

**The Relation of
Social Identity and Transformational Leadership
in Project Teams:
An Examination in the IT Industry in Germany**

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Abstract

Project-based business has become more and more important for companies in Germany's IT industry, but it is also noticeable that many projects suffer or fail. Leadership behaviour plays an important role in project management and effective leadership is desired if projects are to be successful. There are a number of challenges for project leaders, such as projects may be temporary, the project team members possibly do not know each other prior to the project start and the power of project leaders is reduced in many cases compared to managers in line organisations. There is strong empirical evidence in the literature that transformational leadership is a very effective leadership style and it is also recommended in project management by academic as well as project practitioner literature. This study examines the relation of social identity and transformational leadership in project teams within the IT industry in Germany to obtain a deeper understanding of effective leadership processes with the aim of increasing work engagement.

Three research questions have been developed and a case study with a qualitative approach has been performed by applying a social constructionist epistemology. Data has been gathered through 20 semi-structured interviews with experienced professionals in the IT industry in Germany. A thematic analysis has been conducted by interpreting data and developing themes. The results provide answers on firstly, how transformational leadership behaviour causes social identity in project teams that leads to increased work engagement; secondly, how governance in projects affects leadership; and thirdly, how leadership effectiveness can be measured and might be improved. Seven behaviours of leadership including useful mediators, and ten facilitating governance measures are identified and discussed. In addition, insights regarding governmentality and governance approaches are presented. Furthermore, governance measures to measure and to improve leadership effectiveness are suggested. The findings have been conceptualised in a leadership framework and contribute with new important insights to theoretical knowledge as well as to project management practice. Furthermore, limitations are indicated and areas for future research have been suggested.

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 education 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.

06 April 2021

Signed

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Dedication

To my wife and family

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List of Abbreviations

| | |
|---------|------------------------------------------------------------|
| CEO | Chief Executive Officer |
| CMMI | Capability Maturity Model Integration |
| CR | Contingent Reward |
| CSF | Critical Success Factor |
| FRL | Full Range of Leadership Model |
| GTL | Global Transformational Leadership Scale |
| HR | Human Resource |
| IC | Individual Consideration |
| ICB | IPMA Competence Baseline |
| II | Idealized Influence |
| ILI | Identity Leadership Inventory |
| IM | Inspirational Motivation |
| IS | Intellectual Stimulation |
| IT | Information Technology |
| KPI | Key Performance Indicator |
| KPQ | Key Performance Questions |
| LF | Laissez-Faire |
| LMX | Leader-Member Exchange Theory of Leadership |
| MBE-A | Management by Exceptions - Active |
| MBE-P | Management by Exceptions - Passive |
| OCB | Organizational Citizenship Behavior |
| OE | Organisational Environment |
| OECD | Organisation for economic co-operation and development |
| OI | Organisational Identity |
| PCB | Project Citizenship Behavior, Project Citizenship Behavior |
| PMBOK | A Guide to the Project Management Body of Knowledge |
| PMI | Project Management Institute Inc. |
| PRINCE2 | Projects in Controlled Environments |
| RO | Research Objective |
| SI | Social Identity |
| SIL | Social Identity Theory of Leadership |
| TAL | Transactional Leadership |

TFL Transformational Leadership
WE Work Engagement

1. Introduction

1.1. Introduction

This study examines the relation of transformational leadership and social identity in project teams in the IT industry in Germany. The first chapter provides an introduction to this study. Context and relevance of this research are explained and the importance of project-based business for Germany's IT industry is demonstrated. Risks in this regard are emphasised and the link to transformational leadership, mediated by social identity approaches, as one important risk mitigating factor is rationalised. The provision of context of this study is followed by scope descriptions and definitions. Initial research gaps are identified, and the aim of this work is stated. Research objectives to be achieved are also determined. Contribution to theory and to practice is outlined. Finally, the thesis structure is provided.

1.2. Setting the Scene

This section provides the context and the rationale of this study. The importance of project-based business for Germany's IT industry, its challenges and the importance of effective leadership are outlined.

1.2.1. Project-based Business in the German IT Industry and its Challenges

Project-based business has becoming more and more relevant for companies for many years. Dynamic markets, changing customer demands for growth and innovation as well as economic pressure in a complex and turbulent environment are some of the business characteristics that has led to considerable project-based work in companies over the last few decades (Martens et al., 2018). A study regarding project-based business in Germany showed that running business in projects is positively related to innovation success and innovation is positively related to business success of companies

(Wald et al., 2015). Therefore, project-based work is indirectly related to business success of companies. Approximately 30% of the world economy has been project-based for the past decade (Turner, 2008) and today project-based business is still growing in several industries as well as in all parts of society (Schoper & Ingason, 2019; Turner & Miterov, 2019).

A project can be understood as “a temporary endeavour undertaken to create a unique product, service, or result” (Project Management Institute, 2017b, p. 4). This is one possible definition, provided by the Project Management Institute (PMI), founded 1969 in the U.S. It is the biggest project management association and one of its aims is to provide standards for project management. Project management has since been developed and is now an established practice.

The management of projects is of economic importance today and impacts organisational developments (Henning & Wald, 2019; Svejvig & Andersen, 2015; Yazici, 2020). Companies expend a high amount of money in implementing project management in their organisations and a lot of research is done in terms of project management and project success, but still many projects run into trouble or fail (Blas & Oré, 2020; Carvalho et al., 2015; Papke-Shields & Boyer-Wright, 2017). Especially IT Projects frequently run into trouble or fail and cause economic losses and this is perceived as one of the biggest issues in the IT Industry (Alami, 2016; Blas & Oré, 2020; Engelbrecht et al., 2017).

Several studies point out that the success rate of projects still remains low (Blas & Oré, 2020; Sirisomboonsuk et al., 2017). Thus, it makes sense to understand what project success means. There is no unique definition for project success in the literature, neither in general nor in the IT industry (Blas & Oré, 2020; Radujković & Sjekavica, 2017). Müller and Jugdev (2012) find that perceptions of project success differ by individual personality, nationality, project type and contract type and therefore, project success is “in the eyes of the beholder.” The Project Management Institute measures success by “product and project quality, timeliness, budget compliance, and degree of customer satisfaction” (Project Management Institute, 2017b, p. 8) for instance. The Standish Group have analysed IT projects since 1994 in their

annual “Chaos Report” and they found that in 2015 only 29% of IT projects were successful in terms of time, budget, and quality. In fact, 52% of the projects were challenged, which means that these projects were late, over budget or that requirements were not covered. Furthermore, 19% of the projects failed and were cancelled or never used. This situation was similar in the years since their first analysis in 1994 (Sirisomboonsuk et al., 2018; The Standish Group, 2015). The failure rate of IT projects remains very high as seen by the findings of the Standish Group published in their recent Chaos Report 2019. More than one third of the projects failed, more than the half of the projects had issues such as cost overruns, time overruns or lack of promised functionality (Blas & Oré, 2020).

The share of working hours in projects in Germany was at 34,7% in 2013 and it is estimated that the share will further increase (Schoper et al., 2018; Wald et al., 2015). Investments in IT are increasing (Blas & Oré, 2020) and in the future IT projects and project management will remain relevant to serve customers in all sectors for the digital age (Blas & Oré, 2020; Hassani & El Bouzekri El Idrissi, 2020; Neugebauer et al., 2016; Steyn, 2018; Tommasi, 2018; Vlad & Daniel, 2020). The situation is supported by pure German reports and this is also assessed by my own experience in practice as I am responsible for a business area where most of the business is project-based. Hays AG (2015) states for instance that projects become more relevant in the digital age and almost every sixth project fails. Bitkom e.V. (2020) for instance suggests agile methods for project management are necessary to drive digitization and to make projects more successful.

It seems to be a high risk for German companies in the IT industry, if they plan to create business through projects and if the number of successful projects will remain low on average. This assumption is supported by my own experience and perceptions. I have been working in IT companies, where business is driven by projects for approximately twenty years. Even one project in trouble can cause significant losses that negatively impact the profit of a big company and many profitable projects and efforts are needed to cover the losses. Beyond this, projects in trouble consume more resources such as

efforts of management and employees. Other observed impacts are that employees become ill, get into trouble concerning their career paths due to poor reputations or they just leave the company because of their own or the employer's decision. Thus, it is of vital interest of companies to run successful projects continuously and to avoid trouble or failure in projects.

1.2.2. A Critical Success Factor: Effective Transformational Leadership

Banihashemi et al. (2017) who carried out research on construction project management practices, explored the literature and discovered 56 potential critical success factors (CSF) in former studies. More recently, Blas and Oré (2020) discovered 263 CSF for IT projects in the literature. There has been substantial research conducted in the recent decades to identify the critical success factors for projects, nevertheless many authors continue to find that the search for explanations for success or failure is still unfinished (Blas & Oré, 2020; Padalkar & Gopinath, 2016). Leadership is recognised as one critical factor for success or failure in projects and the leadership style should be most effective during the project life cycle (Ballesteros-Sánchez et al., 2019; Banihashemi et al., 2017; Blas & Oré, 2020; Nixon et al., 2012; Thite, 2000; Yang et al., 2011). Thus, it is to be emphasised, that effectiveness of leadership is key, and an effective leadership style needs to be applied in projects among other helpful project management actions.

Transformational leadership in project teams is examined in this study because it is suggested in literature that transformational leadership is appropriate to be applied in project management to achieve project success (Aga et al., 2016; Zaman et al., 2020). There is a strong empirical evidence that "transformational leadership" (TFL) is more effective than any other leadership style (Crede et al., 2019; Deinert et al., 2015). This is also supported by recent studies addressing the digital age, where a transformational leadership style is strongly requested and seen as beneficial (de Sousa Jabbour et al., 2018; Hickman & Akdere, 2018; Larson & DeChurch, 2020). Today, many projects in the IT industry are concerned with digital transformation and there are claims in literature to examine

transformational leadership further related to digital transformation initiatives (Philip, 2021).

Based on Burns (1978) initial works, Bass (1985) introduced the full-range leadership theory encompassing transformational (TFL), transactional (TAL) and laissez-faire (LF) leadership styles. TFL is constructed by four components: idealized influence (II), inspirational motivation (IM), intellectual stimulation (IS), and individual consideration (IC) (Avolio, 2010; Bass, 1985). The TFL components are briefly described by a leader's behaviour in Table 1.

| TFL Component | | The leader ... |
|------------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Idealised Influence | (II) | <ul style="list-style-type: none"> ... is role models for their followers ... is admired, respected, and trusted ... takes risks ... is consistent |
| Inspirational Motivation | (IM) | <ul style="list-style-type: none"> ... provides meaning and challenge ... arouses Team spirit ... displays enthusiasm and optimism ... provides a shared vision with clear expectations that follower should meet |
| Intellectual Stimulation | (IS) | <ul style="list-style-type: none"> ... encourages creativity and new approaches ... questions assumptions ... reframes problems ... approaches old situations in new ways ... doesn't do public criticism ... doesn't criticise ideas if they differ from the leader's ideas |
| Individualised Consideration | (IC) | <ul style="list-style-type: none"> ... pays special attention on each individual follower ... develops followers to higher levels of potential ... accepts individual differences ... personalises interactions ... listens effectively |

Table 1: Components of Transformational Leadership (Source: Bass and Riggio (2006))

The TAL components are constructed by contingent reward (CR), management-by-objectives active (MBE-A), and management-by-objective passive (MBE-P). Bass and Riggio (2006) state that CR is transactional if the reward is material like a bonus, but CR can also be transformational, if the reward is psychological such as in praise. The TAL components are displayed in Table 2 and briefly described by a leader's behaviour.

| TAL Component | | The leader ... |
|----------------------------------|---------|----------------------------------------------------------------------------------------------------------------|
| Contingent Reward | (CR) | ... obtains followers agreement on what needs to be done ... promises a reward in exchange after assignment |
| Management-by-Exceptions active | (MBE-A) | ... monitors deviances from standards, mistakes, and errors actively ... takes corrective actions |
| Management-by-Exceptions passive | (MBE-P) | ... waits passively for deviances, mistakes, and errors to occur ... takes corrective actions |

Table 2: Components of Transactional Leadership (Source: Bass and Riggio (2006))

Laissez-Faire Leadership (LF) is the avoidance or absence of leadership and is inactive as well as ineffective (Bass & Riggio, 2006). LF is described in Table 3.

| LF Component | | The leader ... |
|--------------------------|------|------------------------------------------------------------------------------------------|
| Laissez-Faire Leadership | (LF) | ... avoids leadership ... does not make decisions ... ignores his responsibilities |

Table 3: Components of Laissez-faire Leadership (Source: Bass and Riggio (2006))

There is much evidence in the literature, that TFL is more effective than TAL and LF in many contexts, but the literature also suggests, that TAL is also effective in different situations. Therefore, many authors find that TFL and TAL should have a relation, where one leadership style augments the other (Bass, 1985; Bass & Riggio, 2006; Jangsiriwattana, 2019; Passakonjaras & Hartijasti, 2019; You-De et al., 2013).

However, there is also criticism and there are statements that TFL is not universally applicable. Some researchers state (e.g. Keegan & Den Hartog, 2004; Tyssen, Wald, & Spieth, 2014) that TFL is a very good leadership style for line organisations, but TFL effectiveness might be weaker in project teams due to organisational factors that mediate the relationship between leaders and followers. Keegan and Den Hartog (2004) suggest creating a sense of belonging that addresses unstable and overlapping social relations.

Researchers have recently analysed how dedicated mediator processes influence the effectiveness of TFL in project teams. According to Aga et al. (2016), team building mediates TFL effectiveness regarding project success. Chi and Huang (2014) suggest team goal orientation and a group affective tone as mediators for TFL for instance. Aga et al. (2016) state that transformational leadership has a positive influence on project success and indicate that further research is needed on the processes through which TFL impacts project success.

Recent research suggests social identity (SI) approaches that might mediate TFL effectiveness in projects (Costa et al., 2018; Ding et al., 2017; Lorinkova, 2019). “Social identity” as a term was introduced by Tajfel and Turner (1979). The basic idea is that the self-image of individuals derives from social categories to which someone perceives himself as belonging (Tajfel & Turner, 1979). A person can socially categorize in parallel with several groups, such as football teams, religious groups, gender groups, age groups, families, or even companies or project teams (Tajfel & Turner, 1986). A social category provides a system for self-reference and defines the place of an individual in society, and social categorisation can be understood as a cognitive tool that segments, classifies or orders the social environment to undertake social actions (Tajfel & Turner, 1979).

Tajfel and Turner (1979) argue there are some derivations for social identity based on three assumptions: The first assumption is that individuals strive to maintain their self-esteem. Tajfel and Turner (1979) derive from this, that individuals strive to achieve or maintain positive social identity. The second assumption is that membership to social groups is associated with positive or negative value connotations. People belonging to a social group categorise between “us” and “them”, where the own social group is named the “in-group” in the literature and other social groups are named out-groups (Tajfel et al., 1971). Tajfel and Turner (1979, p. 40) state that “in-group must be perceived as positively differentiated from the relevant out-groups.” The third assumption is that positive or negative discrepant comparisons between in-group and out-

group lead to high or low prestige. Individuals try to improve their own group, or they try to leave this group (Tajfel & Turner, 1979).

