Then, thank you.

130816_003: Thank you, [Interviewer].

Interviewer: This is obviously confidential --

130816_003: Yeah.

Interviewer: -- will not be given or stored on Bodycote's technical infrastructure.

130816_003: Okay. Okay. Very good.

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Interviewer: So, that the access is very, very limited.

130816_003:   Okay. I have no problem --

Interviewer: Okay.

130816_003:   -- either way.

Interviewer: Thank you very much.

130816_003:   Thank you.

[End of recorded material]

10.6   131011_001_FOCUS GROUP 1

[Start of recorded material]

Interviewer: So, welcome for joining me. A short introduction, basically, what we are
                           looking -- what I am looking at is how companies define their strategy.
                           And Bodycote has a strategy, which they talk about a lot. And it is a
                           question for me how people relate to the strategy and how you perceive
                           strategy.

                           So, I have structured this a little bit in groups because I was a little bit
                           curious, in particular in this company, how strategy connects to the daily
                           work you're doing, or do you find yourselves daily in supporting the
                           strategy, or how do you see that what we do fits into the strategy of the
                           company? Yeah?

                           And it starts with some basic -- really basic questions which I have written
                           down, which is based on -- well, what is the objective of the organization?
                           And --

Male: [Foreign language].

Interviewer: And I don't know if you had the opportunity to read all the questions, but for
                           me, I would like to know from you as a group what -- for example, what is
                           the objective of a company like Bodycote? What -- why is it here? And
                           how do you find the strategy? What is strategy for you? And at this
                           point, I would like to ask you to give me some input what -- there's no
                           right and wrong answers. But I don't know if you want to start?

Male1:   No, you can. It's okay. I tried to prepare something. I have really different
                           take, question, and tried to think about that before I'm here. So, I think --
                           for me, strategy's two different things. Sum up point, it's -- you can find in
                           our different meeting, different -- or sum up point you can read in different
                           report. So, I have it summed up, not real, but some level, really picture of

	which kind of strategy we have in Bodycote Surahammar. And I try to explain what I can see.
Interviewer:	I mean, what is in -- what is the objective of an organization like Bodycote? What do you think it is? To your opinion, what is -- ?
Male1:	Yeah.
Interviewer:	If you look at Bodycote as a company, what is it? What is the objective?
Male1:	If you -- if I start with the first question, I provide -- give to best service, best quality, best price, and faster delivery as possible. And in this case, I speak about internal and external customer. Internal customer could be you, and external customer could be our -- say, customer outside. So, this kind of thinking, I try to apply.
Interviewer:	Any other opinion on what is the objective of Bodycote, Bodycote at large and Bodycote as HIP AB?
Male2:	For -- from my viewpoint, we have had lot of changes the last year. We had lot of strategies that's -- have been in -- started at your [unintelligible] to Bodycote the last year. It has been very much of it, lot of changes.
	And there was a period where it came very much of it. And that was quite -- a little bit too much to -- in too short period, time. And I tried to in -- tell myself that it's a -- involves important stop up a little bit and let it grow in and grow up a little bit and see what's coming out from it, the way we are changing the company over the past year.
	And today, I feel that we have come very long in our business. We are actually -- I feel more and more comfortable, say, the last three months. It's lot of -- the work we made for half a year ago. It's coming now. And I can actually see that we're changing and in the right way I think.
	And it's more cooperation between each other. We talk more. We understand each other more. And yeah, that's how I see this company today, how -- actually see the way we are going. I don't know --
Male1:	So, you mean --
Male2:	-- if you have the same feeling or --
Male1:	-- in the right way, but we have a lot of thing to do.
Male2:	Yeah, we still have a lot of -- but I don't know which -- what kind of --
Interviewer:	In your opinion, in which direction does the company go? Where do we go from here?

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Male2:	Yeah, which way you ask now. And -- but I feel more comfortable today compared to a half year ago. And --

Male2: Yeah, which way you ask now. And -- but I feel more comfortable today compared to a half year ago. And --

Male3: Yeah, me, too.

Male2: -- I think it's very important to stop a little bit now and let people have time to actually grow together with the whole company the way we are thinking.

Interviewer: What do you think -- if Mr. Harris talks about Bodycote HIP AB, what does he want?

Male2: I don't know.

Interviewer: That's a valid answer. You don't know, yeah.

Male1: More profit.

Interviewer: I mean, it's a question. What do you think? I mean, there's no wrong and right -- there's no wrong answer to this. What do you think he wants, I mean, is a valid question --

Male2: I think --

Interviewer: -- which I always wonder what employee thinks what he wants.

Male2: Yeah, I think he will grow the company, of course, get more out form the machine, the HIPs units and everything, of course. That's our goal also. So, a shorter delivery time in total end -- in total delivery time.

Male1: And maybe he has some -- say, some strategy for short time, short time to take care about our customer now and a long term to -- could growing, to find new customer. But both short and on long term for Bodycote is important to earn money. I think this is the first and important thing and how we can earn money, we must keep our customer. And this is a big teamwork all of us must help, could do that.

Interviewer: What do you think if he'll -- if Mr. Harris looks at the business and the results which are delivered, what do you think today what he is thinking?

Male3: I think he's thinking that we are doing well actually. But we're having some issue as with the customer. But I think we do okay. I think I think.

Interviewer: What do you think? What do you think?

Male2: No, the same. I think it's thinking about how to do more money, think -- earn to get more profit from there from the business. Yeah, I think that's his goal to actually see the way to spend as less as money as possible and [run] the company with less money.

Interviewer:	So, today, we are in basically one business. The majority of our business is one business. It's oil and gas.
Male1:	We should expand our areas. I think this question we have in another -- you have -- I have -- and I tried to answer this question but in later questions. I will take off that.
Interviewer:	Okay. The -- what I'm asking, because to your feeling, I mean, some of you have been here for a very long time or for a long time, maybe not both of us. But you have taken -- you have made the step many years ago to decide you'll go in oil and gas. And now, some year ago, we have experienced that, oops, there are lots of problems when we go in this business.
	So, how do you think we have gotten to a stage where we were basically overwhelmed with problems? Why do you think we have gotten into a situation like that?
Male3:	Before the deliveries hit through Sandvik almost. And now, there's the -- we lose ourselves the product, machinery and so on. I think it's much problem that.
Interviewer:	Is it that we did not know what is needed, or do we -- ?
Male3:	Yeah, I think we didn't have the -- I don't know how to answer that.
Male1:	How much knowledge?
Male3:	It's buried in that area so much because Sandvik had that -- took care of that business before --
Interviewer:	Yeah.
Male3:	-- in quality and machinery. So, I think the problem is much as the quality we have and machinery and so on.
Male1:	But I think the problem is not why we have a business with oil and gas. The problem is inside. We must change something inside. We must maybe work different. I think we could take care about a lot of problem if we change our routine so we could learn and do better than what we do today, especially for oil and gas.
	The problem is a lot of people work with oil and gas. They don't have so much experience about this area. They don't have so much experience to take care about customer. They maybe don't have so much experience to take care about the project. And they -- this thing we have problem in lots of new people we have in our organization. And then it's something we must do.

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And even maybe we have not good -- right organized to take care about different problem because, when I check -- I came from Stephen yesterday. I have worked for this kind of a -- Stephen has for 30 years, 25, 30 years. And even for this industry I came from, it was more easy thing, but we was organized much better.

So, something must happen here. And I think we have a big opportunity. But we must -- could take care about that. And one thing is more important. We try to take this oil and gas because we don't have another thing.

Maybe, because we -- inside in our organization, we have oil and gas. We have [tool steel]. And we have others. But these others, we have no one work with that. We don't try to develop this thing.

So, something must change. But I think oil and gas is important because, there, we can earn money now.

Interviewer: If you -- I mean, here, we are working very on an operational basis. That means we have very short-term targets. What do you think your short-term targets are?

Male1: Short term.

Male2: Seven weeks or --

Interviewer: So, what -- ?

Male2: Or what do you mean?

Interviewer: I mean, what do you think, on a very short-term basis, what the company or the President or Stephen Harris or -- would look for when we say we -- in a two-, three-month period, what is he looking for?

Male1: I think it's --

Male2: Delivery time --

Male Voice 1: It's clearly --

Male2: -- for the -- yeah.

Male1: Not only delivery time. I think it -- our President is more worried about quality problem because, if we didn't take care about our business now and something happened, it could cost a lot of thing. And it could cost maybe more than what we think. A big claim in oil and gas, it's money. So, I think something our President thinking about, about how we could take care about our business now. And that is something we must try to do something for that. Well, I think --

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Interviewer:	There's no wrong answer to the question. No, no, there's no wrong answer to the question. I mean, this is an opinion you have. And we are here to -- that I understand what your opinion is about -- because what I'm sometimes puzzled is how targets are communicated in the organization. And I'm deriving a little bit from this question here.
	What do you think your targets are for this month and next month, the next three months, the next six months? Would you say you -- I don't know. What do you think your targets are?
Male2:	Yeah, targets must be there, the delivery time to sell out the products in the right time, and --
Male3:	Make the customer happy.
Male2:	Yeah, make the customer happy. That's the most important.
Male1:	Yeah, that's something.
Male1:	Delivery time, right quality, and try to fortify the specification of our customer.
Male2:	Yeah.
Male1:	So, we must try to make exact according the specification in the right time.
Interviewer:	So, how do you participate in this endeavor? What is your role in the endeavor to deliver on time?
Male2:	To keep the machine running, that's the first step for me, but --
Interviewer:	How do you participate, or how do you think you participate?
Male2:	Wake up in the morning, and yippee, I go to work.
Male3:	I do the best I can to do that actually.
Interviewer:	So, how do you know that you have done well?
Male3:	My boss --
Interviewer:	No?
Male2:	No.
Interviewer:	Is he telling -- ?

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Male3:	Sometimes he telling, but that's all.
Interviewer:	Okay.
Male3:	So, you give yourself a clap on the shoulder.
Interviewer:	Okay.
Male3:	Hopefully have done the best.
Interviewer:	Okay. I'm asking this because, obviously, we have financial targets to meet before everything. And I was wondering now, do you know what the financial targets are?
Male1:	Financial target for short term?
Interviewer:	What is the month? What is the year outlook? What is the next year's budget?
Male2:	We --
Interviewer:	It's a microphone. So, you have to speak to say an opinion. You cannot shake the head, or not -- doesn't recognize.
Male2:	We know that we should come up to 200 million.
Interviewer:	This year.
Male2:	This year, yes. That's the object. And we are below that as it looks like today. We had about maybe 10 million. And the reason for that I don't know actually. That's something -- it might be better to understand why we have come up to 200 million. But I don't have any answer for that. I don't know actually why, the reason for it.
Male1:	Why we have -- what do you mean?
Male2:	Below 200. The budget was stepped up to --
Male3:	200 and --
Male2:	I wasn't at 200 million. Now, you see. But I know that we are below that. So --
Male1:	In my opinion, I think the most problem why we cannot pass 200 is the planning of our business, of our activity. If we had better planning, we could grow even more. So, 200 million --

Male2: So, well, what's -- I mean, the planning, what do you mean with the planning?

Male1: I mean, you know, you didn't have so much production for last month, why we couldn't use our productivity.

Male2: But if we don't have order for it, what's -- ?

Male1: We have orders. We already have 120 million orders stock. So, the problem is not order. The problem is how we take care about our order to come in and out. So, that's the -- that's something we must be better to grow it.

Male2: Or to -- what you mean is actually to -- now, for example, we have a couple of orders that we have a hold on just now.

Male1: Yeah.

Male2: So, you mean that's the reason the way we come to achieve 200 million.

Male1: Yeah.

Male2: And whether -- why is it hold? Is it because of us internal, or is it the customer, or is -- ?

Male1: Both of them. This could be communication between us and customer. It could be something not clearly from beginning. It's take time to be clear. This could be different thing because our, say, production unit, I think we could take care about more than SEK400 million. I believe in that. But why we couldn't do that, it's another -- it's not production unit.

Male2: It's not a production problem.

Male1: No, no, it's not production problem. I think so. So, I mean, your area, you could take care about more --

Male2: Yeah, of course.

Male1: -- per year.

Male2: Of course.

Male1: So --

Male2: Of course. But we also need the order for it.

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Male1:	No.

Interviewer:	So, I tell you now that the actual budget was SEK260 million.

Male2:	Yeah.

Male1:	260.

Interviewer:	Would you think that sound achievable? Is this realistic? And now, we know -- we ended last quarter. We know there's a shortfall of at least 68 or 70 million. But why would you say there is -- we took this very ambitious target, and then now we failed so miserably, or is it realistic for you, this target? The company never has sold -- has never sold more than 189.

Male2:	Yeah.

Male3:	I don't know how much capacity we have in this.

Male2:	For --

Male3:	For 250, 260, or even 300. I don't know if I can manage that.

Male2:	I don't think the workshop can handle that. That's not the issue. We can do that because I can see that we don't run the machines as we should be able to do because we are missing orders. So, I think the problem is we don't have the orders. And why don't we have orders from oil and gas?

Male1:	Or another.

Male2:	Is the market -- is the other companies who actually have more orders instead of us are giving -- take the orders from the other companies? I think that's the most important to have the people out and selling and actually telling the world that we have tremendous sort of capacity in our workshop. So, I think that's the biggest issue that we don't have enough people who actually selling our products or our knowledge.
	I think 260 million, we should be able to handle that, not easy, but we should be able to handle it. And I also believe that, if I have more order, things will go much, much better in our company. Things will be more smooth. And I think we had too much time today to actually think too much and don't do now what we should do. Yeah, sum it up that --

Interviewer:	Okay. Is this -- ?

Male2:	Some more.

Interviewer:	Exactly. Some more. The -- is this -- if you see 260, I mean, what I would like to understand from you is, what would -- how would you like to be measured, your performance against the objective. Let's say we have to sell 260 million. Well, how would you like to be measured to say that you have participated well in this achievement of 260 million of sales? Is there any measurement which we could say, okay, you did a great job in participating? So, you understand what I mean? Instead of putting on the shoulder, we can actually discuss, okay, you have that delivered so much and that well.
Male1:	So, next year, we're reaching for 300.
Interviewer:	Yeah, and now, we can go to another level. But as a -- personally, how would you like to measure yourself, and how would you like to measure all the other people around you?
Male2:	It's much easier to measure the other people around me compared to myself.
Male1:	I think, to measure this, I think it would change a lot of thing here. The first, we must have more order from the, okay, oil and gas, tool steel, various product. This part, if we say we have three part, the part number three, it must grow to be, say, 30, 40 percent of our order.
	And then I think we would change something with -- toward, say, we must have a better technical customer service. And this technical customer service, I don't speak only for customer -- give service to the customer, to have a service inside, internal activity.
	So, this internal activity will be in -- is some kind of, say, discussion, technical discussion between people in technical customer service and customer and then from this discussion to do something internal. What can we do? What can we do for -- to be better? What can we do so we cannot -- so what be better, be different, small project, if for all of us we do some kind of project?
	And this kind of project, I think it's better -- is little bit initiated from this meeting between customer and us. And then we will do something.
	So, maybe in future, we will try to work with that. Marketing department will change. Material department, product development department will do something different.
	I think, if we don't do that, we cannot keep this budget, 200 or 300. We cannot say, okay, write a budget, next year 300 million. Okay. This didn't come of sale all in. It's needed to do something different.
Interviewer:	Okay. We have to do something different. But that also implies that we know what we do wrong.
Male1:	Yeah.

Interviewer:	Right? So, what -- how do you think -- ?

Male2:	You asked --

Interviewer:	Yeah.

Male2:	You asked about how to measure it, how we actually see the measurement of what's happening.

Interviewer:	Yeah.

Male2:	For example, do we know today how much we can produce from this factory? Do we have any scale for that? And I would say no. We said at 260 million should be -- should -- was our goal for this year. And I mean, that was the target. And we come up to 100 and -- but it's -- we've been 195, 200. That's the scale for the company actually where we can see the gap between the right figures.
	And how do we actually understand the gap between this 70 million? I don't know because I'm not in that position so I know. Of course, if I ask you or Anas or someone, maybe I get some sort of answer for it. But that should be something for me to actually understand. Okay. We lose the 70 million because of -- we had not enough with orders or some other problems with drawings or HIP problems or whatever.
	But we measure the delivery, what do you call it, right on time. Then we have -- we are up in 95 percent just now. But this 70 million is not 5 percent. So, I would actually know -- would like to know better, have better understanding why we don't achieve the 260 million.
	So, it's actually about communication between us to have a better understanding between all of the departments there. I will not have any more meetings because we had too much meetings. But in an easier way to understand why we don't --

Male1:	But surely, it's lack of communication.

Male2:	It is.

Male3:	Meeting, meeting, meeting.

Male2:	Yeah.

Male3:	So --

Male1:	Not only meeting. I think -- I have written down this question. How would you include current performance? I said resulted-oriented activity, not -- this is as important. We have maybe a lot of idea. Idea is idea. We can -- you can have very good idea, 10 very good idea. But it's important one

good idea to be result of that. So, maybe we would work with that, try to work with that.

And since everything we do, we try -- we must have clear instruction. I think there we can do -- be better. Job instruction, different instruction, so there we need to be better.

And another, it's -- I have -- all activities should be taken into consideration, say what, why, how, when, and final force. So, this thing we can do better together. So, I think we have a very good opportunity to be.

So, I think we are very good team. And we have experience from different area. It's mixed people from different place, a lot of us in EU in this company. So, we can do much better.

Interviewer: My question is actually targeting towards -- okay, I want to achieve 260 million of sales. But what do I have to tell you that you understand what you have to do in your part to achieve the 260 million? You understand what I'm saying?

Male1:   What can I do?

Interviewer: What can I tell you what you have to do, or would you expect your senior management to tell you to be able to achieve the 260, 300, 500 million whatever it is? But where do you think -- what information you require and what feedback also to improve your work?

Male1:   Okay. You -- that's a very interesting question. Okay. I --

Interviewer: It is not an interesting question. It is a fundamental question I'm asking myself.

Male1:   I can give you an answer for me. It's I -- for me, to have it, to keep this level, maybe if I go back to my experience, I would work with -- to be more involved to have a new product, new customer, new activity together with the customer and our production unit, for me. I don't -- because we have different role in this. And so --

Interviewer: And what do I -- what information do you need? And what is the feedback I have to give you that you have the feeling you're participating in the success of the company? You understand what I'm saying?

Male3:   Yes, but I have no idea.

Interviewer: Because everybody is a link in a chain where we sell the final product. So --

Male3:   But all I can do is have the drawing ready in time. That's it for me.

Male2:   Well, back on the delivery time.

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Interviewer:	Yeah.
Male2:	From each department.
Male3:	But you depend on --
Male2:	But also, if we have to figure out which one is the weakest one so we can help the weakest one because the weakest link is always the weakest one, and to better understand it. And then if that information should come from you that we have the HIP unit is the weakest one just now, how can rest of the company help you to be stronger?
Interviewer:	Yeah.
Male2:	It's tricky question how to -- what type of information should you give us?
Male3:	Yeah, it's a tricky one.
Interviewer:	Because it comes back, how do you know you did a great job if you actually don't know what to do?
Male2:	Yes.
Interviewer:	How do you know your priorities?
Male3:	Boss tell me.
Male1:	Boss tells you. It's good.
Interviewer:	How do you know your priorities?
Male2:	Tell myself [unintelligible]. Now, we -- because we have the meeting. We tried to understand what's in the queue, what's the next, and tried to understand that as quick as possible. So, it's very important to understand the leak before you. And I'm always coming back to delivery time between departments, between the customers, from the beginning to the end of it to actually understand that better and maybe see the time difference between when you're making the drawings and that it's come out to the --
Male1:	Factory.
Male2:	-- yeah, to the welding area and to the filling station and everything so we actually can highlight it if it was better to have an easier way to understand the flow for the products because we think that it takes too long time when the company takes the order until it's coming to you guys and who make the drawings, for example. We think that the time is just flying away then. And then as longer you're coming into -- around the

	[same], in the end of it, you have -- always have to try to catch up the time we lost from the beginning.
	And today, I understand much better from the welding, filling, [unintelligible], HIPing, and delivery out and then back and then out again. That's a little bit easier to see and see just now.
Interviewer:	So, how do you judge the performance of the welding department and the filling department? How are they doing?
Male2:	They're doing it very well. I can't see any weak point in that area, not just now. But coming back a little bit -- the drawings are -- I don't know. They're coming out at the right time I believe.
Male3:	Almost.
Male2:	Of course, I can see [Yemy] is hunting sometimes. But we all do that. But before that, probably taking in the order and what's happened with the order until it's coming down to be a [job]? I don't understand that, that period. Is it two weeks? Is it five weeks, or what is it? I have no idea.
Interviewer:	And what problems do you experience which -- and, like, bad performance creates frustration. So, from your side, what is your frustration in this job because, there, if you have frustration, there is friction? So, something is not moving really right. What do you experience as a -- where you could actually -- if you had something, you could actually do much better.
Male3:	Yeah, but I think sometimes we had a little time to do the drawings. But it's just [us]. So, [unintelligible].
Male1:	You have all the information right time?
Male3:	Yeah, but we have so much to do, must design the drawings.
Male2:	It's too stressful.
Male3:	Stressful situation.
Male1:	That's --
Male3:	You don't always deliver on time from us.
Male1:	I understand.
Male3:	So, lack of people in design.
Male2:	But then you have -- also have to check everything from the [scouting] and just going out there that it's coming back information.

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Male3:	We have a lot of things to do actually.
Interviewer:	So, what is the one thing you would improve, top on the list?
Male3:	More people in the design department. [Gotma] is leaving soon, three weeks [unintelligible]. So, yeah, it's tough actually. So, I would appreciate a coauthor. That's my --
Male2:	How -- stupid question -- how many people are you, you, [Yuka], [unintelligible]?
Male3:	Actually, it's drawing, it's [Ewan], Yuka, and I.
Male2:	Three.
Male3:	So, it's tough, yeah.
Interviewer:	And, you, what is the one thing you would change?
Male1:	I would change -- I will have -- for my job, priority is to take about this different project I have. At the moment, maybe I have, let's say, a lot of project. But a lot of them is small and big projects, so to take care about them and because I will -- when I start something, I will -- it will be result of that, only start. It's just -- keeps [take over].
	But priority, I try to understand different problem around me because, in -- okay. Why? Because I like to do that, to do what's problem with material, discussion with filling or welding or HIP or customer or subcontractor and different things. So, I try to be involved at -- in this level I can.
	But for me, because to change, I don't -- I think -- I see -- maybe I have some experience to have maybe over material department. Maybe I will be little more involved in this subject, this issue.
Interviewer:	Okay.
Male1:	Because I see they need a bit more support from this area.
Interviewer:	What do you expect from your manager? What kind of feedback, information? What do you expect from your manager to tell you? Everybody's happy with information.
Male1:	No. Yes and no.
Male2:	There can never be too much information. It's better with the information so we have better understanding. But I can't just tell some specific things. It's just -- let's see, from my viewpoint, over to my team, and I try

	to handle over the information to my team as quick as possible. But of course, I miss lot of information to my team.
Male3:	It's always lack of information.
Male2:	Yeah.
Male3:	But which information --
Male2:	But [unintelligible].
Male3:	But which information you actually need? So --
Male2:	It should be the right information instead of [unintelligible], the short, good information, open-minded information.
Interviewer:	Okay. Do you think you have influence on the results of the company?
Male2:	Definitely.
Male1:	Yes.
Interviewer:	Okay.
Male2:	I hope so.
Interviewer:	Oh, you're not sure?
Male2:	I'm sure.
Male1:	Yeah, all of us have, yes.
Interviewer:	It is also my feeling that despite there is a strategic decision to do certain things, it is difficult to communicate downwards what exactly has to be done and what is a priority to be done. And actually, that is a real challenge probably for most people or managers to give the right information at the right time, and what is the actual information we have -- which has to be given? So, I have a last question. What is motivating you?
Male1:	Motivating me? I think it's three things important for me, to have a good teamwork together, to have an interesting job, and to earn money.
Interviewer:	Okay.

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Male1:   It's -- I -- and so, this is my motivation.

Male3:   My motivation is an interesting job. My coworkers are very good. That's the most important I think, good coworkers.

Interviewer: Okay.

Male3:   Money is not that much important for me anyway.

Interviewer: Okay.

Male3:   I have a job.

Male2:   Money, money, money.

Interviewer: Oh, you're really basic.

Male2:   So I can afford to have [unintelligible]. No, I'm actually with people and technology about the machine. That's very important to me. It's very complicated machines and very complicated people around me. And I like that. It's a challenge sometimes to get a phone call in the middle of the night. Hey, the HIP is down.

Male1:   So, you're in the right --

Male2:   And now, they're coming up with -- and then to have the people around if I can't -- if I need information, I know exactly which one I should make a phone call to wake up in the middle of the night, during the daytime or whatever. So, it's an interesting job. It's not a -- the days are not the same. It's always something every day. That could also be on the other way. Sometimes also, it could be a tough time. But I like that.

Interviewer: Okay.

Male2:   So, [Interviewer], how do you see the company from your view?

Male1:   From your view.

Male2:   Point.

Interviewer: My view?

Male2:   Just briefly, I mean --

Interviewer: Okay. I think, looking backwards, I am not sure that you as a company are -- were really aware in what you're getting into. And you have spent a lot

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of time on doing nothing much in many -- in the previous years, where you were -- I think you did not do any market research, what it required for entering the oil and gas market. And then we finally --

Male2:   It's a small just now.

Interviewer: Hmm?

Male2:   We have two small.

Interviewer: Well --

Male2:   We don't understand the oil and gas --

Interviewer: Right. Exactly. You have entered a market in 2009 or 2010 where there are requirements which are really stringent. And it was discovered when we actually got orders. So, we learn -- had to learn everything on the way. And that is what marked me most in the last 12 months that most of the problems we have is our inexperience in this market. We are gaining experience only by doing, executing. And we are discovering a lot.

And from an organizational point of view, I do not think that the roles and responsibilities are clearly defined, who is responsible for what, and what are the interfaces between the people to define what is what? Yeah?

So, what can I hold you responsible for? And what do you have to do to get this going?

And I also think that people communicate badly. Yeah. It is not really clear what they communicate and to whom and at which time, which creates stress for other people.

And on the other hand, we have addressed a lot of issues in the past 12 months. We have decreased the number of ongoing problems. And this is only by the effort everybody put into this adventure I'd say. So, I think people are very motivated to achieve more and more every day. And I think we have made a lot of strides forward in this.

And the question I have today and the question I also wanted to inquire here is what people actually think about what has happened and how to go forward.

I also know that the environment is a little bit strange. I mean, in a group, it's difficult to talk sometimes if you're -- maybe if you're not fluent -- don't feel you're not fluent. And it's recorded, which also influences the responses.

Nevertheless, I hope that you have expressed your opinion about certain things. And it's definitely not going outside this room. I cannot guarantee I'm not biased by the things you have said, which I will probably use in certain conversations that might come up in one way or the other, but not

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	on a personal basis, but as a general statement to address certain issues.
	I think, going forward, we have a challenge to get better because I think we should not take competition as a measure but leading the --
Male2:	Better understanding.
Interviewer:	Well, better understanding and leading the quality and the customer service we provide to our customers. And I think this will be --
Male2:	The customer, you mean also the -- it's just external, or is it internal?
Interviewer:	Internal, yes.
Male2:	That's --
Male1:	It's a mix.
Male2:	Very, very important.
Interviewer:	Provide better service to our customers internally and externally.
Male2:	Yeah.
Interviewer:	Because that would prove that we can actually generate more and more value out of this revenue, out of this. And really, we have seen that our order book is increasing. So, something must be going right.
Male2:	Well, that's good.
Interviewer:	All right. Great. So, thank you very much.
Male3:	Thank you.
Male2:	Thank you.
Male1:	Thank you.
Interviewer:	And I hope the salad was good.
Male1:	Yes.
Male3:	Yes.

Male2:	It was okay.

Interviewer:	It was okay.

Male2:	Too much green.

Interviewer:	All right.

[End of recorded material]

10.7   131029_001_FOCUS GROUP 2

[Start of recorded material]

Interviewer:	And the thing is running. So, welcome for joining me today. And I have explained the purpose of the discussion before the meeting and the framework of this thesis work. I'm interviewing several groups of people and asking them about their perceptions about performance in general, how they would understand the strategy of the company, and how would they measure themselves and others within the company, or what do they like, how the company is managed? What don't they like? What are the key -- some key issues you have with the company?
	And it is an open discussion. It would be great if everybody can have an opinion. The interview is confidential and will not stored on any Bodycote equipment. So, there is no risk that this conversation goes into the company.
	And to find our way in, I ask always, so what do you think is the objective or the purpose of a company like Bodycote? Why are we here, or why are we doing that, what we do? And I don't know who wants to take the lead on the question first.

Male1:	Well, I can start.

Interviewer:	Yeah.

Male1:	I think the objective of the company is to deliver the right product with the right quality and, yeah, try to fulfill as much as possible the demands of the customer in order to -- yeah, to guarantee that this product is going to perform well along the time that it's supposed to be installed in subsea systems or whatever it is.
	So, I would say that that's the focus of the company, deliver the right thing with the right properties and right quality when you focus on oil and gas. I don't know [unintelligible].

Female1:	And in the right time.

Male1:	And in the right time, of course. Thank you.

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Male2:	Yeah, but also make the money to make the shareholders happy I would think would even be more important.
Interviewer:	Right. Any other opinion on that?
Male1:	I think it's also important, an objective of the company is that, like, safety of the employees. That's also part of the objectives on each project that nobody gets hurt or works in the right environment. So, we ensure at the same time that all the people that is involved in these projects, they won't have any risk in order to deliver what they are supposed to be delivering.
Female1:	I think we're doing a great job there.
Male1:	Yeah.
Female1:	Like it's taken seriously. And I think Bodycote is doing a good job there.
Interviewer:	Okay. So, how would you define strategy? What means the word strategy for you?
Male2:	Well, they have an aim and a goal and a plan how to get there is strategy for me.
Male1:	Yeah, for me, yeah, more or less the same kind of whatever you want to do in order to achieve what you desire, yeah. So, it's --
Female1:	Our plan to reach our goal.
Male1:	Yeah.
Interviewer:	So, what is our goal?
Female1:	We don't know.
Interviewer:	Can you name -- I don't know. Can -- if you look at Bodycote, could you name something which has stricken you in the past or which was communicated to you which you would consider as the strategic goal we have taken?
Female1:	I think there's always things that [unintelligible] mentioned to deliver the right --
Male1:	Deliver fast, I think that's one of the biggest things that been communicated internally, that in order to compete in the market, we have to be fast at the time to deliver our parts and then also all the things involved with the quality and the properties. And not from my side because I don't -- I'm not involved much in those conversations, but they asked or said that the margin, the profit is also important. But I've never focused on that part

	because, as I said, I never take part of those conversations. But I know that's a big deal, and that's -- and other people in the company take care of that as well. Otherwise, doesn't [make] any sense to be working here if we don't make the profit for what we do.
Interviewer:	Okay. Do you have another opinion? If you're nodding, this is a microphone. It will not take pictures of you.
Female1:	I know. I know. No, I do agree, though. We have to make money. We have to, you know, satisfy the customers. But we also have to make sure we make money.
Male2:	But I remember, when we had this meeting [unintelligible], you know, that meeting, you said that not even the top management of this company really has a clear picture and has a strategy and knows where to go with this. So --
Interviewer:	This is a feeling you have --
Male2:	Yes.
Interviewer:	-- what you agree on?
Male2:	Yes.
Interviewer:	Why?
Male2:	It doesn't seem like there is enough support from the management to -- for us to get the tools to do what they're supposed to do. That's why -- and if they have a goal and they want to do this, they would not have to take -- to give us the tools that we need in order to accomplish what we are supposed to do according to their goal. But -- and right now, it's -- we have a rush. Deliver everything made and with customers, mistakes.
Female1:	Do we have, like, a mission statement? At my old job, we had, like, a mission statement which made it easier for all the employees to know what the strategy and the plan was, our goal. Do we have a mission statement? No? Maybe we should.
Interviewer:	I have not seen one.
Female1:	No.
Interviewer:	So, this interview, I'm actually not representing the company. So, you can ask me things, but -- I know. But --
Female1:	But that could make it a little bit easier.
Interviewer:	Yeah.

Female1:	But on the other hand, like [Male2] said, it's up to management to help us --
Interviewer:	Right.
Female1:	-- understand.
Male1:	Yeah, that's actually the only question I -- when I went through I realized I couldn't answer. Do you understand the corporation's strategy? No, I don't know. I don't know what's our strategy if I have to be honest. I just know I have to deliver my tasks --
Male2:	Yes, you do your part, do my part.
Male1:	I don't know how the whole group be integrated in order to achieve the goal --
Interviewer:	Right.
Male1:	-- or the --
Interviewer:	So, if you don't understand the strategy, who would you think is responsible to communicate strategy or go to you?
Male1:	Well, when you separate it to, like, small units, each responsible for each group should be responsible to give information to the units. But at the end of -- it all comes to the upper level.
Male2:	Yeah, from the top.
Male1:	And then you, like, just separate and give to every department. But in this case, I would say my boss. But then it doesn't make sense. It's her responsibility. It's part of the problem, let's say. But it also continues with the upper levels.
Interviewer:	Yeah.
Female1:	It should come from the -- at least the plant manager.
Interviewer:	Have you ever seen the presentation on strategy from Bodycote plc?
Female1:	No.
Male2:	No.
Male1:	No.

Interviewer:	So, how -- so, if you don't know the strategy, how do you manage then priorities because you have to understand the strategy of the company to manage your priorities?
Male1:	How do you say [unintelligible] in English, like stomach feeling? That's how I do it. I mean --
Male2:	Yeah.
Male1:	-- the more it feels pressure on, the more I prioritize I think.
Male2:	Whoever shouts the loudest maybe?
Male1:	Or unless I get the special instructions.
Female1:	But for me, it's very easy to prioritize because I know when we have to deliver. So, for me, it's not a problem.
Male2:	Yeah, or maybe order value as well.
Female1:	Yeah, could be. But on the other hand, if I don't know, I ask my manager. It's up to him. That's what he get paid for.
Interviewer:	All right. If you look at this unit, is -- the execution requires some collaboration between departments. Do you think that there is enough collaboration to execute priorities? I mean, you say you do it by gut feeling. You know you have the plan. And you say it is your --
Female1:	Scream loudest.
Interviewer:	-- the screamer.
Male2:	Scream loudest or the order value, whatever. I mean, it's different from time to time. But what you're question is, you mean if it's -- so the department, I work in the same way.
Interviewer:	Yeah.
Male2:	And if it's -- I don't know how it is, how they work and how they prioritize things. But it's obvious that they do not prioritize, I mean, the same way. I mean, it's linked. So, some department is prioritizing on that. And the other -- and then at the end, nothing is, you know --
Female1:	But I think the problem is that it's not clear to each department what the responsibilities are.

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Male2:	Correct.
Female1:	And if that was clear, that would help a lot.
Male2:	Yeah.
Female1:	Maybe we would prioritize more equal.
Interviewer:	So, is it -- is the -- so you think, if we defined roles and responsibilities more clearer, then it would actually help to be more efficient?
Male2:	Definitely. Through --
Female1:	And that's between departments and within departments.
Male2:	Yeah, both, yeah. But both between and within.
Female1:	I would say that's our biggest problem.
Male1:	But I think that that question that you just raised is kind of complex because it's a little bit of both sides. You have cooperation or collaboration between departments. And I think there is a lot. Otherwise, with such a -- we are not that well structured in the way we work. Without collaboration between departments, we wouldn't go anywhere.
	But probably it comes not in the right moment. So, first everyone works on the way of what they think it's important. And then when there is a problem and then you lift it up and you say, "Okay. We have a problem. This is an emergency. We all have to work here." And then everybody gets together and pull the problem up. And then it's solved.
	So, yeah, there is collaboration, but probably not organized, not in a structured way I think. But I feel, whenever I need the help from my colleagues, I fully get it.
Interviewer:	But how would you do that better? Is it -- I mean, how would you improve the collaboration between the departments. Is it -- you would -- I mean, it's a question of prioritizing and recognizing somebody else's need.
Male1:	That's a really complex question. I don't know. That's dependent on the structure of the company and how the discussions are taken because, if we have this meeting in this room with the leading group and the aim of that is that all the managers get together daily, on a daily base, get all the same information, and then they go to each department, and then they distribute information.
	But it's still -- even though that -- which you can say that's a way to attack the problem, even though that it feels like it's not getting better.

Male2:	Right. It's not very effective.

Male1:	So, I don't know how to -- what to suggest in order to improve the situation.

Interviewer:	Okay. You said it's not effective. Why is it not effective?

Male2:	Because there's [11] issues that different departments are working on different things and the priority of different things. They're not going order to stay in the same direction.

Female1:	And sometimes, I think that we have too many meetings that doesn't give any result. And we're -- like the daily meetings, sometimes I feel we're wasting a lot of time just keeping having the same meeting over and over and over again, instead of talking about our problems or -- and I do not like that we have the morning meeting so early because you don't have time to look into what you want to discuss. That's something that kind of annoys me because we're talking about the same thing pretty much every morning, 85 percent. It's the same thing that we talked about yesterday.

Male1:	Yeah, same thing, yeah.

Male2:	Yeah, and then I have another meeting with marketing. And I have to repeat everything the same over again.

Male1:	Yeah, that's --

Male2:	What has happened in two hours? Nothing. And I have to sit and go over everything again instead of working.

Male1:	I have the same opinion. Can we take a real example during the interview -- ?

Interviewer:	Sure.

Male1:	-- in order to point out my -- ?

Interviewer:	It's confidential.

Male1:	Okay. We have one good example of how departments are integrated and looking forward the same thing. It's this -- I have -- we have an ongoing problem with the straightening, right, which we don't have any fact at the time to discuss with the customer that it works to perform the parts and then deliver if it's below some level.
	And the truth is actually quite complex to investigate and get some results because the parameters of the problem can vary extensively. So, you can have pipes of different shapes. You could have different -- the formation. So, it's -- this is an investigation that could take -- that could be a PhD actually.

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We haven't got the chance to start investigate that much. But we had a meeting last month with a teacher from Norway who kindly offered to include our material into an investigation that he's starting this month. We just need to deliver him two plates and deform them. And he will give the material to their students, and they will do a master thesis. And that's not the whole investigation of the whole problem. But it's one thing that could help in -- for the discussions.

This is -- from my perspective, this is really important for us because, first of all, we are not putting resources there. We just need to do two plates and give it to someone who will study and will do the hard work.

Second, it's cost free as well because we just need to do the plates and then deliver.

And third, it will help to have these results at the moment to have a discussion with the customer already on your hands, not to say, "Okay. The company is investigating, and we will get some results sometime."

I know there is a lot of load on the logistics department now. But I have prepare -- I have contacted the supplier that has to form the plates and fixed everything. It's [Enlulio]. And then after [Lulio], the part has to be shipped to Norway.

I prepared an internal order to make the plates, which is still on the board. And yeah, it's not on production now. And I have one week and a half to ship the parts to Norway to put our material in the investigation.

And when I asked [Shel], "Shel, when is this going to be done? Is it going to be done today, tomorrow?"

"No, next week, Tuesday or Wednesday." That means today or tomorrow. And he asked me, "I have this many orders to do, and all of them are really important. And what is this about? This is research, like long-time, yeah, for the research." And I said, "Yeah, this is for the research."

"Okay. Maybe you can talk to Robert. And if he likes, I can prioritize that one. But if not, then I have to prioritize what I got now that I have to put into production, which is also really important because we have to deliver all the projects. But at the same time, we sit with the same thing every day, that we don't attack the problem until the customer is here screaming that they want answers. And then we don't have the answers.

And when we have a chance to put it there, in clear material investigation, and get some results, get some answers, then we don't take it seriously, or he doesn't seem to be as serious for every department. And I think that's a good example.

Probably, when you say research, for you, that you look at it more like reports and profits. Probably, for your research, it's not as important as it is for me or as for [unintelligible] product manager, or for [Female1], who works on the planning.

So, that's one thing I would say. It's a good example to point how different departments have a different focus and what we have to attack and when we have to attack.

Female1:   But then it should be up to your manager to inform [Shin's] manager --

Male1:   Yeah.

Female1:   -- how it should be prioritized.

Interviewer: Right.

Male1:   Yeah.

Female1:   That's what the missing thing is.

Male1:   That's the thing.

Female1:   Yeah.

Male1:   And I don't know if I tell her, I don't know if this discussion would be taken. And then I don't know if the discussion is taken and then the right decision is going to be achieved.

Female1:   But that's part of the problem, too. Sometimes, when we need help from our managers, they're in meetings. And they're not at -- in the office at the same time.

Male1:   Yeah.

Female1:   So, we leave things on the desk because, like, we can't catch both of them at the same time --

Interviewer: Right.

Female1:   -- because we have too many meetings.

Interviewer: What do you think -- I'm changing a little bit the subject. But we will come probably back on the same at a later stage. How -- what would you think that -- on a subdivisional level for PF, what are the main business indicators people look at? If -- once we have a conference call about the results, what are people looking at?

Male1:   When you say people, you mean -- ?

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Interviewer:	Like the plc, like the Bodycote plc.
Female1:	Repeat that question. I'm not --
Interviewer:	If we have business indicators of Bodycote, what do you think they are looking at?
Male1:	I think margin and profit.
Male2:	Margin and profit and money, all about the money.
Male1:	Like budget planning and margin, profit. I don't know. That's what I would say.
Female1:	That's what I would say, too. They chase the figures they want.
Interviewer:	So, what is the number in your budget?
Male1:	I don't know.
Male2:	Well, nobody --
Male1:	I don't know.
Interviewer:	Okay.
Male1:	I just know we're behind. And we were behind from the beginning. That's the only thing I know. When it was released, we were behind. And the year wasn't even started.
Interviewer:	And what is the role of, like, senior managers in the performance of a company if you say, okay, what influence could they have on performance of the rest of the people, or what do you expect from people?
Female1:	They should have a great impact on it, but I think it hasn't really been clear to a lot of employees from the upper levels.
Interviewer:	So, how would you think the -- what is the role then? What do you expect of the role? What should people do? Don't hesitate because it's me, right? What should people do to better -- to help people to perform better?
Female1:	To get us involved in the strategy and the budget and would've been more like that. We used to have a lot of numbers on the Internet before. And now, with the new Internet, I don't know if we have any for our employees. And I think you feel more like part of it if you get to see a

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little bit how we're doing, not just how we make sales, also what our goals are.

Male1: I think we have also problem with decision making. It takes too much time, extremely too much time to make a decision. I know that you cannot take decisions in a rush. But that's -- there should be a balance. And when you have a leader that has to take a decision in order to move on with something and you see that the leader is hesitating in order to take the decision, then the whole group --

Male2: It's just --

Male1: I mean, it's just like a transmittal of --

Male2: You need a strong leader, yeah.

Male1: -- of the --

Male2: Sets a standard for the group.

Male1: Because that's what I would say the leader job is, to lead groups, to manage resources. They're not there for sitting and solve, like, whole problems, specific things. They are, like -- that's where we are there, to attack many things at the same time. They really need to know how to handle the group.

And each leader should know how to put every group in the same direction. Otherwise, different groups are put in -- on different directions, which is what happens today I think.

Male2: Yeah, and listen when you have issues and problems. They should be, I mean, considered, not just like, "Okay." And then nothing happens.

Female1: But I do think --

Male2: [Happens to all of us].

Female1: Yeah, before when [Magnus] was here, it was a little bit easier I thought --

Male2: Yeah.

Female1: -- when someone was already always here. And I think, after he left, it got worse.

Interviewer: Worse because there was not enough decision making, or -- ?