Based on the social identity developments of the last century, Hogg (2001) introduced the “social identity theory of leadership.” This emerging leadership theory is mainly based on social psychological works on social categorization (Tajfel, 1972) and social identity (Tajfel & Turner, 1979). The main idea is that identification with the group induces an intragroup prototypicality gradient, where the most prototypical group member has some influence due to the behaviour by other group members which conform to the prototype. Research on social identity theory of leadership advanced in the meantime and there is empirical evidence that prototypicality supports leadership effectiveness (Steffens et al., 2020).

Applying insights from social identity theory of leadership to project management practice, the social group is the project team, and social identity in projects is the identification of project team members with the project team (Ding et al., 2017). Ding et al. (2017) find that project identification, in the sense of identification with a temporary project team, facilitates TFL and leads to an increased work engagement (WE) and less turnover intention of employees. Relevant for this study is that the authors state, that TFL is positively related to project identification and that project identification mediates the relationship between TFL and work engagement. Work engagement is seen as an antecedent for successful outcomes such as OCB (Saks, 2017). In this study the relation of TFL and SI in project teams is examined in order to learn how TFL can become more effective in temporary organisations in increasing work engagement of employees.

However, leadership is not a standalone criterion and leadership relations are not in an isolated environment. Leadership is impacted by several external factors including the context of where the leadership takes place (Oc, 2018). Leadership in projects are social relations that occur in specific project environments and there are mediating organisational factors that impact leadership processes (Keegan & Den Hartog, 2004; Turner, 2020a). This

means that these organisational factors can facilitate or limit leadership effectiveness in project teams. Governance provides the conditions for all actions in projects, e.g., structures and processes (e. g. Project Management Institute, 2016, 2017b; Simard et al., 2018) and thus several organisational factors can be influenced by corporate governance or by project governance. Corporate governance and project governance are actively manageable and shape the project environment (Biesenthal & Wilden, 2014; Müller, 2019; Project Management Institute, 2016, 2017b; Turner, 2020a, 2020b). Thus, it is also important to analyse the impact of governance on leadership processes. Therefore, this study sheds light on leadership processes to find more understanding about the relation of TFL and social identity in project teams.

1.3. Scope and Definitions

Leadership relations in temporary project organisations (project teams) in Germany that aim to deliver IT solutions or IT services to customers as “IT projects” are examined in this study. German employees are in the scope of this research.

The literature review indicates that researchers use the terms IS (information system) projects, IT (information technology) projects and software (development) projects synonymously (Blas & Oré, 2020; Pankratz & Basten, 2018). In this thesis the term “IT project” is used even if referring to studies that use other terms.

In this study, the terms “leadership”, “governance”, “governmentality”, “management” are used in the realm of IT projects. These terms are used sometimes unequally or interchangeably in literature (Müller, 2019). In this study these terms are distinguished as suggested by Müller (2019) and as condensed as follows:

- Governance: “The framework for managers to do their tasks and held accountable for that” (Müller, 2019, p. 8)
- Governmentality: “Governors’ chosen ways of interaction, with those

they govern” (Müller, 2019, p. 8)

- Management: “Goal oriented activity to accomplish (project) objectives” (Müller, 2019, p. 8)
- Leadership: “People oriented activity to accomplish project objectives” (Müller, 2019, p. 8)

Search terms have been defined in American English and in British English, because most of the articles are written in American or British English as is mandatory by most of the important journals like “The Leadership Quarterly” or “The International Journal of Project Management”. British English is used in citations, even if the original citation has been written in American English, because the thesis has been submitted in England. Citations in other languages (e.g., German) have been translated. Interviews were done with German employees in the IT industry in German and relevant quotes of the transcripts have been later translated into British English.

1.4. Research Gaps

This study has discovered several research gaps in the literature, which need to be closed to enhance leadership and governance theories and to improve leadership effectiveness in project teams.

From a theoretical perspective there is lack of PM theories and knowledge is drawn from other established theories (Padalkar & Gopinath, 2016; Sydow & Braun, 2018) such as leadership theories, governance theories or organisation theories. Although success in projects is frequently researched from several perspectives, including leadership research, this issue is very complex and seems to be unresolved because there are still a considerable number of projects that fail (Alami, 2016; Blas & Oré, 2020; Carvalho et al., 2015; Papke-Shields & Boyer-Wright, 2017; Sirisomboonsuk et al., 2018). There might be a gap in the understanding of transformational leadership processes mediated by social identity in project contexts and how this behaviour is related to work engagement to contribute to project success (Amor et al., 2020; Banks et al., 2017; Chen et al., 2018; Ding et al., 2017; Pankratz & Basten, 2018; Usman,

2018). The identified research gap is summarised as follows:

GAP1 (later addressed by RQ1): Lack of knowledge regarding the relation of leadership, social identity and work engagement as contributor for project success.

A further identified research gap is the understanding of the influence that governance and governmentality can have on leadership processes in project contexts (Turner, 2020a, 2020b). Thus, there is lack of knowledge of how governance and governmentality facilitate or limit SI mediated TFL processes. Therefore, a second research gap is summarised as follows:

GAP2 (later addressed by RQ2): Lack of knowledge of how governance can impact leadership behaviour and contribute to project success.

A third research gap is the understanding of how leadership can be measured and improved to become more effective in project contexts. Closing this gap would make it possible to monitor and to improve leadership performance (Nixon et al., 2012; Peters & Moreno, 2017). This research gap is summarised as follows.

GAP3 (later addressed by RQ3): Lack of knowledge how leadership performance can be measured and improved to increase leadership effectiveness in project teams.

Derived from GAP1, GAP2 and GAP3 there is of course also a lack of conceptual frameworks that combine social identity and transformational leadership processes, governance and governmentality and continuous leadership improvements to increase work engagement in project teams.

1.5. Research Aim

The aim of this research is to examine causal relations of social identity in project teams and TFL as well as facilitating factors by governance to find out how to leverage leadership effectiveness and how to improve work engagement in project teams. The findings enhance knowledge in leadership theories and governance theories by a developed leadership framework and

contribute to practice by increasing the probability of project success.

1.6. Research Objectives

In this section the research objectives (RO) are outlined. These set the frame for this thesis. In chapter 2 the corresponding research questions evolve section by section and are finally incorporated in a conceptual framework.

Leadership needs to be effective and TFL is an appropriate effective leadership style for projects. Mediating effects for TFL are of interest in the research community and the mediation of TFL with SI has been already identified in some studies. However, the knowledge in the area of transformational leadership connected with social identity in project contexts is still scant. This study should shed light on the relations of social identity and transformational leadership in project teams. The study took place in Germany's IT industry due to lack of knowledge in this industry regarding this topic and my access to project professionals in this specific industry.

Leadership takes place in a specific environment and is influenced by several factors. Governance and governmentality influence leadership processes, but knowledge in this area is still scant. It's interesting to analyse this because governance and governmentality are actively manageable or changeable by companies.

The outcome of this study should provide insights to enhance theory and to improve project management practice. This can be supported by offering guidance for leadership and governance as well as tools for leadership monitoring. Its application shall contribute to project success.

Derived from this, the present study targets the following corresponding research objectives:

RO 1: to identify causal relations of SI and TFL that lead to work engagement in project teams.

RO 2: to analyse the influence of governance and governmentality on the SI mediated TFL effectiveness in project teams.

RO 3: to find possibilities to measure leadership effectiveness and to find possibilities for continuous leadership improvements in companies for their project-based business.

RO 4: to conceptualise the findings of this study and create a leadership framework for project-based business as a contribution to leadership and governance theories as well as project management practice.

1.7. Contribution to Theory and Professional Practice

A DBA thesis requires an independent, significant and original contribution to knowledge. This study contributes to theory and to professional practice in regard to this requirement. For example, contribution to theory is achieved by providing an in-depth understanding of commonalities of transformational leadership theory and social identity of leadership theory in the context of temporary organisations regarding effective leadership behaviour. Leadership processes in project teams are analysed. The findings enhance theory significantly and contribute to closing some research gaps by providing answers on how leadership becomes more effective in project-based business. Furthermore, governance theories are affected as facilitators for effective leadership are discovered and discussed in this study. These important insights are conceptualised into a comprehensive leadership framework to substantially enhance the body of knowledge. Knowledge is constructed by taking the epistemological position as a social constructionist in this study.

Contribution to practice is achieved by providing insights for effective leadership behaviour, recommendations regarding governance, leadership monitoring and continuous leadership improvements to professional project management practitioners. The components of the developed leadership framework can be integrated into the governance framework on corporate or project level of companies in order to contribute to project successes. This

might be beneficial for all stakeholders in Germany's IT industry who have a position with responsibility of effective leadership behaviour in project teams. The application of this framework should finally contribute to the profitability of companies. Furthermore, the developed leadership framework can be used within project management communities for trainings and education purposes. A good example might be conducting webinars in project management institutions such as the PMI.

1.8. Thesis Structure

This study is structured in five chapters as outlined in Figure 1.

Chapter 1: In this introductory chapter the context and the relevance of this study is introduced. Project-based business and its challenges in the IT industry in Germany are demonstrated and the criticality of effective transformational leadership in project teams is presented. Research gaps in leadership theories and project management practice are indicated. The aim of this research and research objectives are outlined and explained. The chapter provides an overview of this thesis.

Chapter 2: A literature review is conducted to investigate what has been researched so far and to identify research gaps. This chapter is divided into three main sections. Firstly, an overview about project management research and its relation to established leadership theories is discussed in the first section. The relevance of project management for the IT industry in Germany is provided. In addition, leadership as a critical success factor is addressed, and research gaps are identified. The second section presents the current state of leadership theories with a focus on commonalities of transformational leadership and social identity theory of leadership. The link to governance theories is also demonstrated. Research questions developed in this chapter are presented in the third section, and a theoretical framework is provided.

Chapter 3: Methodology and methods are discussed in two sections, and the applied research philosophy is presented. In addition, the social constructionist epistemological position is explained, and methodological consequences are

derived. The case study research design is explained and semi-structured interviews as the applied method for gathering and analysing data are demonstrated and justified. Finally, quality criteria and ethical considerations are presented.

Chapter 4: Data is analysed after conducting interviews with employees with project experience in the German IT industry. The findings from the semi-structured interviews with experienced professionals of the IT industry in Germany are presented in this chapter by highlighting themes from the analysed transcripts. Four main sections address the four research objectives of this study. In addition, discussions that connect findings to literature are found in each section. Finally, a leadership framework is provided.

Chapter 5: This chapter concludes this study. Contribution to theory as well as contribution to practice is derived from the findings. It is demonstrated, how leadership theories and governance theories are enhanced and how professional practice is improved. Furthermore, the limitations of this study are presented, and further research is suggested. Finally, a reflective commentary by is provided.

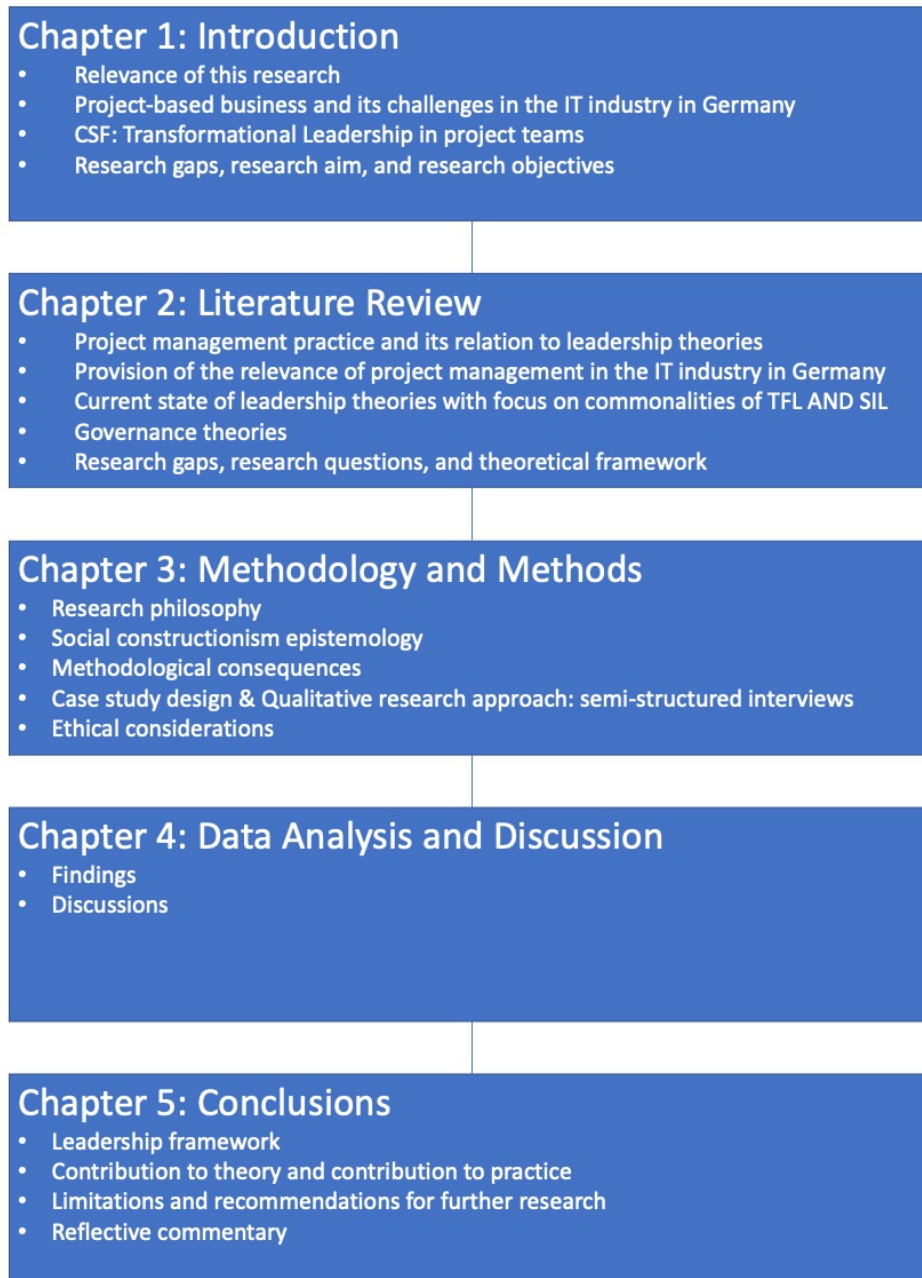


Figure 1: Thesis Structure

1.9. Conclusion

Chapter 1 is the introduction into this study. Issues of projects and project management in the IT industry in Germany as well as the importance of transformational leadership have been demonstrated. The research aim and research objectives have been presented. Finally, the structure of this thesis

has been outlined. In Chapter 2, the theoretical foundations of this study are provided, and a conceptual framework is presented.

2. Literature Review

2.1. Introduction

The goal of this chapter is to investigate what has been researched so far by conducting a literature review. It will be demonstrated how the research topic fits into previous research, to explore key academic arguments, to identify research gaps, and to justify this work. The research topic addresses several research domains, such as leadership research with a focus on mediation effects of transformational leadership and social identity, governance research and its impact on leadership, organisation research with a focus on temporary organisations and project management research. The aim of this literature review is to give an overview on the current state of research in these areas and their intersections, with a particular focus on project teams in the IT Industry in Germany.

2.2. Narrative Literature Review

Literature distinguishes between the two possible approaches of narrative literature reviews and systematic literature reviews. In this study a narrative approach has been selected.

A narrative review is less focussed and wider in scope than a systematic review and there are no criteria that determine if and how a reference will be included or not (Bryman & Bell, 2015). However, this approach has been criticised because of possible bias by the researcher, for lacking rigour, reproducibility, thoroughness and evidence, for instance (Tranfield et al., 2003). Tranfield et al. (2003) suggest conducting systematic literature reviews, which originated in medicine, also in management research, to develop a reliable knowledge base. This approach is found to be more rigorous than narrative literature reviews. The process is structured and divided in a planning stage, a conducting stage as well as a reporting and dissemination stage. However, some researchers argue that a full systematic literature review cannot be fully applied in a dissertation, and concerning the aim it is

unnecessary (Haddaway et al., 2015). Tranfield et al. (2003) foresee establishing a panel with experts in methodology and theory. This is not feasible in a dissertation and, in line with Haddaway et al. (2015) who state, that a traditional review is valuable, if the researcher is working alone or has limited time. The authors further state, that a systematic review will not bring more insights, if saturation is achieved in exhaustive reviews that lead to a conceptual framework. Systematic reviews with its positivistic character are criticised by qualitative researchers as explicit procedures to provide “objective” evidence seem to be more preferable than “judgements by the researcher in the field about what are key studies, or about what is well-established knowledge” (Hammersley, 2020, p. 27). Furthermore, Bryman and Bell (2015) argue that interpretive researchers with inductive approaches by qualitative research need more flexibility, e.g. to change the views of theories due to findings in collected data, and such researchers might tend to narrative reviews of the literature. For Merriam (1998), who follows a constructivist paradigm, the research process is not a linear process but an interactive one. Research questions lead the researcher back to the literature and then back to the phenomena of interest. To shape the problem, one goes back to the literature again. The researcher decides subjectively which sources are relevant to him and when he thinks he knows the literature (Merriam, 1998). It follows that a narrative review fits well with the constructivist paradigm and qualitative research.

However, there is no need to take one of the extreme positions as it can be narrowed. This study is based on a social constructionist epistemological paradigm (see Chapter 3) and a narrative approach was selected, but it should also be as rigorous as possible. Hence, the narrative review was conducted transparently by drawing from the rigour of systematic literature reviews (Collins & Fauser, 2005) by applying elements of systematic approaches. The selection of relevant data bases as well as the careful design of search strings contributed to mitigate biases (Haddaway et al., 2015). Moreover, besides identified studies by search terms or strings, there were also interesting studies identified within the articles, which were also analysed. Priority was set on finding peer reviewed and recent articles.

The literature review is based on online resources, provided by the University of Gloucestershire beside Google Scholar, because of its unique coverage (Martin-Martin et al., 2017). To achieve a high coverage and to address the research topic specifically, the discovery service of the University of Gloucestershire was used, covering the following databases among others, that include important journals in the areas of leadership, governance and project management:

- ScienceDirect
- ABI/Inform
- Business Source Complete
- PsycARTICLES

This makes it possible to analyse articles for this research in important journals such as “The Leadership Quarterly” (Dinh et al., 2014) or the “International Journal of Project Management” (Uchitpe et al., 2016). As transformational leadership is at the centre of current leadership research and frequently researched (Zhu et al., 2018), it was aimed to analyse articles that were more recently published. Furthermore, a search with single terms delivers “millions of proposed articles,” hence Boolean search strings helped to narrow the target articles. Some search strings are listed in appendix 1. This list is not conclusive but initial to gather a wide coverage of relevant articles. Further articles were found by applying the snowball technique. Important cited texts, articles and authors were identified by reading articles and extended the scope of the reading. The research is more focused in this way than when only keyword searches are used, and the researcher becomes more familiar with the literature relevant to this study (Ridley, 2012).

2.3. Projects & Project Management

This section gives an overview on project management research with particular focus on project management of IT projects in the IT industry.

2.3.1. Theoretical Foundation and Relevance in Practice

Projects, mainly infrastructure and construction projects, and the management of projects have been present in our society for several hundred years (e.g. Garel, 2013). In the last 60 years, project management research has increased as well as the use of project management by organisations in order to achieve strategic goals as well as project management research increased (Padalkar & Gopinath, 2016; Turner et al., 2013). The change to project-based companies, where work is organised in temporary organisations is becoming more popular in all types of industries, including the IT Industry in Germany (Martens et al., 2018; Schoper et al., 2017; Thiry & Deguire, 2007). In the future, project-based business will remain relevant to enable companies in all sectors of the digital age, and the IT Industry will become more relevant to enable business in other industries. (Adriane Monteiro Cavalieri & Manoel Carlos Pego, 2019; Asbjørn & Agnar, 2021; Ekstedt, 2019; Neugebauer et al., 2016; 2019; Umer et al., 2020; Vlad & Daniel, 2020). Information and Communication Technologies are key factors for “Industry 4.0” capabilities for instance (Neugebauer et al., 2016). This assessment of the situation is also supported by pure German studies from practice (Bitkom e.V., 2020; Hays AG, 2015). In the meantime, project management has developed to become an internationally established discipline in practice, with commonly accepted *de facto* standards and methodologies such as PMBOK, PRINCE2 (Padalkar & Gopinath, 2016) and ICB (Vukomanović et al., 2016), *de jure* standards such as ISO 21.500 and DIN 69900, special standards such as scrum, and maturity models such as CMMI (Grau, 2013).

Different project management associations, organisations and institutes, founded in the last century, have several quite similar definitions for “projects” as displayed in Table 4, and “project management” as displayed in Table 5 (International Project Association, 2015; Murray et al., 2009; Project Management Institute, 2013; Zandhuis & Stellingwerf, 2013).

| |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>International Organization for Standardization (ISO)/ISO 21500:</p> <p>“A project is a unique set of processes consisting of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective. Achievement of the project objective requires deliverables conforming to specific requirements, including multiple constraints such as time, cost and resources” (Zandhuis et al., 2013, p. 21).</p> |
| <p>Office of Government Commerce/PRINCE2:</p> <p>“A project is a temporary organization that is created for a purpose of delivering one or more business products according to an agreed Business Case” (Murray et al., 2009, p. 3).</p> |
| <p>International Project Association (IPMA)/ICB Version 4.0:</p> <p>“A project is defined as unique, temporary, multi-disciplinary and organised endeavour to realise agreed deliverables within predefined requirements and constraints. Achievement of the project objective requires these deliverables to conform to specific requirements, including multiple constraints such as time, cost, resources and quality standards or requirements” (International Project Association, 2015, p. 36).</p> |
| <p>Project Management Institute (PMI)/PMBOK 6th Edition:</p> <p>“A project is a temporary endeavour undertaken to create a unique product, service, or result” (Project Management Institute, 2013, p. 3).</p> |

Table 4: Definitions for Projects from Different Sources

Focussing on IT projects, the definitions can be adapted. “IT projects are discrete and unique activities that serve as vehicles of multidimensional IT-based change” (Bannerman et al., 2012, p. 4874). Varajão et al. (2018, p. 892) suggest the following definition:

An IT project can be defined as a temporary endeavour undertaken to create a unique product, service, or result (Project Management Institute, 2013), such as the development of a software application, the migration of a database, the enhancement of an IT infrastructure, among others.

These definitions, and the literature show that an essential characteristic of projects is the temporary nature of the organisation (e.g. Project Management Institute, 2013; Sydow & Braun, 2018; Turner & Müller, 2003). The theoretical underpinning is allocated in organisation theories (e.g. Lundin & Söderholm,

1995; Turner & Müller, 2003). Organisation theories, where organisations are analysed, generally assume a permanent organisation. Lundin and Söderholm (1995) introduced “a theory of a temporary organisation” which is based on time, task, team, and transition as well as a strong focus on actions. For this study it is interesting to understand specific behaviour in these types of organisations. Project team members have diverse backgrounds, experiences and expectations concerning the project objectives and they are probably delegated from different permanent organisations (Sydow & Braun, 2018). In project teams, employees are expected to identify not only with the organisation they belong to, but also to the project organisation, although some individuals either identify more with the line organisation and others with projects (Arvidsson, 2009). The project organisation is embedded in the permanent organisation and as Braun et al. (2012) find, temporary organisations can cause so called “project citizen behaviour” (PCB). Regarding projects, focus is the behaviour of employees in the project team within the temporary organization. The temporary organisation is therefore one building block of the conceptual framework introduced later in this thesis.

| |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| International Organization for Standardization (ISO)/ISO 21500: |
| “Project Management is the application of methods, tools, techniques and competences to a project. Project management includes the integration of the various phases of the project life cycle. Project management is accomplished through processes” (Zandhuis et al., 2013, p. 15). |
| Office of Government Commerce/PRINCE2: |
| “Project Management is the planning, delegating, monitoring and control of all aspects of the project, and the motivation of those involved, to achieve the project objectives within the expected performance targets for time, cost, quality, scope, benefits and risks” (Murray et al., 2009, p. 4). |
| International Project Association (IPMA)/ICB Version 4.0: |
| “Project management is concerned with the application of methods, tools, techniques and competences to a project to achieve goals. It is performed through processes and includes the integration of the various phases of the project lifecycle” (International Project Association, 2015, p. 36). |
| Project Management Institute (PMI)/PMBOK 6th Edition: |
| “Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. Project management is accomplished through the appropriate application and integration of the project management processes identified for the project. Project management enables organizations to execute projects effectively and efficiency” (Project Management Institute, 2013, p. 5). |

Table 5: Definitions for Project Management from Different Sources

The leading and most utilised standard for project management in Germany is the PMBOK (Ahlemann et al., 2009), issued and maintained by PMI (Project Management Institute Inc.). Therefore it is taken as a reference in the context of project management practice in most of the cases in this study.

Besides being an established practice, project management is also a young academic discipline with several fields of study that has its roots in operations research (Sydow & Braun, 2018; Turner et al., 2013). However, Sydow and Braun (2018) state that research lacks a theoretical foundation and researchers are looking for more integration and theoretical pluralism. Padalkar and Gopinath (2016) state that project management theories are weak and that there are only a few studies that aggregate diverse research streams and indicate further research directions. They propose non-

deterministic approaches in further research, where the variability of phenomena should be addressed and theoretical as well as methodological approaches should be employed to build theory. In this study, this is considered by an inductive, qualitative research approach.

Researchers have shown leadership in project management research since the 1990s. Research in project management draws on and contributes to other fields of management (Turner et al., 2013). Turner et al. (2013) identified nine schools of thought (Table 6) in project management research and provide underlying theories for each school. The schools of thoughts are characterised by “a group of researchers, investigating and developing common methods and techniques” (Turner et al., 2013).

| School | 1950s | 1960s | 1970s | 1980s | 1990s | 2000s |
|------------------------|-------|-------|-------|-------|-------|-------|
| 1. Optimization School | █ | █ | █ | █ | █ | █ |
| 2. Modeling School | | █ | █ | █ | █ | █ |
| 3. Governance School | | | █ | █ | █ | █ |
| 4. Behavior School | | | | █ | █ | █ |
| 5. Success School | | | | | █ | █ |
| 6. Decision School | | | | | | █ |
| 7. Process School | | | | | | █ |
| 8. Contingency School | | | | | | █ |
| 9. Marketing School | | | | | | █ |

Table 6: The Nine Schools of Project Management Research: based on Turner et al. (2013)

Turner et al. (2013) state that there are overlaps between the groups. The study showed that governance, success and behaviour is connected, for instance.

The following key findings have implications for the present study: Firstly, project management is an established practice with common international standards (Ahlemann et al., 2009; Project Management Institute, 2017b) and project management has relevance for companies today (Adriane Monteiro Cavalieri & Manoel Carlos Pego, 2019; Asbjørn & Agnar, 2021; Ekstedt, 2019; Neugebauer et al., 2016; 2019; Thiry & Deguire, 2007; Umer et al., 2020; Vlad & Daniel, 2020). This finding is also valid for Germany’s IT Industry (Schoper et al., 2017). One key characteristic is the temporary nature of the

organisation, and the project team (Sydow & Braun, 2018), which has an impact on the behaviour of people. For example, how participants identify with the project, and (related) project citizen behaviour, where more contextualized research is needed (Braun et al., 2012). Hence, in this study, project teams that are understood as temporary organisations are the area of research regarding team behaviour and implications on project success by improved work engagement. This builds the base for the research questions.

Secondly, project management is a young academic discipline with theoretical weaknesses (Sydow & Braun, 2018) and with claims for non-deterministic approaches, where the variability of phenomena should be addressed (Padalkar & Gopinath, 2016). Schools of thought in project management have been established and in the present study, elements of the “governance school,” the “behaviour school” and the “success school” (Turner et al., 2013) are touched on and combined. Literature is examined according to each school of thought and related established theories such as governance theories and leadership theories, where projects as temporary organisations are in the centre of the examination. The research areas of this study and its intersections are displayed in Figure 2.



Figure 2: Areas of Research

The following section takes up the interdependence of success and behaviour by working out the importance of leadership for success as well as the rationale for this study.

2.3.2. Project Success

Project success is the top priority of each project manager (Müller & Jugdev, 2012). However, an ongoing major problem is that still a considerable number of projects in the IT industry continue to fail, which leads to significant losses (e.g. Alami, 2016; Blas & Oré, 2020; Carvalho et al., 2015; Papke-Shields & Boyer-Wright, 2017). But what is success and how can success be achieved? Even if there is no consensus in the literature for the definition of project success (Blas & Oré, 2020), there is consensus that success can be achieved by appropriate actions of project managers (Radujković & Sjekavica, 2017). This means that behaviour is relevant. Literature sometimes distinguishes project success from project management success, where project management success traditionally measures against cost, time and quality (Cooke-Davies, 2002). Nevertheless, successful project management leads to project success (Mir & Pinnington, 2014; Sebestyen, 2017).

2.3.2.1. Project Success Criteria and Project Success Factors

In the 1980, researchers focussed mainly on time, cost and quality as critical success factors, but today project success is seen as a multi-dimensional category (Todorović et al., 2015). The literature distinguishes between two elements of project success: Firstly, success factors, or those elements of independent variables that increase the likelihood of project success, and secondly, success criteria, which can be measured to judge a project's success (Müller & Jugdev, 2012). In the recent decades research has identified many different success factors and criteria (Joslin & Müller, 2016), but success criteria and success factors vary by the type of the project (Müller & Turner, 2007a).