Female1: No one to ask.

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Male2:	No, it was not clear at all who was in charge.
Female1:	It was easier when he was here and his door was open because you're not here that often.
Interviewer:	Yeah.
Male1:	Yeah, it also makes the whole process more difficult because, probably, you're in a different country with different time or sitting in a meeting. And when you need to be reached, then you're not available, for example, or you have to report and, for example, we have to contact this person, or that person has to contact the other person and then the other person. So, the whole chain's too long.
Male2:	Yeah, and the person who's going to take the decision is not in the loop really either. So --
Male1:	That could be something that affects the decision-making process I think.
Interviewer:	How do you know that you have performed well, or yeah, how do you know that this was a good achievement, or we had a failure? How would you know that for the company and for your personally?
Male2:	For me, it's just my -- I judge by the customers because I deal with them directly. So, I feel from them when [unintelligible]. But I don't really sense anything from the company, only from the customers.
Female1:	And that's kind of sad I think because it's not always -- I mean, you have unhappy customers if we deliver late. But it's not always because you -- it's not because you performed bad.
Male2:	No, but sometimes actually they can actually -- they're not stupid either. The customers, several times, they express that they're happy with me but not with the other stuff. But so, they actually say that sometimes. They only say that you've done your part where have -- you're good at, but --
Female1:	That's good.
Male1:	That's good for you.
Female1:	Well, I have the easy part there since I'm always -- I have always dates when we need to be finished and to deliver things. So, for me, I know, if I followed the plan, I did good. On the other hand, when I don't follow a plan, I do understand that it's not always because I performed bad because I have too much to do.
Male1:	In my case, could be a combination, as [Male2] said. I also meet a lot of customers. And sometimes, I get good feedback from them. They said that they're happen with my help or my performance, or the other way

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around. They could go -- being pissed. So, I know they weren't happy, or personally, when we have, like, internal problems that we need to solve here at the office, I know that I have done good or bad when the goal is achieved. So, that could be --

Interviewer: What is the goal?

Male1:   That depends on the problem of the day.

Interviewer: Okay. The -- I have a question, really general question about, how would you like to be measured against?

Female1:   I really don't know. I can't see a good way to be measured since my day is so filled with so many different issues every day.

Male2:   Yeah, feedback from the customers maybe, hear what they say would be the most I think fair way anyway.

Male1:   Yeah, I think also the same for me, feedback from the customers, although you work much more with them than I do. Probably, for my position, that would be required to be measured another way that -- I don't know -- amount of tasks that you have to do in a certain type of period.

                 But that also leads that you need to have clear rules for the game because, if you measure the amount of tasks that you have to deliver in a certain period, that means that you have -- you need to have your own room to focus on those tasks that you receive, not like someone coming all the time and checking out with things because then, at the end of the day, then you don't deliver anything. And then you apparently seem to be, like -- you come to the office and play.

Female1:   But we also have to keep in mind that our customers are always -- also other departments within the company, not just external customers because --

Male1:   Yeah, that's true. That's true.

Female1:   Yeah, so that could be a way to measure.

Male1:   That's true. That's a good input.

Interviewer: So, how would you measure [Male2] or other people? I mean, you have an expectation, right?

Male1:   I would say something that depends on [Male2] for my work is if he doesn't send the information that he received from the customer to me, then I cannot update documents or submit the information required by the customer.

So, that would be kind of -- probably, like, not a nice way to measure because that would measure when he does wrong whenever I don't, like, get delayed because [Male2] didn't tell me, like, "Okay. Then you need to fix this up, or you need to stand with this."

So, probably, that's not a good way to measure him. But that's a way that he, for example, can affect my work. And it works exactly the other way around. If he doesn't get the right thing for me, then he sends something that is completely wrong, and then he had the customer complaining because you don't know what you're doing, or if he doesn't get the things on time, he has to sit every week to the customer and try to explain why he didn't get the papers or whatever he needs from me.

So, that would be exactly the same thing, probably way too much how bad I am in my work, not how good [unintelligible].

And then I don't know about [Female1] because we don't work that close.

Female1: No, we don't work close at all.

Interviewer: So, how do you measure other people? It doesn't really matter if somebody in the room, doesn't matter. But as a general statement, how do you measure other people?

Female1: Other people? Well, it depend -- like, if we do talk about the quality department, how I measure them, for example, the only time I ask you something is about powder, if I can use a certain batch and so on. And then how do I -- if they deliver what's agreed upon to me on time, no matter if it's, like, whatever I need, if they follow up, is how I feel.

I more feel like I have customers here instead of me being the customer because I do help a lot of people with a lot of different things. I don't really -- like you, I don't really work together, even though we're in the same department.

Male1: But I depend on you anyway.

Female1: Yeah, of course.

Interviewer: In this frame, I would like to ask, what is motivating you? And what is motivating you, coming here in the morning?

Male1: My colleagues.

Male2: Yeah, definitely.

Male1: That's the strongest thing I think --

Male2: Yeah.

Male1:	-- for me, my colleagues. I want to meet the people that work here every day.
Interviewer:	Why are you coming here?
Female1:	I do think it's fun with my new job.
Male1:	Nice.
Female1:	I could do it on my own. No, I do enjoy my colleagues, too. But I always worked very independent, even when I was doing accounting. It was -- I was on my own.
	And now, I'm not on my own really. But no, I don't know. I just want to do a good job no matter what I do. And if it's fun, it's even better. But we -- I do enjoy the colleagues. And since we're having a tough time in a lot of different departments because it's not clear to us our responsibilities, it's good that we have so good colleagues. It wouldn't work otherwise. I think it's --
Interviewer:	And what is frustrating you?
Female1:	[Unintelligible.]
Male2:	What is left?
Interviewer:	Well, 25 minutes.
Male1:	You can save them all for me, [Male2].
Male2:	I have to start. I'm thinking.
Male1:	I can start. You can think. To me, that frustrates me, it's the few times I meet the customers, it's mostly to get technical discussions, which are quite awkward because many of the questions that they arise, I already know that we don't have the answer. And I already know that they have raised the question many times. And then it's really awkward to be on the table trying to explain out of the blue, what is your understanding of the problem or why you don't have time to do it, or why haven't you done it?
	And at the same time, you lift these kind of questions with the upper level. And in a short term, you don't see changes. And then you know the question is coming back. And it's going to hit you back.
	And time after time, the hit is stronger and stronger. And the customers get more irritated for not having any feedback from the supplier.

And then at the end of the day, they just, like -- they are really disappointed almost. And it's not like we don't want to do it. It's not like we don't care about solving problems. It's just like the whole structure is not probably working on the right way to solve these things.

So, then at the end of the days, it feels bad that the customer comes back to [Male2] and then says something bad that we don't perform well because I know he does his best. And like, at least, we all do our best. But still, nothing's probably happening in order to make them happy.

And even though you spend a lot of time and energy trying to solve the problems, then they are not happy. So, that's -- at the end of the day, that's what counts. If they are happy, then you have done a good job. If they're not happy, it doesn't matter if you think you have done a good job. Probably it's not the truth as a group, not as individuals, because not everything lies on one person.

But that's what's frustrating for me. I have to face these kind of conversations quite often.

Interviewer: Is it that you can't answer the question because we did not do the groundwork?

Male1: For example, yeah.

Interviewer: Yeah?

Male1: Straightening, when the customer comes and asks me again, we cannot straighten the parts, or can we do it? And we won't destroy the properties. Me as specialist of HIP products should know what's happening on the material. And I don't know. So, I cannot answer. And then they would probably refer to some old project that we had the same problem and probably was three, four, six months ago. And we still don't have the answer.

So, it's because we haven't done this -- for example, this research. And we don't have the answer. So, we don't know exactly how to tackle problem in this specific case.

That frustrates me. I don't know, you, [Male2]?

Male2: Well --

Interviewer: [Female1], you know there's many points.

Female1: Yeah, I started my list already. No, I'm not that frustrated. But one of the problem is that we have -- either we have too short lead times, or there's too much trouble before the order goes out in production. So, we're late before we even start. And that's frustrating. Why are we always late? Why does it take so long time because it's not good? That's one of my things. It would be easier if we could at least start on zero. But we don't. So, what -- that's one thing.

And two is [Jeeves]. You know, I'm a big fan of Jeeves when it comes to the accounting part. But when it comes to planning, it's not good. I do a lot of manual work. That takes up a lot of my time, a lot of my time. So, thank God we're changing system.

And then what I pointed out before, it's not clear to each department or to each person what their responsibilities are. And that creates a lot of frustration. That's something we need to work on soon because, even if we do enjoy, like our colleagues and so on, you can feel, in every little department, how it start to, like --

Male1:   Yeah.

Female1:   -- crack because it ends up with us dumping jobs on each other's desks out of frustration because we have a hard time prioritizing. So, that's what I am thinking about. And why are -- why does the orders come out so late?

Male2:   Well, my frustration is to sit with the customer. And they're asking me, "Give me an EPMS. And when can you deliver this?" And then I cannot yet make it up myself. So, I have to, of course, ask my manager. And he needs to do the groundwork and see how the -- look, like, out to the factory and, you know, all the things, welders, and look at the heat treatment, all the stages. But it's never done. It's done, like, in one second if they even look at it. It just -- oh, something like -- they give -- yeah, we need to deliver anyway within these months. So, we should be able to deliver it within these months.

And I get some really screwed up schedule, which I know will never hold ever and then having to tell the customer, "Okay. We can deliver like this. I know already it's not going to -- it's not possible."

Interviewer: So, you know from the start it's not possible?

Male2:   So, on the other hand, I can choose. I can choose to actually forget about it and not tell the customer what I really believe, which actually I started doing because I don't get any feedback which is anything to use, not useful from my management, I mean, when it comes to delivery times. It's just guessing and wish thinking all the time. "Oh, everything is not going to be out before Christmas, no problem." Okay. It's going to be a problem. I know already it's not going to be. Okay. Let's put everything before Christmas, everything.

Female1:   But part of that could be, too, because I'm kind of new at this position. I've only been there for six months. But it's hard in Jeeves to -- it's not a modern system that works well, to his defense.

So, but yeah, that's why we start out late. So, it's a real struggle to get things out of time, plus that we can't even adjust the dates in Jeeves. It's all manual work. I just did like 2,000 rows this last four days, entered -- data entry.

Male2:	And it probably goes back to when they do the quote. I mean, you -- and they say, "Okay. Well, how -- what's the lead time?" Well, look at the quote. Okay. It said 10 weeks. It's not going to work. We already know, not going to work 10 weeks and already passed like two or three weeks before we even have the [unintelligible]. You know, it's just we're late already.
	And the customer's going, "Oh, you quoted 10 weeks. And why? What are you doing, blah, blah, blah, blah?"
Female1:	Yeah, that seems to be one of the biggest issues we have.
Male2:	We don't take into consideration the situation we're in when we do the quote and look at lead times, and yes, okay, 10 weeks, 12 weeks, should work.
Female1:	And even with, like, SDM, they have, like, a little schedule for how many weeks each parts are taking, so on. So, I requested two different kind of plans, if we're early and if we're late, you know, so I can be more generous with the dates. And I think I used the more generous one once. It's always a rush. We should already have welded them yesterday.
Interviewer:	So, is there something we actually do right in the company?
Male1:	What the -- ?
Interviewer:	I know. I'm just asking. Do we do something right?
Male1:	Yeah, yeah. I think we -- yeah, we do a lot of things right. Otherwise, we don't sell any product.
Interviewer:	So, name what we're doing right.
Male1:	We have, for example, when it comes to tackling the problem, and then we need quite emergence, and everybody knows, then we have really good disposition to solve it. And then we have good integration from different departments. And we do it fast and quite good job I think.
	I think we deliver -- and that's probably one of the things that keeps us in the business that, even though the delays and everything, we deliver properties -- materials with good properties. We deliver quite good material. So, at the end of the day, the customer's happy because they're not just getting cheap things. They're getting something with value on it, even though it's delayed.
	But then if the delay would cost any economical issues or this type discussion between companies, that's another thing. But the material itself is good. So, it's a good product.

And I think we -- for having such a disordered structure, the whole group moves really good. As I said, otherwise, we wouldn't been able to deliver anything.

For example, when I require that [Male2] helps me, even though I know he's stressed because he has to do something else right away or he's about to go home, and I come to [Male2], and, "[Male2], I really need your help. I really need you to help me to do this." And he says, "Yeah, sure, we'll do it."

If you don't have such colleagues, then you cannot move forward. They would say, "No, I have to do this," or, "No, I have to go on do grocery store," or whatever. So, it's not just the example of [Male2]. It's the example of many, many people here that we're all under the same pressure. So, we all know that we're all suffering in order to deliver. So, we kind of care for each other. And we try to help a lot to each other in order to, like, okay, we solve this stage. And then we go through the next stage and the next until we have the final inspection and with the report.

I think that's what -- it's bad that it's a consequence of a lot of troubles. But it's still a good thing.

Female1:   I agree. We have great products. And we have great employees. And a lot of us are bending over backwards to get the products out the door. And that's great. And that's why we've got to keep all the employees happy and listen to them so we continue because, yeah, everyone is very helpful all the time, which is a good thing.

Interviewer: Anything we do right?

Male2:   Yeah, like they said.

Interviewer: Okay.

Male2:   It's still frustrating that it should have to be like that.

Interviewer: So, how would you improve the current situation if you -- majority think it is a structure -- you think it's a structural problem. I mean, that's what I gather. So, how would you improve the current situation if you had -- like I said to [Male2] to -- you can do what you want, how do you -- how would you improve?

Male2:   Well, maybe we should slow things down because now we are rushing into everything and everybody try to do 100 things at the same time. And it's just the issues with the 70 things of them, and they have to be solved, and everything else get left behind, and then it becomes a problem once everything else is solved. Instead of doing just a little bit right and then a lot of things wrong, try to make -- maybe slow down the focus and do it right instead and that the customers understand that it would take longer time for them to get the stuff, but then we had it on that time, and they will get it on that time, and they will get it right.

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I think that's -- it would make it easier for everyone that -- to feel that they don't have so many things to deal with every day and run into.

Male1: I think the problem with the structure, I cannot make an opinion on that because, as I said before, that's really hard for me to say or judge how we can improve.

But if we keep with the structural problem, we can probably attack some of the things, which are, as [Female1] said, the delivery times, I feel they are too short. And I think that's a common feeling from every person in this company or those that working in lower levels.

Prolonging lead times, that would give us much time to think and work better with less pressure. I think we need to be tougher with our customers. I feel sometimes that we are like kids. Our customers are -- they do what they want with us. And we don't fight back when we have to. We have to pick up our fights because, when it comes to argue what was written, the customer is reading it. You offered this in 10 weeks, then I should have it in 10 weeks, or you offered this price or you offered this property. Then I have to get it.

But we are not good at all when they quote or when they request something, and then in the middle of the process, they just, like, "Now, I want to have this and that and that and that." And then we start, like, giving, giving, giving, giving, giving. And in the middle of the process, we have probably double amount of work than what we had at the beginning, plus that we start already late. So, that's a perfect combination for problems, some more problems.

So, we need to be tougher with our customers, or we need to prolong the quotation stage in order to start with every, every, every question already solved. That will take probably ages to get a project. I don't know. But that would make the projects move like this. If we don't have to revise documents, if we don't have to have a PPM meeting in the middle of the delivery time when they come all here and they change everything.

Male2: [Unintelligible.]

Male1: Those are -- and I think we as a company, we should have different departments. Quality and materials should not be the same department. We have an extremely huge amount of quality problems that we, sadly, don't have the time to attack because we also have to take care of the material part.

And as an exception of both Ingrids, I think me, [Wendy], director, and [Veronica], we don't have any kind of instruction for quality assurance. I have never [unintelligible] for quality assurance. I'm really good at materials, not good at all in quality assurance.

So, what I do is what I've been learning here, which is not necessarily the best because we learn by making mistakes. And it's not a smooth process.

Interviewer: What would you improve if you could?

Female1:   Can I give you a list? Just kidding.

Interviewer: Of course.

Female1:   No, I don't know. Well, right now, it's just like the most -- I think it's good that we're going to have that day on the 22nd and go -- I don't really know what we're going to discuss. But I'm sure it's something useful because what we need to do is sit down and just discuss how we're going to move forward because, right now, we're at the point where this is not going to work that much longer. We need to discuss especially who's responsible for what, both within departments and between departments, because there's a lot of time we're wasting running around, sending e-mails back and forth, chasing managers. We're so inefficient. And we don't have time to that with these short lead times.

Interviewer: Just for the record, what is the -- what is happening on the 22nd?

Female1:   We are meeting for some kind of department day. But that's all I know.

Male1:   22nd of November?

Female1:   Yeah.

Male1:   Okay. Maybe I --

Male2:   We are?

Female1:   Yeah, we are.

Male2:   Okay.

Female1:   You and I are. I don't know about you. I -- they're closing down the whole company. So, we're not doing anything that day. We're all -- but I think we're going to say here in Surahammar. And --

Male1:   Okay.

Female1:   -- I assumed it was all the different departments.

Male1:   Yeah, probably haven't accepted the invitation or --

Female1:   But you should have gotten an invitation.

Male2:   Yeah, I know. I did. But I don't remember what -- which day.

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Female1:	So --
Interviewer:	So, what would you improve? Did you go through your list already?
Female1:	Yeah. No. No, but we need to straighten out who's responsible for what. And management need to be more -- how do you say it in English? You need to be more present, not just you specifically, all managers need to be more. It's really hard to get a hold of a manager because there's constant meetings or on the phone or closed doors. And that's a big problem I think. And we have too many meetings, too.
Male2:	Yeah, way too many.
Female1:	We don't work. We have meetings.
Male2:	We have meetings. And when you have meeting, you don't work.
Interviewer:	Can I ask how efficient you judge these meetings because I also see that there are lots of meetings. And I cannot actually see --
Female1:	The result of a meeting?
Interviewer:	I don't know why there are so many meetings.
Male2:	I don't know either. I've asked and got no answer. I really specifically asked why we have so many meetings and what -- get to answer, just, "Oh, it's good, isn't it?" I say, "No, I don't" -- and we -- okay. Stephen had meetings, see him talk about the same thing over and over again.
Male1:	But I think it's the same thing between departments because, when you go through -- for example, you go through these tables every day for a week, and you will notice that there are just four, five projects that are moving. All the rest are just like, this one, no, same as yesterday. This one, same as yesterday. This one, nothing new. This, no, no, no.

And even though you plan to have those meetings in half an hour, it's really easy to see it and start like, "Oh, by the way, and yesterday, I received an e-mail on this and that and that and that." And they're you're just five minutes. And, "Oh, we can get back to the meeting," and you either get the whole half an hour, or you prolong it. So, you spend easily there 40 minutes. |
Female1:	I don't mind the meetings if I'm talking to the right person about it, like -- but in our case, all of you are just listening in on what do me and Robert discuss, for example.
Male2:	I don't care about that.
Female1:	So, me and Robert should meet on our own.

Male2:	Yes.
Female1:	And then if there's a problem, I should come to you.
Male2:	Yeah, right.
Female1:	But we have five or six people just sitting there listening for a half hour every morning.
Male2:	It's crazy. And then they -- every Tuesday or Thursday, we have the meeting sitting in here talking same thing again. And then someone from the market department is just listening. Okay. Stop for another one, ba, ba, ba, ba, ba. Exactly same.
Male1:	I think probably we could have three days a week.
Female1:	We need to have meetings. But they need to be more efficient with the right people participating.
Male2:	Right. There's no conclusion. There's nothing -- we say, "Okay. Just as a fact. Okay." Okay. Thirty minutes now, we can go back and do work.
Interviewer:	So, would you say that, without these meetings, the work would be more efficient?
Male1:	At least we would have more time to work.
Male2:	At least have more time to do what I'm supposed to do.
Female1:	I would say yes.
Interviewer:	Other people also?
Male2:	I would say so.
Female1:	If there's an issue, it's better --
Male2:	Yeah.
Female1:	-- to bring it up with the person who's involved --
Male2:	Right. If they have an issue --
Female1:	-- and solve it.

Male2:	-- with the marketing, I talk with them directly if it's a big issue, or then I call everyone and put -- call a meeting if there is something. Otherwise, not just having to have four or five people sitting and listening to something that --
Male1:	I think, probably, we could maybe have one meeting on Monday to decide what is going to be done during the week and one meeting on Friday to see what was done and inform the people in the department. If you can see you can have achieved your task in -- during the week, inform your manager and try to discuss why [unintelligible], something like that. I think meetings are [unintelligible] now.
Interviewer:	So, how is it with deadlines, if you have a deadline for -- to [Male2], how good do you adhere to your deadlines?
Male1:	He can probably answer better than me.
Male2:	What kind of deadline?
Interviewer:	When he tells you it's finished tomorrow, is he finished tomorrow?
Male2:	Yeah, most of the time, yes.
Interviewer:	So, if he tells you he gets it tomorrow, is he coming tomorrow?
Male1:	Yeah, I would say so.
Female1:	Depending on the customer.
Male1:	Yeah, exactly. Exactly the customer.
Male2:	Only because, otherwise, at least I come back and say --
Male1:	When it depends on him, yeah. It's --
Interviewer:	And would you say that you get enough commitment from other people to deliver on time to you what you need?
Female1:	Yes, I do think so. I think I work a lot with the department managers in the factory. And they're doing a good job getting back to me. So, I have no complaints. What's not working, though -- no.
Interviewer:	Yes.
Female1:	It sounds so negative. No, but what could help my job a lot is if people are getting better at reporting in Jeeves so I know what they have done because I spend a lot of extra time running around trying to find the actual product, for example, out in the factory just to make sure that it's --

oh, it was scanned. Oh, it was HIP. HIP is not a big problem, but it was filled and so on.

People need to get better at reporting in Jeeves. That's -- but all -- everyone I talk to, they do get back to me right away in there. I'm happy.

Interviewer: How would you like to get -- if it's not meetings, how would you like to receive information about the project?

Female1:   Not by e-mails. That's another problem we have. Everyone want to cover their own back. So, they send way too many e-mails to spread the information instead of just sending it to the person who needs to know.

Male2:   Information about projects, or -- ?

Interviewer: Yeah, how would you like to receive the information? Okay. It's not a meeting. How would you like to gather the information you need?

Male2:   Well, I don't have anything all the time if you have the meeting, but having a meeting every day or twice a day of the same thing, that's what I'm against, so then once a week or something like that, twice a week, to have a meeting to follow up.

Interviewer: Once or twice.

Male2:   What's that?

Interviewer: Once or twice, you have five days. It's just a question because I was wondering.

Female1:   I would say twice a week, like Tuesdays and Thursdays, not Fridays and Mondays because that's kind of -- you won't have anything to discuss on Monday that you didn't talk about Friday.

Male1:   Yeah, that's where I agree.

Female1:   Two days.

Male1:   Tuesday, Thursday.

Female1:   Yeah, are we following the plan? If not, what actions should we take? So, but about being more efficient, too, that's another thing. I think we should use the system better, like Jeeves, and inform each other about different things instead of sending e-mails that you don't know if the person reads or not. Go into Jeeves. Put a note in. We need to do this instead of sending it out.

So, that's something everyone could get better at because, if we all write it down in the same spot, everyone can read it, and we won't miss. Now,

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it's like, "Okay. I think she sent me an e-mail two weeks ago. But she didn't even put the order number in there. So, I can't find it." We need to use our system better, which could make us way more efficient.

Interviewer: You understand there's a plan to use SharePoint --

Female1: Yeah.

Interviewer: -- as a tool to map the process flow of a project. And everybody has to fill their share of the project, which is -- which can be linked to reminders and --

Female1: That could be great.

Interviewer: -- uploads of documents --

Female1: That's good.

Interviewer: -- and so that maybe, hopefully, that reduces --

Male2: But it's not completely done.

Interviewer: Well, if I stop the recording, I can explain. Do you have anything more because I think we reached the hour? I don't know if you want to have more comments, or -- no?

Male1: I don't know if we -- if the meeting was how it was planned.

Interviewer: Yeah. I mean, it is an open discussion about subjects, which is confidential. And I mean, it is for me -- but I cannot say it's not influencing my thinking.

Male1: Yeah. That we understand.

Interviewer: So, I probably will take some of these things and will inquire further. But obviously, it's confidential and will not be used anywhere for work. Okay. Thank you very much.

Male1: Thank you.

Male2: Okay. Thanks.

[End of recorded material]

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Interviewer: And it has started now. Okay. Then thank you for participating. And as I explained, it is a semi-structured interview. That means, okay, we can follow the questions I brought up or any other questions we might derive on. But what I'm really looking for is an opinion about things which are happening in this company.

As I said, it's voluntarily and confidential. It will not be published to the company itself, nor has anybody access to the information you provide.

It will be transcribed. That means there's a written document about this event. And the information will be coded. That means we will derive some structure from the interview.

As a starting question, I like to ask everybody, what do you think is the objective of an organization like Bodycote? What -- why are we actually here? And for what purpose, what do you think is Bodycote doing? What is its purpose of existence?

Male1: I would say the purpose is to make money.

Interviewer: Yes.

Male1: Yeah, and --

Male2: Probably the main reason is.

Interviewer: Yeah? You agree?

Male2: Yeah.

Interviewer: If we talk about strategy, I mean, many people speak about strategy. So, what do you think? What does it mean for you, the word strategy, or if somebody says it is a strategy, what would it mean for you?

Male2: I guess they have a general or a goal to be number one in a certain area or maybe -- yeah, I think so. Of course, we'd have maybe not -- the goal is not to reach it right away. Maybe you do it in 10 years or 20 years maybe. That could be a strategy.

Interviewer: Yeah. What do you think?

Male1: I think, yeah, strategy is to have I think, as [Male2] said, a goal and to, like, have a clear way --

Male2: How to reach it.

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Male1:	-- how to reach it, yeah, which way the company should go. Should we go this way or this way or -- yeah, I think that's strategy for me.
Interviewer:	Okay. So, what is the strategy of Bodycote?
Male1:	That's a good question. I'm not sure.
Male2:	I think it's to be the leading manufacturer of HIP products in the world, yeah.
Interviewer:	[Male1], you have an opinion?
Male1:	Yeah.
Interviewer:	You don't know.
Male1:	Yeah, I don't know the current. But I think that's a good strategy.
Interviewer:	So, it's just an opinion. We're looking about an opinion. If you don't know, that is also an opinion, right?
Male1:	Oh, okay, yeah.
Interviewer:	So, you don't have to admit to -- it's no problem to admitting that you don't know. Many other people before you have admitted that they don't know.
Male1:	Okay. Okay.
Interviewer:	Right. It is also to assess how much people know about the strategy. That means, okay, if we have a deficiency in communication, for example, to communicate, what is the actual strategy? Yeah.

Have you ever been in any discussions -- well, you said no -- about the strategy, what Bodycote says? But does anybody ever say anything about the strategy, what we are having here? |
Male1:	I cannot say for sure. But I can't recall it right now. But I can't say, "No, that has not happened. We have never spoke about that." Do you know?
Male2:	I'm not sure either, but probably it has been mentioned.
Male1:	Yeah, perhaps some years ago.
Male2:	Yeah.

Male1:	I don't know. But yeah.
Male2:	I think --
Interviewer:	Yeah.
Male2:	-- maybe what [unintelligible] was saying the first time.
Male1:	Yeah, perhaps.
Male2:	It could have been.
Male1:	That was a few years ago.
Male2:	Yeah.
Male1:	So --
Interviewer:	Okay.
Male2:	I'm not sure.
Interviewer:	So, nothing really. You cannot remember anything which was striking you as important for Bodycote, or -- okay.

If -- what would you think if what people from -- the owner, like the plc, what they look at if they look at Bodycote HIP AB, what are the indicators they are looking at? What is important to them if they look at Bodycote HIP AB? |
Male1:	Yeah, I would probably say, as I said in the first one, to earn money I think could be the main for the shareholder. I would -- if I owned shares in the company, I would look if they made money. If they don't, I would not own that company. I would go for another company that makes money. And so, I think that's number one for the shareholders.
Interviewer:	Okay.
Male1:	Yeah.
Male2:	The same, and also, I think, how does the progress look? You have to start somewhere in the -- you will, of course, have downs and ups. I think they will look on several years how that developed have been.
Male1:	Yeah, before customer in the future if --

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Male2:	Yeah.

Male1:	-- we say we don't make money now, but in the future, the market will grow, that's true. I agree with that. You also look at that, of course.

Male2:	Yeah.

Male1:	Then perhaps you can say, "Okay. This share is cheap today, but in two years, they will make a lot of money, and I will make a lot of money. So, that's a good one."

Interviewer:	Okay. You speak about shares. Do you know what the share price is?

Male1:	No.

Interviewer:	Okay.

Male1:	Do you know?

Interviewer:	Do you know what the share price is?

Male2:	No, I don't buy --

Male1:	I would say 60 or 80 --

Male2:	Eighty I think.

Male1:	-- on something like that. Is it?

Interviewer:	It's GBP6.50.

Male1:	Yeah, yeah. Oh, GBP6? Okay.

Male2:	[Do like] kroner.

Interviewer:	It was zero -- too much --

Male1:	Yeah.

Interviewer:	-- but very close.

Male1:	Yeah.

Interviewer:	To your opinion, what is the role of the senior managers in the company? How would you define their role in driving performance? And how should they drive performance to your opinion?
Male1:	I think the --
Interviewer:	Yes, but you can go up to the President of HIP --
Male1:	Yeah, yeah.
Interviewer:	-- if you want to.
Male1:	I think it's up to them to work out the strategy for the company in future and, as I said, what ways to -- the company should go to make money in the future and so on, yeah.
Male2:	They should make sure that it's possible to do that.
Male1:	Yeah.
Male2:	Give out, maintain strategy in terms of the people, money.
Male1:	Equipment.
Male2:	Equipment.
Male1:	Yeah.
Male2:	That's the main --
Interviewer:	Okay.
Male2:	-- thing.
Interviewer:	So, how do they motivate you to follow the strategy?
Male1:	I don't know. And perhaps they can say, like, "If we do this, we will come back to money again. We will make money in the future. And we can invest more. And we're grow here in Surahammar and employ more people and so on." And I think that could be one motivation.
Male2:	Yeah, and --
Interviewer:	Let me rephrase then, or if you want to answer?

Male2:	You can rephrase it.
Interviewer:	So, what is motivating you? What are you looking for, or why are you coming to work?
Male1:	Because we love to work in Bodycote.
Interviewer:	It's registered. I have --
Male2:	Good colleagues and --
Male1:	Yeah.
Male2:	-- good environment, of course, money a bit.
Male1:	Yeah, of course.
Male2:	To -- I think maybe to be able to develop in the -- your on-job -- I mean, to see that things progress and, yeah.
Male1:	Yeah, I would say the main reason is you need money to survive, but also, like, a meaningful time if -- and the -- for -- I don't know how to say it, but if you don't -- if we didn't like to work here at Bodycote, we wouldn't be here. We would be somewhere else because they also pay money. And so, it's not just the money. It's just, as you said, actually said to [unintelligible].
Male2:	Develop.
Male1:	Oh, some do, as you said yourself, like -- how we say it?
Interviewer:	I cannot make it out.
Male1:	No, I like it.
Male2:	Progress or development or --
Interviewer:	As a person?
Male1:	Yeah, as a person, as a person, yeah, yeah, yeah, yeah. Yeah, to learn new things also. You learn new things quite a lot. So, yeah, I would say that. And yeah, perhaps that's a little bit possible.
Interviewer:	Do you think your managers have an idea about the strategy of the company?

Male1:	I would say not really, perhaps. I was at this meeting at [Pots].
Male2:	Yes.
Male1:	Yeah, yeah, and this was brought up there. And there was -- I think our manager said, "I don't know the strategy of the company." So, I would say no, not really, but --
Interviewer:	So, how do they put priorities or know what we as a company know what is important? How do we do that?
Male2:	We should ask higher up to have it explained to you or --
Male1:	Yeah.
Male2:	-- demand this to be stated, or ask for it rather.
Male1:	Yeah. Yeah, what's important for us now, it's what our customer thinks important today. That's important for us. So, that's from, like, day to day what's important. Yeah, I would say.
Interviewer:	So, who tells you what is a priority? How would you know what is a priority?
Male1:	For our work you mean, or -- ?
Interviewer:	Yeah, for your work.
Male1:	We have this meeting every morning. And we go through on the board. We have all these POs stated there. And then we go through that and then shift out jobs. That's how we know priority I would say.
Male2:	Yeah. Yeah, it's the same.
Interviewer:	So, who tells you what is a priority?
Male2:	Our boss.
Male1:	Yeah.
Interviewer:	So, do you feel that it's consistent, or is it very confusing, or do you feel? I don't know. I have many comments, right? I will not tell Tero what you said. But I have many comments about consistency and --
Male1:	Yeah.

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Interviewer: -- what is going on. So, I -- you --

Male1:   But there, we -- I don't think we can blame Tero because there's from all the position, oh, this is -- we need this now. And they go, no, this is important now. So --

Male2:   Yeah.

Male1:   So, we just take information from all others, like the logistics or production or whatever. They come and say, "This is very important. We need it now." Oh, then we need to shift our priority. That happens a lot I think --

Male2:   Yeah.

Male1:   -- which is not that good. But that has nothing to do with Tero. That's -- could, yeah, a lot from our customers or something like that. So --

Interviewer: So, do you feel you have enough time?

Male2:   Most of the time, no.

Interviewer: And why is that?

Male2:   Well, we have been discussing this for two days now, so at the lean event. And we don't work efficient enough. There's too much going on that disturbs your work, yeah.

Interviewer: So, how would it be ideally?

Male2:   Well, I don't know. It's --

Male1:   One thing could be that we -- you -- when you start to work, you can work with that to the end and not stop, then start with another thing, and then come back, and work a little bit more and then stop and then do another thing, like if you have job to stop and finish that without being disturbed with 1 million other things, which happens a lot.

                      And it could be all from, like, people comes into your office, says, "Oh, can you answer this one?" Yeah, but then it's a quick disturbance, but it could be, "Oh, you need to break this because this is more important to design." And then we need to try to design -- to stop with this design and start with another project to design that and then come back, which increases the risks of failure.

                      So, I think this hard question because we need to disturb each other. But I think we -- sometimes, we do it without it being necessary. It's easier to go just -- to throw out the question to someone and -- but you could find out yourself and the answer perhaps.

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Interviewer:	So, how is the work organized? And that may be another question here, but how do you organize your work? If you say you cannot finish one in one go, that means, for me, it could be that your work on the same project will last several days or weeks.
Male1:	Yeah.
Interviewer:	Yeah? So, the chances that you will finish this in one go is rather low.
Male1:	Yeah, I would say so.
Interviewer:	So, in -- how would you say it is generally for your work? Is this one big chunk which is dropped on you? And then you have to work through but are disturbed because you work on other things, or are these smaller items, or it depends?
Male1:	I would say perhaps smaller items because, if we get a big project, there's not one people that work with that. We speed it up to, like, you design one part, and I design one part, and so we speed it up. So, the reduced lead time for the design.
	So, we don't get, like, a big chunk. I will say, yeah, you need to do this work, which is, like, two weeks of work. I don't think we get that --
Male2:	No.
Male1:	-- as persons on the design department. We get smaller pieces so to say. So, we could work on the same project, perhaps the whole team sometimes if it's a big project.
Male2:	Yeah.
Interviewer:	If you were to measure or measure the performance of other people, how would you measure their performance or judge if they do well or not, like for other -- the people in the department, or people in other departments? How would you measure their performance that you feel they are giving you good service?
Male2:	That's a difficult --
Male1:	Yeah, I think time is important, if you could say, like, lead time or what you --
Male2:	Yeah.
Male1:	-- so that -- I don't know how to say it, but if things are laying in one department and then it becomes a very rush at the end. And so -- but I don't know how to measure that really.

Interviewer:	Okay. Let's rephrase. What would you need from other people to make your job better?
Male1:	I would say correct input from the beginning.
Male2:	Yeah.
Male1:	That is something we discussed yesterday also. And we need correct information from the beginning.
Male2:	And as soon as possible.
Male1:	Yeah, yeah, yeah.
	Yeah, I think it's information, comes down to -- yeah.
Interviewer:	And what do you think other people would need from you, or how would they be -- feel satisfied with your work?
Male2:	Probably the same.
Male1:	Yeah, the same. They need the input from us or, like, a drawing from us or something like that, that we finish it in time. And because on our board, we also have these times when the drawings should be finished to ensure the delivery time. So, they would appreciate if we complete our job in time in order to keep the -- our lead time, so and also that we do right.
Male2:	Correct, yeah.
Male1:	Yeah, so we don't have to go back and change the drawing or perhaps there'll be discussions with the customer back and forth, which takes a lot of time often.
Interviewer:	Are there many mistakes in the information received?
Male1:	What do you mean, information received?
Interviewer:	To start a drawing, you need some information --
Male1:	Oh, okay.
Interviewer:	-- from the customer, or other departments.
Male2:	[Unintelligible.]

Interviewer:	Many or average, or how would you judge it?
Male1:	I don't know.
Interviewer:	Two hundred a week?
Male1:	No.
Male2:	No.
Male1:	No. It's hard to say, like I don't know, 80 percent, could you say that, correct, or -- ?
Male2:	Yeah.
Male1:	-- less or I don't know.
Male2:	Something like that.
Male1:	Like an average, perhaps 80 percent of the information we get is correct, and 20, we miss something [unintelligible] or something. That's an estimation. I don't know.
Male2:	Yeah, rough, rough.
Male1:	Yeah, rough one, yeah. But it's far from perfect. So --
Interviewer:	And why is that do you think?
Male2:	The customers are in a hurry to make an order. They missed something or order or drawings or --
Male1:	Yeah, that's not usual, as we said. The customer placed a PO before the design is finalized, which means we get the PO, but we cannot start because it's just preliminary drawings. That's -- yeah.
	I think, also, perhaps this time, as we said, since we will have a lot to do here, one department has a lot of work to do. So, they cannot finalize the information in time for us to start in time. That could be one also that we miss information, that we don't receive it in time.
	And also, there could be some small mistakes where we have this -- last week, we got these drawings from a customer. And we started a design. Then we missed out the radius. And the -- I think it took one week to get a reply from that, over a week just for a radius.
Male2:	One dimension.

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Male1:	Yeah, yeah. So, it could be -- yeah, due to human error that the information is not correct, of course.
Interviewer:	But do not -- they do not collect information how many mistakes are in a drawing or how much time we spent on correcting customer information.
Male1:	No. I don't think. We have no information on that, no. I don't know --
Male2:	Also, maybe sometimes, we have been unclear to the customer.
Male1:	Yeah.
Male2:	But our -- what we need in specs and so on.
Male1:	Yeah, yeah, so it could come back to us as well.
Male2:	Yeah.
Male1:	It's just -- yeah, of course.
Interviewer:	So, it's both sides. We aren't clear what we need, and they give us wrong information.
Male2:	We assume they understand.
Male1:	Yeah.
Male2:	They don't.
Male1:	Yeah.
Male2:	They don't.
Male1:	Yeah.
Interviewer:	So, as a company, what do we do right?
Male1:	I think we must do something right since we make money, and the customer -- most of the customers get back to us and place new orders.
Male2:	We make good products.
Male1:	Yeah, yeah, we have good products, yeah.

Male2:	It's -- not many can do what we do. So, we should maybe point more on that issue or on fact.
Male1:	Yeah. And also, I think we have a -- like, good personnel here. Everybody's working good. And I think we have a --
Male2:	Good experience.
Male1:	Yeah, good [hand] with our customers most of the time I would say. And --
Interviewer:	Do you think the customers are happy?
Male1:	That's a good question. And not all of them, and because, as we know, this -- we have had a lot of problems with our orders lately. And I think now it's going for the right direction. I don't see that many red dots here on the board here. It was all red only a few months ago or something like that.

And I know all customers are not happy because we get a lot of NCR scraps, which we are measured on. And that's not good. So, we have happy customers and less happy customers I think. But I don't know if we have any, like, customer that will not come back to us, or perhaps we do. I'm thinking perhaps of, like, SBM. |
Male2:	Yeah.
Male1:	And I don't think they are so happy with us or -- so, but we have also -- we have FMC that -- we have these -- all these NCRs, and they are not happy. But they keep coming back because that's -- because they will have a good product. And so, but we have a lot to work with I think. And --
Interviewer:	So, what do we do wrong then?
Male2:	It's -- we're not consistent. I think that's the -- when we do it right, it's -- I mean, everybody's happy. It's -- as I say, we make a good product, and -- but we cannot quite keep this consistency.

And why, I don't know, but maybe because our process is not yet written in stone or not finished anyway. And that's, of course, why we do these lean events and discuss all the time how we should improve.

I think that's the main thing, that consistency. We're not consistent enough. |
| Male1: | Yeah, and I think we should be more like clear. I think that's been better now. But to be clear to the customer, a lot of time, it happens when they -- like for some reason, I don't know, change the design or whatever it could be that we put our work on hold, and we need to be clear to the |

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customer that say, "Okay. If we stop, we stop now. But it will also push the delivery date forward until as -- so for as many days as we have this stop in the production or whatever it is."

So, we need to be clear on that for the customer so they don't think that we will deliver on the original delivery date. And we take for -- we, like, take for granted that that date will be pushed forward, but the customer don't think so. We need to be clear on that one I think.

I think we have been better on that now. I think so. And I don't know [unintelligible].

Interviewer: So, if you could change anything, one thing or two things, what would you change?

Male1: Here in Surahammar?

Interviewer: I don't know. I don't know where you want to change it.

Male1: One thing I would like us to -- I would like us to be present in more markets than just the oil and gas, which is -- I think it's risky. If the oil and gas dips, then I think we would be in big problems and because we are not into, like, energy or whatever it is so much yet. I think we need to -- I would like us to be in more markets than we are. That I would like to change.

Interviewer: And in your daily work, what would have to change to get better?

Male1: That we know on the 15th when they have the next statement. And we need to have less disturbance, as we said, so we can focus on the jobs that we're doing at the moment. And --

Male2: Yes, and try to do things right the first time. Take that extra time maybe to make sure it's right before you pass it on to the next department.

Male1: Yeah, so I think that's one of the things we're doing right now is that we're performing [unintelligible]. I think that's good.

Male2: Yeah, it becomes clear what we --

Male1: Yeah, yeah.

Male2: -- what we're not doing right.

Male1: No, some actions were -- why are we doing this? Nobody knows.

Male2: Yeah.