Khan et al. (2013) performed a literature review on project success and identified the following success criteria and success factors as important:

Success criteria:

- Project efficiency
- Organisational benefits
- Project impact
- Future potential
- Stakeholder satisfaction

Success factors:

- Project Management Competence
- Organisational and managerial environment
- Financial and Technical Control
- Top Management Support
- Technical Tasks
- Personnel
- Project Characteristics
- Contract/consultant performance

However, there is no unique definition in the literature and there are different lists in the literature (Blas & Oré, 2020). The definition is dependent on context and perspective (Ika, 2009; Khan et al., 2013). Varajão et al. (2018) simply introduced success factors at an international conference as “aspects that influence the likelihood of success of the project” and showed that project success factors are seen differently by diverse stakeholders. Jugdev and Müller (2005) suggest agreeing success criteria with the stakeholders before and during the project as a condition for success. Hence, it is without doubt, that behavioural aspects might also be part of the success of a project. Todorović et al. (2015) proposed a project success analysis framework to enhance knowledge management in project environments. The antecedent definition of context-based critical success factors, success criteria, their connections and KPIs to measure success are preconditions for this framework (Todorović et al., 2015). Furthermore, Varajão et al. (2018) suggest

implementing a success management process for IT projects in companies because of its complexity and importance, where definitions, evaluations, validations, corrective actions (among others) of success factors and KPIs are part of this process. This would mean that behavioural aspects need to be part of frameworks and processes regarding success.

According to Pankratz and Basten (2018) from analysis in the IT industry in Germany, judging project success is dependent on measuring against appropriate success criteria. They identified the following success criteria for IT projects:

- Adherence to budget
- Adherence to schedule
- Meeting functional requirements
- Meeting non-functional requirements
- Process efficiency
- Customer satisfaction
- Contractor satisfaction
- System is used by end users

Project-related motivation was found to be a central success factor linked to the success criteria, and project identification is very important for software developers (Pankratz & Basten, 2018).

Pankratz and Basten (2018) indicate a research gap by stating that the understanding of motivation in this contexts is still insufficient. They claim more qualitative research is necessary in this area. This finding is also supported by Caniëls et al. (2019) who also state that firms need to understand what motivates employees to effectively collaborate in (project-) teams. They further find, that a motivational climate is highly relevant for employee behaviour, with impacts on project performance. Green et al. (2017) suggest that “work engagement” is the fuel of motivated behavior. Thus, work engagement in a project might be similarly characterised as project-related motivation. Work engagement, or project-related motivation, might be a central success factor in IT projects (Pankratz & Basten, 2018), as this is characterised by a high

positive emotional state, and energy is also deployed in uninteresting tasks (Green et al., 2017). There is empirical evidence that human behaviour is important to achieve project success and, as IT projects are mostly very complex and are dependent on interactions of team members, the need for leadership is implied (Blas & Oré, 2020). Blas and Oré (2020) suggest further research in understanding how soft skills (e.g., in terms of leadership behaviour) can contribute to achieve project success. Thus, how project-related motivation is induced and what behaviour can be derived from this in order to lead to desired outcomes needs to be understood. This is examined in the next section.

2.3.2.2. The Relation of Leadership, Work Engagement and Project Success

Work engagement is further analysed as this might be a success factor for projects. Furthermore, the relation of leadership, work engagement and project success is described and a causal chain is proposed. Firstly, engagement should be understood as a specific relation of an employee to his occupation of a role, job or organisation (Saks, 2017). Therefore “work engagement” (WE) is an attitude of employees that describes the relation of an employee to his or her work. According to Schaufeli et al. (2002), engagement is a positive, fulfilling work-related state of mind. Based on the findings of Taghipour and Dezfuli (2013), work motivation is an antecedent of WE. WE can be considered as a motivational issue, which opens the full potential of individuals to achieve higher levels of performance (Soares & Mosquera, 2019). Based on research from the last few decades, work engagement is related to meaningful outcomes for business and for employees (Soares & Mosquera, 2019) and job performance (Rich, 2010) and therefore it can be understood as an antecedent or a contribution for project success. Thus, there is a direct connect between project-related motivation and work engagement in projects with positive impacts on performance. Overall, WE can be understood as the clue that connects an employee to a project. One possible outcome of work engagement might be job satisfaction or organisational citizenship behaviour (OCB) (Saks, 2017). According to Dalal et

al. (2012), employee engagement is a predictor for task performance and even a strong predictor for OCB.

The roots of OCB can be found in Katz (1964) who suggests three essential factors to achieve organisational effectiveness: firstly, individuals need to be induced to enter and to remain with an organisation; secondly, as employees they must carry out specific role requirements in dependable fashion and; thirdly, they must engage in innovative and spontaneous activities that go beyond their role descriptions (Katz, 1964). Smith et al. (1983) picked up the latter in their study and named it “organisational citizenship behaviour.” OCB means, that employees perform beyond their contractual obligations and it is described by seven dimensions: helping behaviour, sportsmanship (tolerate inevitable inconveniences and also impositions of work without complaining), organisational loyalty, organisational compliance, individual initiative, civic virtue and self-development (Braun et al., 2012). Braun et al. (2012) find that temporary organisations can cause so called “project citizen behaviour” (PCB). PCB is derived from organisational citizen behaviour (OCB). A quantitative study of van Dick et al. (2006) with samples also taken in Germany points out, that organisational identity (OI) is positively related to OCB. This means that OI is an inducing factor for OCB. Braun et al. (2013) performed a quantitative study in Germany and Portugal and they state that OCB in projects is positively related to project success. This is a first hint that OI in temporary organisations might impact specific project citizenship behaviour (PCB) of its team members that can lead to a better project performance. Another inducing factor might be work engagement in projects as many studies see this relation (e. g. Saks, 2017).

There is empirical evidence that stronger engagement of employees positively influences success in organisations within the IT industry (Gupta et al., 2019; Singh, 2019). Based on these findings it can be concluded that WE is desired as a motivational state in project organisations as it contributes to project success. Kahn (1990, p. 694) defined “personal engagement as the harnessing of organisation members’ selves to their work roles; in engagement people employ and express themselves physically, cognitively, and emotionally during

role performances.” In the meantime this first definition and motivational concept has been adapted by many other authors and there is not only one unique definition in place. However, three components should be considered: a holistic investment of the entire self, a focus on work performed on a job and the willingness to dedicate physical, cognitive and emotional resources on one’s job (Saks, 2017). Rich (2010) provides “job engagement items” to measure work engagement as conceptualised by Kahn (1990). The job engagement items are displayed in Table 7.

| Physical engagement | Emotional engagement | Cognitive engagement |
|----------------------------------------------|------------------------------|------------------------------------------------------|
| I work with intensity on my job | I am enthusiastic in my job | At work, my mind is focused on my job |
| I exert my full effort to my job | I feel energetic at my job | At work, I pay a lot of attention to my job |
| I devote a lot of energy to my job | I am interested in my job | At work, I focus a great deal of attention on my job |
| I try my hardest to perform well on my job | I am proud of my job | At work, I am absorbed by my job |
| I strive as hard as I can to complete my job | I feel positive about my job | At work, I concentrate on my job |
| I exert a lot of energy on my job | I am excited about my job | At work, I devote a lot of attention to my job |

Table 7: Job Engagement Items (Source: Rich (2010))

There are some other measurement models in the literature. Schaufeli et al. (2002) who analysed how to measure engagement and burnout suggest a model for job engagement. The authors suggest there is distinct job engagement in three dimensions: vigor (high levels of energy and mental resilience), dedication (sense of significance, enthusiasm, inspiration, pride, and challenge/identification) and absorption (fully concentrated and deeply engrossed in one’s work). Schaufeli et al. (2002) suggest engagement items as displayed in Table 8.

| Vigor | Dedication | Absorbtion |
|-----------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|
| When I get up in the morning, I feel like going to work. | To me, my job is challenging. | When I am working, I forget everything else around me. |
| At my work, I feel bursting with energy. | My job inspires me. | Time flies when I am working. |
| At my work I always persevere, even when things do not go well. | I am enthusiastic about my job. | I get carried away when I am working. |
| I can continue working for very long periods at a time. | I am proud of the work that I do. | It is difficult to detach myself from my job. |
| At my job, I am very resilient, mentally. | I find the work that I do full of meaning and purpose. | I am immersed in my work. |
| At my job I feel strong and vigorous. | | I feel happy when I am working intensely. |

Table 8: Job Engagement Items (Source: Schaufeli et al. (2002))

These items show traits of work engagement and are useful for this qualitative study as outlined in chapter 3 as these traits should be generated by leadership behaviour. These traits as a result of leadership processes might be particularly useful during the interview process in order to check if work engagement is concerned.

Companies are interested in increasing work engagement and to discover its antecedents because they hope to achieve better performance results (Matthews et al., 2018). But what leads to work engagement? According to the findings of Tims et al. (2011) or Bakker (2017), transformational leadership has a positive impact on work engagement. A recent study suggests, that work engagement mediates transformational leadership and performance in organisations (Hendrastuti & Setiawan, 2021). Based on for example, Zhang et al. (2018) project-based motivation can be caused by effective leadership styles, in particular transformational leadership, applied in project teams.

Based on the literature review of Khan et al. (2013), leadership quality has a high loading within the needed project management competencies of a project manager, which the authors also identified as a critical success factor.

Therefore, there is a clear hint in the literature that leadership is an antecedent for work engagement as leadership leads to work engagement or project-based motivation of project team members.

Furthermore, Khan et al. (2013) identified organisational and managerial environment (OE) as well as top management support as CSF. OE includes

the delegation of authority for instance, which is a task of governance. Top management support which includes stakeholder support is also a behavioural factor. Rules and policies within governance can regulate these behavioural factors somehow. Beyond this, Albrecht et al. (2018) state that contextual factors such as senior leadership support, clarity of organisational visions and goals, organisational climate, organisational support and HR practices indirectly or directly influence work engagement. The study by Oc (2018), who conducted a systematic literature review on how contextual factors shape leadership and its outcomes, provides empirical evidence that leadership is influenced by contextual factors, including governance. Thus, governance needs also to be considered as a critical success factor, as it influences effective leadership behaviour and work engagement. Furthermore, the author indicates a research gap in temporal and physical contextual factors that might be subject of governance (Oc, 2018). Derived from this, there might be a gap in how governance impacts leadership behaviour to influence work engagement.

There are a considerable number of recent studies that link team personalities or team behaviours to project success in the IT industry. In particular, leadership behaviour plays an important role (Blas & Oré, 2020). There might be a gap regarding the understanding of underlying processes, as most of these studies follow quantitative approaches (e.g. Acuña et al., 2015; Blas & Oré, 2020; Gelbard & Carmeli, 2009; Lindsjörn et al., 2016). Qualitative studies are more able than quantitative studies to obtain answers about culture and meaning, or to get a phenomena explained (Parry et al., 2014). Therefore, qualitative research has been applied in this study.

Summarizing the findings of this section and merging them with the findings of section 2.3.1, it can be stated that success factors and criteria in projects are determined, depending on the specific context (Blas & Oré, 2020; Joslin & Müller, 2016; Khan et al., 2013; Müller & Turner, 2007a). Leadership behaviour within an organisational environment might cause work engagement and contribute to project success (Bakker, 2017; Hendrastuti & Setiawan, 2021; Tims et al., 2011; Zhang et al., 2018). Project-based motivation can be

caused by effective leadership styles, in particular transformational leadership, applied in project teams.

Organisational behaviour and organisational environment are characterized by leadership and governance (Biesenthal & Wilden, 2014; Keegan & Den Hartog, 2004; Müller, 2019; Oc, 2018; Project Management Institute, 2016, 2017b; Simard et al., 2018; Turner, 2020a, 2020b). Therefore, it can be concluded that there is a causal chain as displayed in Figure 3. Based on the findings it can be derived that leadership is an antecedent of work engagement, and work engagement contributes to project success. Quite similar causal chains are used in models such as in Buil et al. (2019) for instance, where, for example, effects of leadership on work engagement and performance are examined. In this study the causal chain is embedded within governance and governmentality within the theoretical universe of the three school of thoughts (success, governance, behaviour), introduced by Turner et al. (2013) and as outlined in the previous section 2.3.2.1.

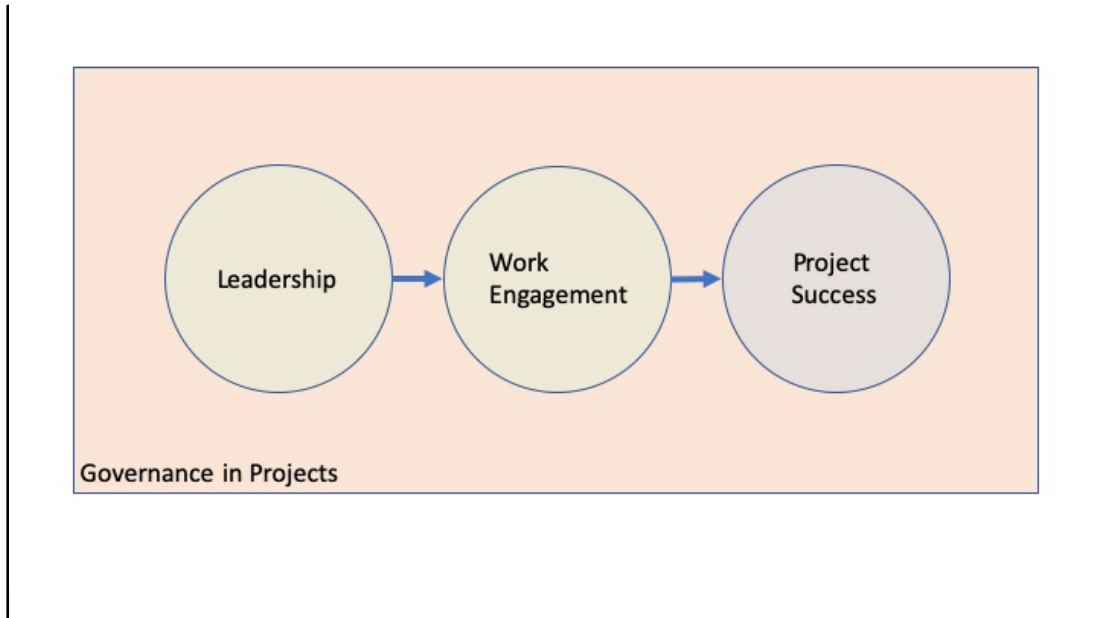


Figure 3: Causal chain

Understanding of this phenomena is still lacking, because of missing qualitative studies, that shed light on the processes and frameworks (Blas & Oré, 2020; Caniels et al., 2019; Oc, 2018; Pankratz & Basten, 2018).

Consequentially, the meanings of the research questions go in the direction of a qualitative and tendentially subjective analysis.

In the next section 2.3.3, the argument that leadership is a critical success factor will be explored, as its application impacts work engagement in projects.

2.3.3. Critical Success Factor: Leadership

There is empirical evidence that leadership behaviour is important for project management as a critical success factor for projects (Blas & Oré, 2020; Clarke, 2012; Khan et al., 2013; Mir & Pinnington, 2014). This finding in academic literature is also in line with PMI's PMBOK 6th Edition, an international recognised standard (practice), where leadership is a required competence for project managers to achieve successful projects (Project Management Institute, 2017b).

Pankratz and Basten (2018) examined IT project managers views on IT project success mechanisms and they suggest project-related motivation as a central hub and success factor, with direct relation to other success criteria such as budget, schedule. In their model, leadership is one of the predecessors for project-related motivation. It makes sense to keep in mind that "inspirational motivation" is one important component of the later (see 2.4.3) introduced "transformational leadership" style (Bass & Riggio, 2006). Especially in big companies, IT project teams are often organised in distributed (global) virtual settings (Haselberger, 2016). The effectiveness of these teams and project success are dependent on strong leadership by the project manager (Verburg et al., 2013). For example, project managers face enormous challenges because they deal with temporary settings such as project teams. Disciplinary power is missing in most of the cases (Hölzle, 2010), so leaders need to act without this supportive power.

Another important finding is that leadership in projects is not only ("vertically") applied by project managers for instance. In certain project contexts or situations, project team members can take over the ("horizontal") leadership

role within the project team for a certain time, or specific project process (e.g. Müller, Sankaran, et al., 2018; Pilkienė et al., 2018).

In the literature there is acceptance that leadership is an indispensable critical success factors for projects (Blas & Oré, 2020; Khan et al., 2013; Nixon et al., 2012), and according to Aga et al. (2016) the applied leadership style is also a critical success factor. Many studies in the IT industry support this finding also for IT projects (e.g. Blas & Oré, 2020; Goparaju, 2012; Haselberger, 2016; Taxén & Riedl, 2016). Nixon et al. (2012) discovered in a literature review that research in leadership performance management and its effects on project outcomes is still scant. The authors state that a lack of leadership performance monitoring could lead to project failure. They propose developing key performance questions (KPQ) before defining key performing indicators (KPI).

A KPQ is a management question that captures exactly what it is that people want to know when it comes to leadership performance. The rationale for KPQs is that they provide guidance for collecting relevant and meaningful KPIs and focus our attention on what actually needs to be discussed when we review performance (Nixon et al., 2012, p. 213).

This is in agreement with the study of Todorović et al. (2015) who propose a project success analysis framework to enhance the knowledge management process. In a more recent article, it is suggested that performance criteria including leadership effectiveness should be defined to evaluate software project managers and to provide feedback. This endeavour should be conducted frequently during the project. Furthermore, the authors state that there is lack of empirical data on how to evaluate software project managers apart from the classical KPI such as time and cost requirements (Peters & Moreno, 2017). This would mean that success criteria need to be analysed and this also would mean that KPIs in terms of leadership need to be connected to a previously defined specific context. Furthermore, it would be beneficial for companies, if this could also be included in a process such as described by Varajão et al. (2018). Controlling processes and oversight are a topic of governance in IT projects (Mashiloane & Jokonya, 2018).

Although project management theories are generally lacking (Padalkar & Gopinath, 2016), Kaulio (2008) showed that project leadership theories are very limited, and that established leadership theories are incorporated in the field of project management research. He suggests inductive approaches to advance knowledge in project leadership research to address the specific leadership aspects in projects.

The synthesis of the findings shapes GAP3 regarding comprehensive frameworks and processes that determine, monitor and improve desired leadership behaviour. Closing the gap would enhance project management practice and theories in the domain of leadership and governance in projects.

2.3.4. Project Management Issues in the IT Industry

Two interesting trends can be observed in Germany. The increasing significance of IT services and the rise of business organised in projects. Germany is the largest IT market in Europe, where big international companies are present. Most of the revenue (almost 40 billion euros) is created by IT services and revenue is increasing for years (Statista, 2021). The change to project-based companies, where work is organised in temporary organisations is becoming more popular in all types of industries, including the IT Industry in Germany (Schoper et al., 2017).

Project-based business addresses a significant part of IT services, for example, in the area of digital transformation. Digital technologies such as social media, mobile, cloud computing, analytics, internet of things, or artificial intelligence are becoming more and more relevant in our society and companies need to consider the digital transformation in order to keep up. The IT industry plays an essential role in the implementation of the digital transformation (Neugebauer et al., 2016; Schneckenberg et al., 2021). Due to the relevance, companies are increasingly appointing new roles, such as a CDO (chief digital officer), at management board level to implement the digital transformation in the company by projects (Walchshofer & Riedl, 2017). An expert opinion of the Scientific Advisory Board at the Federal Ministry for

Economic Affairs and Energy has highlighted lessons from the Corona crisis regarding digitalisation in Germany. Germany lags far behind many OECD countries in digital transformation. Although the Corona crisis led to an unprepared digitisation push, it is suggested to drive digitisation forward (BMW, 2021). This means that project-based business will continue to be relevant for the IT industry in Germany, especially in the course of digitalisation projects.

If we take into account that IT projects are highly relevant for digital transformation and thus for the German economy, but that on the other hand many projects still suffer or fail (Blas & Oré, 2020), it also becomes clear that the study of success factors in the IT industry in Germany is very important.

In the context of digitalisation, major changes in project management are seen in the type of communication, interaction, pace of work, ability to work, and basic knowledge (Ribeiro et al., 2021). Due to digitalisation, companies have adopted changes in the application of project management methods. (Moura, 2021). Project managers in the digital age apply modern methods such as Lean Agile Practices, Scrum, Design Thinking, or DevOps, alongside classic methods such as Waterfall, and collaborative leadership skills are essential to achieve successful projects (Project Management Institute, 2019). It depends on the type of project and its characteristics which method is most promising for successful completion (Thesing et al., 2021). According to Thesing et al. (2021), who interviewed experts in the German IT industry, the leadership behaviour to be applied in the project team is different when using agile and classic waterfall methods. For example, Project Management Institute (2017a) suggests “servant leadership” for agile projects. However, according to Shastri et al. (2021) research regarding the role of the project manager in agile projects is still scarce. Whichever leadership style is ideal for a situation, one key insight is that, in addition to technical skills, leadership also plays an important role in digital transformation projects (Ribeiro et al., 2021). In complex IT projects, it is not uncommon for leadership to be assumed also by team members. Team members are nominated by the team (shared

leadership) or by the vertical leader (horizontal leadership) for a specific leadership task (Steyn et al., 2017).

All this shows that the effectiveness of leadership in projects in the IT industry in Germany should be further investigated.

2.3.5. Findings and Gaps

This section 2.3 has exposed some important findings. First of all, project-based business and project management are relevant for the economy and companies (e.g. Schoper & Ingason, 2019; Thiry & Deguire, 2007; Turner et al., 2013; Turner & Miterev, 2019). This finding is also valid for the IT industry in Germany (Adriane Monteiro Cavalieri & Manoel Carlos Pego, 2019; Asbjørn & Agnar, 2021; Ekstedt, 2019; Neugebauer et al., 2016; 2019; Schoper et al., 2017; Umer et al., 2020; Vlad & Daniel, 2020). Furthermore, it is clear that, project management is an established practice (Ahlemann et al., 2009; Project Management Institute, 2017b). The ongoing problem is that a considerable number of projects fail (e.g. Blas & Oré, 2020; Carvalho et al., 2015; Papke-Shields & Boyer-Wright, 2017). These findings underline the relevance for further research in the area of success in projects.

A second finding is that PCB and SI might occur in temporary organisations such as project teams, and thus influence project performance, however, more research is needed (Braun et al., 2012).

A third important finding is that the definition of success factors and success criteria in projects depend on the context (Blas & Oré, 2020; Ika, 2009; Khan et al., 2013; Varajão et al., 2018). Due to the findings in the literature, leadership, and specifically the applied leadership style, can be a critical success factor in projects (Aga et al., 2016; Blas & Oré, 2020; Nixon et al., 2012) as it can cause project-related motivation. Thus, there remains a research gap in the understanding of project-related motivation and work engagement, and how this is leveraged by leadership (Blas & Oré, 2020;

Caniëls et al., 2019; Oc, 2018; Pankratz & Basten, 2018). All findings in the literature considered the research gap is summarised as follows:

GAP1 (addressed by RQ1): Lack of knowledge regarding the relation of leadership, social identity, project-based motivation, work engagement in terms of processes and frameworks as contributor for project success.

Governance influences leadership behaviour and outcomes and there is still a gap in the understanding of temporal and physical contextual factors (Oc, 2018). This gap is summarised as follows:

GAP2 (addressed by RQ2): Lack of knowledge how governance can impact leadership behaviour to increase work engagement and to contribute to project success.

Furthermore, there is a lack of knowledge in measuring leadership performance (Nixon et al., 2012; Peters & Moreno, 2017) as well as a lack of knowledge in success analysis frameworks (Todorović et al., 2015) and success management processes (Varajão et al., 2018) for effective leadership. Controlling processes and oversight are topics of governance (Mashiloane & Jokonya, 2018). Thus, more research is needed in these areas and a further research gap is summarised as follows:

GAP3 (addressed by RQ3): Missing success analysis frameworks and success management processes for leadership as part of governance

A further finding is that there is lack of foundational theories in project management research (Sydow & Braun, 2018; Turner et al., 2013). To bridge this gap, the use of knowledge of established theories is drawn to support research in project management. A key characteristic of projects is their temporary nature (e.g. Sydow & Braun, 2018), and this has its theoretical foundation in organisation theory (e.g. Lundin & Söderholm, 1995; Turner & Müller, 2003). Leadership theory is also incorporated in project management research (Kaulio, 2008). There might be a gap regarding the understanding of underlying leadership processes as most of these studies follow quantitative approaches (e.g. Acuña et al., 2015; Blas & Oré, 2020; Gelbard & Carmeli, 2009; Lindsjörn et al., 2016).

The conclusion from a theory perspective is that a theoretical foundation is found in leadership theories, as leadership in project teams is the object of analysis in this research. Furthermore, qualitative approaches would contribute to obtain more context-based insights (Parry et al., 2014).

In the following section 2.4 leadership literature is reviewed and analysed to have a better understanding of leadership as a success factor in projects, and to shape the gaps in literature. This leads to connections of the “governance school,” the “behaviour school,” and the “success school,” as proposed by Turner et al. (2013).

2.4. Leadership

2.4.1. Leadership Research – Development and Current State

The goal of this section is to give an overview about the current state of leadership research and the proposed research directions derived from literature.

Leadership is a phenomenon of everyday life and can be recognised in every human community. It is implemented in our psyche due to the very early leadership relation to our parents that is needed for our survival. Written principles of leadership (hieroglyphs) reach back 5000 years ago (Bass & Bass, 2008). Early positions regarding leadership questions were stated by the Greek philosophes Plato and Aristotle, Chinese philosophers such as Confucius and Lao-Tzu before Christ, or influential philosophers such as Machiavelli during the renaissance for instance (Bass & Bass, 2008). In these times leadership was related to a prominent person, either worthy for imitation or damnable (Weibler et al., 2012). However, the starting point of modern leadership research as a research discipline with more focus on leadership in organisations can be dated at around 1900 (Weibler et al., 2012).

There is no unique definition in place (Rost, 1993) and finding only one proper definition seems to be fruitless (Bass & Bass, 2008). As leadership definitions are mostly used in terms of “leaders as a person” (Bass & Bass, 2008), one interpretation of leadership can be understood as follows: “Leadership means to influence others by one’s own, socially accepted behaviour so that it directly or indirectly causes an intended behaviour by the follower” (Weibler et al., 2012, p. 19 - translated from German by the author). A further definition, accepted by 54 social scientists from 38 countries, who met 1994 in Calgary, is as follows: “Leadership is the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organisations of which they are members.” (House et al., 2004, p. 15).

Leadership research has increased dramatically over the last few years and leadership can be categorised by several theories. Table 9 provides a comprehensive overview regarding the most recent research focus between 2000 – 2012. Dinh et al. (2014) analysed 10 top-tier journals and identified 66 different leadership theory domains. Leadership theories were grouped in established and emerging theories. Table 9 shows the frequency of articles regarding “transformational leadership” (TFL) introduced by Bass (1985) is significantly high and is an established theory which underpins relevance in current research. TFL is also ranked no. 1 in a number of research articles in the journal, *The Leadership Quarterly*, in the years 2010 – 2019 (Gardner et al., 2020). Based on Müller and Turner (2007b) six leadership schools have evolved in the last 75 years and were reflected in project management literature. The main idea of the “visionary & charismatic school” is that TFL and TAL (Müller & Turner, 2007b) underpin the relevance of these two leadership styles. Müller and Turner (2007b) suggest TFL for complex change projects. In recent years, agile methods such as “Scrum” have been increasingly used in IT project management and there are recommendations in practice to apply a servant leadership style (Project Management Institute, 2017a, 2019; Shastri et al., 2021). However, the application of Scrum, for example, is only a subset of the tasks in a project. Other tasks in the project that are necessary for the success of the project, such as budgeting and forecasting, personnel management or negotiations are out of scope (Shastri

et al., 2021). Furthermore, it is not excluded that elements of servant leadership are applied in transformational leadership as there are some overlaps between the two theories (Anderson & Sun, 2017). It is suggested by van Dierendonck et al. (2014) that both servant leadership and transformational leadership lead to organisational commitment and work engagement, with TFL acting primarily through perceived leadership effectiveness. Many researchers such as Deinert et al. (2015) see a strong empirical evidence that TFL is more effective than any other leadership style. Of course, the authors also mention in their study that there are criticisms of considering TFL as universally applicable. They also suggest that future research should focus on contextual influences (Deinert et al., 2015). Hickman and Akdere (2018) find out that there is also a lot of empirical evidence in the context of IT that TFL leads to positive outcomes. Larson and DeChurch (2020) also finds that TFL is very beneficial for leading teams in the digital age to face the challenges of virtual teams. Dinh et al. (2014) also analysed an increase in interest in the “social identity theory of leadership” (SIL) introduced by Hogg (2001). Table 9 shows the frequency of articles in this area. They showed that little knowledge exists on how leaders make organisations effective. Furthermore they claimed more research was needed on how leadership theories relate or operate simultaneously, their commonalities, as well as the impact on processes, influenced by context (Dinh et al., 2014). Lack of research on the relation of leadership and organisational context has been already examined in a literature review by Porter and McLaughlin (2006). Hoffman and Lord (2013) also suggest examining underlying context-based processes, triggered by events rather by persons, groups or organisations. According to Epitropaki et al. (2017) research on social identities has so far been conducted mainly in experimental settings and the authors see a clear need for further research in natural organisational contexts. Derived from this it can be concluded that research on commonalities of TFL and SIL in a specific context might be also of interest. This finding is supported by recent studies, where, among others, the mediation of TFL and SI is examined (e. g. Buil et al., 2019).

Furthermore, there is little understanding of how underlying processes work in terms of causal relationships in specific contexts. Van Knippenberg and Sitkin (2013), for example, demonstrated a lack of sufficient causal models that include mediating processes in charismatic-transformational leadership theories. In the last studies found in the literature, the causal relationship between TFL and SI and its effects was presented, but how the underlying process works was not investigated. Tse and Chiu (2014) examined leadership in the banking industry and stated that group identity mediates group focused transformational leadership. They suggest to further exploring the potential effects. However, their study did not cover the examination of causal relationships. Wang et al. (2017) indicate the relevance for transformational leaders to consider followers of social identification with the organisation in terms of performance with job crafting but did not consider causality in their study.