Male1:	Like, in -- so, yeah, I think this will help us in the future to be more efficient.
Interviewer:	What would you like to see different in other departments to work more efficient?
Male1:	I don't know. Some -- I think some departments have a little bit of communication problems here. Since this is confidential, I would say logistics need to improve I think. They -- but that's -- for some reason, that's just always been so here at Bodycote that they have a problem speaking to each other. So, sometimes they can come down to us and ask questions. And we say, "Why you ask me? Why don't you ask him or her at your own?" So, I think that is one of the things, the communications.
Male2:	Yeah. How we handle information I think, documents. So, we do a lot of double work. Instead of having one document, we maybe have three, four documents. And we don't use the same information.
Male1:	No.
Male2:	That's what we should -- all departments, yeah.
Male1:	Yeah, so, this is also something we're working with now with lean. We don't put all information in one place so we don't -- as you can say, we need to go find something. They have something. They have --
Male2:	Takes a lot of time.
Male1:	Yeah, and the -- as the -- inside, every time you handle information, it's a source for error. It could be error when you handle information. So, I think that is very good thing we're working with now --
Male2:	Yeah.
Male1:	-- to put every -- all information in one place, the QA and the design and I think logistics.
Male2:	Logistics, of course, yeah.
Male1:	Yeah. So, that will be very good.
Interviewer:	So, what do you think -- if we speak about communication, often people speak about meetings. Yeah? How do you experience the meetings in the company?
Male1:	I don't know. But perhaps sometimes here, you -- we're called to a meeting and wonder, "Why am I here?" Perhaps that could happen that we call more people than needed perhaps, which spends a lot of unnecessary time. But I don't know. Now, we don't have that many meetings --

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Male2:	No.
Male1:	-- when it comes to --
Male2:	The only meeting -- and this is something we have also discussed on the lean event that was KG --
Male1:	Yeah.
Male2:	-- meeting. That has not been good.
Interviewer:	What is a KG meeting?
Male1:	Contract review.
Interviewer:	Okay.
Male1:	Yeah.
Male2:	Yeah. CR meeting.
Male1:	Yeah.
Interviewer:	Right.
Male2:	The information has been poor. And also, even after we have had this meeting, there have still been open questions.
Male1:	Yeah, yeah.
Male2:	So, there have been no decisions. And so -- and --
Male1:	Yeah, and lot of non-relevant information that we put up and said, "Why should we sign this on the paper?" No one knows.
Male2:	Yeah.
Male1:	So, but it's also something the group is working with.
Male2:	Yeah.
Male1:	So, we need to be better prepared for those meetings. But other -- we had this morning meeting, which I think is good. Every morning, we have,

	like, you should take 15 minutes, perhaps 15 to 30 minutes before your 9:00 meeting. I think that's a good --
Male2:	Yeah.
Male1:	-- meeting we have. I don't think -- as I said, we don't have that many meetings.
Interviewer:	If you go out of a meeting, like the contract review, and you -- does it happen often that the decision is not taken and information is missing and we are still going on with the -- ?
Male1:	Yeah, after the meeting, you'll be like, "What did we decide?" No one knows. And what -- who should do what? I don't know. You don't know. So, yeah, I think so. I think we need to, like, come to conclusions or decisions on the meeting. And that could be more.
Interviewer:	To your opinion, who has to get information if you need?
Male2:	For our department, we rely much on Q, the Q department.
Interviewer:	Quality.
Male2:	Yeah, we need the most information from them.
Male1:	Yeah, and also logistics.
Male2:	Logistic also.
Male1:	Yeah.
Male2:	But I think they have had the same discussions also about this. And they will do as we will do. But they will prepare better and --
Male1:	Yeah, for the -- are you talking about contract review?
Male2:	Yeah.
Male1:	Yeah.
Male2:	For the future. They will -- they already have made this document that should be much better to work with --
Male1:	Yeah.
Male2:	-- before the contract really.

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Male1:	Yeah, because as it is now, we just, like, perhaps 10 minutes before the meeting, "Oh, yes, yes, you need this. Fill this out." And do, do, do, do, do. And you go and you -- yeah. So, yeah, that is something we discussed that we need to be better prepared and have better forms to fill in, relevant information. So, I think those meetings will be better.
Male2:	Yeah.
Interviewer:	How long does it take you to find information?
Male1:	It could take, like, from one minute to two weeks. If -- for this, really, we had this radius missing, and the customer don't answer, it takes week and a half. And sometimes, you can just pick up the phone and call someone if you have a question, and they answer you right away. So --
Interviewer:	Who do you call?
Male1:	Those bastards. No. No, it could be like internal here, QA or logistics or -- I don't know. So, that's very different, yeah. You could get information right away, or you could wait a week. So --
Interviewer:	Okay. Very good. Thank you very much. Do you have any more comments you want to share or -- ?
Male1:	No, [unintelligible].
Male2:	No, I don't think so.
Interviewer:	Okay. Thank you.
Male1:	Thank you.

[End of recorded material]

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[Start of recorded material]

Interviewer:	Now, we are recording. So, thank you for joining. And I have explained it a little bit upfront. It's a semi-structured interview. It's on a voluntary basis. And the information you give today is confidential. That means it will not be given to anybody in Bodycote. And the publication takes on -- place probably 2016, where it's also not published widely.
	So, with this saying, I would like that we have open discussions about your -- how you perceive your work and what Bodycote does on a daily basis. And it also will not influence my work. The research will not name anybody personally what he has said or shared in this interview.

I know it's a little bit difficult because I'm not really a neutral person. So -- but don't hesitate. I think I can take it if you have some negative points.

What I always -- I always start this interview with one question. And that is, what is the objective or what is the objective of the -- of an organization like Bodycote? So, why does it exist? Who would like to start?

Male1: I'll start. I think it's to have a plan to achieve -- how to achieve the goals set up by the company board. And yes, that's very simple I think, how to achieve them.

Interviewer: So, that is strategy you think, kind of --

Male1: [Unintelligible.]

Interviewer: -- on the second question there.

Male1: Yeah, I think the strategy, how to achieve the goals set up by the company board.

Interviewer: What do you think? What -- why does Bodycote exist?

Female1: It exists to -- I think it is to increase revenue. I don't know the percentage, and I don't know the objective for Bodycote. And I haven't had it defined for me. So, I'm a bit unsure what the objective is in -- for Bodycote in particular and just know that the revenues should be increased compared to last year, and if I think about the financial objective, then yeah.

Interviewer: Why does Bodycote exist? Don't say it's luck.

Female2: No, because we have an interesting product. That's what I think.

Interviewer: Okay.

Female2: And a technique, or if we're just talking about the HIP, Bodycote HIP, then I think the technique we're using is very good.

Interviewer: But what do you think an objective of the organization is?

Female2: Yeah, I don't know.

Interviewer: How -- [Male1] told us what he thinks what the meaning of strategy is. What do you think is the meaning of strategy?

Female2: Yeah, but that must be how to achieve the goal that you have.

Interviewer: Okay.

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Female1:	Yes, I agree, a long-term plan set up to -- how to achieve the goal, set of goals.
Interviewer:	So, tell me, what is the strategy of Bodycote?
Male1:	I don't know the goal set up by the company board. But before I came here, I quickly looked at the homepage. And what the board said and the company, the reason for the company, but I cannot recall all the -- it was half a dozen points. So, it's written there. But I don't know them.
Interviewer:	Okay.
Female1:	I don't know the strategy either.
Interviewer:	Does it worry you that you don't know the strategy?
Female2:	I don't think about it so much, so no.
Interviewer:	Sorry, I'm deriving from my --
Female1:	It would be better if we knew the strategy because a strategy is like -- if we have a clear strategy, then it's easier for everyone to take decisions and know what to prioritize and --
Male1:	I should clarify myself maybe. When I'm talking about Bodycote, I talk about the company Bodycote. And company of Bodycote has a lot of division, daughter companies, and I don't talk about only HIP fabrication here in Surahammar. I talk about Bodycote from the top and try to think how those goals set by the Board of Directors in England, how much is left of those goals in Surahammar.
Interviewer:	Yeah.
Female2:	But are you aware of those goals?
Male1:	For Bodycote as a whole. Before not, but now, before I came here, I looked at it on the homepage and the investor part of the homepage. And there, they tell us or tell the investors the goals of Bodycote, why it exists and what the goals are.
Interviewer:	If you look at your managers and their managers, what is their role in managing performance, your performance, the company performance?
Female2:	What do you mean?
Interviewer:	So, what is your expectations from, for example, me or Anas or Ingrid to help you to improve the performance of the company?

Female1:	I think it's up to the top management to create and communicate a clear vision and the goals and the strategy to everyone working. So, let me know what is happening within Bodycote and what we're working on our actions and strategies.
Interviewer:	And do you think that is done?
Female2:	I think the --
Interviewer:	Are there clear priorities? Are there clear -- ?
Female2:	I think the communication could be better.
Female1:	Yes.
Female2:	So, it's not always clear. And yeah, there has been some discussions. And I don't really know if we want to stand as a -- only a production company or if we want to develop and find some new ways. So, for me, it's not really clear what those goals are, if it is, like, continue on this with these materials that we're working on or if it should be improvements, and yeah.
Female1:	Yeah, it's not clear.
Female2:	Or kind of research or so.
Interviewer:	So, you mean just executing an order based on our current experience.
Female2:	Yeah.
Interviewer:	This is what you say, or go further and say --
Female2:	Yes.
Interviewer:	-- let's develop new materials and propose new --
Female2:	Yeah.
Interviewer:	-- products --
Female2:	Yeah.
Interviewer:	-- based on these materials.

Female2:	It's -- that's like an example of what could be better in the communication and from the management.
Interviewer:	Okay. On the -- on our level is a subdivision called PF. What do you think the mother company is looking at, or what do you think in a conference call if we review the results, what are the discussion points we are having during this conversation?
Female1:	Revenue, yes.
Male1:	For me, before I can answer that, I have difficult to understand how this company -- it's a shareholder company, this unit in Surahammar with -- they obey the company laws in Sweden. And that means you have to have a Chief Executive Officer. You have to have a board. You have to have a Chairman on the board. And you have to submit the financial reports to the Swedish authorities.
	This unit is different to other Bodycote units in Sweden. They are not [foreign language].
Interviewer:	Public limited company. This is a public limited company, yes.
Male1:	And therefore, I don't understand how the results is reported, that is it to the board in Surahammar, so for this company, and then transferred to the board or the units in England or elsewhere? So, to me, it's very diffuse. What company are we in Surahammar? And to whom do we report? For instance, not many knows who's the Chief Executive Officer.
Interviewer:	Of this company?
Male1:	In Surahammar, or even less who sits in -- who -- what persons are in the board?
Interviewer:	So, the organization is unclear for you?
Male1:	Yes, for Surahammar.
Interviewer:	Yes.
Male1:	And how that is in relation to Bodycote as whole.
Interviewer:	Okay. I can answer that question after the interview.
Male1:	So, when you're asking about how -- what are the objectives for the different persons, it's very difficult to me to say because I don't know. If you take a manage -- a Chief Executive Officer or a Managing Director for this company and know that he is only responsible how it goes for this, it gives another view of that person, or if this position is in England or not in Sweden as the other units are.

Interviewer:	But what do you think we are reporting -- we have results we have every month. What do you think -- on which results is the -- is our mother company looking at? We have -- we heard revenue. What do you think?
	What are discussions we have on the phone when we meet the President of HIP, or what does Stephen Harris look at?
Female2:	Yeah, it's --
Female1:	On time --
Interviewer:	There's no wrong answer. There's no wrong answer.
Female2:	Yeah, yeah. Order stock, budget, maybe also have it for longer term, maybe not only next month or next year. But maybe you can discuss for --
Female1:	Forecasts.
Female2:	-- what happens in five years.
Male1:	I don't know.
Interviewer:	Okay.
Male1:	I don't know what they look at. I have no -- I can guess, but I don't know. Of course, the financial figures, delivery performance, [substance], profit. But I don't know.
Female2:	Maybe what we need to do to increase.
Interviewer:	Increase what?
Female2:	In how much we sell and produce and deliver.
Interviewer:	Okay. So, what is the budget this year?
Female2:	What do you mean? You mean in numbers?
Interviewer:	Yeah.
Female2:	I don't know, not exactly.
Female1:	Don't know either.

Female2:	270, something like that?

Female1:	200-something, yeah.

Male1:	I think, before it was on the homepage for Surahammar, but now it's gone.

Female1:	The Internet?

Male1:	No, on the homepage for Surahammar, but now it's gone. But I think it was in the -- you know, and Magnus, he had the goals for GBP275 million in turnover. But I think it was adjusted down to 230 for this year. I think so.

Interviewer:	And where do you think we're standing?

Male1:	I think I don't know because they had taken away all the charts. And sorry to say because the former Managing Director Magnus, when he came here, he said it was the most important in the whole company to keep those key figures updated and available for everyone to look. But here has gone -- it's not so important anymore, maybe. I don't know.
	But anyway, I think we are standing on 100 invoiced -- 100 -- the goal is 170 I think you said, last information.

Interviewer:	I said?

Male1:	I think you said invoiced for this year.

Interviewer:	You have an idea?

Female1:	We should reach 200 I think for this year.

Interviewer:	I like her more. You have an idea?

Female2:	I would guess about the same as [Female1]. And I have missed the last monthly meetings. So, I haven't --

Female1:	I missed that, too.

Female2:	-- been on any one after summer. But Ingrid told us a little bit about it on our department meeting some weeks ago. But I don't remember exactly.

Interviewer:	If you had more information about the strategy and the objectives, would that motivate you in your job?

Male1:	Yes, for me, anyway, to see how the company's performing. And if you want, you can read a lot out of those figures and the combination of the company, for instance.

Female1:	Yes, would be good to know where we're heading and what the strategy is and objectives.
Female2:	Yeah, I agree.
Interviewer:	So, if we look at performance, how would you measure other departments?
Female2:	You mean if I think they perform good or bad or more if we should give percentage in what is good or --
Interviewer:	In your mind, you probably already have thought about if they do a good job or not.
Female2:	Oh, you mean like that?
Interviewer:	Maybe you can say key points where you say, "Okay. If they do this better, okay, my work would be easier." And maybe there is a measure you would like to apply.
Female2:	Yeah, I think lots could be better if we increased the communication. I think we miss a lot there. And that's why we can get mistakes.
Female1:	Yeah, communication can't be --
Female2:	Improved I think, because of lack of communication, it sometimes feels like you -- the other departments do not do all the things that you need. And you don't got -- get the answers you might need to proceed with your own work. So, it can be hard to judge because I think we do better than you sometimes get the feeling of.
Male1:	To me, to measure, of course, you can say that that department could be better, or that department is better. I think, if they are good or bad, that has mainly to do with the dimensioning of the departments. So, the problem is, to [dimense] a certain department or in production units, you have to dimense it from something. And you decide what the dimension of it, the capacity of a certain department should be.
	But the problem we have is that the order intakes is going up and down. And when it's going down, you have better performance, of course, from all the departments. But when it goes up, the problem is you don't have any time to increase the capacity of the departments. It's too late to set it.
	And then you have problems in every department more or less. Some departments is more. You have all sorts of problems when the dimension is too small or to different units for the workload. When it's a small workload, of course, you have better performance. I think that's --

Female2:	But then it's important when you have a low workload that you get some good routines that you can follow and stick to when you get a higher workload because, if you know how you should work, then it's easier when you get more work. And it's -- you get less mistakes if you have good routines to follow.
Female1:	But how should we measure each department? It's very difficult to put a number there or percentage and deliver on time. I don't know. We can answer that, but --
Interviewer:	If I asked you, how would you do your job better, what would you say?
Female1:	How would I do my -- ?
Interviewer:	If somebody else could -- how can -- if you want to improve your work --
Female1:	Yeah.
Interviewer:	-- what do you expect of others to do better?
Female1:	What I expect others to do my work better. It's -- the one aspect is delivery on time. If I need to send something to the customer this date and I promised this date, then it's helping my work if I receive the documents or drawings that -- on that date.
	And also, one aspect is the quality. Is the document or drawing, is it correct so we can send it and it has -- doesn't have to come back? And so, on time and good quality improve my work.
Female2:	Yeah. For us, it's -- as it looks today, we almost always have to update the documents after it's been sent to customer. So, in that sense, it doesn't feel like it's so much internally because it's changing with the different customers. I don't know if we can put it harder against customers saying this is the document we would receive. And we cannot update everything that you comply on.
	I don't know. But from other departments, it's -- I need the drawings. As you said, I need the drawings on time to be able to deliver some of the documents on time. So, once again, it's the communication between the departments that needs to be improved.
	But I also need -- before I can start my work, I need all the specifications, documents from the customers. So, if marketing department could improve that, always receiving all the documents before we start work, that would help us a lot as well.
Male1:	As for the unit preparation and purchasing that doesn't involve that, when it comes to quality, I don't think -- I can do it better myself. When I look at the -- all the material I need, quality plans, drawings, the contract review and so on, it could be better. It could be better. But I'm so experienced, I can see where the faults are and adjust it. But sometimes, it takes time.

For instance, when it's design faults, it takes time to go down and get new drawings adjusted, go up, or if it's in the quality plan, what -- something mysterious, it takes time to go down here and clarify it. And also, if it's something with the customer, it takes time.

So, of course, if they were perfect, it would save time for me. I -- then I could do, on the capacity side, more. But as far as unit preparation, I don't make any mistakes. So, it can't be better. I think I made one mistake in spring, a small one.

So -- and that's the unit preparation part. On the purchasing part, there I could save some time. If I get rid of a lot of things, I help them with it in the workshop, purchasing pipes, small things. And that's -- that I have taken with me from earlier times. And I help the people in the workshop because I know -- I don't see anyone else who can do it.

But if I could get rid of that, it would be better. So, small adjustment from the purchasing side.

| Interviewer: | To your experience, how many mistakes do you discover in documents you get? |

| Female2: | You mean how -- like, how often I don't have all the documents I need? |

| Interviewer: | Yes, how often do you have the documents you don't need, or you get documents which are -- have to be clarified? Let's say it like this. |

| Female2: | I think it happens quite often, maybe 70 -- or I might have everything I need in 70 percent of the cases maybe. And for the rest of them, we need to ask for something. |

| Interviewer: | Yeah. Any idea? |

| Female1: | Only been working here for four months, but usually, there's always something that needs to be clarified for the customer regarding documentation or something else. |

| Interviewer: | So, only 0 percent is perfect. |

| Female1: | Sorry? |

| Interviewer: | Only 0 percent of the documents are perfect. |

| Female1: | Yeah, yeah. |

| Interviewer: | So, you have the impression that actually nothing which arrives need -- is -- as -- can be used as is. |

Female1:	Yeah, that's my impression. I think there's always something that we need to check or clarify.
Interviewer:	So, that means customer information coming?
Female1:	Maybe it's we take it for something, and then the customer has another opinion. So, if -- even if it's written -- something's written, then it can be that it's -- need to be just discussion and clarified between customer and us so that we --
Female2:	I think that our department has started to question more things that we did before as well. So, maybe --
Female1:	Yeah.
Female2:	-- that's why you feel that we always have something that we want to clarify.
Female1:	Yeah, but it's better to take it up from --
Female2:	Yeah.
Female1:	-- I think. So, it's good.
Interviewer:	So, my question was actually, if you submit a document, how often does the customer come back and finds a mistake?
Female1:	Oh, if I submit our documents.
Interviewer:	Yeah.
Female1:	They usually come back with something, but it can be something that they don't like, or they want to change the phrase in something, or they want to add something. And it happens quite often.
Interviewer:	So, always?
Female1:	Not always.
Interviewer:	75 percent?
Female1:	Yes, 75 --
Female2:	Or more.
Interviewer:	50 percent?

Female1:	-- or 80 percent.
Interviewer:	80 percent?
Female1:	Yeah.
Interviewer:	So, only 20 percent is actually usable from the beginning?
Female1:	Yeah.
Interviewer:	So, how many documents do you get which are good to use at the first time?
Male1:	It's different on different documents. For the order preparation, I need the quality plan. And it's okay when I get that. It's -- now, I'm talking about the condition today, not what it was two months, four months back. It's good. The problem is that, during the process, when I have passed it onto the workshop, then it comes changes very much on the testing part [unintelligible] testing.
	And so, when it comes to the contract review, it's getting better, but it's not so good, a lot of faults that I have to clarify.
Female2:	Well, when you talk about QP and you do the preparation, I think you always get it at the same time as we send it to you and you send it to the customer. And as [Female1] said, it's quite often that we have to update the QP. And every time we have to update the procedure, we also have to update the QP.
Female1:	Yeah.
Female2:	So, when you receive it the first time, it's never okay from beginning. So, there will always be --
Male1:	But at that moment, it's okay.
Female2:	Yeah, well, it's okay.
Female1:	The customer has to approve the QP but not a procedure.
Female2:	No, and if -- then you need to update the procedure because, if you right the procedure that we have written in the QP for the first time, then it will not end up with the same one as it should be in the end because we have to do changes all the time.
Female1:	Yeah, that's the problem.

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Male1:	And then, on the design part, it's all the time smaller mistakes, not so important.
Interviewer:	So, how often -- ?
Male1:	-- times it's grave mistakes, but it's not -- maybe one grave mistake in a half a year or something.
Female2:	What do you mean with large mistakes and small mistakes? What is the -- ?
Male1:	Small mistakes is in the part list, for instance, something wrong. You cannot laser cut it, or you say you should have a round thing rolled. And I know it's not possible because it's too small and such things.
	And also, it's drawing numbers have been changed around and such things. And grave mistakes is, for instance, you have forgot that you have to have a test piece on the capsule.
Interviewer:	How often is it that you have really good documentation? Is it in -- ?
Male1:	I would say 25 percent.
Interviewer:	So, 75 percent, you don't really have good --
Male1:	Yeah, good.
Interviewer:	That's work to be done.
Male1:	I have to investigate, sometimes very little, sometimes more.
Interviewer:	Okay. Communication was one discussion point, which comes up very often. And I have the feeling that you have a lot of meetings. So, I was wondering why communication is an issue if you meet all the time basically.
Female2:	Yeah, but it's -- sometimes you get information just by hearing it in the house, and it's not the correct way it goes. So, then you get -- you catch one thing there and one thing there. And then you get your own opinion about it and might not always be the correct one.
	And for example, I can receive e-mails from the customers, which I think you should receive. But since I've been involved with the customers before, I get those e-mails. So, then I have some information, which should be to someone else. And I don't really know who should get that information from me.
Female1:	Yeah.

Female2:	So, it's not always clear who should do all the different things and who should -- who is responsible for everything.
Female1:	Yeah.
Female2:	Like, if I get this information, of course, it should be the project manager. But is it someone else? Is it me who should give that information to this someone else, or is it the product manager or -- ?
Female1:	Think we're lacking a good communication plan --
Female2:	Yeah.
Female1:	-- where we describe who is involved with this project, who needs this information, and who -- how should the information go. And --
Female2:	Yeah.
Female1:	-- if there is a change, this is the action we're going to take, and this person is noticed and yeah.
Female2:	Yeah, and it could be something that I need to update a drawing, for example. And then, of course, I go to design department. But do I need to go to [Shen]? Do I need to go to -- I'm not to tell about that. And that's things you don't really know about.
Female1:	Yeah.
Female2:	So, it could be increased --
Female1:	Yeah.
Female2:	-- responsibilities and -- yeah.
Interviewer:	I understand define roles and responsibilities better?
Female2:	Yeah.
Female1:	Yes.
Female2:	Better. It's almost daily that you have something that you don't really know who should take care of.
Female1:	Yeah, work responsibility for each role. We don't have that.
Female2:	And I don't think I have seen a proper description of my role.

Female1:	Me neither, mine.
Male1:	Well, I think it's a lot of meetings on the different units or departments. And what is said there is, I understand, taken away to this room. And I don't know what this -- maybe with the information different [posts] bringing. But I think it's lacking in feedback from that.
Female2:	Yeah.
Female1:	Yeah.
Male1:	Especially when it involves the other department, it's very important comes feedback from our boss and that it's -- the quality department has said that about the problems that we discussed the other day. I think such things would reduce confusion.
Female1:	Yeah.
Male1:	Yeah.
Female1:	Or if we have product team meetings instead of department meetings, I mean, everyone involved in --
Male1:	Yes.
Female1:	-- certain projects.
Male1:	I made one thing. It was very interesting. When I was making the order preparation in the beginning in logistic, I asked the design manager if I could be in their morning meetings. So, then we made it -- I was first half an hour in their meeting. And then I came to our meeting. And then I knew -- because I need a lot of things from the design. I knew exactly what was on the way from them and what the problems are, special conditions, and so.
	So, this interacting between the departments, of course, you cannot build an organization where everyone is in the other -- going around --
Female2:	Yeah, but --
Male1:	-- in meetings.
Female2:	-- once in a while, you could go to --
Female1:	Yeah.
Female2:	-- to and to just find out what they talk about on their meeting.

Male1:	Because now, when I think about it, we are very logistic at their meeting. You're sitting there, audit department with their meeting.
Female1:	Yeah.
Male1:	And design has their meetings in the workshop there. But it's not communication between the --
Female2:	Not at our level since the managers are meeting here.
Female1:	Yeah, and then there's a risk that the information will be --
Male1:	And comes back anything, too.
Female1:	No, and --
Male1:	The meeting members, maybe something when it's very important.
Female2:	Feedback.
Interviewer:	So, what do we do right as a company?
Female2:	We produce the parts and deliver. I don't know. But we must do lots of things right since we --
Female1:	Yeah, we have a good product, so --
Female2:	Yeah.
Female1:	-- that's good. And customer is coming back. That's good.
Female2:	Yeah, I don't know. I have customers saying that they're happy with us and that we take care of them in a good way. And even if there is sometimes problems, we try to do something to solve it. And yeah, we're friendly to them and are doing a good job there.
Interviewer:	What do we do right?
Male1:	What we do very good is pre-HIP. And for the most, what depresses me that the design has so good performance when it comes to shrinkage, it's unbelievable that we have so few scraps due to shrinkage that is shrunk wrong.
	When you look back maybe 10 years, eight years, always every near net shape capsule is -- was thrown in the shrink. And it was either too big, or

the hole was too big, burst, or on the outside, it was too big. They had to machine away. But you never hear about it. And that's fantastic to me.

But on -- and also, the whole way to include the HIP in, but post-HIP has a lot to do. And it's new. We don't -- have not so long experience, three, four years. On the post-HIP, we have 30 years' experience.

Interviewer: On the pre-HIP.

Male1:   On the pre-HIP.

Interviewer: Yeah. Okay.

Female2:   But I think we have lots of experience in those. That's good.

Interviewer: So, what can we do better? Communication, yes.

Female2:   Communication, quality.

Interviewer: What does it mean, quality? We have a good product you just said.

Female2:   Yeah, we have a good product. But we have the -- or the problems that we have had has come because we haven't been -- we haven't really foreseen all the -- these issues. But now, we're more aware of it. And we can make something to decrease those issues I think.

Interviewer: What could we do better?

Female1:   I think we need to write down, implement routines so we know work responsibilities. And I also think we need a new system or to handle projects. Jeeves doesn't fulfill all the requirements, just like planning a project. There's so many steps, and we don't have a good tool for it.

                    And then communication, as we said, between departments and also communication from top management about strategy and plans and financial reports.

Male1:   I think we can do better with dimensioning the production as a whole. And I think you can do better with a production plan. And I think you can do better with post-HIP, the post-HIP [team].

Interviewer: What does it mean better, like organize it better or more suppliers, more -- I don't know. The word better is a really vast definition of --

Male1:   Yes.

Interviewer: -- something. I don't know.

Male1:	I think, most of all, the depend -- the ability of the delivery times. And also, you can do better on the cost side. And you can do better on the quality side that you don't make those very expensive mistakes because it's very easy to do them on the post-HIP side. And the chances for more is great on the post-HIP side.
Interviewer:	Okay.
Female2:	I think it would be kind of a dream that we send the documents and drawings to the customers and they should be approved immediately, not without getting back to us. So, I -- but I don't know if we can work more on that to -- like, heat treatment procedure, for example. This is the one we have. It is sent for -- to the customer for information. But it is qualified. And it -- we know that it works well. So, it's not up for changes according to what everything the customer says.
Female1:	No.
Female2:	But I don't know if it work like that because, now, we do everything the customer says.
Female1:	Can we send it already on the quote stage perhaps?
Female2:	Maybe.
Female1:	This is the procedure. You have to accept.
Female2:	But when -- and we're working on the standardization to decrease the mistakes in the documents. So, I know it will be better.
Interviewer:	Okay. So, why do you come to work every day?
Female2:	Because I think it is -- I don't have the word in English. Well, I get -- it's lots of variation. And I like that. And I like to have a discussion with the customer, even if they have another opinion. I like to discuss about it. And if I know I am right, then it's -- I think it's interesting to try to convince them, tell them that -- what -- find ways to tell them and to get them understand what I mean.
Female1:	I like to give support and service to the customer, interact with them. And I have good colleagues also. And it's an interesting product, and I'm learning every day. So --
Female2:	As you said, the colleagues are very important. And they are good here.
Female1:	Yeah.
Male1:	For me, with 1.5 year before I retire, so of course, the most important is to get my pay. But also, of course, I'm curious to see what happens with the company -- how it travels along, what will happen to it. And it's very

interested to see it from the inside, not only from the outside, what will be as I am retired.

Female2: It is interesting that it's quite new what we're doing here. And you can follow what happens. Everything is not set, or it wasn't set when I started here. There are things to improve.

Interviewer: Well, I don't have any more questions. Do you have any more comments? No?

Male1: No, I have one. I think somehow it must be clarified the organization and what the different managers, what they do. And then I don't mean only in Surahammar, more how this company's connected to the rest of Bodycote. For instance, as I mentioned earlier, how does this company management work? Is it a board of directors? And so, that part I think, to me, is very important and I think also for everybody to know, how is it organized, the whole thing?

Female1: Yeah.

Interviewer: This is the only comment. I have one more question. It just came to me.

Female1: Yeah.

Interviewer: I have looked at your -- watched you all. Most of you have taken disposition during the conversation. That means you cross your arms. Is this because you feel uncomfortable with answering the question, or did I put you in an uncomfortable situation where you felt you could not speak freely, or was the subject disturbing you? I'm not sure because all of you have crossed the arm.

Female2: But I think --

Interviewer: At least two people are sitting always with cross arms.

Female2: But I always do that.

Interviewer: So, you always feel uncomfortable.

Female2: No, I'm not uncomfortable.

Male1: I think it's a sign for -- that you're relaxed and comfortable.

Interviewer: Okay.

Male1: I think so, in Sweden, yeah.

Interviewer: In Sweden, you're allowed to.

Female2:	If you would see me sit more like this or do things --
Interviewer:	Or a knife in the hand?
Female2:	-- then it's not --
Interviewer:	Okay. I was just wondering because, in general, from body language perspective, this is a very defensive position.
Male1:	But all body signs are different in different countries.
Interviewer:	Yeah.
Male1:	Not always, but often, very often.
Interviewer:	Okay. All right. Thank you very much.
Female1:	Thank you.
Female2:	Thank you.

[End of recorded material]

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[Start of recorded material]

Interviewer:	Okay. Thank you for joining me today. Sorry for the no lunch. I actually wrote her on Monday/Tuesday that she had to provide some.
	But as I explained, I would like to do a semi-structured interview. That is an interview where I just give general guidelines. That means you saw some questions on the back of the guidelines here I've gotten. The participation's voluntary. So, I cannot force you to say anything. And it's obviously confidential. I will not distribute information you give me today to anybody else, nor will it be shared with Bodycote as a company.

It will, though, be transcribed into a document and then published maybe in 2016 or something, will be difficult to find. So, it's only stored in one place in the UK. So, you really have to really want to read it.

I start this interview -- I had this interview with several other groups. And I always start with a question. And that is, what do you think is the objective of an organization like Bodycote? Why does it exist? And why are we here as an organization, Bodycote plc? Anybody who wants to pitch in first.

Female1:   To make money and both for all the employers and for the shareholders.

Female2:   Yeah, I think that is the purpose for, like, every company to, yeah, money to the owners and the shareholders. I see that.

Male1:   Anyway, [unintelligible] to make rent of the monies they invest [unintelligible].

Interviewer: Everybody speaks about strategy. So, how would you define strategy?

Male1:   To use heat treatment to grow in the -- in this business.

Interviewer: But as a general thing, what is strategy for you?

Male1:   Yes, it is the -- to use the technologies Bodycote have knowledge about to -- how to increase our business.

Interviewer: Any opinion about strategy? What is strategy?

Female2:   Obvious and in general, like how to achieve the long-term goals that the company have and how to [unintelligible] the more money for the owners.

Interviewer: Yeah. There are no right or wrong answers.

Female1:	I say, yes, the same, and plans and guidelines to achieve goals and policies and so.
Interviewer:	I was going to say it's -- there's no right or wrong answers. It's actually more to discuss what you feel is appropriate or what you think --
Female1:	Yeah.
Female2:	Yeah.
Interviewer:	-- actually. It's not a quiz or quiz you. You have knowledge about the strategy of Bodycote. If you look at Bodycote, do you know what the strategy is of Bodycote or Bodycote HIP?
Female2:	Bodycote HIP.
Male1:	PF we're speaking about [unintelligible] HIP [unintelligible].
Interviewer:	Bodycote or Bodycote HIP.
Male1:	Bodycote HIP, the growth in HIPing.
Interviewer:	Any other -- and there's no wrong or right answer. What do you think?
Female2:	Yeah.
Interviewer:	What do think Bodycote's strategy is, or what is our strategy, or do you know the strategy?
Female2:	To satisfy the customers' requirements and that -- yeah.

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Female1:	And beat the competitors.
Interviewer:	Yeah, could be.
Female1:	Yeah.
Female2:	Deliver on time with the right quality because we are, like, delivering products that are used in bigger systems. So, it's, like, important to deliver on time and the right quality because it's going to be for a long time. So --
Interviewer:	Right. How does this -- your perception of strategy influence your work?
Female1:	The daily work, to improve the quality and the materials and in documentation, to be more correct in the first place, and deliver it faster, short delivery time, both for the documents and the parts at the end.
Male1:	[Unintelligible] the same [unintelligible] make our own indicators what we believe are the form of the strategies and more understand your management for making, as you say, short lead time and correct quality and type of work that very hard.
Female2:	Try to meet and handle all the requirements from the customer and implementing our business.
Female1:	To, in the first place, understand the requirements.
Interviewer:	Yeah.
Female1:	That's the first.
Female2:	Yeah, of course, yeah. That's right.
Interviewer:	What do you think then the main business indicators are? I have a conference call at 1:00. So, what do you think we will be discussing?

Male1:	Growth.
Interviewer:	I'm asking questions, not answering. What do you think we will discuss? What is the company looking for?
Female1:	More orders.
Female2:	Money.
Female1:	Shorter lead times.
Female2:	Economical goals and how it will look in the future and --
Female1:	Budget of next year maybe.
Female2:	Yeah.
Interviewer:	Could be, yes. If you look at yourself, how do you participate as a person in the executed -- execution of the corporate strategy? How do you see your role there?
Female2:	Try to, like, in my case, deliver the documents on time and make sure that we have, like, understand the requirements and, yeah.
Female1:	I agree because we have the same --
Interviewer:	Yeah.
Female1:	-- work department.
Interviewer:	Okay. So, what is important for you in your work? What is important?

Female1:	To have a good system to work in that's right first time and a smart assistant to be able to do right at the first time with the documents and deliver it faster.
Interviewer:	Okay.
Male1:	Yes, and also, to understand the future demand from customers so one can implement that, too, some proper way. For example, discussion of the customers, different customer groups, new type of products, and sources so that we can have good organization to do that.
Female2:	I think, in the daily work, it's also important that you have all the information from different kind of groups in the company. So, you don't have to, like, ask for information that you know where to find it, and you don't have to put a lot of time, not just searching for information. It's important to know where to find it [unintelligible].
Interviewer:	Okay. If you look at yourself, how would you like to be measured? How would you say your performance could be measured?
Female2:	I think --
Interviewer:	What is a key indicator which you see to be important? If other people look at you, what would they want from you?
Female2:	I think it's a bit tricky because, if you never look at -- like, in that case, if I have got documents ready on time, it also depends on, like, other people because I have to have information from other. And it's just -- not just me. So, it's a bit tricky how to, like, master it on an individual level because you are so dependent on others also.
Female1:	Yeah, I agree. We need [associate] information from other departments to post our documents to send to customers. And all our instructions could be more easier to find how to fill -- fulfill the customers' requirements in our purchase order to our subcontractors, to our suppliers. And we could do -- develop that to have an easier system to -- for all these instructions that -- all procedures that the customers need to approve. And always a long time to get it back and --

Interviewer:	So, from the customer?
Female1:	Yeah, the customer doesn't approve. We get it back. We do another revision. It's going on. And we have a lot of procedures. And we need to sort it up.
Interviewer:	Is there any -- how would you like to be measured?
Male1:	Measurement. I would like to be measurement so that I can be sure if I make a good key indicator that really good for the company also about turnover there or some piece of my report for us to grow or take new orders or something like that, [chop it all] and good connected to that, but also to the owners of the -- can be measurement, that we can be measurement in good ways so I can see all on good money this month also.
Interviewer:	How do you know that you did a good job?
Female1:	We don't know.
Female2:	Think one way should be when it -- customer are satisfied with our product and if we have -- if they would like to recommend it, recommend us to another company. I think it's a good sign.
Female1:	And they order more from us.
Male1:	I think growth of the -- really that we have close contact to customers or the customers' feedback is very important for us to see we do a good job.
Interviewer:	Okay. How would you like to measure your colleagues? What do you expect from your colleagues? Don't be shy.
Female1:	Okay. No --

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Female2:	To give the right information and also, if they got, like, informations from the customer how it wanted or something, it should be spread to all the employees or the -- that should be from, of course, and that they give me the right information when I need it.
Female1:	Yeah, and to have all informations during the order, the process. So, when we finally got to the final inspection, you need to know what happened all the way. So, that communication between departments could be better.
Female2:	That the information is available or all that needs it's [unintelligible].
Female1:	Yeah. And how do we measure them? I don't know.
Interviewer:	I don't know.
Female2:	I don't know if we have that kind of measurement. I don't think so.
Female1:	No.
Interviewer:	And how would you do it? On time in full?
Female2:	Yeah.
Female1:	I don't know how to measure them.
Interviewer:	Any ideas or -- I don't know -- suggestions?
Male1:	Suggestions. I don't think they have enough indicators that the measurement -- and there can be very few indicator that can be wrong, prioritize, though, if you don't have a very, very few indicators and don't have to manual [unintelligible] not optimize [unintelligible] can be strange if you optimize for OTIF. There can be quality products if [unintelligible] need to have a number of indicators of [cover] or important things [and they can get] splitted up in different ways coming up in a way that -- in at least the right way.

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Female2:   Yeah, I think it's important, like, to highlight a few of these key points and that it will come from the chiefs and so on so you know what is important and what is focus now -- for now and what we -- which number of key points we try to get down or up, depending on what's the focus on -- what our problem is as a company.

Male1:   They aren't exactly behind you [unintelligible] see that when you're talking indicators [unintelligible] one is OTIF, and one is [unintelligible] I think.

Female2:   Yeah.

Male1:   It's not enough to drive our business. We do this, too.

Female2:   But it's also important that it's, like, on some individual level and let you know how to change the numbers and how -- what is your part in it, and why is it important?

Interviewer: So, do you know what is expected from you? That's already a no.

Female2:   Sorry?

Interviewer: Do you know what is expected from you? If it takes you 30 seconds, that's probably a no. Or how do you know what is expected from you?

Female2:   I think you know in, like, main guidelines you know, but maybe not specific and how, and what should you do to improve it? You know that you are expected to -- what to do in the main guidelines to say that -- maybe not so specific and what you are expected to improve. But this is [unintelligible] there.

Interviewer: You have been here such a long time.

Female1:   Yeah.

Interviewer:	Do you know what is expected from you?
Female1:	Yeah, everything. Well, as a document controller, I think I know. And we have all the documents with four post-HIP and pre-HIP and expecting to have everything for final inspection. But I think I have these days always. So, they're expecting me to, for example, approve all powder that we buy and then certificates and all that's for final inspections. But it doesn't say anywhere, "This is your, yeah, working day."
Male1:	[Unintelligible] what to expect from me. The problems can be worked [unintelligible] prioritize away if one had too much some expected.
Interviewer:	So, the priorities are not always clear?
Male1:	No.
Interviewer:	So, what do you expect from your manager?
Female2:	Guidelines to [prioritate] --
Female1:	Yeah.
Female2:	-- I think.
Female1:	That would -- that isn't always clear.
Female2:	No.
Female1:	It changes from day to day.
Female2:	Yeah, and I don't think it's, like, uniform, that it's from high levels that it's -- this is, like, focus. So, this is -- it's -- depends on who you talk to and where you listen and where you hear things.

So, that's a bit tricky sometimes, as you -- because, as you said, it's a lot of things to do. And the tricky part is how to prioritize. And I think it's important that you have some kind of guidelines that everybody or absolutely the same thoughts about priority because, if everybody prioritize different things, it -- I don't think it's good, and it will end up not be good for the company.

Interviewer: I had a conversation with some of your colleagues, actually quite a bit now. My next question is more in detail. So, many people have said that they have problems -- I rephrase. If you get documentation, how much of the documentation's actually complete, that you actually can finish it in one step?

Female2: I don't know if I understand.

Interviewer: If you get a new project --

Female2: Yeah.

Interviewer: -- and you've got the -- get the documentation for the project --

Female2: Yeah.

Interviewer: -- and how much of the information in the information you get initially in the first time somebody gives it to you, how much of the information is actually complete that you can continue working on this without additional --

Female2: Okay.

Interviewer: -- inquiry?

Female1: It's not completed the first time.

Interviewer: So, none of the information is complete at the first?

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Female1:	Yes, but not all.

Interviewer:	What does it mean not all? You get documentation, but it's -- you still have to inquire more?

Female1:	Yeah.

Interviewer:	On everything.

Female1:	No, not on everything, on some place, in some place. I can't say it any --

Female2:	But in most of the cases, you have to ask some -- for some clarification or something like that, yeah. But I think a bit of the problem also is that we don't have, like, guidelines how to do the daily -- some of the daily work. And maybe because it's, like, document handling -- I don't know -- that I think it's pretty new for the company as Bodycote has just do the HIPing, and then it's final.
	But now, we have so much more information to handle. And maybe you could -- the system not really can handle all the information that we should need with all the documentation that we have now because we have not the kind of business than before if I have --

Female1:	Yes, that we had before two or three years. So --

Female2:	Yeah. And I think it's not always clear how to, like, implement new revisions from a customer or customer changes or that kind of things that could be more clear from every department how to -- like spread the information and so on. And that takes some time and energy I think.

Female1:	No, and routines.

Female2:	Yeah.

Female1:	Documented routines how to do -- if this, go there. If not, go there, and so on.
Interviewer:	Like a process flow.
Female1:	Process flow, yes. We have process flow, but kind of main process, not the daily work, if this happens, so what are we doing to do? So, maybe [we still] --
Female2:	I think so.
Female1:	-- as we have these lean activities, I think we --
Female2:	Yeah.
Female1:	-- approve.
Female2:	Yeah, it shows, yeah, and it show that we have some things to work on to get more standardized or -- how to say -- internally also.
Female1:	Yeah.
Female2:	I think --
Interviewer:	So, how much of the documentation you get is complete?
Male1:	I believe in way 80 percent or something. I don't know exactly. But the other 20, take a look of the impact of our work. We take a look, influence our work very much. So, the fields are there a lot of job with it. We have start a log in [unintelligible] all of what is not completed and what to go through [subtext] from two [basement] is six of our heat treatment have not been completed and six of our heat treatment. And I don't know exactly what it is [that it means] that we had too many so [must] not complete it.

Interviewer:	I didn't understand what six.
Male1:	Six heat treatment. I don't know. Our documentation has not been completed for six --
Interviewer:	Heat treatment.
Female2:	After --
Male1:	-- heat treatment [unintelligible].
Female2:	Out of our money.
Male1:	Sorry?
Female2:	They lack information of --
Male1:	They lack information or the wrong information or something.
Female2:	In six.
Male1:	In six [unintelligible].
Female2:	-- how they measure [unintelligible]?
Male1:	Maybe 15 I think, but not that -- too many then, between 10 and 15.
Female2:	Yeah, that's really high.
Male1:	But there's been -- wait to see what it is also.
Interviewer:	So, the heat treatment specification is not finalized. So, for six batches of heat treatment, we are waiting for --

Male1: Like something had been wrong in our documentation to them.

Interviewer: To them.

Male1: Or they probably have been so long time. But I saw that from telephone [unintelligible] write it down so I can send it out to correct department or for us what have been wrong [unintelligible].

Interviewer: Yeah. So, as a company, what do we do right?

Female1: We must do something right because they are -- customers mostly are satisfied. Then we get new orders. But what is --

Interviewer: How do you know the customers are satisfied? They tell you they are satisfied?