The mediation of TFL and SI is also supported by other studies (e.g. Ding et al., 2017; Lorinkova, 2019; Ng, 2017; Wang & Howell, 2012) and further research by deconstructing TFL is suggested by a recent study (Lorinkova, 2019).

| Established theories | Frequency | % | Rank |
|---------------------------------------------------------------------|------------------|-----------|-------------|
| Neo-charismatic theories | 294 | 39 | 1 |
| Transformational Leadership | 154 | 20 | 1 |
| Charismatic leadership | 78 | 10 | 7 |
| Transactional leadership | 35 | 5 | 17 |
| Ideological/pragmatic, outstanding leadership | 12 | 2 | 29 |
| Self-sacrificing leadership | 8 | 1 | 33 |
| Pygmalio effects | 5 | <1 | 35 |
| Inspirational leadership | 2 | <1 | 38 |
| Leadership and Information Processing | 194 | 26 | 2 |
| Social Exchange/Relational Leadership Theories | 156 | 21 | 3 |
| Dispositional/Trait Theories | 149 | 20 | 4 |
| Leadership and Diversity; Cross-cultural leadership | 81 | 11 | 5 |
| Follower-Centric Leadership Theories | 69 | 9 | 6 |
| Behavioral Theories | 64 | 8 | 7 |
| Contingency Theories | 55 | 7 | 8 |
| Power and Influence of Leadership | 52 | 7 | 9 |
| Emerging theories | Frequency | % | Rank |
| Strategic Leadership | 182 | 24 | 1 |
| Team Leadership | 112 | 15 | 2 |
| Contextual. Complexity and System Perspectives of Leadership | 110 | 15 | 3 |
| Leader Emergence and Development | 102 | 14 | 4 |
| Ethical/Moral Leadership Theories | 80 | 11 | 5 |
| Leading for Creativity, Innovation and Change | 72 | 9 | 6 |
| Identity-Based Leadership Theories | 60 | 8 | 7 |
| Social identity theory of leadership | 31 | 4 | 19 |
| Identity and identification process theories of leadership | 29 | 4 | 21 |
| Other Nascent Approaches | 101 | 13 | 8 |

Table 9: Frequency, Percentage and Rank of TFL and SI in 10 Top-tier Journals, 2000 – 2012 (Source: Dinh et al. (2014, p. 40) with marks by the author)

Until the end of the last millennium leadership research was mainly characterised by quantitative methodologies (Parry, 1998) where the understanding of interactions and context is very limited (Conger, 1998) and even to date qualitative studies are in the clear minority (Gardner et al., 2020; Gardner et al., 2010; Stentz et al., 2012; Takahashi et al., 2012). The understanding of causalities and underlying leadership processes is still scant (Behrendt et al., 2017; Dinh et al., 2014). But, to understand complex and contextualized leadership phenomena, subjective views are also needed. This means that qualitative approaches should be applied (Stentz et al., 2012).

To summarise the relevant findings from literature, it can be concluded that TFL can be an effective leadership style, even in the digital age (Bass, 1985; Bass & Bass, 2008; Deinert et al., 2015; Hickman & Akdere, 2018; Larson & DeChurch, 2020). Current research focusses on commonalities between leadership theories (Dinh et al., 2014) and recent studies state that SI mediates TFL effectiveness (e.g. Buil et al., 2019; Ding et al., 2017; Ng, 2017; Wang & Howell, 2012). Therefore, it makes sense to further analyse effective leadership behaviour in the context of TFL and SI.

The majority of leadership research has been performed by quantitative methods and there is a gap in understanding causal relations and underlying leadership processes in a specific context (Behrendt et al., 2017; Dinh et al., 2014; Gardner et al., 2020; Gardner et al., 2010; Parry, 1998; Takahashi et al., 2012). This narrows the research gap to the understanding of the mediation of SI and TFL in a project context. These findings shape GAP1 regarding the understanding of the mediation of TFL and SI with impact on WE and this evolves RQ1.

The following sections should provide the findings in the literature regarding TFL and SIL and examine more deeply the applicability of TFL and SIL in project teams.

2.4.2. Leadership Relations and Governance in Project-based Business

Before deeper examination of TFL, SI and their relations, it makes sense to get an understanding of diverse project stakeholders and their responsibilities and leadership relations in project teams. This is important to understand as leadership is a social relation between leaders and followers and a question of power and influence (Kort, 2008), that is determined by governance (e.g. Turner et al., 2013). An overview of project stakeholders is displayed in Figure 4. Furthermore, governance needs to be discussed, because of its active influence on leadership processes. Leadership does not take place in a vacuum and the contextual influences on leaders and outcomes need to be considered (Oc, 2018). Firstly, the project manager leads the project team and

has the responsibility for the project results. Secondly, the project sponsor is part of senior management and accountable for project success. The role can be covered by one or more individuals (Project Management Institute, 2017b). The project sponsor is the direct link between the project manager and executive manager of the parent organisation (Too & Weaver, 2014). Beyond this, there are other company internal stakeholders, such as functional managers, programme managers or portfolio managers, as well as external stakeholders such as customers or suppliers, who have influence on the project team. Having influence is the essence of leadership. Leadership needs to be distinguished from the command structure, although power or authority empowers leadership (Yukl, 2013). Some roles such as functional managers, project sponsors or project managers have “leadership” as a task or skill in their job description, but leadership can be performed by every project stakeholder, including team members (Hsu et al., 2017; Müller, Zhu, et al., 2018; Pilkienė et al., 2018).

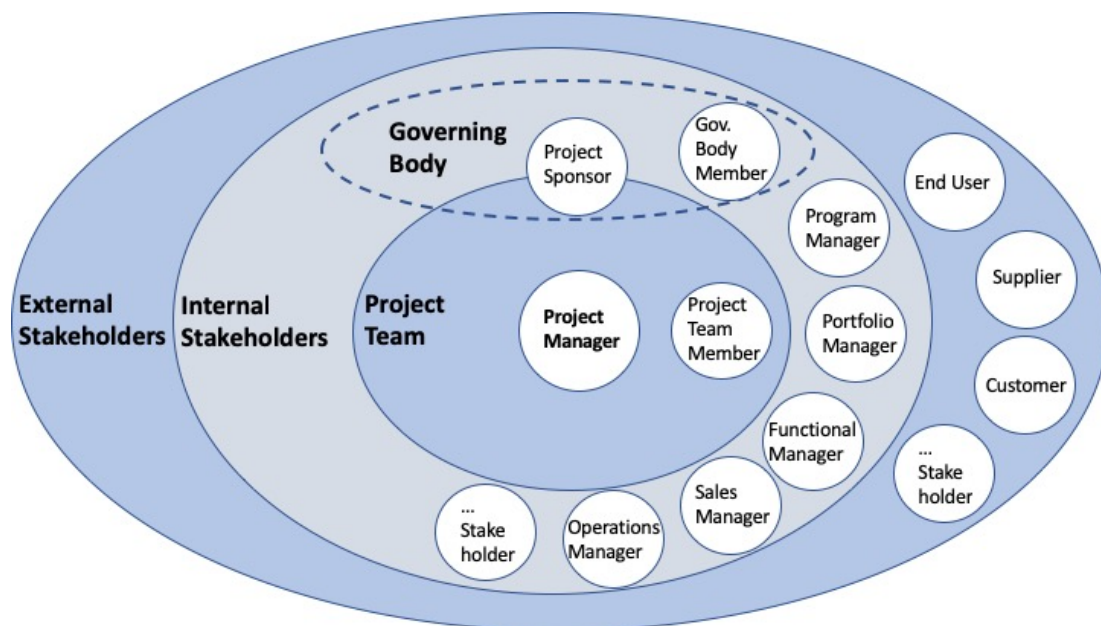


Figure 4: Project Stakeholders (Source: derived from Project Management Institute (2013, p. 31) and Project Management Institute (2017b, p. 53))

Looking at the command structure, the position and empowerment of the project manager is dependent on the organisational structure of a company

(Project Management Institute, 2017b) and how the project manager is led by others in terms of “empowering leadership” (Bass & Riggio, 2006). Various types of organisational structures are displayed in Table 10.

This demonstrates that the empowerment of the project manager is dependent on the organisational context and project characteristics as well as those influences on PM leadership from outside the project.

| Organisational Structure Type | Project Manager's Authority (PMI) | Resource Availability (PMI) | Budget Management (PMI) | Potential influence on PM leadership (judgement by the author) |
|-------------------------------|-----------------------------------|-----------------------------|-------------------------|----------------------------------------------------------------|
| Organic or Simple | Little or none | Little or none | Owner or operator | High |
| Functional (centralized) | Little or none | Little or none | Functional Manager | High |
| Multi - divisional | Little or none | Little or none | Functional Manager | High |
| Matrix - strong | Moderate to high | Moderate to high | Project Manager | Low |
| Matrix - weak | Low | Low | Functional Manager | High |
| Matrix - balanced | Low to moderate | Low to moderate | Mixed | Medium |
| Project - oriented | High to almost total | High to almost total | Project Manager | Low |
| Virtual | Low to moderate | Low to moderate | Mixed | Medium |
| Hybrid | Mixed | Mixed | Mixed | Medium |
| PMO | High to almost total | High to almost total | Project Manager | Low |

Table 10: Organisational Influence on the Project Manager's Empowerment (Source: derived from Project Management Institute (2017b))

Because of the several structures, it can be concluded that the leadership relation between project manager and project team, as well as between project team members, is not isolated and neither group-focused nor individual-focused. It is more complex. There are several diverse influences which come from other stakeholders, or from the organisational structure, which impact on individual project employees or the project team's group behaviour. Based on the personality of transformational leaders, a supportive organisational context is needed for leadership effectiveness (Phaneuf et al., 2016).

Looking at leadership interactions of other different stakeholders, the project sponsor is typically a senior management representative providing support for the project team to make the project successful by being influential (Bryde, 2008). A programme is constructed by several projects and should be aligned with the organisational strategy. The aim of the programme manager is to lead

several projects to an alignment with a vision or strategy (Shao, 2018). In addition, portfolio managers have a leadership role towards project managers and the project team and can contribute to project success (Kissi et al., 2013). This means that project managers or common team members are led by several others in a n:1 relation, viewed from a follower's perspective. Furthermore, the mentioned organisational structure itself is a reasonable focal point of examination. Structures, policies, stakeholder relationships, and processes are topics of governance, and governance is seen as an enabler for successful projects (Biesenthal & Wilden, 2014; Joslin & Müller, 2016; Project Management Institute, 2016). Authority (respectively empowerment) is executed and controlled by governance (Biesenthal & Wilden, 2014). Chen et al. (2019) states that some mitigation actions of governance are necessary to prevent harm from CEO TFL in order to improve firm performance. This supports the assumption, that governance influences leadership relations. Governance has a theoretical background. The origin of governance theories can be allocated in policy research within the political sciences and some particular theories have been developed by researchers: agency theory, transaction cost economics, stakeholder theory, shareholder theory, stewardship theory and resource dependence theory (Biesenthal & Wilden, 2014). Biesenthal and Wilden (2014) emphasise the importance of project governance and provide a comprehensive overview on current central governance theories (see Table 11), which are frequently discussed in literature.

| Theory | Summary |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Agency theory | Agency theory identifies an agency relationship of two parties (the principal and the agent) in organizations. Both actors are perceived as rational economic actors that act in a self-interested manner. The governance structure is cost and control oriented and may favor short-term results. |
| Transaction cost economics | Transaction cost economics (TCE) implies that organizations adapt their governance structures to achieve the lowest possible transaction costs. However, TCE assumes a complex relationship between buyer and seller. Behavioral factors are also considered when choosing a particular transaction. |
| Stakeholder theory | Stakeholder theory takes into account of a wider group of constituents rather than focusing on shareholders. Where there is an emphasis on stakeholders, the governance structure of the company may provide for some direct representation of the stakeholder groups. |
| Shareholder theory | The Shareholder theory of corporate governance assumes that the main purpose of an organization is to maximize shareholder return on investment (ROI). This requires structures (such as contracts, processes and policies) to assure managerial action is always in the best interests of the shareholders. |
| Stewardship theory | Stewardship theory defines a relationship between organizational actors, in which the managers are not motivated by individual goals, but rather are stewards whose motives are aligned with the objectives of their principals. The governance structure is built on trust to enhance the long-term performance of the organization. |
| Resource dependence theory | Directors are able to prioritize, acquire, facilitate and connect the company's internal and external resources needed to achieve corporate objectives. |

Table 11: Summary of Central Governance Theories (Source: Biesenthal and Wilden (2014, p. 1293))

The applicability of governance approaches is not an “either or” question, but rather a possibility for merged approaches or approaches on different project levels (Biesenthal & Wilden, 2014; Davis et al., 1997). Agency theory and stewardship theory might be the most known governance theories and they represent the end points of a governance continuum between trust and control (Müller et al., 2016). Agency theory emerged approximately two hundred years ago. The idea is as follows: in large companies, an owner of a company cannot manage his business alone and therefore he contracts a manager to do this job in his behalf. By this event, the owner becomes the principal, and the manager becomes the agent. In this theory, the principal and the agent want to receive as much individual utility with least possible expenditures. For this reason, the principal establishes governance systems to control the

manager and to maximize his own utility (Davis et al., 1997). By mapping agency theory to project management, the principal would be the project governor, like the project sponsor, and the agent would be the project manager. Costs occur because of incentives for conforming behaviour of the agent as well as due to control mechanisms (Müller et al., 2016). By applying this governance approach in project management, the project governors believe, that project managers do not fully act in their interest and spend efforts to control project manager's behaviour, thus an agency governance approach is control-based (Müller et al., 2016).

Stewardship theory has its roots in the 1980s and assumes that managers behave as stewards in the best interests of their principals (Davis et al., 1997). For stewards, collective interests such as organisational utility is more important than individual utility. Stewards behave cooperatively even if interests between principal and steward are not aligned. In this case principals are like outside owners, but they can rely on their managers. As stewards act in the interest of the organisation, they take care for the satisfaction of the principal, e.g. by delivering profitability (Davis et al., 1997). According to Davis et al. (1997), principals establish governance structures to facilitate actions of the steward for performance. Derived from this it can be stated that governance structures influence the leadership behaviour of stewards. Furthermore, the authors suggest, that empowering governance structures would be appropriate. Steward theory applied to project management would mean, that the principal is a project governor like a project sponsor and the steward is the project manager (Müller et al., 2016). Donaldson and Davis (1991) state that strong empowerment of the CEO facilitates their pro-organisational actions. Applying this finding to project management and the context of this study would mean that empowering project managers by project governors would facilitate leadership behaviour for project purposes.

The governance strategy based on stakeholder theory is to achieve social goals and to provide assistance for the team members (Biesenthal & Wilden, 2014). Stewardship theory assumes that managers act on behalf of a collective (Biesenthal & Wilden, 2014), so identity processes might be

influenced within the governed part of the organisation. This is supported by Davis et al. (1997), who argue that managers identify with the organisation and organisational identification is aligned with stewardship theory. Supporters of this approach conduct trust-based governance (Müller et al., 2016). Decision criteria for one of the two approaches might be the level of risk, where the owner is willing to accept, in comparison with governance costs that occur as well as the level of trust in the manager (Davis et al., 1997).

The selection of governance approaches is also a question of culture. Hofstede (1984) classifies countries by several dimensions of culture. Power distance for instance is characterised by the dependence of relationships or the emotional distance. In low power distance countries for instance, there is low dependency between employee and manager and employees easily approach their managers for consultations for example. In higher power distance countries, dependency is preferred, because of autocratic behaviour of managers, or because employees reject dependency, which is called counter-dependence (Hofstede, 1984). Collectivism is characterised by cohesive in-groups and traits of loyalty, and individualism is characterised by loose connections within a society for instance (Hofstede, 1984). Collectivist cultures and high power distance countries might have a tendency to stewardship approaches, where individualistic cultures and low power distance countries might be more in favour of agency approaches (Davis et al., 1997). In the case of Germany, there would be a contradiction, as this country is seen as a low power distance country with an individualist culture (Hofstede, 1984, 1991). According to Davis et al. (1997) this is a valuable explanation by which governance processes with elements of both of the two approaches develop. According to these findings, in theory, it can be concluded that leadership behaviour could be limited or facilitated by executing governance and that governance has impact on identity processes in projects.

Governance can be applied at several levels within an organisation: at a corporate level, at programme, portfolio or project level for instance. Based on OECD, and frequently cited in literature, "Corporate governance involves a set of relationships between a company's management, its board, its shareholders

and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined” (OECD, 2015). Corporate governance plays an important role regarding the effectiveness of leadership in projects, as it cares about the stability of social relations within projects (Keegan & Den Hartog, 2004). PMI explains governance of organisations as follows:

Many organisations have principles, policies, and procedures to provide guidance for how an organisation is directed and controlled.

Organisational governance principles are approved by the organisation’s highest-level governing body and may include clarity of roles and authorities, ethics, accountability, transparency, social responsibility, and a variety of other principles that are unique to each organisation. Organisational policies are the mechanism used to support and communicate these principles so that the governing board or body is informed of the key strategic issues and risks facing an organisation (Project Management Institute, 2016, p. 3).

There is no single definition for project governance in literature (Musawir et al., 2017). According to PMI, project governance is defined as “The framework, functions, and processes that guide project management activities in order to create a unique product, service, or result to meet organisational, strategic and operational goals” (Project Management Institute, 2016, p. 4). Furthermore, “the project governance framework provides the project manager and team with structure, processes, decision-making models and tools for managing the project, while supporting and controlling the project for successful delivery” (Project Management Institute, 2017b, p. 34). It is an oversight function and aligned with governance at a corporate level (Project Management Institute, 2017b). Each project needs its own governance structure in co-existence with corporate governance due to the temporariness of the organisation (Zwikael & Smyrk, 2015). In addition to project governance, the Project Management Institute (2017b) provides detailed information for practice on programme and portfolio governance in project-based business, where programmes and portfolios are related to projects.

In many research articles “governmentality” is mentioned and distinguished from “governance”. Governmentality, first introduced by Michel Foucault in the 1970s, is the attitude of how people govern others (Dean, 2009) and there are three approaches, related to project management which are discussed in literature: the authoritarian, the liberal and the neo-liberal approach (Müller et al., 2016). The authoritarian approach is characterised by a rigid governance with central decision making, and clearness of directions (Müller et al., 2017). The liberal approach is characterised by economic principles and rationalities. Governors focus on output control, but they allow flexibility in governance structures. This approach is often used in customer delivery projects, as analysed in this study (Müller et al., 2017). Teams are steered indirectly by applying the neo-liberal approach. Criteria are set by influencing and addressing the social context and the collective interests of the project team (Müller et al., 2016). Therefore, this approach might impact leadership and decision behaviour of people related to collective goals. The agency perspective might be associated with an authoritarian governmentality and the stewardship perspective might be aligned with liberal or neo-liberal governmentality (Müller et al., 2016).

According to Müller (2019), the impact of the interplay of governance and governmentality on project performance is important. He furthermore argues that high sovereignty of project teams as a trusted-base governance measure combined with neo-liberalism governmentality leads to high project and project team performance. This approach fosters self-control and democratic values. This is supported by Turner (2020b), who suggests, that liberal and neo-liberal governmentality lead to good decision making. One component of the mechanism between governance/governmentality and decisions making in projects is identification with the project team (Turner, 2020a). It is important to clarify roles and responsibilities, as these facilitate social identity in project teams (DeFillippi & Sydow, 2016; Turner, 2020a). Therefore, governance as well as governmentality influences leadership behaviour.

Müller et al. (2016) analysed governance and governmentality in different types of organisations and this study was carried with companies from Scandinavia and China. Their research in the IT Industry addressed medium sized companies. Müller et al. (2017) performed a worldwide survey to analyse the relation between governance & governmentality and project success & organisational success. This study did not imply causalities. Müller (2019) suggest further research on governance and governmentality in different contexts in relation to performance. Thus, derived from the identified studies, there might be a research gap of applied governmentality in the IT industry in Germany in relation to leadership effectiveness (Müller, 2019; Müller et al., 2017; Müller et al., 2016). This finding shapes GAP2 of this study.

Governing bodies are “temporary or permanent organized groups, consisting of members by areas of responsibility and authority to provide guidance and decision making, decision making for portfolios, programs and projects” (Project Management Institute, 2017b). Stakeholders, such as project sponsors, portfolio and programme managers, can be assigned to a governing body at certain levels (Project Management Institute, 2016). Joslin and Müller (2016) showed that stakeholder orientation has an enabling effect on projects. Behaviour control is not necessarily a contributor for project success (Joslin & Müller, 2016), but it underpins, that this possible management actions in terms of governance or governmentality (in the sense of Müller et al., 2017), influence (Joslin & Müller, 2015) behaviour and therefore facilitate or limit also leadership behaviour. The available research in project governance has been examined in a recent study. Project governance research is growing in importance. It is recommended that further research in project governance related to project success (Zhao Zhai et al., 2020) should be carried out. Biesenthal and Wilden (2014) suggest further research in particular project contexts such as in the IT industry in order to have greater understanding about project governance, as most research has been performed in construction. There is a gap in the understanding of governance mechanism in stewardship theories at project level (Biesenthal & Wilden, 2014). There is a gap in governance theories and further qualitative research regarding causal relations between project team performance, project success and the interplay

of governmentality and governance is required (Müller, 2019; Müller et al., 2017). Governance theories are therefore a further building block for the conceptual framework of this thesis, which is introduced later in this thesis.

These influences on leadership relations are displayed in Figure 5, showing the relation of the project manager and the project employee. Weibler (1994) introduced the position triad of superior supervisor-supervisor-subordinate and emphasised the influence of next level leaders on leadership culture within the area of responsibility. This generic triad can be adapted to project-based organisations. This is an example of a leadership triad that can occur in a project-based organisation. Events or situations also influence leadership behaviour (Zaccaro et al., 2018), and this completes the diagram.

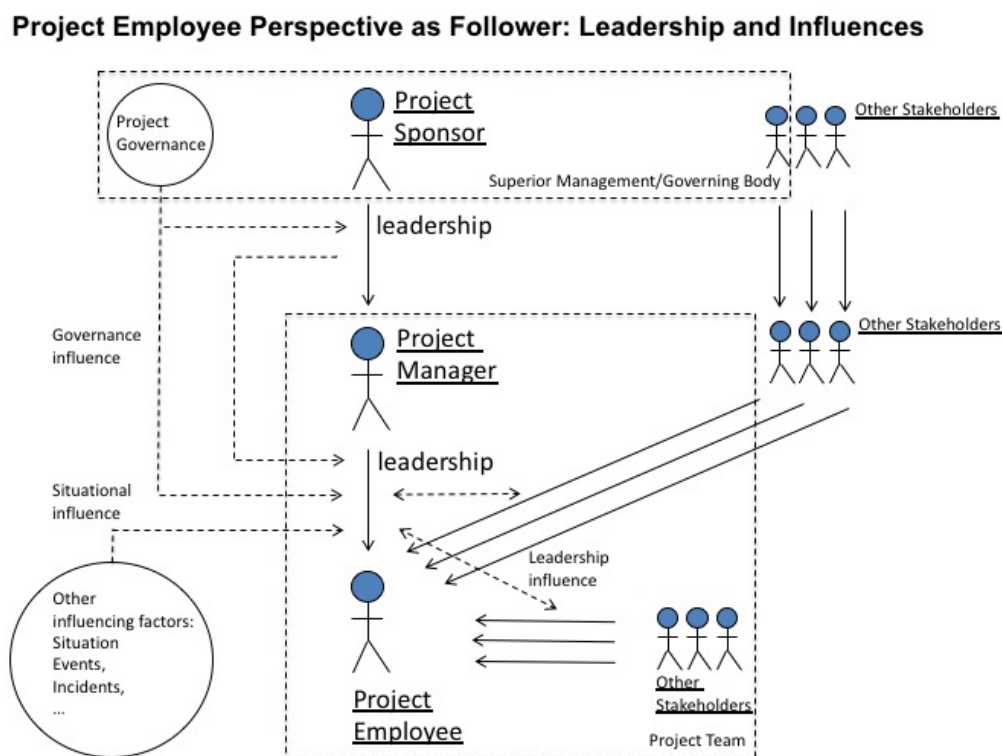


Figure 5: Leadership Triad and Influences

A recent study highlights the importance of project governance processes to achieve project success (Mashiloane & Jokonya, 2018) and suggests the examination of culture within IT projects. This also touches on governmentality issues.

The findings in the literature have some implications for this study.

This section combines governance with the behavioural and success school of thought. Governance is a critical success factor for projects (Biesenthal & Wilden, 2014), and in particular for IT projects (Mashiloane & Jokonya, 2018). Projects have different characteristics and project leadership occurs in different environments. The organisational context might influence leadership effectiveness (Phaneuf et al., 2016). Several stakeholders influence the project team, including the project manager, and for this study it is important to understand that project governance, governmentality and leadership influences leadership behaviour and identity processes within the project team by setting policies, rules and establishing processes and applying a certain governance or governmentality paradigm (Biesenthal & Wilden, 2014; Joslin & Müller, 2015, 2016; Müller, 2017; Müller et al., 2017). Beyond this, corporate governance influences leadership processes. Organisational factors might stabilise social relations and support leaders (Keegan & Den Hartog, 2004). Mashiloane and Jokonya (2018) indicate a gap regarding the impact of culture within projects in relation to project success. It can be assumed that social identity forms a certain culture in projects and thus it confirms that leadership, governance & governmentality processes need further research in a particular project context (Biesenthal & Wilden, 2014; Mashiloane & Jokonya, 2018). The conclusion is that corporate governance, project governance and governmentality as well as leadership outside the project team influence leadership in addition to identity processes within the project team by setting the leadership environment in projects and, therefore it needs to be considered when examining leadership in project contexts. These findings further shape GAP2 regarding the understanding of how governance influences leadership processes that impact WE in a particular context.

2.4.3. Transformational Leadership Theory and Project Management

The aim of this section is to introduce Transformational Leadership (TFL) and to provide an overview of current research in relation to project management.

TFL represents a widely researched and very popular leadership framework (Parr et al., 2013) and is still frequently researched today (Gardner et al., 2020; Zhu et al., 2018). One proof can be derived by a narrowed title + abstract + key word search with the string “transformational leadership” in the renowned *The Leadership Quarterly* journal from the years 2010 - 2018, where approximately 100 articles can be found. Without filters it is much more. The *International Journal of Project Management* counts approximately 10 entries with a “TFL” title + abstract + keyword search and indicates relevance for project management. This is supported by the mention of TFL as an adoptable leadership style for project managers in the PMBOK Guide 6th edition of PMI (Project Management Institute, 2017b).

The birth of “Transformational Leadership” theories took place at the end of the twentieth century. Burns (1978) identified and described 2 basic types of leadership: the “transactional” and the “transforming”. Most of the former leadership relations were classified as transactional. Leaders exchange with followers one thing for another, for example, jobs for votes or subsidies for campaign contributions. The business transactional leadership relationship is based on financial rewards such as money for work or financial incentives for job performance. Transforming leadership is more complex. The leader recognises needs or demands of followers. The leadership relation is a mutual stimulation and is connected with high morality. The concept of Burns (1978) has been further developed. Bass (1985) demonstrated that “transformational leadership” could exceed expected performance, satisfy followers and strengthen the commitment to groups and organisations. Avolio and Bass (1991) developed the “Full Range of Leadership model” (FRL) where the components of transformational leadership, several components of transactional leadership and laissez faire or non-leadership behaviour were included.

| Transformational Leadership | Transactional Leadership | Absence of Leadership |
|------------------------------------|-----------------------------------------|-------------------------------|
| Idealised Influence (II) | Contingent Reward (CR) | Laissez-Faire Leadership (LF) |
| Inspirational Motivation (IM) | Management by Exception-Active (MBE-A) | |
| Intellectual Simulation (IS) | Management by Exception-Passive (MBE-P) | |
| Individualised Consideration (IC) | | |

Table 12: Components of the Full Range of Leadership model, based on Avolio and Bass (1991)

Bass and Riggio (2006) provide good explanations of each component and the entire FRL model. They furthermore state, that the FRL components are distinct but also correlate. Short descriptions of each component are listed below:

II, IM, IS and IC are the components of TFL (Bass & Riggio, 2006).

II – Idealised influence can be understood as charisma of a leader.

Transformational leaders are role models for their followers, which means, that followers identify with their leaders and they try to emulate them. These kinds of leaders are admired, respected and trusted by their followers. They provide a collective sense of missions and reassurance that obstacles will be overcome (Bass & Riggio, 2006). Ideal influence arouses strong follower emotions (Aga et al., 2016). According to Banks et al. (2017), agreeableness and cognitive ability of leaders are strong predictors for idealised influence. II might be attributed or behavioural (Bass & Riggio, 2006).

IM – Inspirational motivation means that leaders motivate and inspire their followers in a way that they challenge them and provide a meaning. Beyond that they display enthusiasm, optimism, arouse team spirit and provide a shared vision with clear expectations that followers should meet (Bass & Riggio, 2006).

According to Banks et al. (2017), extraversion of leaders is a strong predictor for inspirational motivation.

The combination of II and IM has been conceptualised in the so-called “charismatic leadership” theory (Banks et al., 2017). One important finding in the study of Banks et al. (2017), where they examined antecedents and outcomes of charismatic leadership, is, that II and IM predict organisational citizenship behaviour of employees. They see a gap in how leaders might use dark emotions and divisive values to explain a crisis, for instance.

IS – Intellectual stimulation encourages creativity of their followers. Followers can present their own ideas and they are not criticised for this if these ideas differ from the ideas of the leader. No public criticism takes place (Bass & Riggio, 2006). Recent research confirms, that intellectual stimulation is very powerful in inspiring followers to generate creativity (Çekmecelioğlu & Özbağ, 2016).

Lai et al. (2018) who analysed TFL from a regulatory focus theory perspective find that in particular IS, but also II and IM, strive towards a collective promotion focus in projects. Promotion focus means, in this sense, that employees try to achieve the ideal situation which finally leads to higher quality of IT-systems and fewer delays in projects. Based on assumptions of regulatory focus theory, the project team develops to a collective regulatory state, similar to social identity, with common problem-solving strategies which are critical for project performance.

IC - Individual consideration means, that leaders pay individual attention for their followers’ needs and try to provide support if needed. They also try to develop each employee to a higher level of potential. Leaders accept

individual differences and personalise interactions. Effective listening, time for teaching and coaching is essential (Bass & Riggio, 2006).

CR, MBE-A and MBE-P are the components of TAL (Bass & Riggio, 2006).