Female1: I don't know. We don't measure the customers' satisfaction. And that's -- I think that we need to do that. We have done that for -- yes.

Interviewer: Yeah, so what do we do right as a company?

Male1: Frankly, listen a lot to our customer. We try to have [unintelligible] time and maybe too much many times.

Female2: Yeah.

Male1: So, the --

Female2: That's a really good point, yeah. It's actually -- I think we sometimes, like, try too hard to do everything that our customers want. And that gives us some problems, like delivery times some time actually. So, yeah, I think also that's a good point.

Male1:	I mean, [unintelligible] customer want to have something, some -- missing something also. We have no [unintelligible] important for the customers.
Female2:	Yeah.
Interviewer:	You have experienced the beginning of the year. It was very exciting. I don't know if everybody was here. Well, I don't know when you started.
Female2:	In January.
Interviewer:	January? You were here then? We had a lot of issues going on at this time. Why do you think we had all these issues?
Male1:	Not [broke down] the customers who required not the correct way and the wrong specification to our supplies, too wide specifications. So, we need to have -- get more six sigma thinking or with more -- better margin up so they do --
Female2:	Yeah, I think some things are, like, unclear. And then you just go on. And they, like, yeah, it will be good. And instead of, like, say, stock, we don't know how to do it, or we need more information. And I don't know.

Sometimes, we want to deliver in time and want to, like, do it with more satisfied. And I think, sometimes, it -- we are the bit too fast and say, "Yes, okay. Okay." And maybe we have to take step back and do -- have all the information. Do we -- and not be afraid to answer the customer for clarification if we don't understand something.

And also, the internal information I think could be better because, sometimes, it creates problems because, as we said earlier, we need not have, like, routines for other thing. |
| Female1: | And it's always in a hurry, and we need to deliver in time. That's the main thing. And the quality is the second. And that's not good. So, we need to change that. Of course, we should deliver in time. But let's stop and see what's the quality problem we have. Is it -- why is it -- see the root cause and make -- |

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Female2:	And implement changes out of it.

Female1:	Yeah.

Female2:	I think it's --

Female1:	Exactly. There are too many NCRs. And we need approval. And we --

Female2:	Yeah.

Female1:	-- do not change the -- analyze the root cause and change anything. We just repeat the bad things and, "Oh, another NCR," but it's going to be approved. And we go on. So, that's something to work on.

Interviewer:	What I --

Female1:	[Unintelligible.]

Interviewer:	I -- from my perspective, I always wonder that you have a lot of meetings. Yeah, during the day, it's very difficult to get hold of anybody because they are in some kind of meeting. So, people speak about a lot of information. But my perspective is you're meeting so much, how can't you have all this information?
	So, my question is, how do you perceive the number of meetings and the value you get out of these meetings?

Female2:	In my role, I don't think I have so much meetings. So, I can't say anything about it because I'm not in some meetings.

Female1:	No, no, not me either. I think it's because of -- that we don't have good routines and think of the root cause for that delivery, we need to have short meetings how to solve this problem, how to solve this, and so on. And we don't --

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Female2:	So, then we don't have time to, like, reflect on how to implement the [unintelligible] or not doing this again. We, like, solve it for now.
Female1:	Yeah.
Female2:	And then we have [unintelligible] things to do.
Interviewer:	How do you like your meetings?
Male1:	[Unintelligible] of course, but I have a lot meetings, but I'm not sure I go in on the [unintelligible]. And I think I don't need to be in every one of them. So, [unintelligible] away some meeting source or contract review, was invited to go, but I don't go [unintelligible]. So, but I think it's -- I think I need these type of meetings. It's got to be short. And it's got to be relative [unintelligible] very clear agenda what we're doing. And we must be prepared [unintelligible].
Interviewer:	So, is this the case or not? Are you prepared, and are these people prepared when they come, or we go out and say, "We have to rework and come back in a week"?
Male1:	It's happened. There'll always be better and better. But [unintelligible] is to add to one example, and we'll go in more [unintelligible] this. But [unintelligible] better. But we have more to do to be completely --
Female2:	Yeah.
Male1:	-- prepared for [unintelligible].
Female2:	Yeah, absolutely.
Male1:	We need to have very clear agendas so we know what expectations [unintelligible] these meetings.

Female2:	Yeah. I think another problem is also that we don't have a, like, system that helps us with all the documents and all the updates because we have to, like, spread the information manually. And we don't have -- at least I don't see it like that that we have a system to help us to make sure that we have the right addition and so on. We have to, like, go in manually and change it.
	And as we grow as a company and get more orders, it will get more and more information that has to be handled. And I think an important thing is to have some kind of help or something -- a system or something to help make sure that everybody has the latest addition and so on in order to find information.
Female1:	You can't trust the system to 100 percent. You need to check it --
Female2:	Of course.
Female1:	-- from them.
Female2:	Yeah.
Female1:	Besides.
Interviewer:	So, how much time would you gain if you had a system, which tells you, in this project, these are the specifications we have received? These are our specifications.
Female1:	One hour a day?
Female2:	Yeah, yeah, I talked about something like that because, a lot of time, it's just actually for information and inform.
Female1:	Checking.
Female2:	Checking and --

Female1:	Checking if it's right.
Female2:	Yeah. And I think the -- a bit of the problem is also that it's not you that checking information. It's others that check the same information because they want to make sure that it's right and everybody knows that we can't really rely. So, I said many are looking for the same thing. And it's, like, a waste of time.
Male1:	I don't -- I also check the [unintelligible] more or less, I mean, specification [unintelligible] contracting, of course, [unintelligible]. So, the -- but I don't see [unintelligible].
Interviewer:	So, we cannot trust our own documentation?
Male1:	I'd say with six -- I know for a fact it was six documentation, also [unintelligible] heat treatment [unintelligible].
Interviewer:	So, how would you improve the current situation or performance? What would you do? Do you feel encouraged to do improvements?
Female1:	Hope these lean activities would help us.
Female2:	Yeah. And get more, like, structured ways to work and everybody know how to implement changes, for example, and how -- yeah, how to inform others or where to find information, more routine something is one important thing.
Male1:	I think also the order everybody wants must be very careful and even job to next. And we really need to be sure deliver correct --
Female2:	Yeah.
Male1:	-- work to next part.

Interviewer: Okay.

Female2: And then it's also important to know what is expected from you, what is my -- where -- what information should I put where, and so on, so you know what -- also what other expects or information from you.

Interviewer: Is it clear to you what you -- I mean, I come back. Is it clear to you what the expectation is and what you can expect from others?

Female1: No.

Female2: No.

Male1: Not true most of the time.

Interviewer: Okay. But I have to -- I have no more questions.

Female1: Okay.

Interviewer: Thank you very much for participating. I will speak with [Emma] that she provides lunch for you on Monday.

Female1: Maybe it's downstairs.

Interviewer: Maybe it's downstairs. Maybe we have a look downstairs, and it's there. So, thank you very much.

Female1: Thank you.

Female2: Thank you.

[End of recorded material]

10.11   131120_001_FOCUS GROUP 6

[Start of recorded material]

Interviewer:	So, as I said, we will have a little discussion about strategy and how you perceive strategy. And it's obviously confidential and voluntarily. So, you -- if you feel you can't participate and don't want to say anything, that's okay.
	The -- so, the first question I always ask is, what do you think is the objective or the goal of an organization like Bodycote? Why does it exist? Why does it exist?
Male1:	To make money.
Female1:	[Foreign language].
Male1:	[Unintelligible] [fits] Bodycote.
Female1:	[Foreign language].
Male1:	To make money.
Interviewer:	To make money?
Male1:	For the owners.
Interviewer:	Okay.
Female1:	[Foreign language].
Interviewer:	Translation?
Male2:	Be the biggest company.
Interviewer:	Okay.
Male1:	To grow and get bigger.
Interviewer:	The -- so, how do you define strategy? What does it actually mean for you, strategy?
Male2:	It's a goal for the company more or less I guess.

Interviewer:	There's no wrong and right answer. I mean, I could -- let's -- I was wondering what your opinion is.
Female1:	[Foreign language].
Male2:	And a board.
Female1:	[Foreign language].
Male2:	What was the question exactly?
Interviewer:	What -- how do you define strategy?
Male2:	[Foreign language].
Female1:	[Foreign language].
Male2:	Hard question, difficult.
Interviewer:	I know.
Male2:	I don't know.
Interviewer:	There is no wrong and right answer to this. I mean, you know there is, like, tons of literature and books and stuff on strategy. So, I doubt that anybody else knows what strategy really means. But if we speak about -- if strategy is some kind of goal, what do you think the main indicators for the HIP PF business are to if we speak in -- with Stephen Harris, what do you think he would like to know about the business and the monthly or long-term business? What would he like to know?
Male2:	How much money we make probably and, yeah, if we are growing, getting bigger and better.
Interviewer:	What does mean better?
Female1:	[Foreign language].
Male2:	Yeah, safety, more safety and --
Female1:	[Foreign language].
Male2:	-- more effective.

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Interviewer:	Okay. Yes.
Male2:	Yeah, I'm just thinking if he really wants to know. I was thinking about the problems or stuff that is not going right. But I'm not sure he wants to know it. He maybe just wants to know -- as a leader, I would like to know if something is wrong. So, that information I think I'd like to get -- but there's also the safety stuff because that's always --
Interviewer:	So, things going wrong. We had a very turbulent 2013. So, it was very -- lots of things were happening. I don't know how you saw that. How did you experience -- ?
Male2:	What -- ?
Interviewer:	-- 2013, like the start of -- end of 2012 and start of 2013 with all these orders and all -- we had a lot of problems at the beginning of the year.
Female1:	[Foreign language].
Interviewer:	So, did you have the same feeling that there was a lot of things -- ?
Male2:	Problems with orders and --
Interviewer:	Yeah.
Male2:	Yeah, [foreign language].
Female1:	[Foreign language].
Male2:	So, the start of the chain, the whole production chain and production and manufacturing chain from all this -- from the beginning. It's -- the problems got -- in the end, like in production, you mean? Yeah, then it's okay. But it was in the beginning that there's [unintelligible].
Female1:	[Foreign language].
Male2:	That's better, also needs to be a place to do it.
Male1:	I myself haven't noticed so much because I'm not in -- directly in the production. I'm not specifically -- of course, I can see that -- I can see a frustration of some people, the rounds. I can see that something is going on. But I'm not so affected myself about if the production is halted or -- I don't see it too much. So --
Interviewer:	How did you live the last eight months or more?

Male1:   I don't think it's so bad. I -- of course, we have that order with the Singapore order when the guy -- Stephen was here. Yeah, he was a little stressed. But I didn't think that. So, that's dangerous. It's okay.

Interviewer: Okay. What do you think the role of managers or senior managers are in performance of a company?

Male2:   Think it's very important. I mean, they -- it's very important they are --

Female1:   [Foreign language].

Male2:   [Foreign language].

Female1:   [Foreign language].

Male2:   [Foreign language].

Female1:   [Foreign language].

Male2:   Yes, all levels of leaders, or -- ?

Female1:   [Foreign language].

Male2:   It's really important.

Interviewer: What is important? What do you want from me?

Male2:   Yeah, okay.

Interviewer: What do you need to know from me, if I -- well, I'm not sure if I'm senior enough or --

Male2:   I would like to have pretty clear directions and, let's say, the same directions so I can see it today. One day, it's one direction. And the next day, you should do that. And next day, it's not important anymore we do that. And that is pretty frustrating for me because it's all the time changing. And we don't have a straight line. Like I said, strategy is probably missing for some. Smaller, I'm not looking for whole kind of -- in my view, it's just changes all the time, just getting --

Interviewer: So, is it -- what is missing, the clear priorities, clear -- what do you miss? I mean, strategy is -- like, we look at three years. So, do you think something about -- ?

Male2:   Yeah, for the big -- that three-year strategy, that I think is pretty clear. I mean, we know, okay, from my -- in my budget, we want to invest in that. Well, this is a problem. We should do that as long. But then for the daily plan more or less, we get -- but it has also to do with my own -- my work

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situation since, if the HIP is breaking down, of course, I need to just drop everything and just go there.

So -- but also, I get some direction sometimes that, one day, it's very important. Next day, it doesn't matter more or less, that --

Interviewer: Yeah. What do you expect from your boss to tell you?

Male1: Not much.

Interviewer: That's nothing.

Male1: Yeah, that's the best. No, no, not so much actually. I want to work -- for me, it's nearby. Today, this week, next week, that's the only thing I see. And I don't -- for myself, I don't need that much from my boss in my daily work. So, I don't -- and my boss's boss, you and the higher guys, I don't really need anything for myself.

Interviewer: So, there's no questions you have.

Male1: No, not --

Interviewer: You have some questions?

Female1: [Foreign language].

Interviewer: I understand that lot of confusion about priorities. One day is like this, and one day is like that. There is no clear priority.

Female1: Yeah.

Interviewer: Yeah. Okay. So, what is the strategy of Bodycote?

Male2: To make money.

Interviewer: Okay. No, but what do you think they are focusing on? I mean, making money, yes, everybody --

Male2: Making --

Interviewer: How -- ?

Male2: Make the customer happy and deliver on time and deliver right parts and right quality to probably the lowest possible price for ourselves. I mean, production costs, well, should be --

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Interviewer:	Do you know, I think, any markets or any specific markets they are focusing on? I think a little bit oil and gas here. But --
Male2:	I only know oil and gas.
Male1:	I mean, we look at Bodycote as a whole company. It's the HIP unit or for the whole heat treatment [unintelligible]?
Interviewer:	What do you -- yeah, what do you think Mr. Harris's strategy is or -- ?
Male1:	Okay. His view.
Interviewer:	And then you can elaborate on here, whatever it is.
Male1:	I don't know exactly what type, I mean, what we're focused on. Again, of course, we will do the job for anyone if possible. But we're probably focusing and trying to find customers in some areas. Oil/gas is probably one of them. I mean, aircraft industry must be a pretty big one for Bodycote.
	And also, the industrial -- I mean, like, Siemens turbines and stuff and the industry side must be, of course, pretty big for Bodycote, for HIP sites anyway.
Male2:	I think the most oil and gas, what I know. So -- and of course, the strategy must be to get bigger and not only oil and gas I suppose, so more and more are the things that we can do. I don't know what it is, but --
Interviewer:	Right.
Male2:	-- I think we will try to get [unintelligible].
Female1:	[Foreign language].
Interviewer:	And the customers gets wider. Okay. So, if you think about how you would like to be measured yourself that you know you did a good job, how would you like to do that?
Male2:	For me, it's -- what we do today, we are measuring the welding meters per working hour. That's -- for my group, not for me, but for my group. And that I think is okay and the quality of the stuff we are making [unintelligible] percent and not the quality. Otherwise, I don't know.
Interviewer:	So, if you measure this, do you see that people actually look at the numbers, or do you look only at the numbers?
Male2:	Probably only.

Interviewer:	Okay. I mean, we measure kilos filled per man hour probably.
Female1:	[Foreign language].
Interviewer:	Filling.
Female1:	[Foreign language].
Interviewer:	Here I did not.
Male1:	Okay. It was about bringing all people on the floor would say more or less to be more responsible to make them feel more responsible and feel more freedom more or less I guess and to make them work better. But yeah, so that's --
Interviewer:	How so? How? I'm curious.
Female1:	[Foreign language].
Male2:	Responsibility.
Female1:	[Foreign language].
Male2:	But there's next time and growing.
Interviewer:	Growing. Okay.
Female1:	[Foreign language].
Interviewer:	But are you motivated if you see, okay, you have to achieve a certain goal, but kilos per man hour or meters per man hour, is this something which is motivating, or is this just to -- measure to be measured?
Male1:	It should be both ways. But I can see some of the guys. They are getting stressed by it when they say, "Okay. Welding 40 centimeters per hour, and we want to get it faster." Oh, and they get stressed out, some of them. Some of them maybe get motivated, but not all of them.
Interviewer:	So, what do you think is motivating them?
Male1:	That's very hard, very hard question.
Interviewer:	Okay. Growing. I understand growing and more learning and more responsibility. But then the question is how -- what is -- I mean, how -- what to do is what is motivating.

Male2:   I think it's different for different people. People want different things.

Male1:   Some of them are -- of them, some are only interested in money, more pay
                of the higher salary and --

Interviewer: Right.

Male1:   Many of my guys are just like that.

Male2:   I think it's very difficult also. Some people want to do the same thing every
                day. I mean, certain people from some companies, and they'll make
                5,000 units of one thing and just put one in and the [stance] would
                [between] bigger. And they are very happy with that. They don't want to
                change it. They want to stand there every day, just do that. And some
                people want to do different things every day.

                And I don't know if it's possible to have a group and have individually set
                things more or less for the people if you can use -- because I saw this at,
                for example, at [Avior] on the service department. They were always
                travel. It was travel or no travel. And people -- some people want to
                travel a little bit and be home, like be away 70 percent and be home 30.
                And some wanted to be out 100 percent. And then some, they're
                traveling 10 percent.

                But this couldn't be done. And that's why they have 70 percent now
                change of personnel in service department [unintelligible] since they can't
                be flexible enough to have people have their own settings a little bit.

                I mean, of course, you can't say, "Okay. You can travel 10, and you have
                90." But maybe they can have a friend they can -- okay. You can
                choose in between 70 and 30 maybe. So, you kind of give them a little
                bit more flexibility and make them suit their needs. And that would have
                helped a lot in that case.

Interviewer: So, what is motivating you?

Male2:   I like it when I get -- I mean, I learn new stuff. That's from me. I want the
                whole time to learn new stuff, to get better, and to optimize. I just think
                back, when I was standing at [A&B] at the production line doing this
                electrical [cubicles], it was same there. We didn't -- how are they going to
                measure us? I mean, we were standing in a line. So, even if I worked
                harder, I get something on the feeding side. They just put a cube on the
                production line. And it didn't then fit me at all more or less. I mean, there
                was no numbers to tell which one was good and bad.

                Of course, we have this [stample]. We -- on the page for that, it showed,
                okay, you made station number one. And you put your -- you made this
                line. So, if there was something wrong, they could see who was failing in
                line and maybe not fire him, but just tell him, "Hey, you're doing wrong,"
                and just to find the problem, try to get it high quality.

                But I think the most challenging there or what was motivating me to do
                better stuff is just my own internal will to do something better all the time.

	So, I was trying to fix the schedule. I didn't mean to make them look perfect. I mean, was many ways to build the cubicle. And there was nothing the company really could do in that case to make me do this -- it was my own decision to do it. I don't know what -- I mean, what --
Interviewer:	So, what is motivating you?
Male1:	To getting better and to get -- the group to get better and faster and better quality.
Interviewer:	Okay. Meaning of better is what?
Male1:	Doing more [folds], better quality on the --
Interviewer:	So, more volume, more --
Male1:	More volume and better, yeah, yeah.
Female1:	[Foreign language].
Interviewer:	Same?
Female1:	[Foreign language].
Interviewer:	More [unintelligible].
Female1:	[Foreign language].
Interviewer:	Okay. So, more and better, is it right? Fill more powder and then create more capsules?
Female1:	Yes, yep. [Foreign language] positive feedback [foreign language].
Male2:	Leadership more or less.
Interviewer:	So, it, as you said, is you have to speak with a few people to get feedback, what they do good, and they can grow.
Male2:	Recommendations also.
Interviewer:	The recommendations, what they can do better.
Female1:	Yeah.

Interviewer:	Yeah? I speak actually Swedish. How do you measure him because he's just in front of you in the supply chain?
Female1:	[Foreign language].
Interviewer:	So, I didn't get that. He's not good enough. That's what I get.
Female1:	[Foreign language].
Male2:	No, but she is speaking about the corporation, about doing better. It can always be better and so on.
Interviewer:	It could be better.
Female1:	Yeah.
Male2:	It can always be better I guess.
Interviewer:	What does he do wrong?
Female1:	[Foreign language].
Interviewer:	You get it?
Male2:	So, some planning.
Interviewer:	Yes.
Male2:	She not always, but sometimes she goes to -- only to Jimmy information and to get information, confuses stuff, and --
Interviewer:	So, the information is not given to everybody, what is the priority or what is important?
Male2:	Apparently not. I don't know. [Foreign language].
Female1:	[Foreign language].
Male2:	So, lot of communication.
Interviewer:	Okay. So, as a company, what do we do right?
Female1:	[Foreign language].

Interviewer:	IFS and lean, yes.
Male2:	We have, yes, very high safety level, safety proportions, both for good and sometimes bad because it's maybe a little too much down time. So, I think we are -- we could make a lot more profit if we did some things smarter I guess. And today, it's very, very strict in the safety area. Of course, it's very hard to say. You can't take something away, and then something happens, and then it'll get time.
	You've got some things cost a lot to implement and to have running in the safety area. Yeah, that can be done with a little bit less safety and much easier. I mean, it's so hard to say we shouldn't have this. And we should -- I mean --
Interviewer:	I meant -- the question was, what do we do right?
Male2:	Yeah, so what we have safety, I guess we do right. We've been I think very high safety level in the company.
Interviewer:	Right.
Male2:	I think we also have pretty good profit and think that's a good thing. We must have it in a company. That's what we do right. Some companies sell stuff too cheap, and the profit level, or it's good.
Interviewer:	What do you think? What do we do right?
Male1:	I think we do very much right I suppose. Yeah, the safety, as I said, and we are -- yeah, we are taking care of that, people who works there [unintelligible] I think. It also -- always priority one, the safety and that is very good I believe.
Interviewer:	Okay. Why do you work here -- oh, I'm sorry. You -- what do we do right?
Female1:	[Foreign language].
Interviewer:	Okay. Yeah, okay. So, why do you work here?
Male1:	I like it here.
Interviewer:	Why is that?
Male1:	I like my friends here at work. And I live here in Surahammar. So, that's one reason also. But I like the most [unintelligible]. I don't have anything to complain on actually.
Interviewer:	Right.

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Female1:   [Foreign language].

Male2:   Challenge every day.

Interviewer: A challenge every day, yes. So, you live here also in Surahammar?
                    Okay. And growth was one of them.

Female1:   [Foreign language].

Male2:   Working since [1999] and there hasn't been one day that she thought that
                    she was not want to go to work. So, every day, she wants -- like it
                    [unintelligible].

Interviewer: Okay. Good. Why are you working here? We know why you're working
                    here.

Male2:   No, but I think it gives me a kind of freedom I want to need. I mean, I got
                    pretty free job anyway. And also, it's different, pretty different anyway
                    every day. And it's also one thing I need. I'm not shaped to sit in the
                    office and do the same thing every day. Then I'm going to get crazy. So,
                    yeah, that's a good thing for me. And it's also -- I learn new things and
                    stuff. So --

Interviewer: Okay. How would you improve the performance of this company? If you
                    could change one or two things, what would you change?

Male2:   Some more.

Interviewer: Some more? Yes.

Male2:   But I also want to tune the workshop a little bit. I think, as it is at the
                    moment, the welding department is not sized the same size. I mean, if
                    you check the HIP systems, the HIP systems can probably run 50
                    percent more, more or less. The welding department is already running
                    100 percent or more. And still, it can't keep up with the HIP systems.

                    So, if we could tune some more and tune the workshops, we could work
                    with the same level of work in our workshops, we use it efficiently and
                    also have the right amount of goods through it, we can do so much for
                    this workshop. But it's not [unintelligible], is it? I mean, it's not easy.

                    But of course, hopefully, with this welding robot, we will have more -- we
                    will get more products out of -- faster out of -- we can -- might be a little
                    bit less demanding [unintelligible] because I think it's not easy at the
                    moment.

                    So, to tune it more, to --

Interviewer: To improve more, yeah, something you would improve. It strikes you as
                    bad?

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Male2:	Yeah, I mean, if we're going to increase the output, we're always running at 100 and -- I don't know -- because working every day and weekends since one -- we can't improve the welding so much. Then we must let away to some other companies in that case. I think we should keep the welding experience here as much as possible.
Male1:	Yeah, I --
Interviewer:	What would you like to improve?
Male1:	Yeah, I agree what [Male2] says here. I also think that we should keep the -- I would -- all the welding done here. But I understand that we can't do it when looks like this. So, I want more work here, not like this, much -- nothing much -- nothing out of straighter line. That would be much easier to work.
Interviewer:	Yeah.
Male1:	Like that. And how we should do that, I don't know. But --
Interviewer:	Anything else?
Male1:	No, I don't -- not [unintelligible].
Interviewer:	What would you improve?
Female1:	[Foreign language] improve?
Male1:	[Foreign language].
Female1:	[Foreign language].
Interviewer:	Planning, yes.
Female1:	[Foreign language].
Male2:	Some more.
Interviewer:	Some more and synchronize what?
Male2:	The different units in the office to make better communications. Now, I would add one more thing because I'm not so involved in any production. I don't know anything. But one thing I've heard a lot of is that we are lack of powder all the time. We don't what -- when we get the powder. So, and that affects also all the planning and everything afterwards, makes it -- I mean, it's a mess.

Female1:	[Foreign language].
Interviewer:	So, the planning does not work. You don't know -- somebody's ordering, and you don't know when it's actually coming. And then you cannot plan for when the capsule has to be ready to fill.
	You know, funny enough, I get calls from suppliers which will like to send the powder, yeah? So, they have powder we have ordered. They would like to send us the powder. They are desperate to send us the powder. What we are not doing, we are sending -- we don't send any containers.
Male2:	Yeah.
Female1:	[Foreign language].
Male2:	Yeah, but I guess just I guess communication.
Interviewer:	Yeah.
Male2:	I really got to --
Interviewer:	Yes. All right. Thank you.
Male2:	Thank you.
Interviewer:	We will just wrap. Thank you.
Male2:	Thank you.
Interviewer:	Oh, I have one question.
Male2:	Yeah.
Interviewer:	Could you name three people which could do this interview in your department?
Male2:	Yes, Nicholas -- no.
Interviewer:	No, you can tell me --
Male2:	I'll send it over mail.
Interviewer:	Yeah. Okay. Thanks. Yeah, I don't think we have much more. Any other comments you want to share about -- it is a confidential interview,

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	obviously. You might have some ideas or thoughts about the performance of the company that you -- how you see it in general or any -- yeah, any more thoughts?
Male1:	[Foreign language].
Female1:	[Foreign language].
Male1:	[Foreign language].
Interviewer:	No?
Female1:	[Foreign language].
Male1:	They don't listen.
Female1:	[Foreign language].
Male1:	Still communication.
Interviewer:	Yeah, so somebody who understands the -- where -- what is where happening.
Male1:	I believe also we could improve a lot with -- I think the communication will be better if there is a more defined structure how to communicate and which guy do what because --
Interviewer:	Goal to?
Male1:	Yeah, yeah, for example, because, now, you got no idea. So, it can be outsourced with a guy, and you have no idea about this. And you just ask someone. I think that guy is doing that now because that guy is gone. And it's just -- it's just structure is -- and that I think why the communication crashes also because no one really knows where to go and maybe tells a guy that's a bit not responsible or just responsible this week for this and just it's -- I think lots of information is gone. And some people maybe think, "This is not my responsibility to do this." And they just -- the information is lost.

And I think it gets unnecessary complicated or hard to do stuff. And I think that's why we lose -- I mean, it is in all departments, or everything -- maybe I mean, if you look at projects, sometimes they are some stupid fault that really didn't need to happen that happened anyway I think just because of communication.

Of course, there's always going to be that in companies. It's not -- nothing's going to be 100 percent. But I think we can improve lots to make it more -- you know, when it's -- there's certain question, you know who to go to, and you know that person's responsible.

Some person -- some people here, when if you go to -- if the customer say, "No, no, ask another one," because they don't want to take care of it and because they don't want to have more job and then just -- it's --

Female1:   [Foreign language].

Male1:   Yeah, everyone has a lot to do. But sometimes, yeah, I don't know. But that's my big -- if I compare to Avior, for example, there you know, okay, this guy is responsible. If you send him an e-mail, you know that, if it wasn't done or something, okay, it was his fault. It's very easy to know, okay, it's your -- here, you got no idea who's responsible. And just everything's floating more or less. And it's --

Female1:   [Foreign language].

Interviewer: So, it's separated into -- between different people. So, one maybe ordered -- doesn't know where it is. And then, well, he says, "I don't know where it is, and I don't know where it's coming. I ordered it." And then we are waiting for the powder, not knowing where it is, although the capsule has arrived, and we are waiting for the powder.

Female1:   [Foreign language].

Male1:   [Anna] asked him to buy powder [unintelligible]. And she asks [Panzer] if she can buy it. But he said -- hey, he tell her no because we need to deal this like an purchase parcel. So, you need to check with different suppliers and check who's the cheapest one as well. And it takes a lot -- long time, and Anna thinks we should negotiate in advance so we just can buy from one when we need so it's faster processing I guess.

Female1:   [Foreign language].

Male1:   Yeah, and keep a stock.

Female1:   [Foreign language].

Interviewer: It's funny because you're the only one saying that you need the stock.

Male1:   Yeah. There's something else also. And I don't remember what it was.

Interviewer: I see it's much about who is responsible for what and how do we know or communicate.

Male1:   Yeah, because let's say we have some confusion about the powder. We -- no one knows when it will arrive and so on. Then we start this snowball rolling. Then Suzanne doesn't know about the planning. [Jurgen] has no information about the HIPing. We've got to do some stuff, work on the HIP machines. I want to go down to the -- check something for my project. I get no clearance when I can go down. I get no data. I can ask them tomorrow [unintelligible] tomorrow. "Oh, we don't know yet." It's all -- I mean, it's impossible to do anything in the chain afterwards because

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everything is just on hold. Yeah maybe, but maybe not. And no one can tell for sure anything. I mean --

Interviewer: That is because nobody knows, or nobody can decide?

Male1:   That's a good question. I mean, sooner or later, it has to be like that. Like, Jurgen has to decide, "Okay. We're standing now two days." Of course, some will be upset. And maybe it will affect some orders. I don't know how important it is. How in a hurry is it? I mean, no one knows, and no one gets the information. And it's hard. But that's what I see because I tell them sometimes, "Okay. Next week, how many cycles are on? We have two. Okay. Which day are we going to run these two cycles?" We have no idea.

That's just -- maybe run it but maybe not. It depends on and depends on and depends on. Then it's very hard. If I'm going to bring some subsupplier for electrical type -- just we're going to put some normal electrical outputs down in a bit because for my cameras, and I can never tell him to get here because we don't know when it's going to stand and if it's going to -- so, I just wait until it breaks down more or less. And then, okay, no, now, we're not -- know it's -- it can't do anything. Then you bring him there.

And it's also frustrating from my side as I see it because I don't know when we can do stuff.

Interviewer: Okay. It's back to planning.

Male1:   Yeah.

Interviewer: Communicate what the planning is.

Male1:   Yeah, yeah. So, you get more -- I mean, for HIP planning, it must be able to do it I think one week in advance. I mean, we can see what we have in the welding department and the filling department. And maybe that's a week of job more or less to get the HIP. You should be able to see what we've got in and what we can do there and just have these days of planning to be able to do that. And then if we do that, we can -- I think we can do so much more planning.

But the personnel and everything, we don't need to work so much overtime maybe. But sometimes, I guess we're working like hell for a week and so everything. And then it's nothing to do for --

Interviewer: Right.

Male1:   -- two weeks. And we just -- of course, if we sold something to a customer, maybe we haven't -- we didn't get that order if we didn't [broke] that hard and so on. So, it's -- if you don't have a whole view, it's impossible to say. Of course, you can point. We should have more planning. But if we didn't sell that component or that system, if we didn't do like this, of course, we need to work like that. So, it's really hard to tell

from underneath when you don't have all the information about how is this bought or what are circumstances around.

Maybe they're going to produce powder. And maybe they crashed the machine and they couldn't deliver. You never know what's behind all this.

Interviewer: So, how do you prioritize your work then day to day?

Female1:   [Foreign language].

Male1:   [Foreign language].

Female1:   [Foreign language].

Male1:   Can't prioritize. We need to work hard every day.

Interviewer: Okay. So, you have your own targets for daily base. Okay. I have no more questions.

Male1:   No, I mean, I just think about my own frustration. But prioritize, it depends on. I mean, if -- of course, if the -- something in a hurry, then I go there first.

Female1:   [Foreign language].

Male1:   Yeah.

Female1:   [Foreign language].

Male1:   Yeah, so, it's firefighting for you also more or less. I don't run firefighting all the time. I run firefighting sometimes. But it -- sometimes, it's -- I just prioritize my [fault] just to see, okay, which one is most prioritized within projects, which one is needed. Maybe I'll make a small job here, and then the other company has to work on it three weeks. So, it's very beneficial to do that as fast as possible because then I've got -- they can work for three weeks.

If I don't do this now and I make it three weeks later, then it's going to take another three weeks anyway. So, we just try to make jobs that will work by itself for a while more or less, just try to pass within, just see it, of course, depending on how important they are and so on.

We still [unintelligible] compound capsule that we didn't have powder for, for half a year or something. We didn't get any. And this -- the project is just halted for half a year just because no one wanted to order -- wanted, but we didn't order any powder.

Interviewer: What kind of powder is that?

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Male1:	It's five different powders. We have mixed whole 114 I think we put in, got five different powders now. We just opened it today. We will see because that is -- I think all five different might be sent into laboratory to -- they're going to have their own check so it -- because it's a qualification cycle. With this type of product and new powders and so on, we can try to qualify that stuff so we can sell it more to the amount.
Interviewer:	Okay.
Male1:	But with this new -- I don't know. We will see what happens with this new kind of way to produce [unintelligible]. I think it'll be good, but --
Interviewer:	What is the application?
Male1:	It's for boat engines I think. It's injectors.
Interviewer:	Okay. All right. Well, thank you very much.
Female1:	[Foreign language].
Interviewer:	No problem.

[End of recorded material]

10.12   131126_001_FOCUS GROUP 7

[Start of recorded material]

Interviewer:	All right. Well, thank you for joining. As I said, this interview is voluntarily and confidential, will not be issued to anybody, or nobody will have any information about what you have said in this interview. It is a semi-structured interview that might be -- we have some questions which are the basis, but if we go somewhere else, that might happen. That happened also for other people.
	And I always start this interview process with a question, what do you think is the objective of an organization like Bodycote? Why is it -- why does it exist?
Male1:	Yeah, it has to be to make some money I think.
Interviewer:	Okay.
Male1:	The primary topics of it, of course, that you can't run a business without making money. That's the first thing you have to see to, to -- so you can survive as a company, of course.

Interviewer:	Right. What do you -- ?

Female1: Well, I think that that turns into the objective eventually. I think starting a new business, I rarely think that the objective is making money. It's developing an idea or developing something that you have. Eventually, you need to make money --

Male1: Yeah.

Female1: -- to keep developing. But I -- as of now, I would say the objective is to make money. But I don't think that's the starting point for a lot of companies.

Interviewer: Yeah. I forgot to say something. It is not a right or wrong answer --

Male1: No.

Interviewer: -- exercise. There is no right or wrong answer to the questions or --

Male1: Yeah.

Interviewer: -- to the discussion. Okay. If you look at Bodycote, how would you or how do you define strategy? I mean, many people speak about strategy. How do you define strategy?

Male1: Yeah. Strategy is a way to perform something that, for example, the board of Bodycote has decided. You have a certain strategy to fulfill this goal, yeah. Can't -- you can, of course, have as many strategies as -- after the board and how to go forward and to develop the company, of course, yeah. So, you can have many strategies.

But I don't know the strategy of Bodycote. For me, it's to make money, of course. And you have -- to make money, you have certain tool to achieve the best profit or the -- I can't say exactly what strategies, but is to fulfill a demand. A strategy is to fulfill it.

Interviewer: Okay.

Female1: I think it's a more collective agreement saying, "Okay. I want to do this, and you want to do that, but our main goal is to, well, make money. Okay. So, we're going to compromise and say, 'This is how we're going to do it,'" so that you're all moving in the same direction and at the same strategy. And then you have a compromise saying, "This is the way to go forward."

So, if -- it's more of having a collective strategy because you can have your own personal one saying, "This is what I want to achieve with my career, my job." The company strategy should be to combine all of this and say, "Okay. This is how we're going to move forward as a company."

	And I'd say I think that strategy should define the way forward, how we're going to develop. It should not be, "This is how we have done it. This is" -- it should be, "This is how we're doing to move forward."
Interviewer:	Yeah. Do you know what the strategy of Bodycote is, Bodycote as plc Bodycote or -- ?
Female1:	No.
Interviewer:	-- Bodycote as Bodycote HIP?
Male1:	No, not that I -- exactly.
Female1:	No.
Interviewer:	What do you think -- if we have discussions about Bodycote HIP or Bodycote HIP PF, what do you think we are discussing in, like, a monthly review and a yearly review? What are the key indicators for the business?
Female1:	Growing the business, finding new customers, filling the capacity that we actually have.
Male1:	Yeah, to be more competitive to other business and so on.
Female1:	Yeah, offer a wider range of products, services, things like that.
Interviewer:	And on a backward-looking performance, how do we know it was a good year or month? What do you think they're looking at?
Female1:	On-time delivery and profit, sales statistics.
Male1:	Yeah.
Interviewer:	Okay.
Male1:	Of course, I know that Bodycote is topping number one in safety. So, if it's -- no, has very low things that happen to the employees and so on. So, has to be a key -- what is it?
Female1:	Key factor?
Male1:	Yeah. So, I think that's something you -- the board discuss a lot I think, safety of the employees.

Interviewer:	Okay. What opinion -- in your opinion, what is the role of managers in corporate performance? What is your role of your manager or managers in the company to get -- to drive performance or define performance?
Male1:	Yeah, the -- they, of course, to guide the personnel into the right directions so that we perform what the company wants, yeah, to be open and to be good at listening and confidential I think.
Female1:	You are setting standards saying, "Okay. We have our strategy. This is -- I'm going to do my bit by doing this. I'm going to support you and guide you towards the company's goal." So, I think guidance and support and showing that you're putting as much effort into the business as the other employees are, that you're setting a standard.
Interviewer:	Okay. Both of you stated that you don't know the strategy of Bodycote. So, how do you define your priorities for your work?
Male1:	Yeah, of course, we have our managers or my boss, Tero or Robert, has, of course, the responsibility to inform us what to work with. And of course, it's -- we are working as a team. So, it's a big deal, of course, that he is guiding and inform us what to work with as the top priority at the moment. So --
Female1:	I would say that it's -- let me go back to the first question, the strategy. For me, strategy is one defined goal, like one line saying, "This is how our objective with the business." And then you can have implementation of strategy in a different way, saying, I don't know if there's an exact sentence saying, "This is the strategy." But I know in what direction I'm supposed to be going when I'm working. I know the general direction that the company wants to move towards.
	But I don't have a specific statement saying this is our strategy. But of course, moving towards new customers, growing the business, that's the general idea. So --
Interviewer:	How does it influence your work, your priorities?
Female1:	It gets really scattered. You don't really know what to focus on, when to focus on it, jumping between things.
Interviewer:	Do you understand your -- let me rephrase. If you want to define that you did a good job or a bad job, how would you define the indicator for yourself if you have a feeling this was a good job or a bad thing? How would you like to be measured? What tells you it's a good job or a bad job or -- but for yourself, and then you can say, how do you want to be measured?
Male1:	Of course, it's to get some feedback, of course, from our boss and good as bad. They are open conversations that this could you have done better, and this was excellent, or yeah. Open conversation with the boss actually I think.

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Female1:	I think so as well, like constructive criticism, saying, "Okay. This part was good because of -- and this part was not so good because it resulted in this," like cause and effect, say, "You did this, and it resulted in this, which was really good. But the other thing you did resulted in this, which was not so good for the company's future progress."
Interviewer:	Okay. So, how would we measure you then?
Male1:	Good question.
Interviewer:	Or is there a measure you can think of for the department, how would you be measured?
Female1:	I can jump in there.
Male1:	Yeah.
Female1:	For myself, I have no idea how I'm supposed to be measured because I'm doing different things every day. For sales in general, it would be where you're saying the hit rate for quotes. That's a good indication that we're doing the right thing. Increasing sales is one thing, but increasing hit rate on quotes means we're actually working ahead of time on things that are important. That's one thing.
Male1:	Yeah, yeah.
Interviewer:	Okay.
Male1:	Yeah, of course, to keep -- if we have a deadline, of course, I think it's if you pass the deadline over and over again, you did a bad job, and if you are able to perform before deadline, it's -- I think it could be a measurement. It can -- yeah, I think so. It could be a key word -- not word but key point maybe, yeah.
Interviewer:	And how do you -- would measure your -- how would you measure your colleagues, other departments? What would you say? It's also, what do you need from them that you can do a better job? How would you measure them?
Male1:	How to describe?
Female1:	Well, it's always hard to say what another department is doing and how you should measure their work since you're not doing the same thing. It's not equal to measure to each other. But I know we have talked about this a lot, but receiving the right information to start off with, minimizing actual times you have to come -- go back and say, "Okay. I don't understand this. Could you revise this? This needs to be changed. You misunderstood."

Better communication, and that works both ways I think because you need to be more direct and communicate in a good way so that people understand what you're asking for. But you also need to receive |

	information that is correct to start with. And I think that would be a good measurement, how many times you have to change things.
Male1:	Yeah, that's -- yeah.
Female1:	Because you can't actually do their work, but you should receive the right information to start with.
Male1:	Yeah, that's true.
Interviewer:	If you look at like a -- if you look at a project, how much -- how many projects as a percentage do you receive where the information is complete and workable without too much questioning?
Male1:	Yeah. I go back to the job as a design engineer. I think we have -- it's a lot of changes along the way, but 50 percent, it's the right from the start I think. Of course, you have -- the customer hasn't decided and the changes, we have to redo our work and maybe 50 percent maybe.
Female1:	As I'm not involved with a lot of projects at the moment, but production planning was a lot of projects -- well, all of them really. But yeah, it depends whether the customers are unclear or we are unclear with each other in our communications. But I would agree. Around 50 percent, maybe 60 are not finished. There's some issues. There's always some paperwork that hasn't been signed off. There's a drawing maybe or one out of 10 drawings that hasn't been approved or --
Male1:	Yeah.
Female1:	It does create a lot of stress that doesn't need to be there maybe. But yeah, 50, 60 percent are not right at the beginning.
Male1:	Yeah.
Interviewer:	What would you think can be improved from there?
Male1:	Improved from -- ?
Interviewer:	I mean, you have 50 percent is wrong. Where do you think this number could be improved, and how? How do you improve this number --
Male1:	Yeah.
Interviewer:	-- that it's maybe like 99 percent?
Male1:	Yeah, we -- as we did before, we just received an order or tried to fix the problem after we got a PO. But now, we started to develop the project with the customer before they send in the PO. So, in this case, it's the percentage is much lower because we have been -- because you have

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worked with the customer before they sent in the information and documents and so on. So, maybe could be that you work with the customer before in an early stage of the project.

Female1: I think that's a good idea for the bigger projects, say, [itching] out the big, big ones. But for the smaller ones and the more -- I shouldn't say standardized, but the more recurring shapes, I think a standard, like a mutual agreement with the customer saying, "These are the documents," and have everything stated at the beginning and say, "Okay. If you need to deviate from our agreement, it's going to increase lead time by this much. If you stay to this, we can decrease lead time instead."

And that would also relieve us from having to revise documents for orders that are not in -- per se really complicated. It's just that they have different project teams and things like that. So, I think a standard would be good for the more simple project orders. And for the big, big ones, the suggestion you had was a lot better with having early-stage development, saying, "Okay. We can do this if you redesigned it that way, or this is how we usually do it," discussion quality documents and things like that, but approaching it in two different ways because there's --

Male1: Yeah.

Female1: There's two different problems with those types of projects.

Interviewer: Why do you come to work?

Male1: For money. No, no, I like this -- in the bottom end, of course, the money. But I like the technique. It's very challenging. And I think the size of the company is very good. You -- it's around 80 people here. And you -- size that you can -- you know everyone that works here. So, if you work in a very big company, you just know your department, and the other department is a gray area. So, you -- I think it's a very good size to -- on the company. And we have I think a very good atmosphere at Bodycote here, yeah. So, yeah.

Interviewer: Okay.

Female1: I like working. I like doing something. And I feel that this is a good company to actually grow in. I can move up. Yeah, I like working here. As [Male1] said as well, it's a good-sized company. I know everybody that works here. So --

Interviewer: Okay. I have seen that we have a lot of meetings going on, very much a lot. I mean, I've never seen people meeting so much. Do you think these are efficient meetings? Is it what you expect as a meeting? Do you get something out of these meetings? Are they too many? Are they too less?

Male1: Yeah, if everyone's on time and you keep to the subject, it could be very efficient. But you have a -- it's easy to start talking about the -- something else. And you steal money from the company when you do that. So, I think it's -- if we keep the amount of meeting to a minimum and you be

efficient on the meeting, I think you can -- so try to keep them as short as possible.

Interviewer: So, are they efficient or not?

Male1:   Now, we're not efficient now, but could be in the future.

Interviewer: Too much or too many or too less meetings?

Male1:   I don't know how to say. Well, there's a reason why we have them now. It's -- the information is unclear. You have to have many meetings to spread that information maybe.

Female1:   I feel that the meetings in the morning with production and information moving up and being sorted out, it's a good idea. I have only attended this morning meeting. So, I'm not really sure what filters out during the process. As I say, I like the idea. I don't know how well it's working as a fact right now.

Interviewer: What is your assumption?

Female1:   I think that some things are lost along the way. They get stuck. Things that actually should be brought up to this morning meeting at 9:00 are lost along the way. And some things are brought up that are not as important. So, I would say that, yes, they're efficient in their layout. But it need some more work to actually shorten them and take out the most important points from each meeting.

Male1:   Yeah.

Female1:   And in general, there are a lot of meetings. I don't like meetings because, as you said, people start talking about everything else. I like short meetings. Just go through a list saying, "Okay. We have to discuss this, this, this, this, this." And then you're done.

                 I mean, I have coffee breaks I can talk to. So, I don't need to -- I get distracted having too much meetings. So, no, I would not say that all meetings are efficient at the moment. But it is important to have meetings to actually allow the information to filter up from each production worker up to the [match] meeting.

Interviewer: Okay. If you have a problem, do you know where to go?

Female1:   I know I -- where I would start. I'm not sure if it's the appropriate place, but I know where I would start.

Male1:   Yeah. Same for me.

Female1:   Depending on the issue.

Interviewer:	Do you think we are communicating efficiently? That means, if you discuss something, you get what you were looking for in this meeting. Do you get the answers you're looking for if -- ?
Male1:	That's good question.
Female1:	Not always. Sometimes, it's because you ask the wrong questions. Sometimes, it's because the person misinterprets your question. Excuse me. And sometimes, it's because you ask questions. You call somebody up, or you send an e-mail. And the person who's receiving the question maybe glances it, maybe answers the phone, hears what you're saying, but doesn't start working on it immediately, which is fine. But then the information gets lost somewhere in the massive flow of information that comes to you every day.
	So, I think -- really, getting back to meetings, meetings are good if you're actually discussing things that happened. They are better than actually trying to communicate over the phone or sending e-mails because information gets lost. If you're actually meeting together, you can agree, "Okay. This is what we're looking at. I understand it this way. Do you see it any other way?" And then you can actually talk about it. And then you're both on the same page. I would say that's a better way of communicating.
Male1:	Yeah, when it's come to the work I should perform every day, if I need some information, of course, I always get the information that I need. But it's a question more general, and it demands a little bit more consideration, it may be lost on the way, and I don't receive the answer, and I have to ask again. But if it -- when it comes to my work, I -- and I need something, I think I always receive the information.
Interviewer:	Okay. And how often do you have to redo something because you did not have the right information?
Male1:	Not that much. I think it's maybe end up in human error maybe, but not for the lack of information I think.
Female1:	No, I don't redo things. It's more after discussions saying, "Okay. We're looking at this document. Do you have any points we need to revise or anything?" And it's always after a discussion not redoing because of mistakes really, but rather developing things.
Male1:	Yeah.
Female1:	So, I would say, yeah, human error, misspelling, something like that.
Interviewer:	As a company, what do we do right, and why?
Male1:	It was easier to say what we don't -- we do wrong.
Interviewer:	Exactly. That's why I asked what we do right.

Male1:	Yeah. We have to do something right because we are growing I think. I can't put a finger on what we do right. But I think we grow stronger on each department. So, we don't forget things and so on. Yeah, it's hard to -- it's a hard question actually what we do right.

Female1:	I think we encourage people to grow. It keeps people staying, developing within the company, maintaining knowledge within the company. I think that's one of the major parts, actually allowing people to switch jobs, positions, promoting. I think that's the really big part since, often, the people that have experience, they've worked a long time, want to do something new. And if they can't do it within the company they're actually working in right now, they will move to somewhere else. And they will take all the knowledge with them.

Male1:	Yeah.

Female1:	So, if you can relocate them within the company and give them a new challenge, actually motivate them more each day, that's something you should do. I think it's really good here.

Male1:	Yeah. And also, that the -- you know if you do something wrong, it's not the end of the world. It's -- you're allowed to do certain errors. But yeah, high ceiling.

Interviewer:	Okay.

Male1:	Yeah.

Interviewer:	So, what do we do wrong then?

Male1:	Yeah. Think that we are -- have a unique technique that we -- that -- not that much company know of. We can produce the things that other can't. And we are not that good or to inform the potential customers and spread the word about HIPing, HIP techniques and so on. I think we could be better to prioritizing. I don't know the -- how to send out a message, but advertising, meeting, seminars, and so on.
	I know we are doing that, but not that -- maybe we choose small organizations where we don't have the capacity to -- even better to advertising or have seminars and so. Maybe we are adjusted to the size of the company. I don't know.

Female1:	Marketing wise, this company is -- there's nothing. At least there should be some technical document saying, "This is what we can actually do." There's nothing we hand out to customers. And I'm not talking about pencils or, like, giveaways, but actual technical information.
	When we're at trade shows, when we're holding seminars, things like that, we actually do it. But I think that what we do is actually quite well adapted to the size of the organization. But technical information and

having a portfolio of -- well, technical data sheets really, things like that were missing.

And yeah, well, not letting everybody in the organization know a short way to -- I think Jimmy was mentioning this, like elevator conversation, "This is what we do. This is where we do it," describing the company in 30 seconds. Everybody needs to know what we are doing. And it needs to flow down through management to production, to everybody. That is something we're lacking. But I don't know if it's wrong. It's just not focused on. So, it's not something we're doing wrong. We're just not doing it at all.

As for things done wrong, in general, sometimes, decisions are made, and not everybody's made aware of why recent reasoning behind decisions. I think more open communication would be beneficial. It makes everybody feel more included.

Interviewer: Okay.

Male1:   Sometimes, when we -- I think that, when we send a quote for -- to a customer, we take for granted that they know the technique and what we're offering. Maybe it could be good to have the advantage on the -- written down that we send attached to the quotes -- every quote. It could be a new customer that doesn't know anything about the technique. We not do that -- we don't [in line] to them what the technique has for advantages. I think be a good idea.

                  So, now, we let -- give the customer a quote. And they don't know what we're quoting actually I think. This is something we can be better at.

Interviewer: Okay. Do you know your roles and responsibilities?

Female1:   No.

Male1:   Yeah.

Interviewer: Why not?

Female1:   Because when I started, I had a boss. Then he left. And then I was kind of in the blue really. I know generally. But I -- nothing specified saying, "These are my responsibilities. The responsibility ends here." I'm not responsible for any process really and not anything defined.

Interviewer: Okay.

Male1:   When I started as designing, I think my role was very clear actually. I -- of course, we got more and more different things to do. But I -- well, I think it was rather clear for me actually I think. The design job is the same over and over again but with a different product. And so, for me, it's rather clear actually.

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Interviewer: Okay. Do you know the roles and responsibilities of other people?

Male1:   Yeah, my -- of course, my design colleague because, of course, we do the same thing, but not any -- on the other departments, no.

Female1:   No. I know what I would like them to do. But I don't know if that's what they should do, if that's their responsibility. No, I don't really know where their engagement should start and where it ends and what process they're actually in charge of or responsible for.

Interviewer: Okay. Both of you have experienced now the last year -- you were already here. And you have seen it was a lot of turmoil. But it was -- there were lots of problems going on.

Male1:   Yeah.

Interviewer: So, what is your interpretation how we got into this situation of heavy turbulences? And yeah, what should we learn from that? How did we get there? And how do we -- well, what should we learn from that?

Male1:   How to -- how we get there, I think we grew too fast actually. So, we said that we should deliver a product with all the responsibilities. And before, we just produced the product and didn't have any responsibility. Of course, we make more money now. But the -- we have to live up to the higher demands, of course. So, I think the growth has been too fast I think, yeah.

Female1:   And to start off with, I think communication. We were perhaps promising things that we thought we could keep. And then it just kind of snowballed. And then going back, I think a lot of turbulence internally was because everybody was stressed. And it's not blaming, but you try to push it away because you feel like, "Well, I did what I'm supposed to do, what I feel I was supposed to do."

                    And as I was saying previously, maybe it's not clear. "Okay. Well, I feel like this is where my responsibilities end. And I feel that yours started right here." But if the person on the other end feels, "Well, I don't think my started until here," then you have a conflict. But you don't know why because you have different expectations of what other people are supposed to do.

                    So, in bottom end, I think communication is -- that got us where we were. I think that's the only way you can actually get back from it as well.

Interviewer: Do you think as a company we were prepared for this kind of growth, not only on a staff or interaction, but on the knowledge basis, for example? Did we have the knowledge to engage in this kind of business?

Male1:   Not in the beginning, but now I think we have a -- we're building up a bigger knowledge, of course, on each department. But then in the beginning, it was -- I know it was -- we knew, of course -- we knew how to produce parts, but not to -- the process that is after and before, of course,

	the -- all the paperwork is new. And heat treatment, pickling, that part is also new.
	Our comfort zone is, of course, to produce the part and HIP the part. I think it's -- so, yeah, it's -- I think we started too rapidly. I can't explain it otherwise, but yeah, we grew too fast I think. But I think we are on the way to keep it up to the efforts that we need to be an excellent company I think.
Interviewer:	Okay.
Female1:	I think the technical knowledge was there, most parts, I should say. But the working knowledge wasn't really there. Like, we have people that have technical backgrounds and -- but you need to apply it to the specific type of situation. And when you're trying to do that adaption of knowledge really to a working knowledge, sometimes it takes time. And the problem is we didn't have time. So, you need to push the knowledge in another way.
	So, I think that was -- so, in that way, we had not enough knowledge within the company to actually make it work. We had the technical but not the working knowledge. That's what I would say because I think that shows now that we're actually growing. And it's -- the knowledge is settling in, to say. It's starting to become a ground base to grow on instead of, previously, we had to actually build the ground base of knowledge whilst we were actually trying to work.
Male1:	Yeah.
Female1:	Does it make sense? I don't really know, but yeah, that's how I feel.
Interviewer:	Okay. I have no more questions, or if you have some, you could share that now or some more comments, anything you want to share. Otherwise --
Male1:	No, just I think Bodycote is an exciting company to work in. We just started to scratch on the surface. We have the potential to grow and be a very good company I think. Of course, we have to -- we have built a foundation now. Now, we have to put out the wall and everything. If you -- yeah, so, I think Bodycote could be a very good company to work on.
Interviewer:	Okay.
Male1:	Yeah.
Female1:	Yeah, I think so. I mean, it's a really young company. I started three years ago. And I've worked here a long time compared to almost half of the staff here. So --
Interviewer:	Right.

Female1:	It's -- as [Male1] said, we have the foundation. Now, we just need to build the rest.
Interviewer:	All right. Thank you very much.
Male1:	Thank you.
Female1:	Thank you.

[End of recorded material]

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[Start of recorded material]

Male1:	None of us are very used to speaking English.
Interviewer:	Okay.
Male1:	Just to let you know.
Interviewer:	All right. The thing is running now. And yeah, as I said, the interview is basically handling how people -- employees of the company perceive the strategy of the company. What information do you have about the strategy, and yeah, how you would measure performance, good performance, bad performance. What is your expectations about your manager or all the managers of the company? What do you expect to know about the company and what the company's doing?

It is obviously confidential, as I said. I repeat this just for the microphone. It will not be forwarded to anybody, and nobody has access to the information you're saying here.

It is obviously not a quiz. So, there is no wrong and right answers. So, it's -- you can state your opinion about things which also implies that I will not share your opinion, or I will not say, "This person has said this," to anybody else.

And I always start this interview with one question. And I would like that you take some -- anybody can speak at any given time. And I ask this question always at the beginning. Why do you think a company like Bodycote exists? What is the purpose of this company? |
| Male2: | Maybe it's because they want to build up the future, like in oil and gas, like a better future, better product and things that -- better, safer, and something like that. |

Interviewer:	Could be, yeah. It's to annoy you. Why do you think they exist?
Male1:	Now? I guess the main purpose of it's to earn money for all the investors and, yeah, basically money I guess.
Male3:	Yeah, I don't know.
Interviewer:	Hard question.
Male3:	The reason it's -- I don't know.
Interviewer:	What do you guess why -- they must be here for something.
Male3:	Probably money.
Interviewer:	Yeah, it's a valid -- I mean, you -- why do you come to work?
Male3:	Yeah.
Interviewer:	It's a valid reason, right? And everybody speaks about strategy. And you happen to hear this a lot. People speak about strategy. And what -- how would you for you -- what do you think is strategy for you? What -- when people speak about strategy, what is it for you? What does it mean for you, this word strategy?
Male2:	Well, it's like a plan for the future or something, like more money, but expand perhaps.
Male3:	[Unintelligible.]
Male2:	Purpose.
Male3:	[Unintelligible.]
Male2:	He said what I thought.
Interviewer:	Okay.
Male3:	[Unintelligible.]
Interviewer:	Don't be shy. I will understand even if it's not fully correct [unintelligible].
Male3:	[Unintelligible] have a plan.

Interviewer:	Have a plan. Yeah, okay. And if you, at 2:30, I have a conference call. And we will speak about this factory and all the other factories. So, what do you think our head office is looking?
Male3:	[Unintelligible.]
Interviewer:	So, what are they looking for, the guys from plc?
Male3:	What what?
Interviewer:	What are the key indicators they're looking for?
Male3:	[Unintelligible.]
Male2:	Probably making money.
Male3:	All about the money.
Interviewer:	It's all about the money?
Male3:	Yeah.
Interviewer:	What other things you think they're interested in?
Male2:	But it's if they produce things and run smoothly forward and happy coworkers.
Male1:	Yeah.
Male3:	Quality of the products.
Interviewer:	Yes.
Male1:	But I guess all of those things, in the end, it comes to the money.
Interviewer:	So, why do you think that all these little things are important?
Male1:	If you are to be able to sell your things and earn the money, need to have a high quality. Factory needs to be running smoothly and all that. Otherwise, you won't make any money.
Interviewer:	All right. So, what is the strategy of Bodycote?
Male2:	Make money.

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Interviewer: Make money.

Male3: And they have to grow.

Interviewer: Grow. How do we grow?

Male1: To educate customers about the HIP process and --

Male3: Search new customers.

Male1: Search and educate.

Male2: And sell.

Male1: Yeah.

Interviewer: Okay. Was -- do you actually under -- did ever somebody explain what is the strategy of Bodycote here and somewhere else?

Male2: Well, I heard it's -- they like to increase the production here and sell for more money. That's basically what they tell us.

Male1: But they have been talking about the going around in different countries and have --

Male3: Educating.

Male1: -- educating maybe --

Male3: Clients.

Male1: Educating the other [unintelligible] customers.

Interviewer: Customers, other customers?

Male1: Educating other customers [unintelligible].

Male3: Potential customers.

Male1: Potential customers because whatever the HIP process is a pretty new technology or what.

Interviewer: So, what do you do to support the strategy? If you think that is the strategy, what -- how do you see your role in such a strategy?

Male2:	We make high-quality product.
Male1:	Yeah, that's --
Male2:	And try to make them a little bit faster.
Male1:	Yeah, that's not -- we can't --
Male3:	Cannot do so much I believe.
Interviewer:	Why?
Male1:	We're not smart enough.
Interviewer:	You think?
Male3:	Maybe we can get -- come up to solutions when we work that way.
Interviewer:	Yeah. So, we spoke about growth probably is one of the factors. Bodycote is looking into growth. And how do you see your role in participating in growth of the company?
Male2:	Yeah, that's a hard one. Well, it can help with efficiency, like if we see problems, we solve for the rest of the company, we become more efficient perhaps. And --
Male3:	[Unintelligible.]
Interviewer:	Yeah, more efficient?
Male2:	Yeah, and work with quality. I can --
Interviewer:	Yes, better quality?
Male3:	[Unintelligible.]
Male2:	Quantity, have more quantity.
Interviewer:	More, yes, more quantity.
Male2:	More meters [valid].
Male3:	Yeah, yeah.

Male2:	Other than that, I can't think of anything.
Interviewer:	Okay. The -- what would you expect from your manager, from -- what do you expect from [Jimmy]?
Male2:	Good leadership.
Interviewer:	Yeah? What is with leadership then?
Male2:	Not someone running around with a whip.
Interviewer:	Okay.
Male2:	Someone to support us and really do his best to help us and all that.
Interviewer:	What is good leadership for you? What do you expect for him to tell you?
Male1:	I expect him to give me good and clear information about what to do, keep a good plan. I really don't know.
Male3:	I believe it has to be [unintelligible] strict [unintelligible].
Interviewer:	Fair.
Male3:	Fair.
Interviewer:	Strict and fair. The -- do you understand what is -- what are the priorities? I don't know if I'm clear. But do you understand? Does he give clear priorities? What are the priorities? Is this communicated to you what are the priorities?
Male2:	Yeah, [unintelligible].
Interviewer:	Yes, in your work I mean.
Male2:	Even though it's once, priority one also.
Interviewer:	Is this clear to you what the priorities are, or is it more changing priorities, or -- ?
Male2:	It's changing a bit from day to day, but he's having -- it's good information. I guess Jimmy doesn't know more than we do sometimes. But when he get to know something, he comes to us and explain it.
Male3:	Yeah.

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Interviewer:	What do you think you need more information to do a better job?
Male2:	Why?
Interviewer:	No, what information do you need to do a better job?
Male2:	I would say we need better planning, a little bit of forehand so that get everything just once it has to be done already.
Interviewer:	Okay.
Male2:	It's a bit stressful lately.
Male1:	Yeah, and when I started here, I was told that welding here at Bodycote, it was -- priority one was quality. That is going more and more priority one is quantity, and quality goes less, and it goes backwards.
Interviewer:	Okay.
Male1:	It's always stressful nowadays.
Interviewer:	So, you would say there is not enough planning, so everything is changing a lot?
Male2:	Yeah.
Male1:	It feels like not a good planning, but we don't know how they --
Male3:	They work.
Male1:	Yeah, maybe they have it stressful, too, up here at the office.
Interviewer:	Yeah. So, you don't understand why things are changing?
Male1:	[Unintelligible.]
Male2:	No, not really. It's changing basically.
Interviewer:	Okay.
Male3:	The biggest problem I think, they say to -- this can take two month. And then it's up here in seven weeks. Then we get three weeks to make that. I think it shouldn't be [unintelligible].

Interviewer:	The other way around. So, you say it's -- it has -- the project is going for two months. Seven weeks, it stays in the office, and three weeks, it has to be --
Male3:	Done.
Interviewer:	It has to be done, yeah. If you could measure other departments, what would you measure from them? How would you measure them in performance, good/bad performance?
Male3:	Which I would measure.
Interviewer:	Yeah. What would you measure them that you can do a better job, or how should we measure other people?
Male3:	By knowledge and efficiency I think.
Male1:	[Unintelligible.]
Male3:	[Unintelligible]. And also how good a job they do.
Interviewer:	So, if you could measure the quality department, what would you measure?
Male2:	That's hard. We don't really --
Male1:	I don't know what they do there.
Interviewer:	Okay. All right. The supply chain department, what do you need from them? How would you measure them?
Male2:	Which one is that?
Interviewer:	Okay.
Male1:	Supply [unintelligible].
Interviewer:	Like [Robert Panzer].
Male2:	Oh, logistic.
Male1:	Yeah, that's pretty hard to measure I guess. I think easier to measure us welders.
Male2:	We know what we are trying to do there. So -- but basically planning should be better there.

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Interviewer: Okay. Planning. So, you think there's not enough information to plan further out for you?

Male2:   Sometimes we get information, well informed. And they say, "Hey, it's coming soon this job," that we have quite good time through it, make [unintelligible]. And then something changes, and then it comes, like, last minute. It has to be done to -- by tomorrow or something like that.

Interviewer: Okay. If you -- if somebody would measure you, how should we measure you?

Male1:   I was -- I mean, we got -- I don't know [unintelligible].

Interviewer: Well, now, you measure something because they report some meters welded? Does it actually interest you?

Male1:   No, it doesn't. That go -- some days, maybe it doesn't weld almost anything. Well, maybe just [unintelligible].

Interviewer: A sample.

Male1:   A sample things or [unintelligible].

Male3:   Grind.

Male1:   Grind.

Interviewer: Yes.

Male1:   Some days, maybe you're welding a whole day and do a lot of meters.

Male2:   It's not the way to measure.

Male1:   And you can measure the [unintelligible].

Interviewer: The number.

Male1:   Number of products you weld them.

Male2:   Tight efficiency.

Male1:   Yeah.

Male2:	And how -- if the planning job yourself, assembled things in a good order so it's -- run smooth in --
Male3:	Then it's [unintelligible].
Interviewer:	Manual labor?
Male3:	Okay. So, everybody's so different in their way to work. So, I believe it's -- if you just meet the weld meters, it's fails between person.
Interviewer:	Yeah. So, it's different between the person. It's different --
Male2:	Some are faster, and some are slower.
Interviewer:	Yeah. So, how would you like to be measured on good performance, bad performance, achieving your goal?
Male2:	Quality.
Interviewer:	Quality, yes.
Male2:	Knowledge, again.
Interviewer:	Can you explain knowledge for me?
Male2:	Yeah, like, you know how to assemble things --
Interviewer:	Yeah.
Male2:	-- quite learned, like, efficiency in that, and you know how it behaves and how the way this will behave and like that, save some time for yourself.
Male1:	Yesterday, there come -- becomes a problem, and you know how to solve that in a good way.
Male2:	Also, you have to, like, [unintelligible] to -- if it get deformed, we have to, like, make things right.
Interviewer:	It's deformed.
Male2:	Yeah.
Interviewer:	Yeah.
Male2:	And you --

Male3:   You have to straighten it out.

Male2:   Yeah, and you can plan ahead, like, straighten a bit more up, like you flatten the -- so, it got -- gets better when you weld. So, you don't have to straighten it out afterwards. That's also bit knowledge.

Interviewer: Okay. How does this relate to -- what do you think the cust-- I mean, you said what the company needs, probably something like more volume. And you said it was [unintelligible] to more volume because we get more and more components, bigger order. So, how does knowledge -- is it you want to be measured how much time you need to assemble a component or to turn around a comp-- like, make the component? Is that what you're saying?

Male2:   Yeah, basically, or efficiently, make [unintelligible].

Interviewer: The question I have here is, every component is different and has different -- will take different times because they're -- I mean, if you have a billet, I mean, you have a pipe and --

Male2:   Yeah, [unintelligible], yeah.

Interviewer: So, you probably won't spend the same amount of time on billet than on a hub --

Male2:   No.

Interviewer: -- probably. So, my question is how to give a realistic measure or a speaking measure to this work.

Male2:   That could be hard.

Interviewer: Yeah. What -- I mean, what motivates you then?

Male2:   Work?

Interviewer: Yeah, what motivates you at work?

Male2:   I think it's fun. And I like it.

Interviewer: Yeah?

Male2:   I like especially assembling part. That's just plain fun. And I like to try harder things and have to grow, like have fun to [unintelligible].

Male3:   [Unintelligible.]

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Interviewer:	Like whole, yes.
Male3:	[Butterfly]? To grow.
Interviewer:	Grow, yeah. To grow, yes. What motivates you at work? Why do you come here every morning?
Male3:	Morning?
Interviewer:	Yes. Everybody else?
Male1:	And well, I guess it's pretty [unintelligible] to create something. I don't know. I guess it's like [James] said. It's -- need to grow and get better at what you do and, yeah.
Male3:	The first is not -- it's money.
Interviewer:	Yes.
Male3:	Then it's little bit, when you work and you get better and better here, then you create the future for my family because, if this grows, I have a better chance to stay here and then save the future for them.
Interviewer:	Yeah. So, what do we do right as a company?
Male2:	What do we do right?
Interviewer:	Exactly.
Male3:	Expand, expand, expand, no?
Interviewer:	Can you name some things we do right?
Male1:	In what way you mean, in, like -- well, I guess we do a lot of things right. Well, it's going pretty good for the company I guess.
Interviewer:	Okay. What do we do wrong then, or are you just too shy to tell me what we do wrong?
Male2:	Have to think, but it's --
Male3:	Very little --
Male2:	-- stress part.

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Male3:	Yeah, [unintelligible] optimist.
Male2:	Time optimist.
Interviewer:	You're optimist on what?
Male3:	Well, the jobs. It's a little optimist all the time what it takes to do the whole process.
Interviewer:	Okay. What do we do wrong?
Male2:	What he said and -- I don't know.
Male1:	I think the company's -- is pretty good.
Male2:	Yeah.
Male1:	And then that is always stressful. That could be a bit better.
Interviewer:	Yeah?
Male1:	Otherwise, [unintelligible] good.
Male2:	I don't have too much to complain about.
Interviewer:	Okay. So, if you could improve one thing in this company, what would you do?
Male1:	I would like some more -- we need more time to create -- we need more time for what I do. It's always in the last minute that we need some --
Interviewer:	Some more lead time.
Male1:	Yeah, so that I can get that -- sometimes I think, "Is this the right way to do it? Can I do it better?" and stuff like that.
Interviewer:	Okay. Just thinking about improvement or things like -- ?
Male1:	Well, when it's stressful, you -- maybe if you had a sample, if you're going to sample something, then you just put it together and -- but if you had some extra time, maybe you could -- if there's some problems, some measurements are wrong or something, you would not sit earlier than if you are -- if you just sample it as fast as you can. Maybe it goes farther in the chain before someone notices.

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Interviewer:	Yeah.
Male2:	It usually takes longer time when we're stressed.
Male1:	Yeah.
Male2:	The sample and --
Male1:	And there are -- there's much more problems when we are stressed.
Male2:	So, less stress.
Male1:	Yeah.
Male2:	And also a pat on the back when we do good job.
Male1:	Yeah.
Interviewer:	So, do you get feedback?
Male2:	No.
Male1:	No.
Male 2:	Negative.
Interviewer:	Negative.
Male2:	Negative feedback.
Male1:	Never good feedback.
Male2:	Yeah.
Male1:	Yeah, that's one bad thing I guess.
Interviewer:	Okay.
Male1:	[Unintelligible.]
Interviewer:	You had more comments? No? I have no more questions. For me, that was okay. Do you have any questions for me?

| Male1: | I can't think of anything. I didn't prepare any questions. |

| Interviewer: | Maybe something you were wondering or -- I don't know -- any question you have on your mind. |

| Male3: | I don't. |

| Interviewer: | No? Okay. |

| Male3: | Are you coming to Christmas party tomorrow? |

| Interviewer: | Of course. I hope to have some drinks. |

| Male3: | Yeah. |

| Male2: | Yeah. |

| Interviewer: | All right. Thank you very much. |

| Male3: | Okay. |

[End of recorded material]

11 Appendix C: Interview with Stephen Harris, CEO Bodycote

130429_001

[Start of recorded material]

Interviewer: All right. Thank you, [130429_001], for having us today.

130429_001:   Okay. So, the goal of the enterprise, the most important goal of the enterprise is to create shareholder value. Notice I use the word shareholder, not stakeholder --

Interviewer: Right.

130429_001:   -- which is interesting to some people. As far as I'm concerned, that's what we're here for, to make money.

Interviewer: All right.

130429_001:   So, the question is, what then translates into, so what is the strategy of the company in order to do that to create the shareholder value? And that's where actually creating value for all stakeholders comes into play because, if you don't create value for employees and customers and suppliers, then you can never create money for shareholders.

Interviewer: Right.

130429_001:   So, important distinction in my mind is something I've always worked with.

Interviewer: Okay.

130429_001:   So, our strategy for creating value is really quite simple in terms of the fact that the business is already in existence. It's been built up over many years. It's not a question of completely changing what we do. It's a question of taking the assets that we have, which we're over-endowed with. We have a lot of assets that are underutilized --

Interviewer: Right.

130429_001:	-- and not being made use of in order to create value in the business. If you think about it, we've got GBP1.8 billion of gross assets.
Interviewer:	Right.
130429_001:	It's a big number.
Interviewer:	It's a big number.
130429_001:	And yet we only make profits, EBITDA, of something like 150 million, which is tiny --
Interviewer:	Yeah.
130429_001:	-- compared to the assets that we've got. So, we're kind of sitting here with a gift from our forefathers of massive amounts of assets and underutilized.
	So, the question is, how do we utilize those assets to actually create value in the near term? And then once we've started doing that, it would be a case of, how do we then do a longer-term growth of the business, grow --
Interviewer:	Right.
130429_001:	-- the value in the business?
Interviewer:	Okay.
130429_001:	Right? So, we're in a mode at the moment of short- to medium-term creation of value out of the existing assets that we've got and thereafter in terms of expanding pretty much along the lines of what we already do. Okay?
Interviewer:	Okay.
130429_001:	So, yeah, we could go on for hours in terms of what the detail --
Interviewer:	Yeah.

130429_001:   What do you want to do for that?

Interviewer: So, what is the -- the focus, as I see in lately was more in heat treatment than --

130429_001:   Yeah.

Interviewer: -- anywhere else.

130429_001:   Not true. If you want to try and operationalize the strategy, then I've given you the sort of overarching picture. The main parts of the strategy are breaking the business down into those markets that are more attractive versus those markets that are less attractive.

                 The most attractive markets that we've determined in the medium term are aerospace and energy.

Interviewer: Right.

130429_001:   Aerospace and energy then has been organized in the business into three technology strands, heat treatment, surface technology, and HIP. And we've decided that our prioritization for expansion and investment is in those three strands. So, it's not about heat treatment. It's about aerospace and energy. And that means heat treatment, HIP, and surface technology.

                 What it's not about is investing in the markets which are less attractive, which are basically the commodity end of automotive, the commodity end of heavy truck, and the commodity end of general industrial.

                 There are pieces in those markets that we do like, but generally speaking, the vast majority of them we don't. All right?

Interviewer: So, you do a market segmentation independently of the process you would apply to the market.

130429_001:   Exactly. Market segmentation where the market's going, what markets are most attractive. It has to be something that's

easily understood, both internally and externally as to why those markets are the ones that we've chosen.

Interviewer: Right.

130429_001:   And then we've aligned the company along the axis that allows us to capitalize on those markets, and so our three global divisions of HIP, surface technology, and heat treatment. And then it's a case of investing and growing those.

The business in years gone by in the past was organized geographically.

Interviewer: Right.

130429_001:   There were local managers in local countries, and that was it. They did everything. So, for instance, in Germany, we had -- the business was Germany only, controlled all of the business in Germany for every market segment with every technology. Frankly speaking, it was a failure.

Interviewer: All right.

130429_001:   What happened was that it under-capitalized the opportunities in the region, concentrating more on those parts of the business that the senior management felt comfortable with --

Interviewer: Right.

130429_001:   -- rather than those parts of the business that deserved the most attention.

When we broke it up, Germany now is in fact not recognized as one single territory. There are three different divisions active in Germany. And each of those divisions is actually pursuing its own market segment --

Interviewer: Right.

130429_001:   -- technologies. So, there are other aspects to the strategies of developing new technologies and expanding into emerging markets. Fundamentally, it's about attacking, exploiting

aerospace and energy markets right now, market segmentation standpoint.

What's next? How to make sure the business unit strategies align with the company strategy.

Interviewer: Exactly.

130429_001: The first thing is to make everybody aware of what the company strategy is. So, that was done in 2010 originally. It's very simple. It boils down to a half a dozen key issues, which have been drummed in time and time again to be, every year, we do a refresh of that, but we don't change the key principles.

Each of the divisions then is asked to produce strategies along those lines. They're not constrained and told that they can't do anything else. They're told the general areas, but when they come to present their strategies to senior management, those aspects of their business that aren't aligned with the strategy get kicked out, and they get screamed at.

Interviewer: Right.

130429_001: So, you could try and do something different, but if it's not on the money, you're in trouble, but the reason why we don't constrain it ahead of time is, occasionally, people come up with very good ideas, and we don't want to kill them at birth.

Interviewer: Right.

130429_001: So, we only kill them when they're a little bit older if they're not in line with what we want to do. Does that make sense?

Interviewer: Yes, it does.

130429_001: So, we have a little bit of creativity, but not too much.

Interviewer: Not too much.

130429_001: At the end of the day then, those strategic plans are monetized because the initial plans are not done with financials first and foremost in mind. They're done --

Interviewer:	Right.

130429_001:	-- in terms of markets' general strategic advantages. After those -- that piece of work has been done, then they've monetized in terms of people have to put financial figures on top of it for four years out.

Those financials then are transferred into a one-year budget. And the one-year budget is very heavily monitored with a whole bunch of KPIs on it.

In terms of the longer-term strategy, we don't actually have KPIs that are two, three, four years out. The KPIs that we use are only in the year coming. And one of the reasons for that is that I think it's very difficult to set a strategy and to keep it rigid.

Interviewer:	Right.

130429_001:	Strategies have to change with the environment --

Interviewer:	Right.

130429_001:	-- and have to change with the times. So, it's important to make sure that you don't try and rigidly plan too far out.

Interviewer:	Right. How far out would you see -- you have to see results on the strategy implementation?

130429_001:	Depends what it is.

Interviewer:	Probably in terms of monetary revenue?

130429_001:	Yeah, it depends what it is. So, what you've got to avoid is, every time anybody wants to do something that doesn't make money, they call it strategic --

Interviewer:	Right.

130429_001:	-- because it's a popular way of doing things, yeah. If somebody comes to me with a strategic acquisition, that means they really don't think it's going to make any money.

Interviewer: Right.

130429_001: If they come to me with a strategic investment, that probably means they don't think it's going to make any money. So, anything that's got the label strategic on it gets thrown out. That's the first lesson.

But in terms of actually the time horizons that we use, we're blessed with a business that can make extremely good returns very quickly. So, tactical investments are tasked with making a good return, in our case, 20 percent return on investment in the first full year of operations --

Interviewer: Right.

130429_001: -- which is normally two years after inception. That's building a factory, buying a company, whatever.

So, in your second year of op-- second year after inception, you should be making 20 percent return. And pretty much all of our investments have done that.

Interviewer: Right.

130429_001: Something that is naturally longer term is things like strategic expansion or building a position in the technology. So, you have one example in your area, which is HIP product fabrication.

Clear, HIP PF is not something that we're looking that we have to make a massive killing year one. The fact of the matter is it has been making good money, but we're investing a lot of the money into revenue expenditure anyway. So, we're tolerate of longer-term returns there.

But if I couldn't see something that was going to be making excellent returns within five years, I probably would not be --

Interviewer: Right.

130429_001: -- thinking about doing it.

Interviewer:	Okay.

130429_001: So, lot of people would think that's short term. It's not about short term, is it? Problem is, if you lay plans, in my experience, that take you out more than five years, the world will have changed by the time you get there, and your plans will be wrong.

So, past five years, all you've got is a general vision, general goal, but plans shouldn't last more than four to five years.

Now, in my other company, because I mean, I work for a paper company as well, we do 30-year plans, but that's because trees take a long time to grow.

Interviewer: Right.

130429_001: Okay?

Interviewer: Different business.

130429_001: Different business, yeah.

Interviewer: The -- so, summarizing it would say that we have to see a positive trend within the first three years of the inception to justify further investment in the area.

130429_001: Well, I wouldn't even let it go that long. I mean, I'd want to see improvements in the business and achieving traction, moving forward every quarter.

Interviewer: Right.

130429_001: I wouldn't wait three years to see traction. If I can't see the right things happening in the first quarter, then something's wrong. And if it's one quarter away, it can't be the plan is wrong. That's too quick for a plan to go wrong; means the people are wrong.

Interviewer: Right.

130429_001:   So, and the other interesting thing about strategy in my mind is a lot of people say it, but it's absolutely true: thinking out the plan is the easy bit. Getting people to do it or to do something is the difficult bit. So, actually, so long as you've got a focus and direction that everybody's onboard with, you'll do an awful lot better than sitting around thinking about a better plan or a better strategy. It's really about getting motivated people on the ground and moving.

Interviewer: Right.

130429_001:   So, you can tell I'm not the purist when it comes to strategy.

Interviewer: No, not really. Not really, no.

130429_001:   It's almost any strategy's okay. Just get good people.

Interviewer: Okay.

130429_001:   And that's not going to help your paper, but --

Interviewer: No. No, it's a good view. So, how do you determine success? You said quarterly results are determining your success?

130429_001:   Moving the right direction in the quarter and then, on a quarterly basis, you have to keep moving forward. And you could have setbacks, but you have to know what's happening on a short-term basis.

                And in terms of what is a success or not, it's very easy to judge in my mind because it's monetized. It's, what's your return on investment? And if you can't beat your cost of capital, it's a failure. That's clear. If you can't get a return that is very high because you're -- if it's a chosen strategy, it's something you're focusing the resources of the company on. It therefore should get better than your average rate of return.

                So, our average rate of return on the company at the moment is 19.6 percent. So, anything that we focus on to invest in should be giving us over a period of three to five years a better return than that.

Interviewer: All right. The average cost of capital would be 10-ish or something?

130429_001:   Before tax, if you can understand that notion because we're --
              it's actually about 8.5 percent really after tax.

Interviewer: Right.

130429_001:   Thank you. If you want to hang up, we'll go inside.

Interviewer: Yeah.

130429_001:   We'll keep going.

Interviewer: We're measuring -- well, you have determined the measure of
              success, but how would you as the Chief Executive Officer
              think about -- how do you make it understandable for the last
              person on the shop floor what he has to do to contribute to the
              success of the company, or how would you do it?

130429_001:   Yeah. So, the first thing I think to understand is that never
              mind the person on the shop floor, which is -- person on the
              shop floor's important, but they're no different from anybody in
              the company. And if you're going to communicate to a lot of
              people in many countries in many languages, then however
              difficult you think your strategy is, it has to be explainable in
              one page, big writing in one page.

Interviewer: Right.

130429_001:   If it's more than one page, then nobody's going to understand
              it. And in fact, our strategy, as I said, it comes down to six
              sentences when you look at it laid out.   It's very
              straightforward. It's very simple.

              And then after that, it's really a question of making sure every
              level of management understands what it is so that it goes all
              the way down through the company. And then we actually use
              traditional communication methods, including sort of Website
              and videos and all that kind of thing.

Interviewer: Right.

130429_001:   But how it relates to a particular person and their role is done
              through cascading objectives. So, I have a set of objectives
              which are absolutely in line with the company strategy. All my

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direct reports have objectives which are based on that. And then the -- thank you.

Female Voice: You're welcome.

130429_001: And then it goes all the way down until you get to the shop floor managers. It doesn't go any lower than that in terms of objectives, but their job is to make sure that they educate the shop floor.

Having said that, by the time you get to the shop floor because our facilities are very small, there's not a lot that can happen in one facility that can cause us to go off target because, as you know yourself, [Interviewer], most of our labor is actually physical and manual labor.

Interviewer: Right.

130429_001: We don't have teams of engineers and teams of technologists. In fact, piece of the business that you're in, which is HIP PF, is probably the most complicated that we've got.

Interviewer: Right. It is. It is. I confirm.

130429_001: And even that's easy. So, I mean --

Interviewer: Yeah. Okay. We can have an argument. And from a HIP or HIP PF perspective, what are the key guidelines or indicators or visions you have for the HIP and HIP PF business?

130429_001: So, the HIP PF business comes into -- well, it's a subset of our strategy, which is the piece which is investing in new technologies or differentiated technologies. Most of Bodycote is not differentiated. Most of Bodycote is in a commodity market. There we have few technologies that are differentiated.

Having said that, even though we exist in a commodity market, we do generate returns of nearly 20 percent, which is more than most industrial companies.

Interviewer: Right.

130429_001:	So, there's something about it. And there's long reasons to why that is the case, but whatever.
	The HIP PF side, so HIP PF is a technology which is young. It's something which Bodycote -- I used to say it belonged to us and only us. It's not quite true, but it's nearly true. We're about the only commercial operation in the world that does this kind of stuff, mostly I think because we recognized that it was a market to go for. The technology's been around, but nobody really recognized it as something that you could make a business out of.
	So far, our progress in HIP PF has been more along the lines of doing what we were familiar with and what came through the door rather than actually guiding ourselves proactively.
	So, we got business when this business started up in oil and gas, and so we carried on doing that. But in fact, if you do a deep dive into that, you'll probably find that's not the best place to put our efforts for many, many reasons. It's just that it's an easier place to go because people in that industry are more familiar with the technology.
	But we've invested a huge amount of effort going into oil and gas rather than standing back and saying, "Well, what's the best market for us to go for?" And we've probably made a mistake in that.
	But in the early days of this -- and we're about four years into it -- it's more important in my mind to get a team of people in place that understand the technology and understand how to run the business mechanically than actually really deciding on the end market because there's plenty of opportunity.
Interviewer:	Right.
130429_001:	And there's opportunity coming at us every day. And our biggest task is filtering out what we shouldn't be doing rather than trying to find something to do. But we're going to be moving into a new phase in HIP PF. We need a much better understanding of where the market is and what to go for because we're moving from a low-cost beef-it-up operation to now really starting to invest very, very heavily.
	So, the management of investment going forward's going to be much greater than we've done to date. Therefore, we

	better know what we're doing and to a much higher degree of accuracy.
Interviewer:	Okay. So, how do you feel about the current performance of PF?
130429_001:	I don't like it. It's not good enough. We have underestimated the difficulties. And we've overinvested in the wrong parts of the business. I mean, our flagship facility's at Surahammar. We've not sorted out our physical plant properly. We got ourselves into a silly situation, where we waited for our equipment to be out of warranty before we made a claim on the manufacturer, unbelievable, but there you go.
	If it was only worth EUR100, fine, but it's a very expensive piece of equipment. So, we're now into a bit of backfilling in that respect. We've put a lot of people on the ground. We've not really got a great functioning organization yet.
	It sounds negative, but at the end of the day, when you're exploiting a new technology, it's always like that. So, I'm not crying, right? But I'm not -- I haven't put the flags out saying what a fantastic job because we haven't got there yet.
Interviewer:	Right. You speak a lot about people. Do you think you have the right people in place?
130429_001:	Not yet.
Interviewer:	That's a very short answer.
130429_001:	That's what you need. We are recruiting. So, we have some of the right people.
Interviewer:	The --
130429_001:	When you think about it, you can answer the question yourself. We've got good people in operations. What we don't have are good people in sales, marketing, contracting, and the like. I mean, we've got one guy who seems to be okay, but you can then -- in terms of sales and marketing, but we don't have the contract management skills. We don't have the commercial skills. And frankly, our sales force is tiny and immature. So, we need to recruit more people --

Interviewer: Right.

130429_001:   -- and high-quality people.

Interviewer: Yeah.

[End of recorded material]

12 Appendix D: Personal Notes Bernd Thommes

Unlined
Journal 3

29. 01. 2013

Thoughts on

Strategy

for

the

AIP PF Business

It is more and more important to define where we are standing and where we want to be in the future. It seems that the business is narrow focussed on a single market which exposed the technology to a substantial risk of failure. The question is how do we want to diversify the market and revenue streams of the business?

Before we speak on markets we should speak about technology. The law of diffusion of innovation seeks to explain how technology spreads through cultures

Early adopters

Late majority

2,5%   13,5%   34%   34%   16%

Innovators

Early majority

Laggards
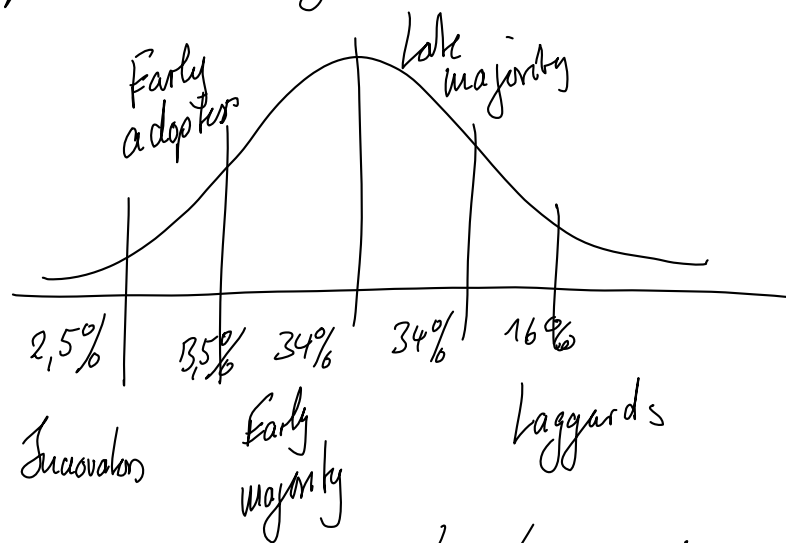
Our strategy has to take into account that we might not have reached the innovators in all

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markets and therefore have to
approach the subject differently
case by case, market by
market

7.6. 2013

In the meantime many thing
have happened.

The factory in Sweden has
gone through a major turmoil.
Sales and Orderbook went in
worrysome directions. And it
became obvious that we
were not prepared for the
business which we decided to

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order. In 2012 improvement
in supply chain and equipment
efficiency were achieved. Supply
chain performance went from 118 days
to around 54 days to execute
an order only on the manufacturing
portion Sooo ,it became visible that
the actual manufacturing was
not the main issue but the
related paperwork. In particular
the management of deviations
to the initial specification or
deviations due to manufacturing
shortcomings, e.g. tolerances, process
deviations..

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Journal 3

This resulted into delays in revenue recognition. How to put in UDE?

- Bodyote cannot consistently achieve financial objectives due to variations
  ~~variability~~
  in project execution.

- Customers do not require to <u>date</u> execution of projects

- Customers have limited knowledge about the technology, material properties ... and rely heavily on standards.

- Standards do not always represent our process but a competitive process.

- It takes 2 to 4 weeks to get approval on documentation which

We need a current reality tree ?
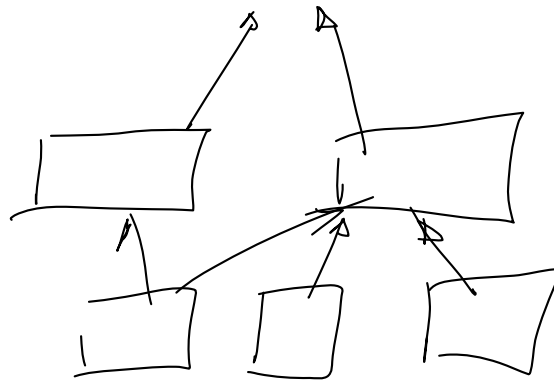
These are _operational issues_ and
strategic impacts which hinder
the success of the business. Not
only of the current but any
future.

Back to initial
comments

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Journal 3

in a 20 weeks delivery time is 10%
- 20% delay.

- All deviations from the process are material properties
  open for interpretation like law. That
  means fundamental material knowledge
  is needed to build a case for the
  customer. (time consuming)

- Customers have limited knowledge
  about the process and the
  material they use

- Standards are vague or open for
  interpretation

- No order is a repeat order.
  All orders are made to _order._

- BC is not participating in norming
  activities and exposes itself to normiats
  of   ok

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Journal 3

BC is not financially performing as required

No specific knowledge

Reduced Risk of the revenue stream

Reduction in staff cost

Separation of PF from the BC standard business

BC

POST

OTHER PARTY

BC HIP

SALES

POWDER
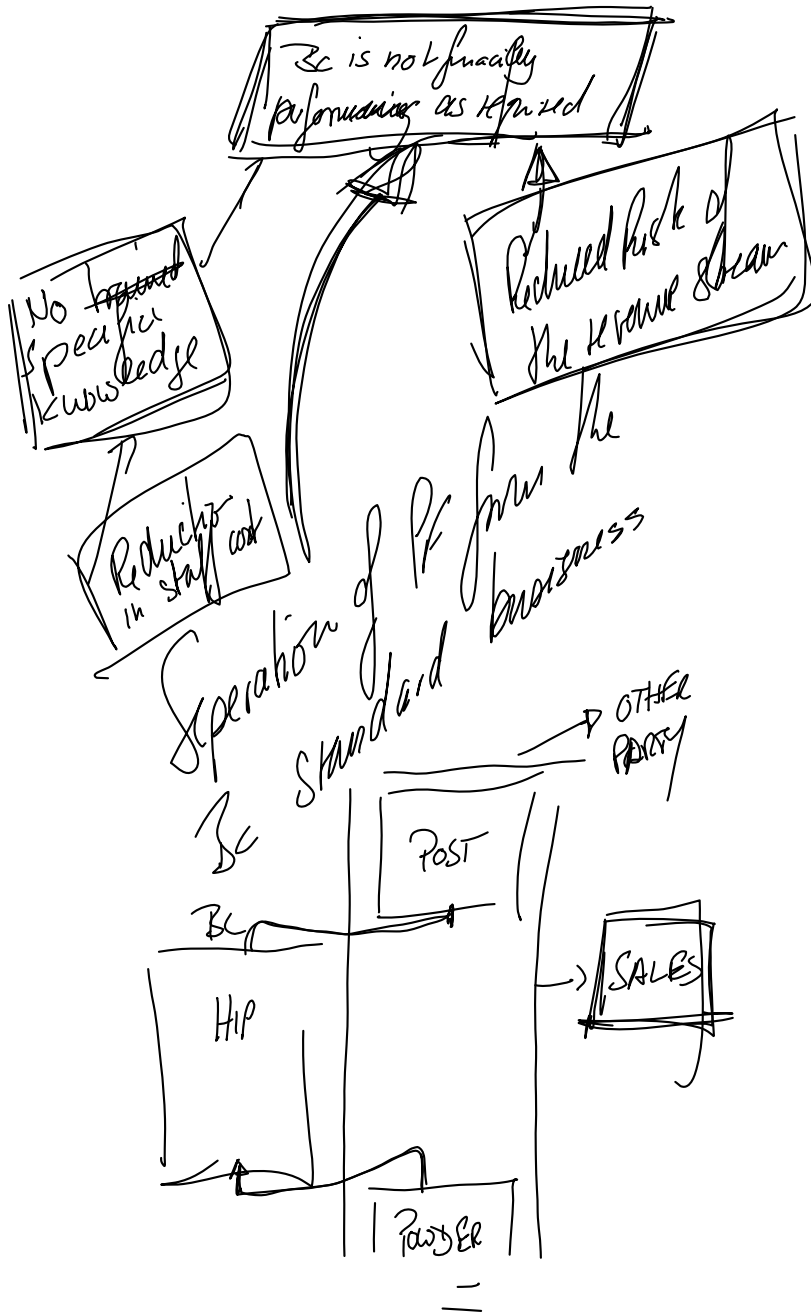
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Journal 3

- Our people do not have the industry specific experience
- Our supplies do not have the required knowledge to fulfill our requirements
- A change in process, deviation from agreed process, specification or standard causes delays which often have significant impacts: 10% — 25% of the lead time.
- Our people have no or limited knowledge about problem solving techniques (which limits the quality of our responses to our customers.) → Could be 2 WOE.
- Bc does not want to carry risks and liabilities.
- Risk come from contracts like liquidate damages are standard in project work

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Journal 3

Mixed models way to market

○ Objective is to reduce the
  risks of product liability,
  liquidated damages.

• Diversentration :

  • Customer acceptance of way to
    → market ?
  • Reduction of internal
    knowledge ?
  • pure source contracting ?
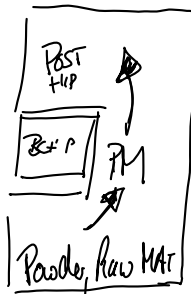
  • Only competitive
    advantages are
    the Ø of the
    tech, and # of
    furnaces.

POST
HIP

B&P   PM

Powder, Raw MAT

- Revenue Stream is not diversified
- BC does not have the sales reach to develop a vast # of markets
- Other companies have done ground work and have developed the markets.
- Other companies are willing to assume risk related to these markets but have no RP (specific tech)
  - Trading companies
  - Forging companies
    └ diversification into RP
- Risk of project business can reduce the reliability of the revenue stream.
- Competition of substitute tech controls price levels, so increasing margin is challenging

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Journal 3

A future reality tree is required.

2 aims :

→ Steady growing revenue stream
→ reduced risk in obtaining
  this revenue

?

Unlined
Journal 3

- Order to (cash) invoice cycle is long compared to other businesses in the company (Reduce the cash cycle)

○ These are limited indicators for groups or individuals if they contribute to the organizations objective or goal.

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Journal 3

Rules and
Regularities

Measures
towards
the R & R

Logging Results

Results on
Validity of
Measures

Impact on
Measuring
Results

Alignment
with R & R
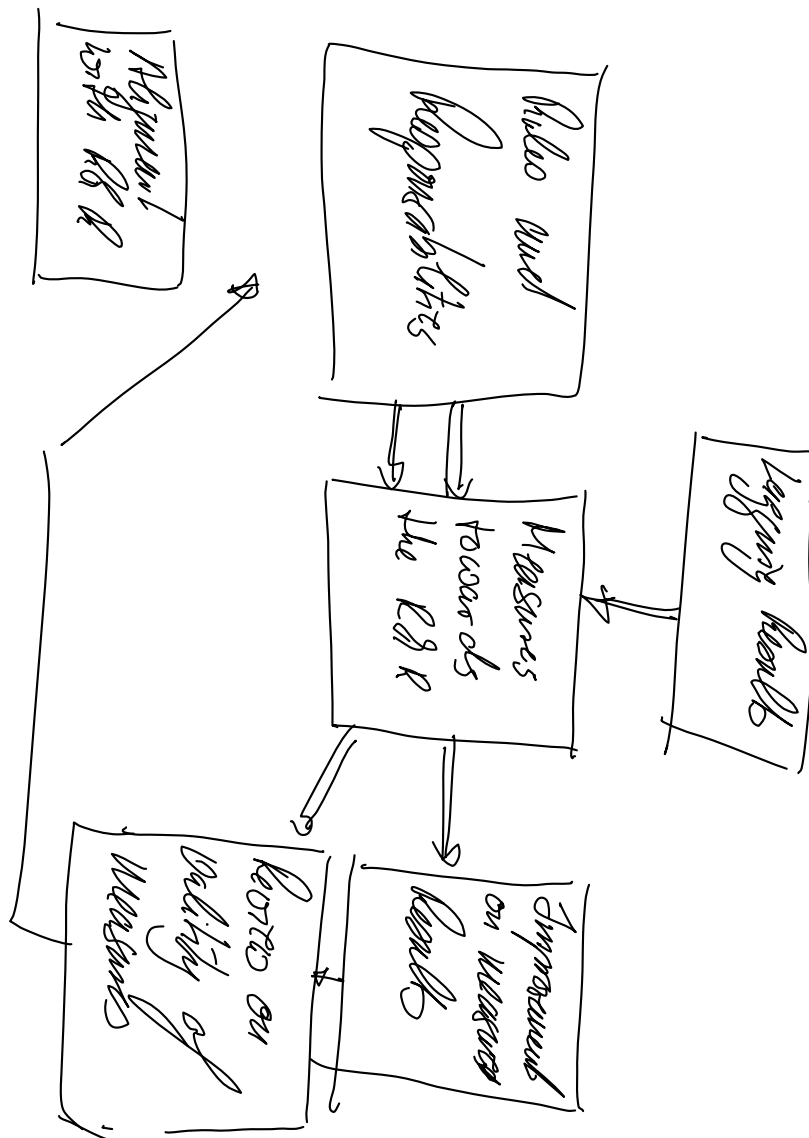
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The issues in my thought process
of leaving are that senior
leaders do not engage in
double loop learning. They
are often isolated from their
base and operate within
a political environment
with does not allow for
fundamental questioning of
the company or organization.
This might be valid for
all levels of the organizatio?
It could be that misposed

Unlined
Journal 3

policies and rules are fostering
a single loop learning and
does not allow for the
renewal of the way we
conduct business and also
review what can be done
different. How do you
foster learning then. Is it
involvement, empowerment or
anything else. I would expect
for the case in hand that
we fall back into old
patterns very soon. In our
case we have a new president

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Event: Many employees were disappointed with an executive decision. They complain to an open door line. The answer they get is that the decision was rightful and that there is no reason to complain.

Unlined
Journal 3

and we have to compare him
to the old one.

[old behavior]

- micromanage
- unreasonable in demands
- unrewarding, no record
for performance
- likes to hear the word "yes"
- no business sense
- no risk taker
- no memory for details
- a lier,
- no knowledge about the
business

- no decisions made
- cannot build relationships
- does not delegate anything
- inattention to results
- no competence to run the business
- no sales sense
- keeps to establish rules
- no innovation in anything
- no vision
- no strategy

01.11.13

Well this week it got official
I did not get the promotion.
The question is really if I did
really everything to get it or

Was I to passive, or ever didn't I really want this job? I do not have the answer to this bcs I played on the fact, probably as always, that the good soldier will get promoted. Why would I liked to get the job?

1. Prestige of the title
2. Money and recognition of the past work
3. A new challenge to build something great
4. I like the people I worked with and could see that it can be drive farther

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Why did I not want the job?

1) There is no authority
give to middle manages
in this company, decision
making is highly centralized
and a VP at this company
is a madman with
only responsabilities and
no authorities.

2) It seems that only
people with a high alignment
are recruited. Which means
that critical thinking and
questioning of systems are
not allowed

4) The unability to make a
decision. It takes years
to make any decisio
what ever the importance

5) It seems that the
legal counsel runs the
business. Business decision
are drive by legal advise
not by business sense.

6) The company pays bad, despite
delivered growth no bonuses
are paid.

3) Total diffusion of responsibility
with lead to a situation
that nobody really knows
what decision can be taken
by whom and if there is
a decision is taken who
is responsible of executing
the decision

What is interesting is that the
market value of the company
has doubled despite the
dysfunctional behaviour of
the lack of modern management
processes and share price. I
would argue that any

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Journal 3

company can have a sustainable business in the long run if it denys itself to internal renewal and employee empowerment and therefore the shareprice represents a false market perception on an assumed future performance which is not going to happen. The results are more likely a result of luck than of actual innovation or management. It seems also that the main focus is on immediate gains misleded long term growth. "What can you do for me today".

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Journal 3

The management strategy has more of Jack Sparrow: "Take all you get, give nothing back."

What is the value of a company which leaves only animosity with their customers and supplies, Despite current results, it seems that there might a future which is not as bright as the manages of the company might hope. A business model build on disrespect and burned relationships can that be _valued_.

3) Endless discussion with
analyst with seem to work
on a different planet, at
least it seems it is their
first day on in the company

4) Outsiders are much more
competent than any
employee

5) People in charge seem
to learn nothing. I think
there is at least one
question which rocumes looy
noth about WIP adjustments
on the P&L and how

it is done. The answer was the same for the last six months but it still pops up.

6) To secure confusion we hire as many people foreign to the business as possible. It has become a big training camp for senior managers which have never worked in a manufacturing environment

7) For 12 months we had no management hierarchy and it seems that this still continue.

8) For 300 people we need a president, a senior VP, 4 VPs, a controller a HR.

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Journal 3

I wonder what over small
to medium size companies do.
In addition we have Vps
reporting to vps and so on and
so on ___. In Germany a
company this size is run
by 3 managing directors.

9) The absence of reward and
recognition. Despite delivered
results you basically have to
put the socalled leaders at
gun point to pay small
bonuses to you while they
cash out with their loooow

of stock options.

10) The list of things I do not
like is already much longer
than the positive sides.

9. 11. 2013

After many interviews
and discussions I have the
feeling that only some points
repeat itself (: forget about the 2)

→ I do not know the
strategy of the company

→ I do not know how I
can influence the strategic
goal of company

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3) Only 80% of the documentation
I receive to do my job is
complete or correct

4) I don't know my role
and responsability

5) I do't know the roles
and responsabilities of
others

6) Wrong specifications are
forwarded to customers
(CANEA)

7) It takes too much time
to find the required
information

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Journal 3

8) I am not sure if the information I found is the correct for the project

9) I cannot search past documentation for precedence

10) We do not take the time to reflect on problems and how to prevent them

11) People are not efficient communicators has to be improved

Actionable items:

1.) Evaluate existing sharepoint system

2.) Evaluate web-based camea system (Actually we use 2 systems, Safety, CM)

On Strategy :

For the employee there are 2 type-
Strategies : 1. Reason to exist, propose

1) What is the goal of the
Company   (WHY)
   " Make more and more money
   now and in the future "

2) We are challenging current
   technology with innovative
   solutions made out of
   powder   (HOW)

~~How~~ 3) We excell in the production
of PM material / component as
managing the process from material
to the finished component.

2) Support the "Reason of existance"
with actions. #3 must
be translated into actions
The organisation has to reflect
the problems faced by the
employees. Who is doing what
when and is responsible for the
delivery "

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We are responsible to deliver a PM product at the right time at the right Quality and generate profit from this.

Right time : Manage the process
that the customer is satisfied
with the delivered date : Manage
the customer expectation

— inform about delayed caused
by us in a timely manner

— inform about delays caused
by them in a timely manner

Give new delivery date
accordingly

QUALITY

PROFIT
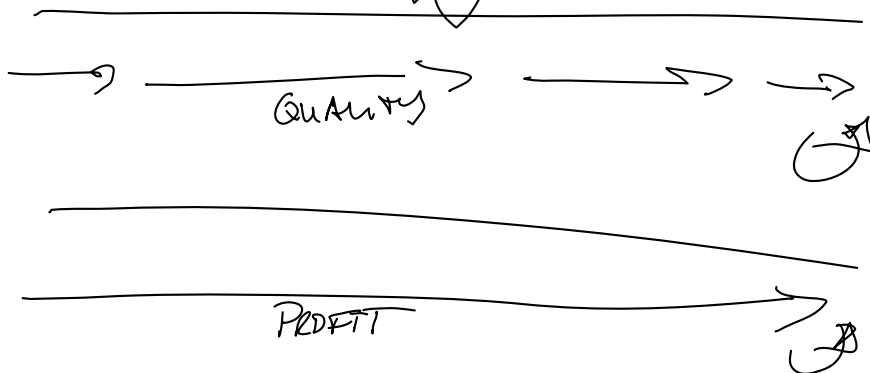
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Journal 3

-Changes in requirement to be
efficiently managed in timely
manner with the customer. This
can also increase the marginal
create revenue. Required good
understanding of the tech. specs
and requirements.

PROFIT
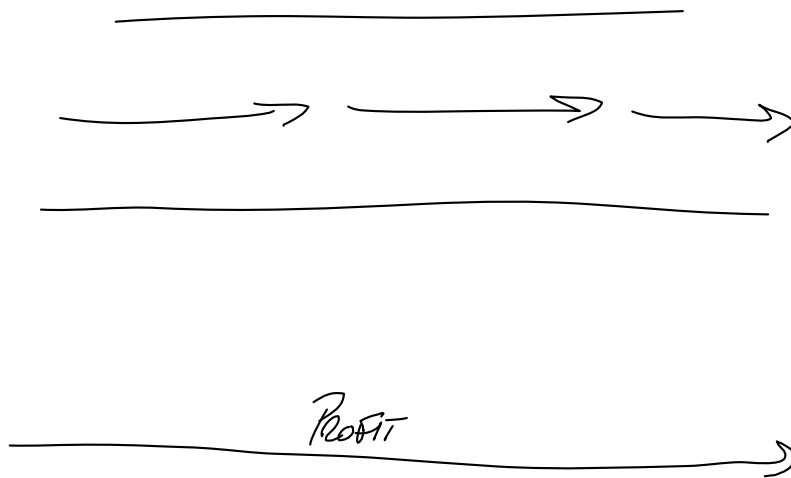
RGA Quality delivered to the customer:

- Identify a missmatch between requirement and achievable early in the process and achieve consensus on resolution

- Reduce the quality incidents by constantly improving specs and standardize work for internal and external processes

- Early information in case of deviations and resolution by the customer

PROFIT

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THOUGHT:

A Did I receive documentation in time
→ Measure ~~one~~ ON TIME (Y/N)

B Did I receive the documentation w/o
mistakes ? or Did I need
to inquire to complete the
documentation

— Measure Y/N —
— HOW MANY INQUIREY —
— FROM WHOM — CUSTOMER
— DESIGN
PROD
SUPPLY
SALES
QUALITY

PROFIT

Unlined
Journal 3

- Timely delivery of documentation
to the customer w/o mistakes
or strive for a reduction in
mistakes in documentation

→ A) B)

TYPE OF
DOCUMENTATION

DOC RECEIVED ON TIME	RECEIVED FROM	MISTAKES INQUIRERIES	WHAT WAS IT?
Y/N	CUSTOMER	X	
	DESIGN	Y	
	PROD	Z	
	SUPPLY	S	
	SALES	T	
	QUALITY	√	
	SUPPLIER		

RESULT →

↳ WHY? and what can be
done to repair the issue?

PREREQUISIT might be a clear defin.
of roles and Responsibilities. But
it could also help to setup the

R & R's for the different people on a more personal level.

Robust processes generate more profit

1) Clear expectations for all

2) Gain in time and increase in capacity to process

3) Management of change for increased volume

Profit

But what made me concerns
is the total disconnect between
the company performance
and the application of
management systems. The
profits of the company
are rising despite the
obvious asymmetrical relation
between company performance
and internal absence
of management systems

1) Modern companies rely on distribution of authority and want to create a engaged and responsible environment to drive performance.

What are the criteria in <u>literatur</u> to drive good performance?

What does literature refer to if they speak about engaged employees?

What does a practitioner say
about creating a disaster?

How does it compare with the
sample company?

Why is the company successful
despite the fact that it is
a dysfunctional relationship
between company performance
and strategy deployment and
performance management systems

3.6.2012

Today I was in a discussion with a senior manager at a Manufacturing company and we were discussing a factory they have in India and the problems they encounter

1) We donot deliver on time
2) Our quality is not sufficient to export the product to countries outside India
3) We have good quality systems but the quality of our systems does not translate into product quality
4) Our subcontractors do not provide the required performance to fulfill our needs in terms of delivery time and quality
5) Our offsite assembly is not performing well

Comments: I think some of these comments are universal and repeat themself very often in every company. It depends in which phases the company is.

6) Our employees do not understand our quality of work requirements

7) The employees accept that a product
   leaves the factory in a non-conform
   condition

Comment : What are the chain of command
policys in place. Why are the employees not
taking responsability for the product. What
is the Indicator we are measuring

   It brings us back to the purpose of a
   company.

   "TO MAKE MORE AND MORE
      MONEY NOW AND IN THE FUTURE"

The key driver is not quality, customer service
or cost reduction. All activities of the
company have to aim towards the
generation of cash now and in the
future. The quality, customer service,
on time delivery and cost reduction
are tools to achieve this

      COMMENT: What other tools do we think
               we use?
How about employee retention, quality inspection

customer service, on time in full delivery, required quality, cost reduction, key performance indicators, safety in terms of frequency and gravity

Balanced Scorecard, Financial Analysis : What are we measuring and for what reason ?

"Tell me what you measure and I tell you how I behave"

Measurement drives behaviour : => Company run through different phases over periods of time.

It could be argued therefore different phases do require different set of indicators or prioritizing of indicators

1) How do we find out which phase we are in

2) How do we then prioritize the indicators

? Could we derive action or an action list ?

(comment to 1): It should actually be asked what are the phases of a company?

Why do I call it phases?

What would be a better word for a condition of a company?

Spontaneously:
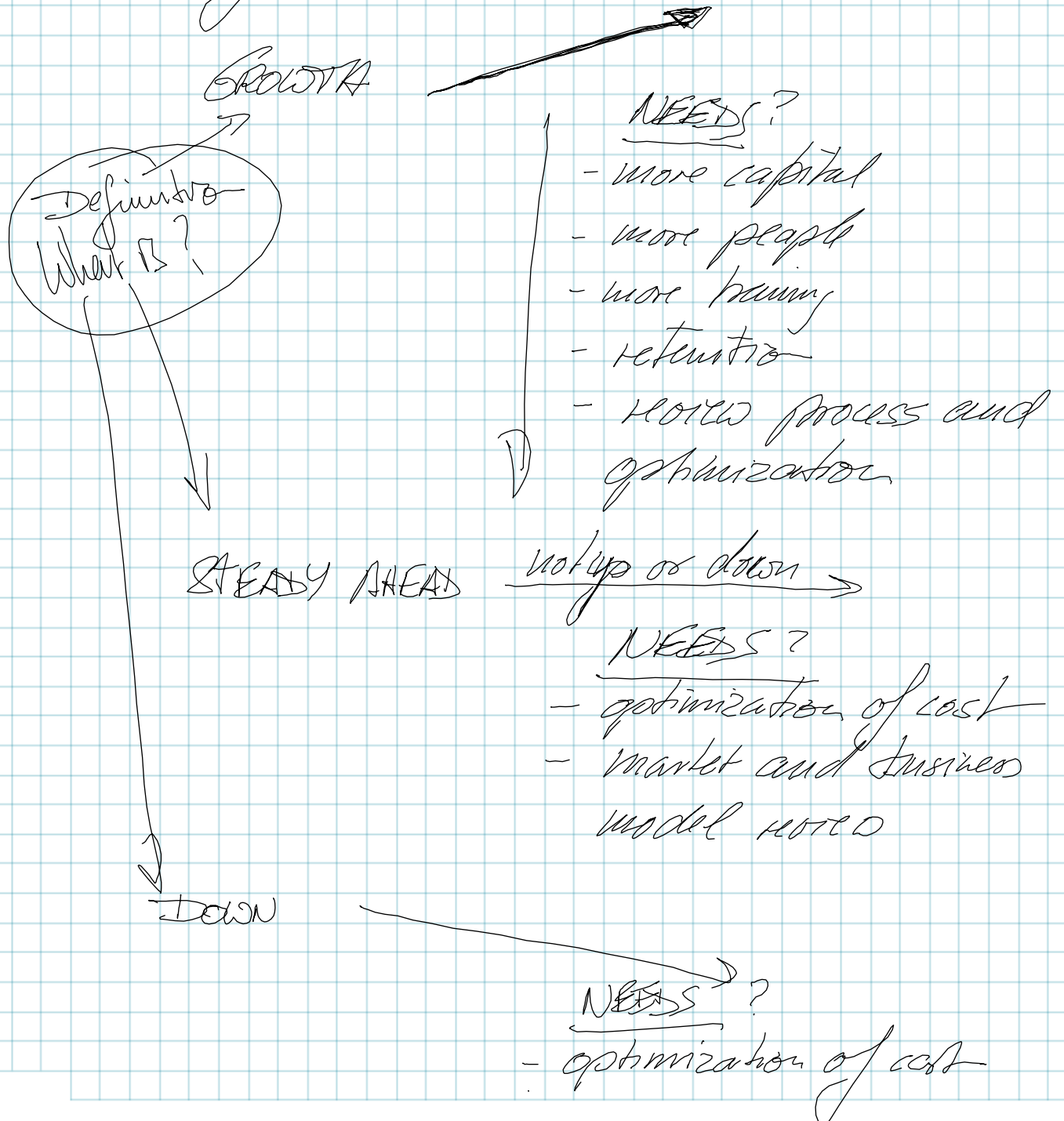
GROWTH ↗

(Definitive What is?)

NEEDS?
- more capital
- more people
- more training
- retention
- review process and optimization

STEADY AHEAD   not up or down →

NEEDS?
- optimization of cost
- market and business model moved

DOWN

NEEDS?
- optimization of cost

— business modell review
— new markets
—

Gude meines Fluges Graz – München

9. 7. 2011

Many people write and speak about performance
but what is performance? The performance of
a company is not a standalone result.
It has to be compared with the overall
and in particular competitive situation.
How do the markets develop during the
time we are measuring the performance of
the company. Again define performance?

To do :   collect data and quotes to
            define performance

If you think performance is expensive, try
using a paralyzed system. "   Peter Trapp

Phd Thesis : Performance Improvements Using
Dynamic Performance Ships, July 2011

Optimization matters only when it matters. When it matters, it matters a lot, but until you know that it matters, don't waste a lot of time doing it. Even if you know it matters, you need to know where it matters [J. M. Newcomer. Optimization : Your worst Enemy. online : http://www.codeproject.com/tips/optimization enemy.asp?print=true, August 2000 [May 02, 2007)

1) Sent a questionnaire to your peers in the class.

2) Put the same questions on the Performance group and the others on LinkedIn.

3) Collect more Newspaper data to confirm

Market   Competition   Internal Processes
Internal   General   Direct   Replace   Cost | Quality
to   to   Technology   People
Industry   Economy   Communication
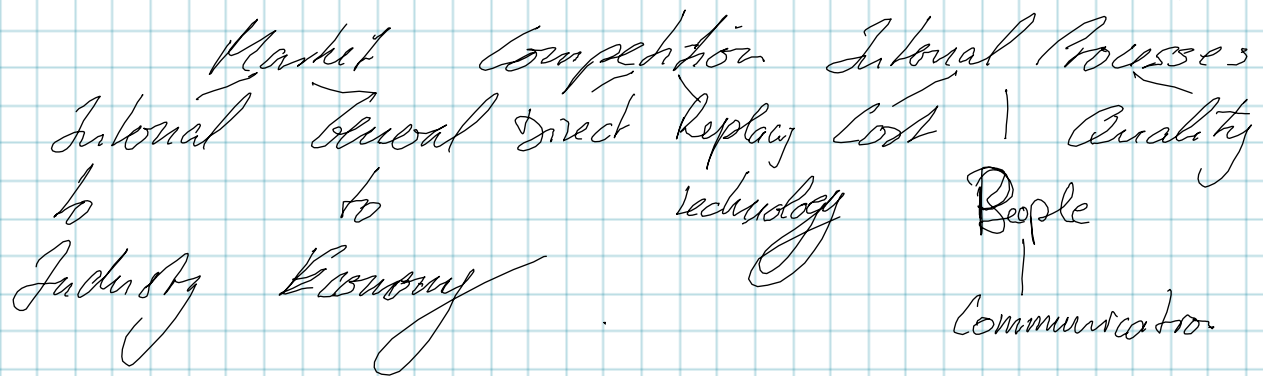
For #1) Instructions not only on negative
perspective but also on how
would it be better

#2) Same and see what is coming
back?

#3) Ongoing

Literature Review:

- Performance Management: what
models have been developed
- Performance Management in combination
with JOC

Action: download the papers you have
found and summarize what has
been done

Goto to find a definition of _performance_
→ Internet Research?

Combine PERFORMANCE + VARIABILITY

Interaction

Purpose: Find a speaking, concise model
that managers can minimize the KPIs
by having a consistent deployment of

Indicators through out the system. That means find a guideline for people or a group of people, namely employees, to ensure that they are working right and therefore the system is working right. How to deal with variability for employees. Scope is on manufacturing, producing and not R&D (Scope, maybe possible?)

Casestudy for Bodycote Sira hammer: How to correlate? => Questionaire => #1
↓
ask Magnus

Wien, 10.7.2012, KAI'S GEBURTSTAG ECKE AMEISGASSE HADiggasse. Morgentliche Flug von München nach Wien, Ich war noch nie am Wiener Flughafen. Aber das ist toll gemacht. Die Anzeigetafeln unterscheiden sich nicht von den Wände, toll. Allerdings kein Platz zum trinken. Noch eine Stunde bis zum Meeting ich bin schon ganz durchgeschwitzt von der Hitze hier in Wien. Ich bin gespannt wie dieser Stift arbeitet. Er sollte alles aufzeichnen, aber ich springe zwischen Seite hin und her ob das funktioniert?

Now after some reflections the following structure comes to my mind. I have returned from Wien and from the discussion with the Andritz Hydro management regarding a position in India. I think it went like crap. And surely they delayed a decision until they have interviewed an other candidate. So I think that is dead. The other job I was interested in was to take over an existing company in the Black Forest. But that did not work out either. I came to the conclusion that in the next 12 months I should concentrate on the DBA and getting Bodycote (& moving a little faster in terms of production and management. There is a problem for me and its name is Robert Panther. I cannot see were he is standing. Is he a resistor? He is when I am far away.

Quick Run Structure

```
┌──────────┐   ┌────────────┐        ┌──────────────────────┐
│ PROBLEM  │   │ PHILOSOPHI │        │ WHAT IS PERFORMANCE  │
└──────────┘   └────────────┘        └──────────────────────┘

┌──────────────────────────┐         ┌──────────────────────┐
│ LITERATURE REVIEW        │         │ MARKET - VARIABILITY  │
│ ON PERF. M. SYSTEMS      │         │ AND                   │
└──────────────────────────┘         └──────────────────────┘
                                              │
┌──────────────────────────┐         ┌──────────────────────┐
│ COMMON PROBLEMS          │         │ THE NECESSITY TO      │
│ OF COMPANIES             │         │ ADAPT IN THE VOLATILITY│
├──────────────────────────┤         │ OF MARKETS            │
│ INTERVIEW ?              │         └──────────────────────┘
│ NEWS PAPER ?             │
│ REVIEW                   │         ┌──────────────────────┐
└──────────────────────────┘         │ INFLUENCE OF DIFFERENT│
             │                       │ MANAGEMENT LEVELS     │
             ▼                       │ IN AN ORGANISATION    │
┌──────────────────────────┐         └──────────────────────┘
│ CURRENT REALITY          │
│ TREE                     │         ┌──────────────────────┐
│                          │   ───►  │ KPI MAP PROPOSAL      │
└──────────────────────────┘         │ FOR THE ORGANIZATION  │
             │                       └──────────────────────┘
             ▼                                 │
┌──────────────────────────┐                   ▼
│ FUTURE                   │         ┌──────────────────────┐
│ REALITY                  │         │   TEST IN BC         │
│ TREE                     │         └──────────────────────┘
└──────────────────────────┘
                          ◄──────────────────────
┌──────────────────────────┐
│ CONCLUDE                 │
│ AND PROPOSE              │
│ NEXT STEPS               │
└──────────────────────────┘
```

SOCIAL CONSTRUCTIONISM

ONTOLOGY   EPISTEMOLOGY

RELATIVISM

THERE ARE
MANY "TRUTHS"

FACTS DEPEND
ON THE VIEWPOINT
OF THE OBSERVER

ONTOLOGY : PHILOSOPHICAL ASSUMPTIONS
ABOUT THE NATURE OF
REALITY

EPISTEMOLOGY: A GENERAL SET OF
ASSUMPTIONS ABOUT WAYS OF
INQUIRING INTO THE
NATUR OF THE WORLD

The work develops a hollistic model of
multilayered numerical performance
measurements by presenting a theory
derived from a case study and
consequent generalisation of the model

x   MARK EASTERBY-SMITH et al p18, table 2.1
MANAGEMENT RESEARCH 4th edition 2012
SAGE, LONDON

P44 TABLE 3.4

```
┌─────────────────┐
│    SALARY       │ ──────────┐
└─────────────────┘           │
                              ↘
┌─────────────────┐         ┌──────────────────────┐
│  LEADERSHIP     │ ──────→ │    MOTIVATION         │
└─────────────────┘         │                      │
                            └──────────────────────┘
┌─────────────────┐           ↗
│ RESPONSABILITY  │ ──────────┘
└─────────────────┘
```
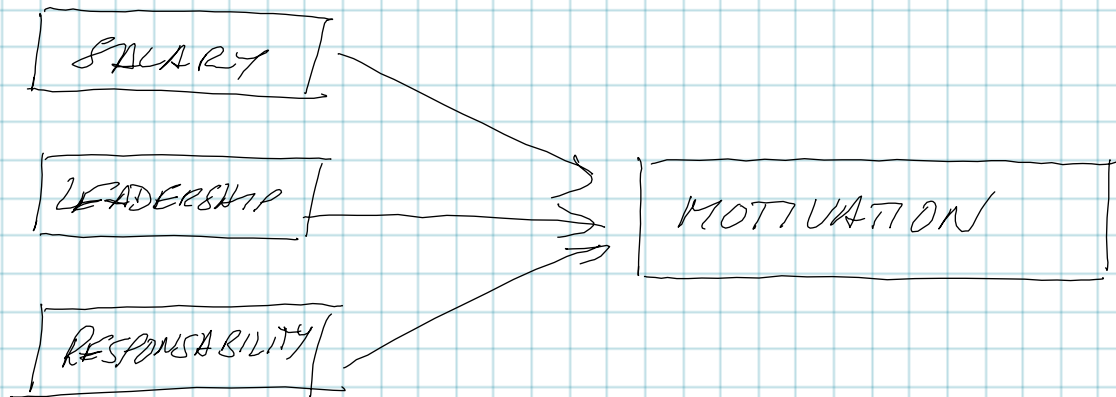
P49   ACTION RESEARCH :

1.   THE BES WAY OF LEARNING
     ABOUT AN ORGANIZATION OR
     SOCIAL SYSTEM IS THROUGH
     ATTEMPTING TO CHANGE IT

2.   THE PEOPLE MOST LIKELY TO
     BE AFFECTED BY, OR INVOLVED
     IN IMPLEMENTING, THE CHANGES
     SHOULD AS FAR AS POSSIBLE BECOME
     INVOLVED IN THE RESEARCH PROCESS
     ITSELF

     KURT LEWIN (1948)

HAAG IN OBERBAYERN   21.08.2012

Ich tue mir schwer mit der 1sten
Aufgabe des Literature Review. Nach 5
Tagen habe ich etwa 3000 Wörter
auf das Paper gebracht. Der Prozess
ist schwer aber ich habe das Gefühl
dass es jetzt schneller geht.

The idea I actually wanted to
write down was the use of the
JVCA study in my research for 2
reasons:

1) Proof that many indicators
   do not drive performance

2) That cost reduction has
   a limit which is capped

3) That Throughput is more
   important than cost reduction

Also I would like to ask Andy
NEELY to suppose my project. Therefore
I have to write a summary. I also
could ask Kaplan @ Harvard Business
School to give input!

The problem is how to make this interesting for them?

I will have to write a summary page. Is this enough

There also has to be an introduction on how to conduct the literature research ▽ I should write this today. There are 2 books available

I killed my travel to Boston this week and shifted it to September to avoid long discussion with Bobby about the future.

Interesting is the struggle between cost and non financial performance measures. At the end it seems that the agreement is that money or cash has to be generated but I could not find a good answer to how to communicate this through the organization. I think here is one gap. ▽ It seems that the measurement is a management problem, because the management only is concerned by KPI's

While the rest of the organization is not. But I found a good and valid statement that in a flat hirachy, the manpower in middle management has been removed to capture, analyse and communicate the performance to the employees. That requires that the measurements are simple in absolute and relative terms. And that these are not many, preferably one to highlight the performance. The interval is also important!

[I have to compile a list with books I purchased!]

The problem is really 2fold for me:

1) CAPACITY : WHAT IS THE CAPACITY OF THE SUPPLY CHAIN?

And here I would suggest a bottleneck which then determines the capacity of the entire supply chain!

2) The capacity analysis based on
a 80% utilization of the bottleneck
translates into capacity measures
of different pre and post processes.
The challenge is to correlate the
measures, because the smaller
the measured time span the
less accurate the capacity measure.
There also has to be the notion of
minimum and maximum as as
compensation for volatility is
required. The capacity measure should
then be translated into a performance
measure by planning an expected
output per time interval. The
time span can be daily or weekly
and should maybe look ~~like~~ based
on delivery performance.

MEASURE ↑   PLAN 100% OTIF

INSTALLED CAPACITY

95%
OTIF

1   2   3   4   WEEK
                              or DAY
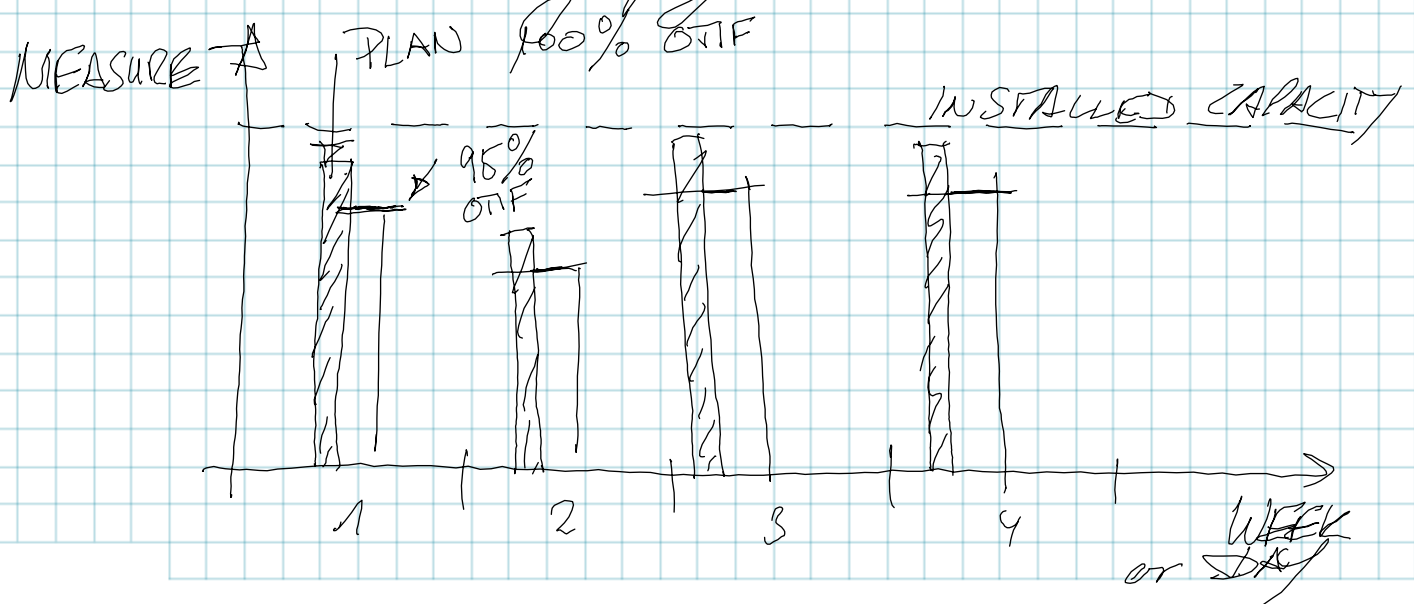
So it has to be planned that we are under the max installed capacity which is related to the 80% utilization of the bottleneck, plus about 20% to account for Murphy.

Improvement are only improvement if the produce the _same_ output at a lower cost. A local improvement of capacity which is not improving the overall output, throughput will not translate into sales or cost for that respect.

INSTALLED CAPACITY REQUIRED FOR 80% OF BOTTLE NECK + BUFFER (20%)

BUFFER   BUFFER   BUFFER
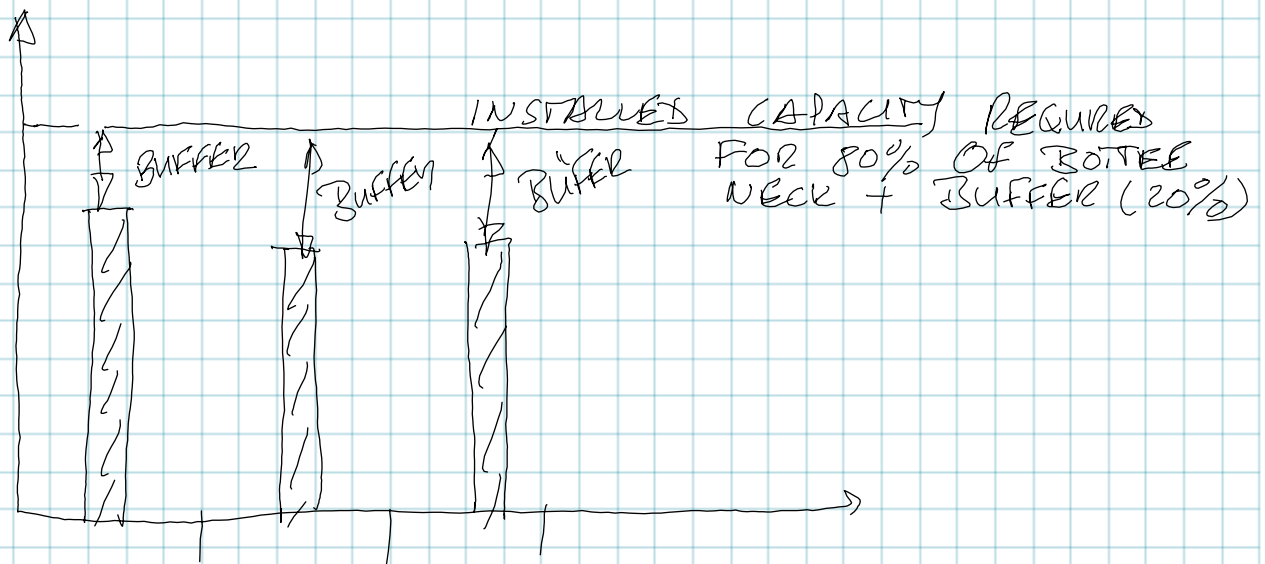
VARIABILITY OR MURPHY : AS WE HAVE ENVISIONED TO SUPPLY THE BOTTLENECK WITH MATERIAL TO MAKE IT RUN @ 80% UTILIZATION WE HAVE TO PROVIDE BUFFERS

A buffer being an additional capacity which ensures that even if there is variability in the supply chain we can serve the companies goal.

Any improvement is to reduce cost and the effort is to focus on the reduction of the variability within the individual process and to be able to reduce the buffer capacity

Productivity measures of a static number are sensitive of distortion by external variations.

- " PRODUCTIVITY AB A PERF. MEASURE
- " YESTERDAY ACCOUNTING
- " ARE YOUR GOALS
- " MANAGEMENT ACCOUNTING" TEEMU
- " ~~MANAGING YOUR DIVERSE WORKFORCE~~
- " ~~IMPLEMENTING STRATEGIES THROUGH MANAGEMENT CONTROL SYSTEMS~~
- " COLLABORATIVE PERFORMANCE MANAGEMENT
- " PROPOSAL OF HELEN (1)

FOR CONTRACTORS THE SAME RULES APPLY BUT IT IS IMPORTANT THAT IT IS COMUNICATED AS AN EXPECTATION.

"HOW TO MAKE THE MOST :_"
- CONFUSION between WHY AND HOW
- HOW TO TRANSLATE STRATEGY
  INTO ACTIONS

" BUILDING PERFORMANCE

  - HAVE TO WRITE ABOUT SHORT
    COMINGS ?
  - DIRECT LINKAGE BETWEEN VARIABLES
    TIMING ISSUE ?

" THE SEARCH FOR MEANINGFULL
MEASURE
            - A TOC MAP HOW WE DEFINE
              ACHIEVE SUCCESS ON A
              ACTIVITY LEVEL

" THE EVOLUTION OF PERFORMANCE
MEASURMENT RESEARCH"

    - Interesting in combination
      with the influence of
      different authors

Activity Bases Costing   By Cooper

- The system does not take into account capacity.
- Takes into account past performance

    Both can lead to destortion if the requirements or volumes vary. e.g. overcharging with higher volume and undercharging at lower volumes but never the right due to the use of standard rates based on past experience

- Automation is no longer constraint on working hours. The capacity is 365 days 24 hours.

- Costs which have not been covered by the standard have to be allocated anyway

- There is no retur or feedback loop to the P&L. It has to be possible to reconstitute the P&L out of the ABC

DRIVER OR STANDARD COST BOTH HAVE VARIATION BECAUSE OF VARIATIONS IN PRODUCT MIX. IT IS ALSO RELATED TO THE FACT THAT AT LOWER RATE AND CAPACITY UTILIZATION THE COST FOR THE UNUSED CAPACITY IS STILL THERE. REFERING TO SALES PATTERS DOES NOT FIX THE PROBLEM BECAUSE THIS ASSUMES THAT DIRECT COST IS VARIABLE (PURELY) WHICH IS RARELY THE CASE FOR LABOUR (THE PROMISE AND PERIL, COOPER PG)

COST CHANGE WITH PRODUCT MIX AND CAPACITY UTILIZATION WHICH MAKES IT NEARLY IMPOSSIBLE TO GET DATA ON COST WHICH SHOULD DRIVE A DEBISION ON A SINGLE PRODUCT LINE THE IMPACT OF MAKING OR NOT MAKING HAS TO BE STUDIED AND ITS IMPACT ON THE SYSTEM. AUTOMATION AND ITS UTILIZATION HAVE HUGE IMPACT ON PRODUCT COST

The complexity of the Literature Review Data was very cumbersome at the beginning and on day 1st I wrote like 300 words over the 2nd maybe 400 words. Eventually I adopted a system that from article to article I research available references and save it in Endnote and then work my way by date through these articles and write at the same time. I think I reached about 1000 words a day by now in 8 hours and the research of 5-10 journal articles. It is actually good progress. Only the logical alignment is troubling me. I have found good ideas and comments and have problems how to summarize them in a good and flowing thought process. That is the challenge for the coming week, to stay to go for the brand is of the summative. 5500 words up to now but logic required.

COULD WE CHART A GRAPH FOR
EACH DEPARTMENT

ORDERS   DRIVER

1
2
3

Whenever it is ready
we fill?
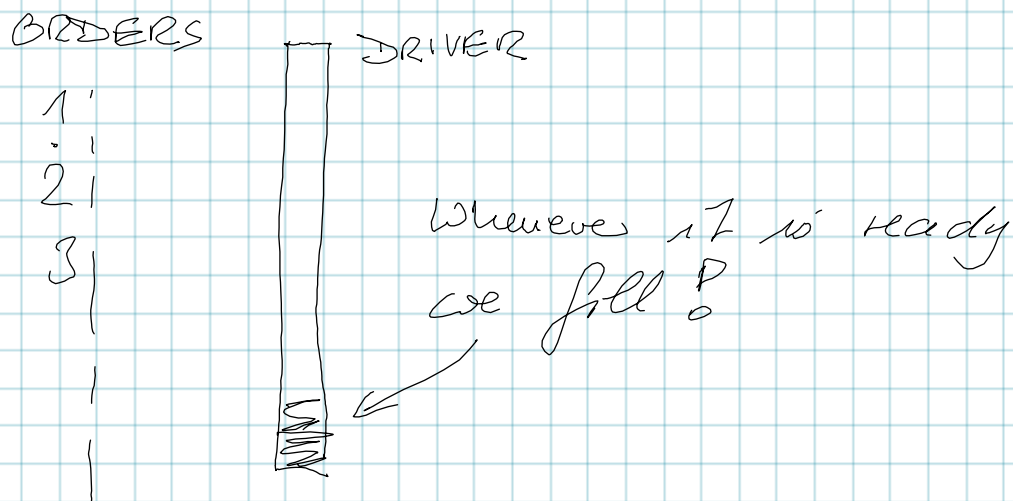
ROBERT S. KAPLAN "ONE COST SYSTEM
IS NOT ENOUGH" HBR JAN/FEB 1988
COOPER KAPLAN "MEASURE COST RIGHT
MAKE RIGHT DECISIONS" HBR SEP/OCT 1988

AFTER OUR VACATION WHICH MAP IS HERE. IT
SEEMS THAT I DID A LOT OF DRIVING

In the process of joining groups about
business improvement. I think there
are about 1 m not jobs in these
groups. Maybe I am not patient
enough but I am astonished how
limited people are open for
new thoughts of approaching things
And if it is not new the

accept that there is an other opinion. It is mainly about to be nice to each other and cuddle.

August 2: finally achieved my Senator Status. I can now have dinner and lunch and breakfast at a Lufthansa launch.

On August 30th I submitted the draft for the Literature Review. It is actually impressive how less I know about performance management. The subject is vast and quite extended throughout the last 50 years. I enjoyed digging around with the effect that I have more and more to read and have to find the time to read all the sources I found

I reviewed the Literature Review with Gordon who wanted to have it restructured that will be quite some work.

Mainly:

- Lighten up the flow
- Lead in major paragraphs
- summarize and contrast
- Choose and justify which way you are going
- Find more sources close to current!

I bought 10 books all to read. These are 10 articles to be found and read. WOW

There is a long gap between the last entry and this. Many months have passed and a lot of courses taken and paper submitted. The company in Sweden went through a though times. and it took a lot of effort to change the situation.

[PhT Graphs] [and case study]

The situation has improved and now I have more time to concentrate on this Research.

Tommorow we are going to England for the last class and out of this working week. There seems to be no end to nonsense in the anglo american rule. Nothing from the top is delivered on time. from these classes. It is constant procrastination

I bought a book which describes how to train your company and what a surprise all features are fitting on our current management. It is a pure nightmare to work here. The distance which is required to stay calm is impressive. Detach yourself from the upper management to avoid deadly frustration. It seems that quality and on time delivery is only for blue collar and middle management while upper management may shine with procrastination and failure to deliver. For example salary increases. 3 months of discussion and there is no resolution. The senior management missed the deadline to put increases through in July. The same happened in April for bonus payments

In the meantime I have used Skype
Harris to complain about the
working conditions and he was well
aware of the situation from different
sources. I am sure that ~~I cannot~~
he is aware that the situation starts
to be unbareable but it seems
that this does not inspire any
action. In the meantime 5 people
have quit and I am still in this
hell. What to do?

How wrong one can be ! The Stephen Harris syndrom I call it. But it inspired me to write a paper.

Sections :

1. Literature on Performance Management Systems.
   1.1. General statement on employed engagement
   1.2. What is considered as good practice
   1.3 What drives good behaviour

2. Description of the company and its performance
   2.1 Analysis of the shortfalls
   2.2. Management style : Micro management and high level of control
   2.3 Communication of strategy

or the absence of.

2.4 Target settings : unmeasurable
targets resulting in no reward

2.5 Types of managers : high alignment
and obedience , no self initiatives
end careers , over 50 ; feudal
system ; high reward for high
executives , no reward for the
middle management, Stymation
of decision makers, procrastination .

thep was a better word in this book

2.6. Management of the shareholders

2.6.1. Destortion of information
(or) management of share
holders and the information

3. Description of management
company pformance.

4. Conclusion.
— Acting against general known
knowledge of management
theory
—

Paper:

1) Strategy

Look at Criterion to Strategy

HOW DO YOU MAKE THEM STAY

1) What is strategy targeting at

2) Describe the Strategy process in the researcher company

a) Compile strategy: describe process

Plan ander Sonne Pongratz P 80
Resource Agendas

b) Presentation of the strategy: describe presentation   Pongratz

Interaction between CEO and other participants (PONGRATZ)
Beauticontests of individuals

→

c) Communication of ✓ PPT strategy

3) THE MANAGEMENT PROCESS

d) Setting of targets —

Strong separation of the management and local entities
Individual drive for performance to succeed as a group and not to support the operational goal; by chance they are the same

→
- Budget: Sales and profit
- Agreement of employee
- HR - observation

→
p Decision making
P 112, 113

What is
good management

Compare with
practice in
researched company

Seek behavioural
input

ask the question
if you would invest
in the company

In particular of in the point of separation of S. management and local management seek explanation to grouping and responsability

crisis + responsability →

I put forward the hypothesis that a group of people collude against the odds of senior management towards selfpreservation. By coincidence the goal of the company can be was aligned

The CEO is managing the share holder by " Pongratz p 58, 59 " Desinformation of stockmarkets or plausible explanation → Failure seems to be acceptable as long as it was "planned"

e) p 53, Pongratz
KNOW EVERYTHING BETTER, ASK USELESS
QUESTIONS, WHICH KANNOT BE ANSWERED
(P54)

GROUP BEHAVIOUR IN CONCLUSION PART
AS THE HYPOTHESIS?

GROUP OF
SENIOR MANAGERS
FAR-FAR AWAY

LOCAL HEROS
DEFENDING THE
LOCAL PEOPLE
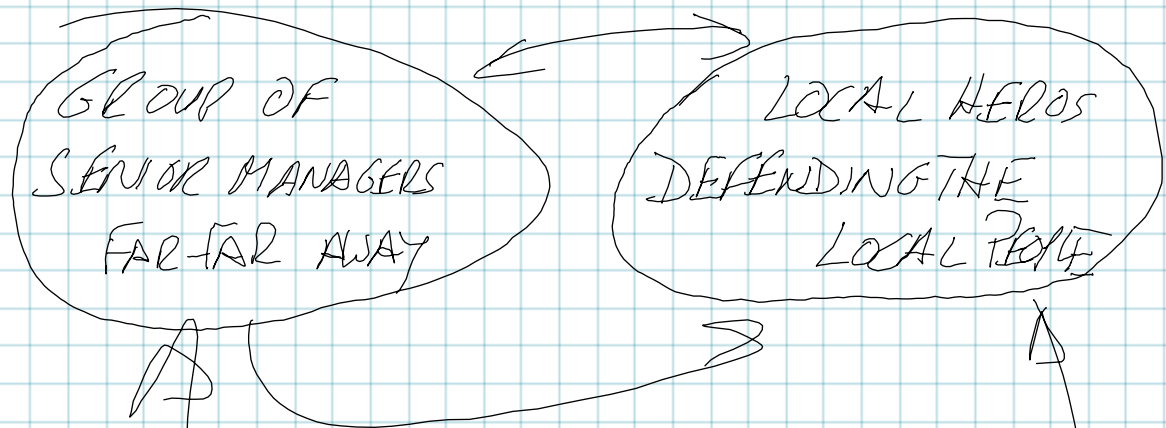
NO REAL COMMUNICATION

"CRAZY"

ALLEGIANCE IS WITH THE
LOCALS AND ITS
MANAGEMENT, WE
HAVE TO SAVE THE
COMPANY BECAUSE
THE "CRAZY" MANAGERS
IN THE COUNTRY FAR
FAR AWAY ARE
UNCAPABLE

Summary

I ON STRATEGY:

THE STRATEGY PROCESS

HOW STRATEGY IS COMPILED

HOW STRATEGY IS PRESENTED

HOW STRATEGY IS TRANSLATED
INTO ACTION

> QUOTE " THESE ARE ONLY
> TACTICS " CEO
> - NO TRANSLATION INTO ACTIONS
> - COLLECTIONS OF IDEAS (?)

II ON MANAGEMENT

THE DELEGATION PROCESS
THE ACCOUNTABILITY PROCESS
THE DECISION MAKING PROCESS

⇓

DISCONNECTION OF LOCAL TO SENIOR
QUOTE "IT GOT VERY CRAZY IN THE
LAST YEARS. LOT TO REPORT
NO DECISION TAKEN "

ON COMMUNICATION

- INTERNALY. IT SEEMS TO
  BE DIFFICULT TO GET RELEVANT
  REPORTS
- THE # OF REPORTS WAS ALWAYS
  INCREASING: BUT IMPACT
  STAYED "HIDDEN"
- STOCKMARKET INFORMATION SEEMS
  TO BE DIFFERENT THAN LIVED
  REALITY.

STRATEGY

PERFORMANCE
MANAGEMENT
+ BEHAVIOUR

COMMUNICATION
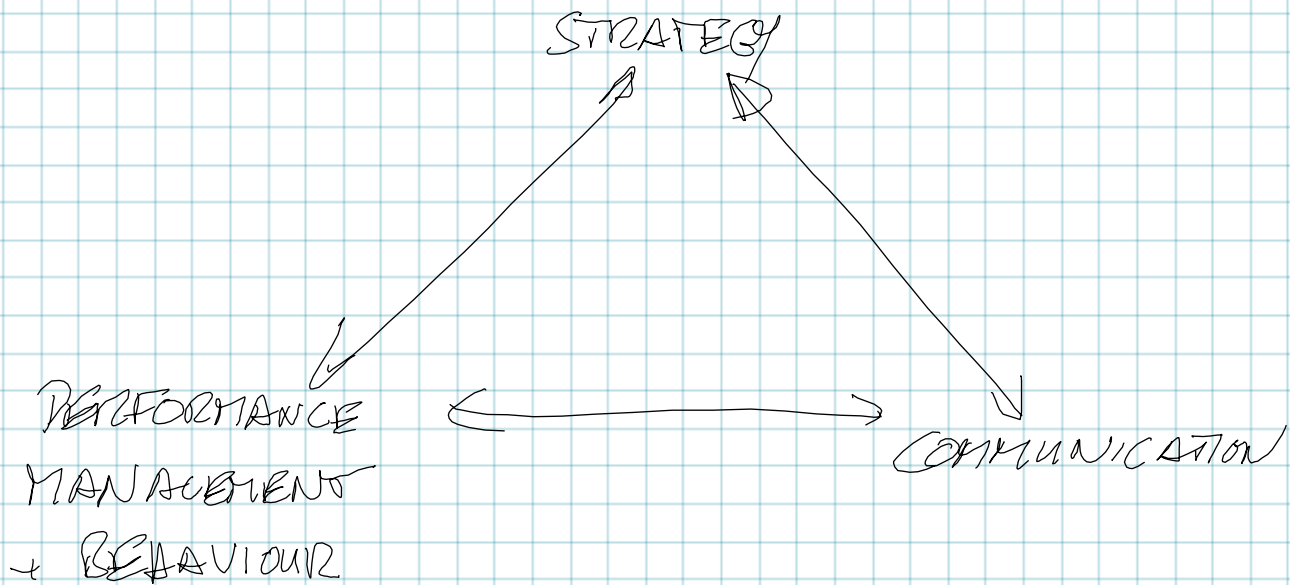
CODES FOR DATA ANALYSIS

1) BEHAVIOUR
   - RELATIONSHIP WITH MANAGERS
   - DO KPIs DRIVE BEHAVIOUR

2) STRATEGY
   - KNOWLEDGE OF STRATEGY   - INFLUENCE OF STRATEGY
   - NO- KNOWLEDGE OF STRATEGY

3) PERFORMANCE MEASURE
   - CURRENT MEASURES   - EMPLOYEE KNOWLEDGE OF KPI
   - ADDITIONAL MEASURES   - IGNORANGE OF MEASURES

4) CORPORATE RELATION AND COMMUNICATION

   = COMMUNICATION OF STRATEGY
   - INFORMATION OF EMPLOYEES

DEFINES STRATEGY   SUPPORTS

PERFORMANCE MEASURE ⟷ BEHAVIOUR
                DRIVES
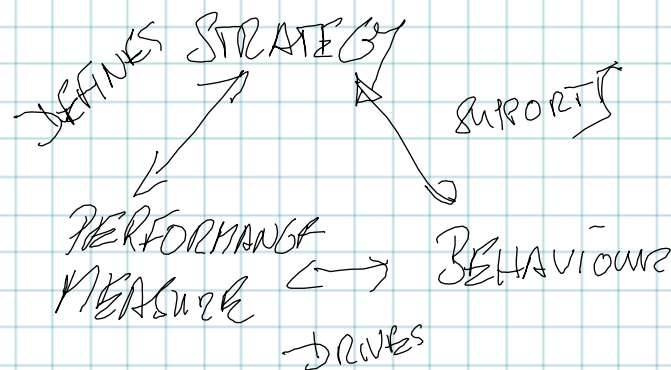
13 Appendix E: Coding Data

Node Summary
DBA INTERVIEW ANALYSIS
31.05.2017 15:44

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Node

Nodes\\Employees\\Alignement priority setting

Nickname:

Classification:

Aggregated: **Yes**

Document	2	2	154	2	

Nodes\\Employees\\Alignement priority setting\Good alignement

Nickname:

Classification:

Aggregated: **Yes**

	0	0			

Nodes\\Employees\\Alignement priority setting\No aligement

Nickname:

Classification:

Aggregated: **No**

Document	1	1	98	1	

Nodes\\Employees\\Alignement priority setting\Notions of alignement

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	56	1	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work

Nickname:

Classification:

Aggregated: **Yes**

Document	3	38	1,958	45	

Nodes\\Employees\\Behaviour influence on work\Behaviour & KPI

Nickname:

Classification:

Aggregated: **Yes**

Document	1	5	350	11	

Nodes\\Employees\\Behaviour influence on work\Behaviour & KPI\Should be analysed

Nickname:

Classification:

Aggregated: **No**

Document	1	2	83	2	

Nodes\\Employees\\Behaviour influence on work\Behaviour & KPI\Should results in action

Nickname:

Classification:

Aggregated: **No**

Document	1	3	267	9	

Nodes\\Employees\\Behaviour influence on work\Empowerment & Accountability

Nickname:

Classification:

Aggregated: **No**

	0	0			

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Empowerment & Accountability\Good empowerment

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Empowerment & Accountability\No empowerment

Nickname:

Classification:

Aggregated: **Yes**

Document	2	6	235	6	

Nodes\\Employees\\Behaviour influence on work\Empowerment & Accountability\Notions of empowerment

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	53	1	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Alignement Priortiy setting

Nickname:

Classification:

Aggregated: **Yes**

Document	2	6	318	6	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Alignement Priortiy setting\Influence

Nickname:

Classification:

Aggregated: **No**

Document	1	5	276	5	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Influence on work of Alignement Priortiy setting\No influence

Nickname:

Classification:

Aggregated:　　**No**

Document	1	1	42	1	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Communication

Nickname:

Classification:

Aggregated:　　**No**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Influence on work of Communication\Influence

Nickname:

Classification:

Aggregated:　　**No**

Document	1	2	163	2	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Communication\No Influence

Nickname:

Classification:

Aggregated:　　**No**

Document	1	1	42	1	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Key Performance Measurment

Nickname:

Classification:

Aggregated:　　**Yes**

Document	2	6	318	6	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Influence on work of Key Performance Measurment\Influence

Nickname:

Classification:

Aggregated: **No**

Document	1	5	276	5	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Key Performance Measurment\No influence

Nickname:

Classification:

Aggregated: **No**

Document	1	1	42	1	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Strategy & Goal

Nickname:

Classification:

Aggregated: **Yes**

Document	2	7	343	7	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Strategy & Goal\Influence

Nickname:

Classification:

Aggregated: **No**

Document	1	5	276	5	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Strategy & Goal\No influence

Nickname:

Classification:

Aggregated: **No**

Document	1	1	42	1	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Motivation

Nickname:

Classification:

Aggregated: **Yes**

Document	3	13	604	14	

Nodes\\Employees\\Behaviour influence on work\Motivation to work

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	25	1	

Nodes\\Employees\\Behaviour influence on work\Motivation to work\Money

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Motivation to work\Work Environment

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Motivation\Authonomy

Nickname:

Classification:

Aggregated: **Yes**

Document	3	9	402	9	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Motivation\Mastery

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	83	1	

Nodes\\Employees\\Behaviour influence on work\Motivation\Money

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	43	1	

Nodes\\Employees\\Behaviour influence on work\Motivation\Purpose

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	44	1	

Nodes\\Employees\\Behaviour influence on work\Motivation\Reach Targets

Nickname:

Classification:

Aggregated: **No**

Document	1	1	32	2	

Nodes\\Employees\\Behaviour influence on work\Positive Change & Learning

Nickname:

Classification:

Aggregated: **No**

	0	0			

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Positive Change & Learning\Influence

Nickname:

Classification:

Aggregated: **No**

| Document | 2 | 3 | 160 | 3 | |

Nodes\\Employees\\Behaviour influence on work\Positive Change & Learning\No influence

Nickname:

Classification:

Aggregated: **No**

| | 0 | 0 | | | |

Nodes\\Employees\\Behaviour influence on work\Rewards

Nickname:

Classification:

Aggregated: **No**

| | 0 | 0 | | | |

Nodes\\Employees\\Behaviour influence on work\Rewards\Good and adequat

Nickname:

Classification:

Aggregated: **Yes**

| | 0 | 0 | | | |

Nodes\\Employees\\Behaviour influence on work\Rewards\Unfair

Nickname:

Classification:

Aggregated: **No**

| Document | 3 | 8 | 329 | 8 | |

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Target Setting

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Target Setting\Agreement

Nickname:

Classification:

Aggregated: **Yes**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Target Setting\Agreement\Behavioral Impact

Nickname:

Classification:

Aggregated: **Yes**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Target Setting\Agreement\Behavioral Impact\Negative

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Target Setting\Agreement\Behavioral Impact\Positive

Nickname:

Classification:

Aggregated: **No**

	0	0			

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Target Setting\No Agreement

Nickname:

Classification:

Aggregated: **No**

Document	4	17	837	23	

Nodes\\Employees\\Behaviour influence on work\Target Setting\No Agreement\Behavioral Impact

Nickname:

Classification:

Aggregated: **Yes**

Document	4	23	1,174	32	

Nodes\\Employees\\Behaviour influence on work\Target Setting\No Agreement\Behavioral Impact\Negative

Nickname:

Classification:

Aggregated: **No**

Document	4	23	1,174	32	

Nodes\\Employees\\Behaviour influence on work\Target Setting\No Agreement\Behavioral Impact\Positive

Nickname:

Classification:

Aggregated: **Yes**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Target Setting\Targets should be

Nickname:

Classification:

Aggregated: **Yes**

Document	4	8	338	8	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Target Setting\Targets should be\Ambitious

Nickname:

Classification:

Aggregated: **Yes**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Target Setting\Targets should be\Realistic

Nickname:

Classification:

Aggregated: **Yes**

Document	4	8	338	8	

Nodes\\Employees\\Communication

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	98	1	

Nodes\\Employees\\Communication\Clarity of expectations

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	98	1	

Nodes\\Employees\\Key Performance Measurements

Nickname:

Classification:

Aggregated: **Yes**

Document	4	100	1,826	114	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Good Knowledge of KPIS

Nickname:

Classification:

Aggregated: **Yes**

	0	0			

Nodes\\Employees\\Key Performance Measurements\Impact of KPIs

Nickname:

Classification:

Aggregated: **Yes**

Document	2	4	186	4	

Nodes\\Employees\\Key Performance Measurements\Impact of KPIs\Enables action

Nickname:

Classification:

Aggregated: **No**

Document	1	1	13	1	

Nodes\\Employees\\Key Performance Measurements\Impact of KPIs\No impact

Nickname:

Classification:

Aggregated: **Yes**

Document	2	3	173	3	

Nodes\\Employees\\Key Performance Measurements\KPI Deployment

Nickname:

Classification:

Aggregated: **Yes**

Document	2	10	526	16	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded
Nodes\\Employees\\Key Performance Measurements\KPI Deployment\Every department need contributing KPIs					
Nickname:					
Classification:					
Aggregated: **Yes**					
Document	2	10	526	16	
Nodes\\Employees\\Key Performance Measurements\KPI Deployment\Every department need contributing KPIs\Target setting based on KPI					
Nickname:					
Classification:					
Aggregated: **No**					
Document	1	2	167	4	
Nodes\\Employees\\Key Performance Measurements\KPI Deployment\Every department need contributing KPIs\Top- Down Deployment					
Nickname:					
Classification:					
Aggregated: **No**					
Document	1	4	231	6	
Nodes\\Employees\\Key Performance Measurements\KPI Deployment\One set of KPIs for all departments					
Nickname:					
Classification:					
Aggregated: **No**					
	0	0			
Nodes\\Employees\\Key Performance Measurements\No notions of KPIs					
Nickname:					
Classification:					
Aggregated: **No**					
Document	2	3	129	3	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Notions of knowledge of KPIs

Nickname:

Classification:

Aggregated: **No**

Document	3	4	169	6	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs

Nickname:

Classification:

Aggregated: **Yes**

Document	4	79	816	85	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Claims

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	6	1	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Cost

Nickname:

Classification:

Aggregated: **No**

Document	2	2	2	2	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Cost of poor quality

Nickname:

Classification:

Aggregated: **No**

Document	4	9	109	9	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Development of new products

Nickname:

Classification:

Aggregated: **Yes**

Document	1	3	18	3	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Fullfulment of Customer requirements

Nickname:

Classification:

Aggregated: **No**

Document	1	5	26	5	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Growth

Nickname:

Classification:

Aggregated: **No**

Document	2	3	3	3	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Headcount

Nickname:

Classification:

Aggregated: **No**

Document	1	1	10	1	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Hit rate

Nickname:

Classification:

Aggregated: **No**

Document	1	1	2	1	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Investments

Nickname:

Classification:

Aggregated: **No**

Document	1	1	1	1

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Lead time

Nickname:

Classification:

Aggregated: **Yes**

Document	3	8	19	8

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Machine utilization

Nickname:

Classification:

Aggregated: **Yes**

Document	2	2	2	2

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Management operating profit

Nickname:

Classification:

Aggregated: **No**

Document	1	1	1	1

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Meters welded per week

Nickname:

Classification:

Aggregated: **No**

Document	1	1	14	1

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Non Conformity Request

Nickname:

Classification:

Aggregated: **Yes**

Document	2	3	114	3	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\On time in Full

Nickname:

Classification:

Aggregated: **Yes**

Document	3	10	110	10	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Order Book

Nickname:

Classification:

Aggregated: **No**

Document	1	1	2	1	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Powder filled per week

Nickname:

Classification:

Aggregated: **No**

Document	1	1	9	1	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Product development project management

Nickname:

Classification:

Aggregated: **No**

Document	1	1	36	1	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Profit

Nickname:

Classification:

Aggregated: **No**

Document	3	6	14	6	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Project management

Nickname:

Classification:

Aggregated: **No**

Document	1	1	27	1	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Response time to RFQ

Nickname:

Classification:

Aggregated: **No**

Document	1	1	8	1	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Safety

Nickname:

Classification:

Aggregated: **No**

Document	2	3	91	3	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Sales

Nickname:

Classification:

Aggregated: **No**

Document	4	12	54	12	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Supplier Performance

Nickname:

Classification:

Aggregated: **No**

Document	1	1	135	7	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Volume of RFQ

Nickname:

Classification:

Aggregated: **No**

Document	1	1	3	1	

Nodes\\Employees\\Strategy & Organizational Goal

Nickname:

Classification:

Aggregated: **Yes**

Document	4	99	3,652	101	

Nodes\\Employees\\Strategy & Organizational Goal\Level of agreement with strategy

Nickname:

Classification:

Aggregated: **Yes**

Document	4	19	669	19	

Nodes\\Employees\\Strategy & Organizational Goal\Level of agreement with strategy\Full agreement

Nickname:

Classification:

Aggregated: **Yes**

	0	0			

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Strategy & Organizational Goal\Level of agreement with strategy\No agreement

Nickname:

Classification:

Aggregated: **Yes**

| Document | 4 | 15 | 565 | 15 | |

Nodes\\Employees\\Strategy & Organizational Goal\Level of agreement with strategy\Partially agreement

Nickname:

Classification:

Aggregated: **No**

| Document | 3 | 4 | 104 | 4 | |

Nodes\\Employees\\Strategy & Organizational Goal\Purpose of strategy

Nickname:

Classification:

Aggregated: **Yes**

| Document | 4 | 17 | 619 | 19 | |

Nodes\\Employees\\Strategy & Organizational Goal\Purpose of strategy\A plan for the future

Nickname:

Classification:

Aggregated: **No**

| Document | 4 | 9 | 289 | 11 | |

Nodes\\Employees\\Strategy & Organizational Goal\Purpose of strategy\Alignement of organization

Nickname:

Classification:

Aggregated: **Yes**

| Document | 2 | 5 | 169 | 5 | |

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Strategy & Organizational Goal\Purpose of strategy\Prioritize actions

Nickname:

Classification:

Aggregated: **Yes**

| Document | 1 | 3 | 161 | 3 | |

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of Strategy

Nickname:

Classification:

Aggregated: **Yes**

| Document | 4 | 40 | 1,709 | 40 | |

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of Strategy\Frustrated understanding

Nickname:

Classification:

Aggregated: **No**

| Document | 4 | 16 | 783 | 16 | |

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of Strategy\Good understanding

Nickname:

Classification:

Aggregated: **Yes**

| | 0 | 0 | | | |

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of Strategy\No understanding

Nickname:

Classification:

Aggregated: **Yes**

| Document | 4 | 17 | 604 | 17 | |

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of Strategy\Notions of understanding

Nickname:

Classification:

Aggregated: **No**

Document	3	7	322	7	

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of the organizational goal

Nickname:

Classification:

Aggregated: **Yes**

Document	4	23	655	23	

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of the organizational goal\Good understanding

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	2	1	

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of the organizational goal\No understanding

Nickname:

Classification:

Aggregated: **No**

Document	3	10	412	10	

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of the organizational goal\Notions of understanding

Nickname:

Classification:

Aggregated: **Yes**

Document	4	4	61	4	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of the organizational goal\Types of organizational goals
Nickname:

Classification:

Aggregated: Yes

Document	3	8	180	8	

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of the organizational goal\Types of organizational goals\Make money
Nickname:

Classification:

Aggregated: No

Document	3	7	128	7	

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of the organizational goal\Types of organizational goals\Make the company attractive for investors
Nickname:

Classification:

Aggregated: Yes

Document	1	1	52	1	

Nodes\\Manager\\Alignement priority setting
Nickname:

Classification:

Aggregated: Yes

Document	2	2	154	2	

Nodes\\Manager\\Alignement priority setting\Good alignement
Nickname:

Classification:

Aggregated: Yes

	0	0			

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Alignement priority setting\No aligement

Nickname:

Classification:

Aggregated:　　**No**

Document	1	1	98	1	

Nodes\\Manager\\Alignement priority setting\Notions of alignement

Nickname:

Classification:

Aggregated:　　**Yes**

Document	1	1	56	1	

Nodes\\Manager\\Behaviour influence on work

Nickname:

Classification:

Aggregated:　　**Yes**

Document	3	38	1,958	45	

Nodes\\Manager\\Behaviour influence on work\Behaviour & KPI

Nickname:

Classification:

Aggregated:　　**Yes**

Document	1	5	350	11	

Nodes\\Manager\\Behaviour influence on work\Behaviour & KPI\Should be analysed

Nickname:

Classification:

Aggregated:　　**No**

Document	1	2	83	2	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Behaviour influence on work\Behaviour & KPI\Should results in action

Nickname:

Classification:

Aggregated: **No**

Document	1	3	267	9	

Nodes\\Manager\\Behaviour influence on work\Empowerment & Accountability

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Manager\\Behaviour influence on work\Empowerment & Accountability\Good empowerment

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Manager\\Behaviour influence on work\Empowerment & Accountability\No empowerment

Nickname:

Classification:

Aggregated: **Yes**

Document	2	6	235	6	

Nodes\\Manager\\Behaviour influence on work\Empowerment & Accountability\Notions of empowerment

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	53	1	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Behaviour influence on work\Influence on work of Alignement Priortiy setting
Nickname:

Classification:

Aggregated: **Yes**

Document	2	6	318	6	

Nodes\\Manager\\Behaviour influence on work\Influence on work of Alignement Priortiy setting\Influence
Nickname:

Classification:

Aggregated: **No**

Document	1	5	276	5	

Nodes\\Manager\\Behaviour influence on work\Influence on work of Alignement Priortiy setting\No influence
Nickname:

Classification:

Aggregated: **No**

Document	1	1	42	1	

Nodes\\Manager\\Behaviour influence on work\Influence on work of Communication
Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Manager\\Behaviour influence on work\Influence on work of Communication\Influence
Nickname:

Classification:

Aggregated: **No**

Document	1	2	163	2	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Behaviour influence on work\Influence on work of Communication\No Influence

Nickname:

Classification:

Aggregated: **No**

Document	1	1	42	1	

Nodes\\Manager\\Behaviour influence on work\Influence on work of Key Performance Measurment

Nickname:

Classification:

Aggregated: **Yes**

Document	2	6	318	6	

Nodes\\Manager\\Behaviour influence on work\Influence on work of Key Performance Measurment\Influence

Nickname:

Classification:

Aggregated: **No**

Document	1	5	276	5	

Nodes\\Manager\\Behaviour influence on work\Influence on work of Key Performance Measurment\No influence

Nickname:

Classification:

Aggregated: **No**

Document	1	1	42	1	

Nodes\\Manager\\Behaviour influence on work\Influence on work of Strategy & Goal

Nickname:

Classification:

Aggregated: **Yes**

Document	2	7	343	7	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Behaviour influence on work\Influence on work of Strategy & Goal\Influence

Nickname:

Classification:

Aggregated: **No**

Document	1	5	276	5	

Nodes\\Manager\\Behaviour influence on work\Influence on work of Strategy & Goal\No influence

Nickname:

Classification:

Aggregated: **No**

Document	1	1	42	1	

Nodes\\Manager\\Behaviour influence on work\Motivation

Nickname:

Classification:

Aggregated: **Yes**

Document	3	13	604	14	

Nodes\\Manager\\Behaviour influence on work\Motivation to work

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	25	1	

Nodes\\Manager\\Behaviour influence on work\Motivation to work\Money

Nickname:

Classification:

Aggregated: **No**

	0	0			

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Behaviour influence on work\Motivation to work\Work Environment

Nickname:

Classification:

Aggregated: **No**

| | 0 | 0 | | | |

Nodes\\Manager\\Behaviour influence on work\Motivation\Authonomy

Nickname:

Classification:

Aggregated: **Yes**

| Document | 3 | 9 | 402 | 9 | |

Nodes\\Manager\\Behaviour influence on work\Motivation\Mastery

Nickname:

Classification:

Aggregated: **Yes**

| Document | 1 | 1 | 83 | 1 | |

Nodes\\Manager\\Behaviour influence on work\Motivation\Money

Nickname:

Classification:

Aggregated: **Yes**

| Document | 1 | 1 | 43 | 1 | |

Nodes\\Manager\\Behaviour influence on work\Motivation\Purpose

Nickname:

Classification:

Aggregated: **Yes**

| Document | 1 | 1 | 44 | 1 | |

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Behaviour influence on work\Motivation\Reach Targets

Nickname:

Classification:

Aggregated: **No**

Document	1	1	32	2	

Nodes\\Manager\\Behaviour influence on work\Positive Change & Learning

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Manager\\Behaviour influence on work\Positive Change & Learning\Influence

Nickname:

Classification:

Aggregated: **No**

Document	2	3	160	3	

Nodes\\Manager\\Behaviour influence on work\Positive Change & Learning\No influence

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Manager\\Behaviour influence on work\Rewards

Nickname:

Classification:

Aggregated: **No**

	0	0			

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Behaviour influence on work\Rewards\Good and adequat

Nickname:

Classification:

Aggregated:　　**Yes**

	0	0			

Nodes\\Manager\\Behaviour influence on work\Rewards\Unfair

Nickname:

Classification:

Aggregated:　　**No**

Document	3	8	329	8	

Nodes\\Manager\\Behaviour influence on work\Target Setting

Nickname:

Classification:

Aggregated:　　**No**

	0	0			

Nodes\\Manager\\Behaviour influence on work\Target Setting\Agreement

Nickname:

Classification:

Aggregated:　　**Yes**

	0	0			

Nodes\\Manager\\Behaviour influence on work\Target Setting\Agreement\Behavioral Impact

Nickname:

Classification:

Aggregated:　　**Yes**

	0	0			

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Behaviour influence on work\Target Setting\Agreement\Behavioral Impact\Negative

Nickname:

Classification:

Aggregated: No

| | 0 | 0 | | | |

Nodes\\Manager\\Behaviour influence on work\Target Setting\Agreement\Behavioral Impact\Positive

Nickname:

Classification:

Aggregated: No

| | 0 | 0 | | | |

Nodes\\Manager\\Behaviour influence on work\Target Setting\No Agreement

Nickname:

Classification:

Aggregated: No

| Document | 4 | 17 | 837 | 23 | |

Nodes\\Manager\\Behaviour influence on work\Target Setting\No Agreement\Behavioral Impact

Nickname:

Classification:

Aggregated: Yes

| Document | 4 | 23 | 1,174 | 32 | |

Nodes\\Manager\\Behaviour influence on work\Target Setting\No Agreement\Behavioral Impact\Negative

Nickname:

Classification:

Aggregated: No

| Document | 4 | 23 | 1,174 | 32 | |

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Behaviour influence on work\Target Setting\No Agreement\Behavioral Impact\Positive

Nickname:

Classification:

Aggregated: **Yes**

| | 0 | 0 | | | |

Nodes\\Manager\\Behaviour influence on work\Target Setting\Targets should be

Nickname:

Classification:

Aggregated: **Yes**

| Document | 4 | 8 | 338 | 8 | |

Nodes\\Manager\\Behaviour influence on work\Target Setting\Targets should be\Ambitious

Nickname:

Classification:

Aggregated: **Yes**

| | 0 | 0 | | | |

Nodes\\Manager\\Behaviour influence on work\Target Setting\Targets should be\Realistic

Nickname:

Classification:

Aggregated: **Yes**

| Document | 4 | 8 | 338 | 8 | |

Nodes\\Manager\\Communication

Nickname:

Classification:

Aggregated: **Yes**

| Document | 1 | 1 | 98 | 1 | |

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Communication\Clarity of expectations

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	98	1	

Nodes\\Manager\\Key Performance Measurements

Nickname:

Classification:

Aggregated: **Yes**

Document	4	93	1,528	105	

Nodes\\Manager\\Key Performance Measurements\Impact of KPIs

Nickname:

Classification:

Aggregated: **Yes**

Document	2	4	186	4	

Nodes\\Manager\\Key Performance Measurements\Impact of KPIs\Enables action

Nickname:

Classification:

Aggregated: **No**

Document	1	1	13	1	

Nodes\\Manager\\Key Performance Measurements\Impact of KPIs\No impact

Nickname:

Classification:

Aggregated: **Yes**

Document	2	3	173	3	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Key Performance Measurements\Knowledge of KPIs

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Manager\\Key Performance Measurements\Knowledge of KPIs\Good Knowledge of KPIS

Nickname:

Classification:

Aggregated: **Yes**

	0	0			

Nodes\\Manager\\Key Performance Measurements\Knowledge of KPIs\No notions of KPIs

Nickname:

Classification:

Aggregated: **No**

Document	2	3	129	3	

Nodes\\Manager\\Key Performance Measurements\Knowledge of KPIs\Notions of knowledge of KPIs

Nickname:

Classification:

Aggregated: **No**

Document	3	4	169	6	

Nodes\\Manager\\Key Performance Measurements\KPI Deployment

Nickname:

Classification:

Aggregated: **Yes**

Document	2	10	526	16	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Key Performance Measurements\KPI Deployment\Every department need contributing KPIs

Nickname:

Classification:

Aggregated: **Yes**

Document	2	10	526	16	

Nodes\\Manager\\Key Performance Measurements\KPI Deployment\Every department need contributing KPIs\Target setting based on KPI

Nickname:

Classification:

Aggregated: **No**

Document	1	2	167	4	

Nodes\\Manager\\Key Performance Measurements\KPI Deployment\Every department need contributing KPIs\Top- Down Deployment

Nickname:

Classification:

Aggregated: **No**

Document	1	4	231	6	

Nodes\\Manager\\Key Performance Measurements\KPI Deployment\One set of KPIs for all departments

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Manager\\Key Performance Measurements\Type of KPIs

Nickname:

Classification:

Aggregated: **Yes**

Document	4	79	816	85	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Claims

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	6	1	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Cost

Nickname:

Classification:

Aggregated: **No**

Document	2	2	2	2	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Cost of poor quality

Nickname:

Classification:

Aggregated: **No**

Document	4	9	109	9	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Development of new products

Nickname:

Classification:

Aggregated: **Yes**

Document	1	3	18	3	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Fullfulment of Customer requirements

Nickname:

Classification:

Aggregated: **No**

Document	1	5	26	5	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Growth

Nickname:

Classification:

Aggregated: **No**

Document	2	3	3	3	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Headcount

Nickname:

Classification:

Aggregated: **No**

Document	1	1	10	1	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Hit rate

Nickname:

Classification:

Aggregated: **No**

Document	1	1	2	1	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Investments

Nickname:

Classification:

Aggregated: **No**

Document	1	1	1	1	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Lead time

Nickname:

Classification:

Aggregated: **Yes**

Document	3	8	19	8	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Machine utilization

Nickname:

Classification:

Aggregated: **Yes**

Document	2	2	2	2	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Management operating profit

Nickname:

Classification:

Aggregated: **No**

Document	1	1	1	1	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Meters welded per week

Nickname:

Classification:

Aggregated: **No**

Document	1	1	14	1	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Non Conformity Request

Nickname:

Classification:

Aggregated: **Yes**

Document	2	3	114	3	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\On time in Full

Nickname:

Classification:

Aggregated: **Yes**

Document	3	10	110	10	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Order Book

Nickname:

Classification:

Aggregated: **No**

Document	1	1	2	1	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Powder filled per week

Nickname:

Classification:

Aggregated: **No**

Document	1	1	9	1	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Product development project management

Nickname:

Classification:

Aggregated: **No**

Document	1	1	36	1	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Profit

Nickname:

Classification:

Aggregated: **No**

Document	3	6	14	6	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Project management

Nickname:

Classification:

Aggregated: **No**

Document	1	1	27	1	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Response time to RFQ

Nickname:

Classification:

Aggregated: **No**

Document	1	1	8	1	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Safety

Nickname:

Classification:

Aggregated: **No**

Document	2	3	91	3	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Sales

Nickname:

Classification:

Aggregated: **No**

Document	4	12	54	12	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Supplier Performance

Nickname:

Classification:

Aggregated: **No**

Document	1	1	135	7	

Nodes\\Manager\\Key Performance Measurements\Type of KPIs\Volume of RFQ

Nickname:

Classification:

Aggregated: **No**

Document	1	1	3	1	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Strategy & Organizational Goal

Nickname:

Classification:

Aggregated: **Yes**

Document	4	82	3,033	82	

Nodes\\Manager\\Strategy & Organizational Goal\Level of agreement with strategy

Nickname:

Classification:

Aggregated: **Yes**

Document	4	19	669	19	

Nodes\\Manager\\Strategy & Organizational Goal\Level of agreement with strategy\Full agreement

Nickname:

Classification:

Aggregated: **Yes**

	0	0			

Nodes\\Manager\\Strategy & Organizational Goal\Level of agreement with strategy\No agreement

Nickname:

Classification:

Aggregated: **Yes**

Document	4	15	565	15	

Nodes\\Manager\\Strategy & Organizational Goal\Level of agreement with strategy\Partially agreement

Nickname:

Classification:

Aggregated: **No**

Document	3	4	104	4	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Strategy & Organizational Goal\Purpose of strategy

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Manager\\Strategy & Organizational Goal\Purpose of strategy\A plan for the future

Nickname:

Classification:

Aggregated: **No**

Document	4	9	289	11	

Nodes\\Manager\\Strategy & Organizational Goal\Purpose of strategy\Alignement of organization

Nickname:

Classification:

Aggregated: **Yes**

Document	2	5	169	5	

Nodes\\Manager\\Strategy & Organizational Goal\Purpose of strategy\Prioritize actions

Nickname:

Classification:

Aggregated: **Yes**

Document	1	3	161	3	

Nodes\\Manager\\Strategy & Organizational Goal\Understanding of Strategy

Nickname:

Classification:

Aggregated: **Yes**

Document	4	40	1,709	40	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Strategy & Organizational Goal\Understanding of Strategy\Frustrated understanding

Nickname:

Classification:

Aggregated: **No**

| Document | 4 | 16 | 783 | 16 | |

Nodes\\Manager\\Strategy & Organizational Goal\Understanding of Strategy\Good understanding

Nickname:

Classification:

Aggregated: **Yes**

| | 0 | 0 | | | |

Nodes\\Manager\\Strategy & Organizational Goal\Understanding of Strategy\No understanding

Nickname:

Classification:

Aggregated: **Yes**

| Document | 4 | 17 | 604 | 17 | |

Nodes\\Manager\\Strategy & Organizational Goal\Understanding of Strategy\Notions of understanding

Nickname:

Classification:

Aggregated: **No**

| Document | 3 | 7 | 322 | 7 | |

Nodes\\Manager\\Strategy & Organizational Goal\Understanding of the organizational goal

Nickname:

Classification:

Aggregated: **Yes**

| Document | 4 | 23 | 655 | 23 | |

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Strategy & Organizational Goal\Understanding of the organizational goal\Good understanding

Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	2	1	

Nodes\\Manager\\Strategy & Organizational Goal\Understanding of the organizational goal\No understanding

Nickname:

Classification:

Aggregated: **No**

Document	3	10	412	10	

Nodes\\Manager\\Strategy & Organizational Goal\Understanding of the organizational goal\Notions of understanding

Nickname:

Classification:

Aggregated: **Yes**

Document	4	4	61	4	

Nodes\\Manager\\Strategy & Organizational Goal\Understanding of the organizational goal\Types of organizational goals

Nickname:

Classification:

Aggregated: **Yes**

Document	3	8	180	8	

Nodes\\Manager\\Strategy & Organizational Goal\Understanding of the organizational goal\Types of organizational goals\Make money

Nickname:

Classification:

Aggregated: **No**

Document	3	7	128	7	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Manager\\Strategy & Organizational Goal\Understanding of the organizational goal\Types of organizational goals\Make the company attractive for investors

Nickname:

Classification:

Aggregated: Yes

Document	1	1	52	1	

Node Summary
DBA INTERVIEW ANALYSIS
31.05.2017 16:44

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Node

Nodes\\Employees\\Alignement priority setting
Nickname:

Classification:

Aggregated: **Yes**

Document	8	133	7,484	293	

Nodes\\Employees\\Alignement priority setting\Good alignement
Nickname:

Classification:

Aggregated: **Yes**

Document	1	1	23	1	

Nodes\\Employees\\Alignement priority setting\No aligement
Nickname:

Classification:

Aggregated: **No**

Document	8	118	6,983	270	

Nodes\\Employees\\Alignement priority setting\Notions of alignement
Nickname:

Classification:

Aggregated: **Yes**

Document	5	14	478	22	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work

Nickname:

Classification:

Aggregated:　　Yes

| Document | 7 | 147 | 6,530 | 235 | |

Nodes\\Employees\\Behaviour influence on work\Behaviour & KPI

Nickname:

Classification:

Aggregated:　　Yes

| Document | 3 | 4 | 198 | 8 | |

Nodes\\Employees\\Behaviour influence on work\Behaviour & KPI\Should be analysed

Nickname:

Classification:

Aggregated:　　No

| Document | 1 | 1 | 76 | 1 | |

Nodes\\Employees\\Behaviour influence on work\Behaviour & KPI\Should results in action

Nickname:

Classification:

Aggregated:　　No

| Document | 2 | 3 | 122 | 7 | |

Nodes\\Employees\\Behaviour influence on work\Empowerment & Accountability

Nickname:

Classification:

Aggregated:　　No

| | 0 | 0 | | | |

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Empowerment & Accountability\Good empowerment

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Empowerment & Accountability\No empowerment

Nickname:

Classification:

Aggregated: **Yes**

Document	2	4	310	4	

Nodes\\Employees\\Behaviour influence on work\Empowerment & Accountability\Notions of empowerment

Nickname:

Classification:

Aggregated: **Yes**

Document	2	3	122	3	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Alignement Priortiy setting

Nickname:

Classification:

Aggregated: **Yes**

Document	6	25	1,305	47	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Alignement Priortiy setting\Influence

Nickname:

Classification:

Aggregated: **No**

Document	2	3	131	3	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Influence on work of Alignement Priortiy setting\No influence

Nickname:

Classification:

Aggregated: **No**

Document	6	22	1,174	44	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Communication

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Influence on work of Communication\Influence

Nickname:

Classification:

Aggregated: **No**

Document	3	7	365	9	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Communication\No Influence

Nickname:

Classification:

Aggregated: **No**

Document	7	16	891	32	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Key Performance Measurment

Nickname:

Classification:

Aggregated: **Yes**

Document	7	29	1,298	53	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Influence on work of Key Performance Measurment\Influence

Nickname:

Classification:

Aggregated: **No**

Document	2	5	206	5	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Key Performance Measurment\No influence

Nickname:

Classification:

Aggregated: **No**

Document	7	24	1,092	48	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Strategy & Goal

Nickname:

Classification:

Aggregated: **Yes**

Document	6	19	825	37	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Strategy & Goal\Influence

Nickname:

Classification:

Aggregated: **No**

Document	1	4	151	4	

Nodes\\Employees\\Behaviour influence on work\Influence on work of Strategy & Goal\No influence

Nickname:

Classification:

Aggregated: **No**

Document	6	15	674	33	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Motivation

Nickname:

Classification:

Aggregated: **Yes**

| Document | 5 | 41 | 1,867 | 47 | |

Nodes\\Employees\\Behaviour influence on work\Motivation to work

Nickname:

Classification:

Aggregated: **Yes**

| Document | 5 | 28 | 965 | 42 | |

Nodes\\Employees\\Behaviour influence on work\Motivation to work\Customer satisfaction

Nickname:

Classification:

Aggregated: **No**

| Document | 1 | 4 | 432 | 14 | |

Nodes\\Employees\\Behaviour influence on work\Motivation to work\Money

Nickname:

Classification:

Aggregated: **No**

| Document | 2 | 6 | 51 | 6 | |

Nodes\\Employees\\Behaviour influence on work\Motivation to work\Work Environment

Nickname:

Classification:

Aggregated: **No**

| Document | 5 | 18 | 482 | 22 | |

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Motivation\Authonomy

Nickname:

Classification:

Aggregated: **Yes**

| Document | 3 | 7 | 327 | 7 | |

Nodes\\Employees\\Behaviour influence on work\Motivation\Challange

Nickname:

Classification:

Aggregated: **Yes**

| Document | 3 | 3 | 150 | 5 | |

Nodes\\Employees\\Behaviour influence on work\Motivation\Mastery

Nickname:

Classification:

Aggregated: **Yes**

| Document | 5 | 18 | 755 | 22 | |

Nodes\\Employees\\Behaviour influence on work\Motivation\Money

Nickname:

Classification:

Aggregated: **Yes**

| Document | 4 | 9 | 333 | 9 | |

Nodes\\Employees\\Behaviour influence on work\Motivation\Purpose

Nickname:

Classification:

Aggregated: **Yes**

| Document | 3 | 3 | 261 | 3 | |

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Motivation\Reach Targets

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Motivation\Security

Nickname:

Classification:

Aggregated: **No**

Document	1	1	41	1	

Nodes\\Employees\\Behaviour influence on work\Positive Change & Learning

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Positive Change & Learning\Influence

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Positive Change & Learning\No influence

Nickname:

Classification:

Aggregated: **No**

Document	3	5	310	16	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded
Nodes\\Employees\\Behaviour influence on work\Rewards					
Nickname:					
Classification:					
Aggregated: **No**					
	0	0			
Nodes\\Employees\\Behaviour influence on work\Rewards\Good and adequat					
Nickname:					
Classification:					
Aggregated: **Yes**					
	0	0			
Nodes\\Employees\\Behaviour influence on work\Rewards\Unfair					
Nickname:					
Classification:					
Aggregated: **No**					
	0	0			
Nodes\\Employees\\Behaviour influence on work\Target Setting					
Nickname:					
Classification:					
Aggregated: **No**					
Document	1	1	72	1	
Nodes\\Employees\\Behaviour influence on work\Target Setting\Agreement					
Nickname:					
Classification:					
Aggregated: **Yes**					
Document	1	1	72	1	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Target Setting\Agreement\Behavioral Impact

Nickname:

Classification:

Aggregated: Yes

| Document | 1 | 1 | 72 | 1 | |

Nodes\\Employees\\Behaviour influence on work\Target Setting\Agreement\Behavioral Impact\Negative

Nickname:

Classification:

Aggregated: No

| | 0 | 0 | | | |

Nodes\\Employees\\Behaviour influence on work\Target Setting\Agreement\Behavioral Impact\Positive

Nickname:

Classification:

Aggregated: No

| Document | 1 | 1 | 72 | 1 | |

Nodes\\Employees\\Behaviour influence on work\Target Setting\No Agreement

Nickname:

Classification:

Aggregated: No

| Document | 3 | 12 | 586 | 25 | |

Nodes\\Employees\\Behaviour influence on work\Target Setting\No Agreement\Behavioral Impact

Nickname:

Classification:

Aggregated: Yes

| Document | 2 | 8 | 431 | 9 | |

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Behaviour influence on work\Target Setting\No Agreement\Behavioral Impact\Negative

Nickname:

Classification:

Aggregated:　　　**No**

Document	2	6	357	6	

Nodes\\Employees\\Behaviour influence on work\Target Setting\No Agreement\Behavioral Impact\Positive

Nickname:

Classification:

Aggregated:　　　**Yes**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Target Setting\Targets should be

Nickname:

Classification:

Aggregated:　　　**Yes**

Document	2	4	182	12	

Nodes\\Employees\\Behaviour influence on work\Target Setting\Targets should be\Ambitious

Nickname:

Classification:

Aggregated:　　　**Yes**

	0	0			

Nodes\\Employees\\Behaviour influence on work\Target Setting\Targets should be\Realistic

Nickname:

Classification:

Aggregated:　　　**Yes**

Document	2	4	182	12	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Communication

Nickname:

Classification:

Aggregated: **Yes**

Document	8	101	5,600	206	

Nodes\\Employees\\Communication\Clarity of expectations

Nickname:

Classification:

Aggregated: **Yes**

Document	3	8	529	10	

Nodes\\Employees\\Communication\Unclarity of expectations

Nickname:

Classification:

Aggregated: **No**

Document	8	93	5,071	196	

Nodes\\Employees\\Key Performance Measurements

Nickname:

Classification:

Aggregated: **Yes**

Document	8	164	3,980	249	

Nodes\\Employees\\Key Performance Measurements\Impact of KPIs

Nickname:

Classification:

Aggregated: **Yes**

Document	3	7	298	27	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Impact of KPIs\Enables action
Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Key Performance Measurements\Impact of KPIs\No impact
Nickname:

Classification:

Aggregated: **Yes**

Document	3	6	258	26	

Nodes\\Employees\\Key Performance Measurements\Impact of KPIs\We make our own indicators
Nickname:

Classification:

Aggregated: **No**

Document	1	1	40	1	

Nodes\\Employees\\Key Performance Measurements\KPI Deployment
Nickname:

Classification:

Aggregated: **Yes**

	0	0			

Nodes\\Employees\\Key Performance Measurements\KPI Deployment\Every department need contributing KPIs
Nickname:

Classification:

Aggregated: **Yes**

	0	0			

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\KPI Deployment\Every department need contributing KPIs\Target setting based on KPI

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Key Performance Measurements\KPI Deployment\Every department need contributing KPIs\Top- Down Deployment

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Key Performance Measurements\KPI Deployment\One set of KPIs for all departments

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Key Performance Measurements\KPIs Knowledge

Nickname:

Classification:

Aggregated: **Yes**

Document	8	22	638	41	

Nodes\\Employees\\Key Performance Measurements\KPIs Knowledge\Good Knowledge of KPIS

Nickname:

Classification:

Aggregated: **Yes**

	0	0			

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\KPIs Knowledge\No notions of KPIs
Nickname:

Classification:

Aggregated: **No**

Document	6	15	436	33	

Nodes\\Employees\\Key Performance Measurements\KPIs Knowledge\Notions of knowledge of KPIs
Nickname:

Classification:

Aggregated: **No**

Document	4	7	202	8	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs
Nickname:

Classification:

Aggregated: **Yes**

Document	8	135	3,044	181	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Argon Leakages
Nickname:

Classification:

Aggregated: **No**

Document	1	1	52	1	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Best Quality
Nickname:

Classification:

Aggregated: **No**

Document	5	8	188	8	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Budget

Nickname:

Classification:

Aggregated: No

Document	3	4	43	4	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Claims

Nickname:

Classification:

Aggregated: Yes

	0	0			

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Competitivenes

Nickname:

Classification:

Aggregated: No

Document	1	1	11	1	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Cost

Nickname:

Classification:

Aggregated: No

Document	3	3	49	3	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Cost of poor quality

Nickname:

Classification:

Aggregated: No

Document	1	2	15	2	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Development of new products

Nickname:

Classification:

Aggregated: **Yes**

	0	0			

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Employee Happyness

Nickname:

Classification:

Aggregated: **No**

Document	2	2	34	2	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Fast Delivery

Nickname:

Classification:

Aggregated: **No**

Document	1	1	4	1	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\First time Right

Nickname:

Classification:

Aggregated: **No**

Document	1	1	4	1	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Forecast

Nickname:

Classification:

Aggregated: **No**

Document	1	1	1	1	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Fullfulment of Customer requirements

Nickname:

Classification:

Aggregated: No

Document	5	13	446	17	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Good Product

Nickname:

Classification:

Aggregated: No

Document	2	4	13	4	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Growth

Nickname:

Classification:

Aggregated: No

Document	6	9	136	9	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Headcount

Nickname:

Classification:

Aggregated: No

	0	0			

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Hit rate

Nickname:

Classification:

Aggregated: No

Document	1	1	70	1	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Investments

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Lead time

Nickname:

Classification:

Aggregated: **Yes**

Document	5	8	223	8	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Machine utilization

Nickname:

Classification:

Aggregated: **Yes**

Document	2	3	38	3	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Management operating profit

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Margin

Nickname:

Classification:

Aggregated: **No**

Document	1	5	82	5	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Meters welded per week

Nickname:

Classification:

Aggregated: No

Document	1	1	52	1	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Non Conformity Request

Nickname:

Classification:

Aggregated: Yes

Document	1	2	10	2	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\On time in Full

Nickname:

Classification:

Aggregated: Yes

Document	6	14	326	18	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Order Book

Nickname:

Classification:

Aggregated: No

Document	2	2	4	2	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Powder filled per week

Nickname:

Classification:

Aggregated: No

Document	1	1	38	5	

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Price of Product

Nickname:

Classification:

Aggregated: **Yes**

Document	2	2	13	2	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Process Stability

Nickname:

Classification:

Aggregated: **No**

Document	1	1	50	2	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Product development project management

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Profit

Nickname:

Classification:

Aggregated: **No**

Document	7	18	384	20	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Project management

Nickname:

Classification:

Aggregated: **No**

	0	0			

Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Range of Products

Nickname:

Classification:

Aggregated: **No**

Document	1	1	12	2	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Response time to RFQ

Nickname:

Classification:

Aggregated: **No**

	0	0			

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Right information

Nickname:

Classification:

Aggregated: **No**

Document	2	11	403	39	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Right product

Nickname:

Classification:

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Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Right the first time

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Classification:

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Classification:

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Classification:

Aggregated: **No**

Document	3	8	149	10	

Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Service

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Classification:

Aggregated: **No**

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Classification:

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Nodes\\Employees\\Key Performance Measurements\Type of KPIs\Supplier Performance

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Classification:

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Nodes\\Employees\\Strategy & Organizational Goal

Nickname:

Classification:

Aggregated: **Yes**

Document	8	146	4,524	240	

Nodes\\Employees\\Strategy & Organizational Goal\Level of agreement with strategy

Nickname:

Classification:

Aggregated: **Yes**

Document	2	5	467	18	

Nodes\\Employees\\Strategy & Organizational Goal\Level of agreement with strategy\Full agreement

Nickname:

Classification:

Aggregated: **Yes**

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Nodes\\Employees\\Strategy & Organizational Goal\Level of agreement with strategy\No agreement

Nickname:

Classification:

Aggregated: **Yes**

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Classification:

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Nodes\\Employees\\Strategy & Organizational Goal\Purpose of strategy

Nickname:

Classification:

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Nodes\\Employees\\Strategy & Organizational Goal\Purpose of strategy\A plan for the future

Nickname:

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Aggregated: **No**

Document	7	13	384	13	

Nodes\\Employees\\Strategy & Organizational Goal\Purpose of strategy\A plan from the top management

Nickname:

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Nodes\\Employees\\Strategy & Organizational Goal\Purpose of strategy\Alignement of organization

Nickname:

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Nodes\\Employees\\Strategy & Organizational Goal\Purpose of strategy\Task segmentation

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Classification:

Aggregated: **Yes**

Document	1	1	35	1	

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of Strategy

Nickname:

Classification:

Aggregated: **Yes**

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Nickname:

Classification:

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Nodes\\Employees\\Strategy & Organizational Goal\Understanding of Strategy\Good understanding

Nickname:

Classification:

Aggregated: **Yes**

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Nodes\\Employees\\Strategy & Organizational Goal\Understanding of Strategy\No understanding

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Classification:

Aggregated: **Yes**

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Classification:

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| Document | 4 | 10 | 357 | 14 | |

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Classification:

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| Document | 8 | 75 | 1,894 | 105 | |

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Classification:

Aggregated: **Yes**

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Nodes\\Employees\\Strategy & Organizational Goal\Understanding of the organizational goal\No understanding

Nickname:

Classification:

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Aggregated: **Yes**

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Nodes\\Employees\\Strategy & Organizational Goal\Understanding of the organizational goal\Types of organizational goals\Become the market leader

Nickname:

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Document	1	2	9	2	

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of the organizational goal\Types of organizational goals\Make money

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Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

Nodes\\Employees\\Strategy & Organizational Goal\Understanding of the organizational goal\Types of organizational goals\Make the company attractive for investors

Nickname:

Classification:

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Source Type	Number of Sources	Number of Coding References	Number of Words Coded	Number of Paragraphs Coded	Duration Coded

14 Appendix F: ArcelorMittal INCA

Ideal costs & Non Conformity Analysis

1. Management concept
2. INCA-1 : methods and results
3. Performance indicators
4. Service value analysis
5. Discussion

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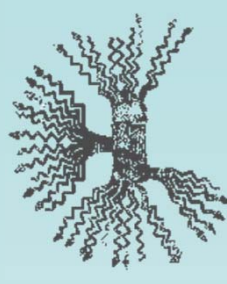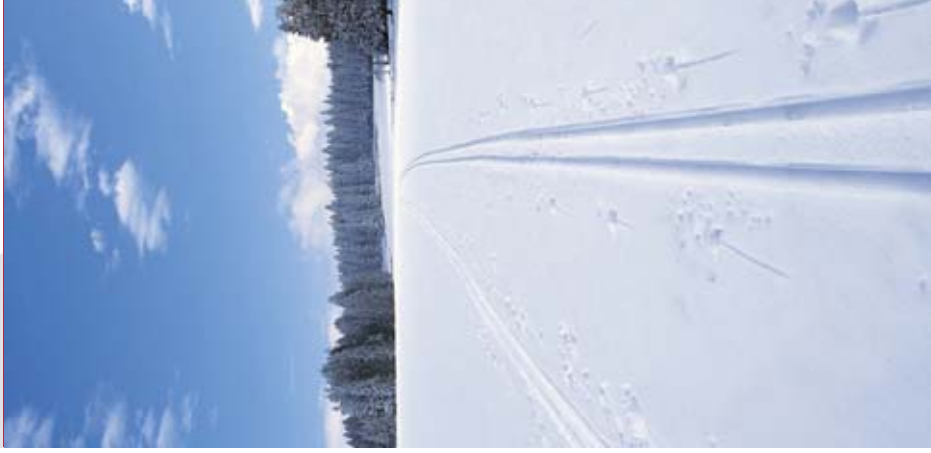
1. Management concept

1.1	Cost Leadership & Efficiency
1.2	ICE
1.3 - 1.6	INCA
1.7	Performance indicators

SIDMAR
Arcelor Groep
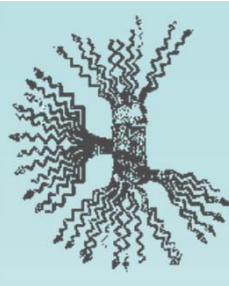
1.1 Cost Leadership & Efficiency

Current OU North programs:

Sidmar Plan 44

SwB FIT

Ekostahl ZUG

▲ Strong increase of personnel productivity (tons/man.hour)

A new approach to go beyond these programs :

Cost Leadership & Efficiency

Sidmar

ICE
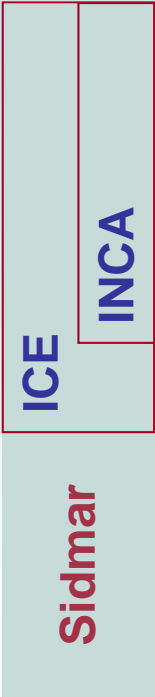
INCA

ICE = Integral Company Excellence
= TQM + TPM + …

INCA = Ideal cost & Non Conformity Analysis
= Measure and Analyse value creation

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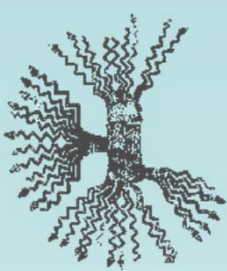
1.2 **I**ntegral **C**ompany **E**xcellence

Integral

ICE aims at a global and well-ordered set of measures, efforts and actions

Company

ICE affects all levels of our company : the management, the departments, the teams and all individual employees

Excellence

ICE strives after excellence of the equipment, the process and the product

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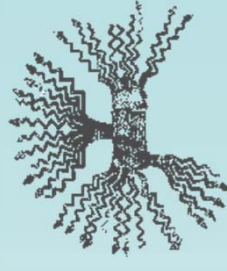
1.2 **I**ntegral **C**ompany **E**xcellence

Optimal deployment of human potential

People ▶

Structures ▶

via

Methods ▶

Processes ▶

Installations ▶

Value creation

With ICE, Sidmar strives for stimulating and enhancing value creation through the introduction and perpetuation of adapted work methods, systems and organizational structures.

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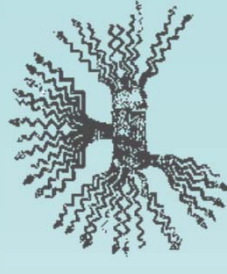
1.2 Integral Company Excellence

Instruments to achieve integral excellence

Value creation
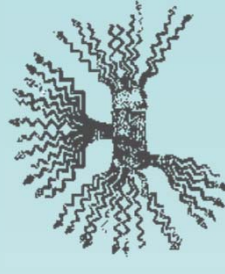
With **ICE**, Sidmar strives for stimulating and enhancing value creation through the introduction and perpetuation of adapted work methods, systems and organizational structures.

ICE

- TPM, TQM
- INCA
- Process-based thinking and acting
- Visual management
- Knowledge management
- Other

Management cycle

- Targets
- Priorities
- Master action plan
- Departmental action plan
- Investment projects
- Departmental projects

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Arcelor Groep

1.3 Ideal Cost and Non Conformity Analysis

**How do we measure and analyse
value creation and value creation opportunities ?**

Value creation

- Productivity (tons / FTE)
- Improvement proposals / FTE
- Profit
- …

Ideal : ∞

Non conformities

- Safety indicators
- Costs of time losses
- Costs of over consumption
- Costs of quality losses
- …

Ideal : 0

Benchmark the value creation   Uncover the non conformities

➜ Discover the potential

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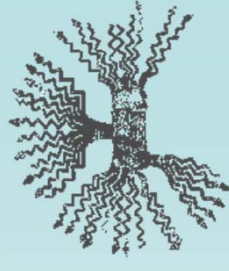
1.3 INCA
Strategy

Benchmarking does not reveal the full potential

Cost Leadership requires us to go beyond the Best of Class approach.

Process based approach

Analyse technical or administrative processes.

Involve the personnel

Link with local objectives and projects.

Avoid local optimisations, that increase overall costs

Measure overall performance (example: Quality cost index)

Managing > Controlling

Reporting tools should be built around the processes, not around EBITDA analysis.

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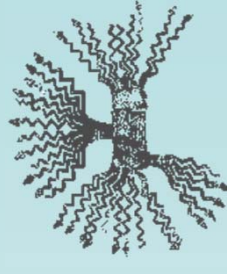
1.3 INCA
Incarnations

3 complementary analyses of non conformities

1. Analysis of the gap between actual production cost and ideal production cost

2. Analysis of personnel activities

3. Analysis of topical non conformities

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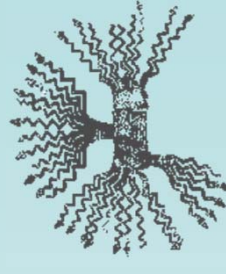
1.4 INCA-1
Analysis of gap between actual and ideal cost

Road map

- **Determine the ideal production cost**

- **Measure the gap between the actual and the ideal cost**

- **Discover the long term potential**

- **Fix targets for the industrial performance**

The link with TPM :

- The TPM multi-year targets are based on this analysis

- The losses identified in TPM-FI are non conformity costs

Non conformity cost reporting will be the basis for the Sidmar monthly "Cost follow up meeting" .

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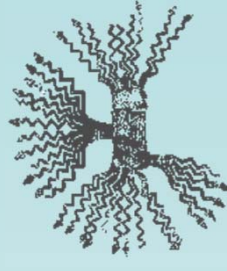
1.4 INCA-1
Focusses

Focus on the gap analysis, not on the ideal costs

Calculating the "ideal cost" shows how huge the cost gap is.
But it is more important to understand the gap.

Focus on internal non-conformities

Analyse energy losses (MJ, kWh)
Exclude external factors such as price variations

State the mission and boundary conditions of each proces

Cost reduction is not always the first priority (coke oven lifetime, coke quality, ….)
Raw material availability, quality and price go before WCR (present situation)

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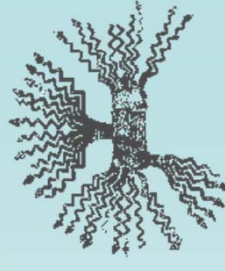
1.4 INCA-1
Challenges

What are the ideal maintenance costs ?

We lack guidelines for "ideal" maintenance costs, but :
- A reduction of maintenance costs is not a first priority at Sidmar
- Reliability gains are often far more important than savings on maintenance.

Benchmarking is for now the appropriate tool.

Gains across different processes risk to remain undetected

e.g. Width control from slab to end product

Non conformities do not always add up

E.g. Work in Progress (WCR) has several overlapping causes.

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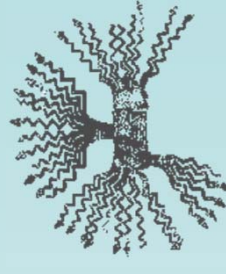
1.5 INCA-2
Analysis of personnel activities

- **Categorize and measure activities (FTE, incl. external personnel)**
  - I. Create value
  - II. Maintain and secure
  - III. Correct non conformities

- **Categorization examples :**
  - Installation improvements, product development, …   cat I
  - Planned maintenance, mandatory reporting, …   cat II
  - Breakdowns, absenteeism, downgrading, …   cat III

- **The link with TPM:**
  - This analysis will support focused improvement
  - The analysis will lead to a Cost-Loss matrix
  - The TPM multiyear targets are based on this analysis
  - The tool can be used to report on TPM progress

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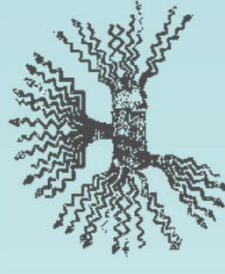
1.6 INCA-3

Analysis of topical non conformities

Complementary non conformities, not measured in the
- **analysis of the gap between ideal and actual cost**
- **analysis of the personnel activities**

- **Examples:**
  - Safety frequency rates
  - Absenteeism
  - Costumer claims and satisfaction
  - Due date performance

- **The link with TPM:**
  - Key Performance Indicators in the TPM multiyear plan

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2. INCA-1 : Methods and results

2.1 xxx
2.2 yyy

De volgende dia's overgenomen uit de ICE-presentatie.

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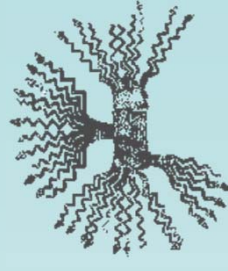
2.1 INCA-1

Scope of the analysis

- The analysis will be based on the added full cost, incl.
  - Fixed costs
  - Material losses

- The cost will be calculated per installation as well as per product.

- Internal and external personnel costs are kept untouched:
  - These activities are to be directed towards value creation
  - Personnel activities are to be analyzed in a separate analysis

- The ideal operation mode assures the long-term availability of the installations, the safety targets and the environmental targets.

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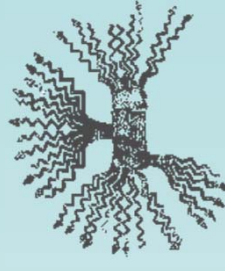
2.1 INCA-1

Categorising the Non-Conformity Costs

- Internal and external quality cost

- Excess variable cost (consumptions)

- Excess fixed costs

- Working Capital Requirement (WCR)
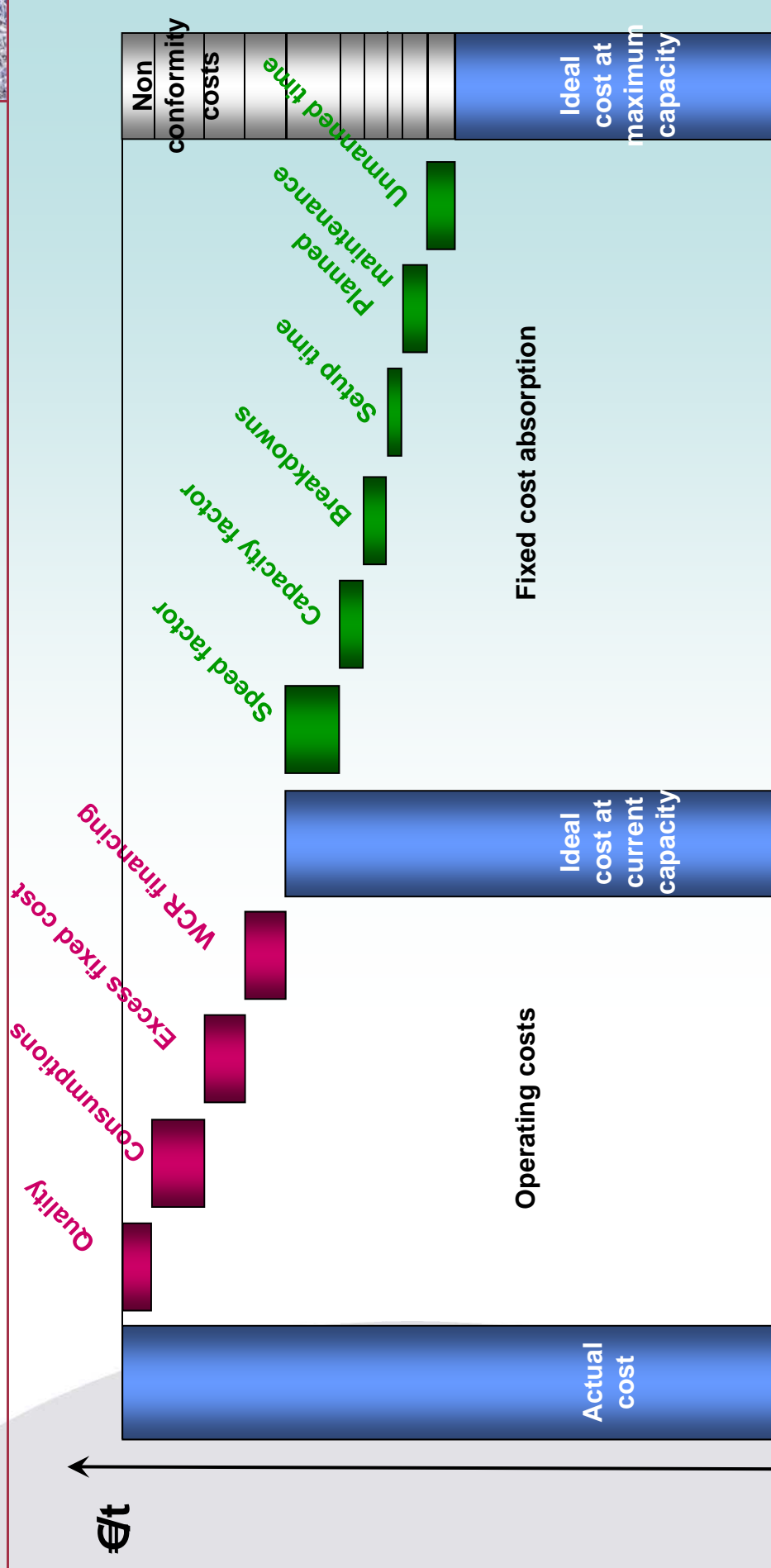
- Fixed cost non-absorption

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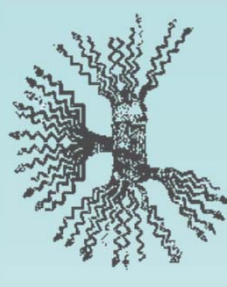
2.1 INCA-1

Fixed Cost absorption

- Fixed cost can be expressed as variable cost by spreading it evenly over calendar time.

- Any time loss results in a loss of fixed cost absorption.

- Time usage can be improved by reducing unmanned time, maintenance time, setup time, breakdowns and by increasing the capacity and speed factors.

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2.1 INCA-1

Actual cost

Quality
Consumptions
Excess fixed cost
WCR financing

Operating costs

Ideal cost at current capacity

Speed factor
Capacity factor
Breakdowns
Setup time
Planned maintenance
Unmanned time

Non conformity costs

Fixed cost absorption

Ideal cost at maximum capacity

€/t

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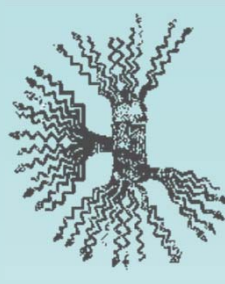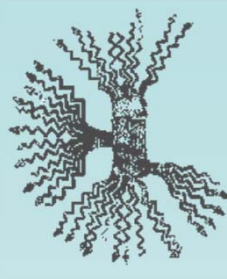
2.1 INCA-1

Guidelines for the ideal costs

- Calculations based on the budget mix of raw materials. The goal is to measure non conformities in the plant, not the deviation between the budget mix and a dream mix.

- Assumptions for energy consumption :

  - Energy spent to process the material : the physical minimum

  - Auxiliary energy : the minimal inevitable consumption

  - No distribution losses

- Identify and take into account interdependent consumptions (e.g. trade off between BOF vessel life time and additions).

- Cost are based on the physical limitations of the current production equipment
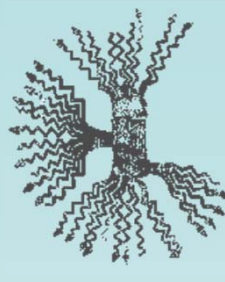
2.1 INCA-1

Guidelines for the ideal costs (cont)

- Ideal consumptions to be "simplified". Examples :
  - Technical and process yields assumed to be 100 %
  - In the mills, roll wear is neglected

Calculation principles for the gap between actual and ideal cost

- Factor costs (e.g. €/kWh) are kept constant in order to eliminate external influences

- The gap depends only on differences between specific consumptions in actual and ideal situation

- Inspection and rework costs are assigned to the previous "metallurgical" line.

- The added full cost includes direct costs, overhead costs, WACC cost for OWCR and depreciations. Other financial charges are kept fixed.

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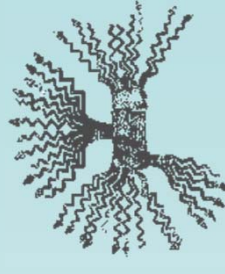
2.1 INCA-1

Yearly adjustments of the calculation basis

- **Order (or mix) dependency :**

  - The order book (product mix) can substantially influence the ideal cost

  - Yearly adjustments are assumed to be sufficient

- **Factor cost change :**

  - The factor costs do change yearly.

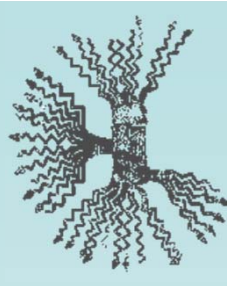 - A yearly adaptation prevents drifting away from reality

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Arcelor Groep
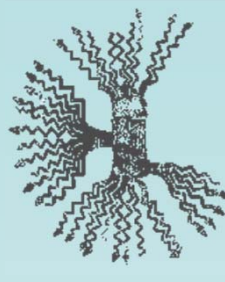
3. Performance indicators

3.1 xxx

3.2 yyy

De volgende dia's overgenomen uit de ICE-presentatie.

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3.1 Performance indicators
Link with the process-based model

The process model requires us to manage each process
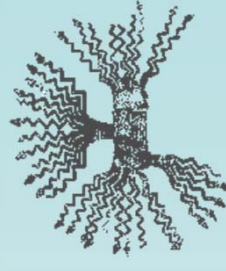
Effectiveness

Do the right things

Efficiency

Do things right

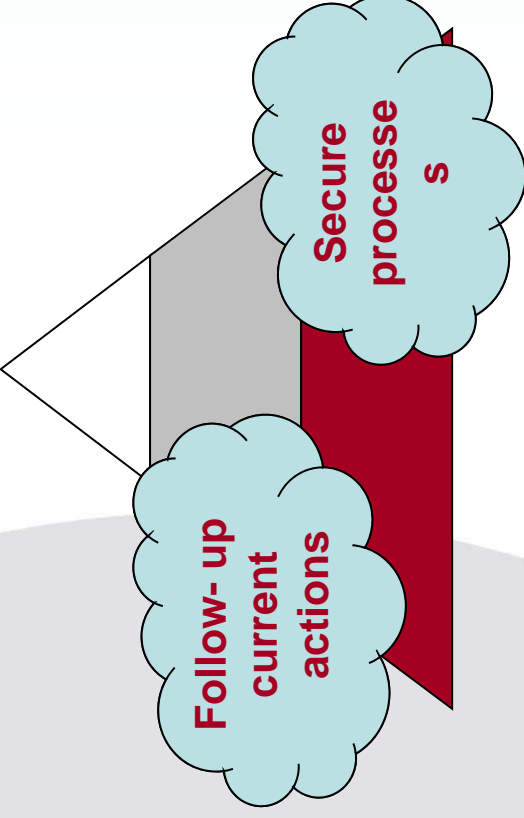Value creation indicators

Non conformity indicators

Performance Indicators must fit in with the process model

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3.1 Performance indicators
Link with the process-based model

Performance indicator hierarchy

Master action plan
Major objectives

Policy theme
KPI's for the company processes

Department action plans
KPI's for each installation or sub-process

Secure processes

Follow- up current actions

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