CR – Contingent reward is a constructive transaction, where leaders assign a task to a follower and promise a reward when the task is successfully completed. CR is typically transactional, if the reward is a material one (e. g. a bonus), but it can also be transformational, if the reward is psychological (e. g. praise).

MBE – Management-by-objectives is corrective transactional and can be active (MBE-A) or passive (MBE-P). Leaders monitor their followers. If leaders apply MBE-A, they control deviations from standards, mistakes, or errors and take corrective actions, if necessary. Leaders apply MBE-P if they passively wait for deviances from standards, mistakes, or errors. If these kind of events occur, corrective actions are taken (Bass & Riggio, 2006).

LF is neither TFL nor TAL (Bass & Riggio, 2006).

LF – Laissez-faire leadership is the avoidance or absence of leadership and represents non-transaction. Decisions are not made, and actions are delayed. This is quite ineffective (Bass & Riggio, 2006).

The assumption of the FRL model is that leaders show characteristics of each component, but with individual different amounts. An important factor within the topic is the research in measuring FRL. There are several instruments in place to define and assess the profile of leaders according to FRL. Beyond that, the structure of the components have been slightly changed by some researchers (e. g. Podsakoff et al., 1990; Rafferty & Griffin, 2004). Deinert et al. (2015) state that some researchers argue, not to distinguish the components in analysis because of their intercorrelations, and to use TFL for instance as a unitary construct. Carless et al. (2000) propose the global transformational leadership scale (GTL) for instance as a possibility to

measure TFL in a single respectively unitary construct. Other researchers see the importance of distinguishing between the components instead of only measuring encompassing TFL, for instance (e. g. Carreiro & Oliveira, 2019; Van Knippenberg & Sitkin, 2013). However, according to Bass and Riggio (2006, p. 19), the Multifactor Leadership Questionnaire (Bass & Avolio, 1995) is the most widely accepted instrument to measure FRL. In this way, leaders can see a profile of their leadership style. The contrast between a desired optimal and a rather suboptimal profile is displayed in Figure 6. For this qualitative study it is important to ascertain, that the MLQ provides samples which might be useful for identifying TFL characteristics within a leader's behaviour.

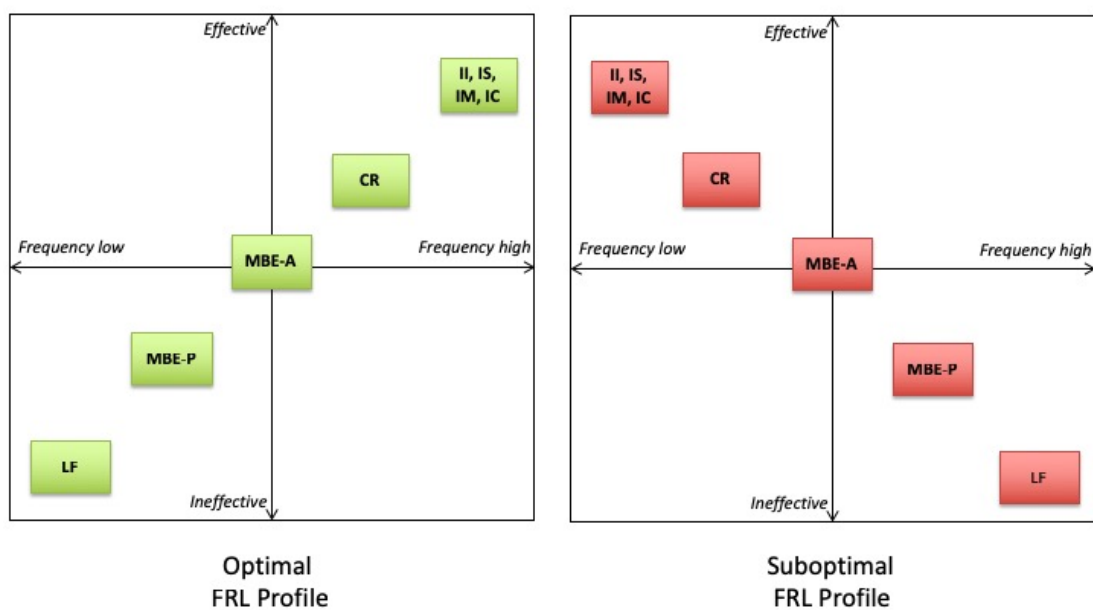


Figure 6: Contrasting Leadership Profiles adapted from Bass and Riggio (2006, pp. 9-10)

Avolio (2010, p. 69) explains that transformational leadership adds or augments transactional leadership in its effects of follower motivation, satisfaction and performance. Constructive and corrective transactions (CR and MBE) may only have marginal impact unless they are accompanied by one or more components of transformational leadership. Many researchers

see an importance of transformational leadership for every sector and setting (e.g. Avolio & Yammarino, 2013). Although TFL as an effective leadership style is empirically proofed (Crede et al., 2019; Deinert et al., 2015; Van Knippenberg & Sitkin, 2013), Van Knippenberg and Sitkin (2013) question this conclusion. Van Knippenberg and Sitkin (2013) assess TFL research and contend that conceptual definitions are lacking, causal models and relations to mediating processes are missing, conceptualisation and operationalisation related to effects are confounding, and that measurement tools are invalid and failing. Similar criticism has been stated in earlier articles (e.g. Yukl, 1999). Yukl (1999) argues that TFL theories need to correct conceptual weaknesses, because they do not address underlying influence processes clearly and he claims more research in this field on the dyadic, group, and organisational level is needed. Moreover, Yukl (1999) finds the emphasis on universal applicability of TFL too strong and suggests shedding light on facilitating and limiting factors of TFL as well as examining the group or organisational level.

Some criticisms of TFL have been taken up by researchers and led to further developments in research. Antonakis and House (2002), for example, argue that "instrumental" leadership should complement the transformational-transactional paradigm. He suggests adding categories such as "strategic leadership" and "follower work facilitation" to the model. Other considerations are to substitute elements of TFL, for example with "mindfulness" (Kroon & Menting, 2017). However, the theories were not mentioned in recent reviews in *Leadership Quarterly* (Gardner et al., 2020) and no relevant articles could be found that demonstrate effective leadership in the field of project management. Therefore, these theories were not considered further in this study.

This view is supported by other studies. However, universal applicability to all cultures seems not to be given in the same way. Takahashi et al. (2012) admit that transformational leadership research is mostly conducted by western researchers. The applicability in Asian countries has been analysed and the key finding is that TFL does not apply to Japanese people to the same extent

because of cultural traditions. Crede et al. (2019) performed a study across 34 countries and state that TFL impact on subordinate performance is smaller in Europe and North America than in Sub-Saharan Africa, the Middle East, Southern Asia and Latin America. The authors suggest further research on organisational and industry context as well as on job types. In contrast, there have been several studies in Germany, where transformational leadership has been salient in relationships with positive impacts on job satisfaction, organisational commitment or work engagement, for instance (Felfe et al., 2004; Mujkic et al., 2014).

Douglas (2012) analysed the use of TFL by male and female leaders and followers and finds that male leaders benefit more by the use of TFL than female leaders, regarding effectiveness. Stempel et al. (2015) performed a study in Germany and suggests that TFL is more typical for female leaders, while the two TFL components idealised influence and inspirational motivation are gender neutral.

The applicability of TFL also seems to differ in terms of age. For example, Anderson et al. (2017) state that TFL is less effective in motivating the millennial generation for organisational needs due to their higher prioritised own individualistic needs. Anderson et al. (2017) recommend setting individual objectives and aligning them with organisational objectives by focusing on the TFL components IS and IC. The age of the leader related to the follower is also important. TFL might be more effective, if the leader is older than the follower (Rudolph et al., 2018). A further study focusing on the applicability of TFL on followers with “autism spectrum disorder” explained that IM can cause anxiety and lead to weaker performance and that IC should be considered to reduce this (Parr et al., 2013).

There are other examples in literature, but this selection of articles indicate that diversity of people is an important factor in terms of TFL applicability and requires attention in TFL situations where diversity can be expected. Diversity of people in project teams is very likely. One example is the trend or need for offshoring outsourcing in developing countries within IT projects, due to cost

saving benefits, where cultural differences are seen as a risk (Niazi et al., 2016). Wang et al. (2016) argued in their study that cognitive diversity of the team and TFL lead to higher team intrinsic motivation and team creativity but indicate a gap regarding causalities. The understanding of culture in projects is important and need further examination (Mashiloane & Jokonya, 2018). Thus, culture and diversity in projects needs to be considered when analysing TFL and identity processes.

TFL is also relevant for project management. The effectiveness of TFL for project success is empirically supported (Aga et al., 2016; Nixon et al., 2012) and several researchers have considered transformational leadership in temporary settings as an appropriate leadership model (Tyssen, Wald, & Spieth, 2014). A study in Pakistan emphasised that TFL might be appropriate to create person-organisation-fit, respectively to connect persons to organisations, and to increase organisational social capital (Usman, 2018). The author claims more research regarding contextual factors (Usman, 2018) which further shapes GAP2. Furthermore, a study in Turkey confirmed that work engagement is more likely if person-organisation-fit is conducted, in particular through job satisfaction (Sevcan, 2018). According to Ding et al. (2017), who performed a quantitative study in China, TFL is positively and directly related to work engagement and negatively and directly related to project turnover. Thite (2000) indicated that the applicability of transformational leadership in IT projects is well supported and this seems to be applicable for several cultures with different focus on the TFL components. This statement is reinforced by later studies, such as by Wang et al. (2005) who emphasised in a study that charismatic leadership supports ERP projects. In a recent study Carreiro and Oliveira (2019) were able to show, that TFL has a positive impact on IT innovations such as mobile cloud computing. In addition, de Sousa Jabbour et al. (2018) suggest TFL for Industry 4.0 projects. Thus, TFL seems to be applicable and beneficial for IT projects. In large companies and organisations, IT projects are staffed as global virtual teams. And due to the Covid-19 pandemic since 2020, the number of virtual teams has been increased in the meantime (Mysirlaki & Paraskeva, 2020). This means people sometimes do not know each other and they meet via phone or via video

conference systems. Cross-cultural differences appear, and a core issue is building trust within the project team. A study explained that transformational leadership is performing better if the leadership relation is physically close (Howell et al., 2005). This would be a weakness because communication and strong leadership is critical for projects with global virtual teams (Daim et al., 2012). In contrast Purvanova and Bono (2009) find that TFL is stronger for computer-based communications than face to face communications in virtual teams. Zander et al. (2012) argues that leadership in global virtual teams needs to be people-oriented, boundary spanning and leveraging diversity. Based on their view TFL (focus on organisational goals) or servant leadership (focus on follower needs) fulfil this requirement and contribute to leadership effectiveness. In a recent study TFL is suggested for leading virtual teams using communication tools in the digital age (Larson & DeChurch, 2020). Leaders of virtual teams need to create visibility towards their team members to compensate for missing physical contacts (Han et al., 2020). There are demands for more research regarding effective leadership at a distance (Han et al., 2020; Howell et al., 2005; Zander et al., 2012).

TFL also seems to be important by other project stakeholders with leadership ambitions. Kissi et al. (2013) for instance, suggest TFL for portfolio managers to achieve project success. However, TFL does not seem to be applicable for project success as such. Keegan and Den Hartog (2004) state that the effectiveness of TFL might be weaker in projects than in line organisations. They found that commitment and motivation were higher in line teams, although TFL by project managers was not less perceived as TFL by line managers. Beyond that, IC had a higher impact on line managers, who were coping with the stress of employees (Keegan & Den Hartog, 2004). Keegan and Den Hartog (2004) claim more research in project contexts is needed, where questions of belonging and unstable social relations play a role. Belonging and social relations are a question of social identity research (Hogg & Rinella, 2018). Where the literature is reviewed in section 2.4.4., Müller and Turner (2007b) argue that these findings occur because Keegan and Den Hartog (2004) do not differentiate between project types. TFL is appropriate in medium and high complex projects, fixed price projects and renewal projects

due to competencies like emotional resilience, communication, motivation and sensitivity (Müller & Turner, 2007b). They state further that visions and strategic perspectives are unimportant for project managers and are seen as part of the sponsor. But, this would mean that IJ plays a minor role for project managers, although IJ is a relevant component of TFL (Bass & Riggio, 2006). Tyssen, Wald and Heidenreich (2014) also provide contrasting findings compared with Keegan and Den Hartog (2004) and they state that TFL helps to induce project success even if the coordination structure is unclear. In complex projects with high uncertainties TFL has a positive influence on project commitment and this contributes to project success (Tyssen, Wald, & Heidenreich, 2014). They claim more research is needed on the relation between leadership, project commitment and project success.

Tyssen, Wald and Spieth (2014) differentiate between the effectiveness of TFL and TAL with different project characteristics. The authors propose TAL as effective if the project duration is short and if clearly defined responsibilities and goal clarity are given. They propose TFL as effective in projects with a long duration, in heterogeneous teams, and where a unique project outcome is expected, hierarchies are missing, and uncertainty or risks are high (Tyssen, Wald, & Spieth, 2014).

Müller and Turner (2010) examined the leadership competency profiles of successful project managers, and the intellectual, managerial and emotional competences were analysed. The need for transactional and transformational styles can be noticed in all types of projects within IT industry. Furthermore, Khan et al. (2015) suggest TFL to achieve project success by leveraging six dimensions. According to a study in Pakistan, it is suggested that these six dimensions are important to achieve project success: model the way, inspire a shared vision, challenge the process, enable others to act, encourage the heart and individualised consideration (Iqbal et al., 2019).

There is currently an ongoing debate in research on mediating factors related to TFL (e.g. Aga et al., 2016; Ding et al., 2017) based on different project characteristics (Tyssen, Wald, & Spieth, 2014). For example, in the context of

a project as a temporary organisation Ding et al. (2017) analysed that project identification mediates transformational leadership.

Leaders are not isolated together with their followers in a leadership dyad.

Both are embedded in an organisation, where they interact with other leaders, peers or followers. For this reason Yukl (1999) recommends not to only focus on the leadership dyad, but to also look at the organisational context.

Different similar leadership behaviours characterise the leadership climate in an organisation (Menges et al., 2011). Based on Menges et al. (2011) a TFL climate in the organisation causes a positive affective climate which leads, together with a trust climate, to a better overall employee productivity, aggregated performance behaviour and organisational citizenship behaviour.

This is supported by Boehm et al. (2015) who explained that the CEO charisma has an impact on the TFL climate as well as organisational identity with an impact on firm performance. Walter and Bruch (2010) examined the role of the organisational structure in the TFL process and they state that centralisation and the size of the company has a negative effect, and that formalisation has a positive impact on TFL climate. Based on these findings it can be concluded that these organisational factors limit or facilitate individual leadership behaviour.

“Governance” is the instrument to manage organisational factors such as leadership climate, processes, and structures that establish big parts of the project environment (Drew et al., 2006) and need to be considered when examining TFL in projects. The following findings, relevant for this study, were identified in literature and can be summarised as follows:

Firstly, the effectiveness of TFL is empirically supported in literature (Deinert et al., 2015) and recognised as an adoptable leadership style by project management practice (Project Management Institute, 2017b). TFL is positively related to project success (Nixon et al., 2012), but might not be universally applicable for all types of projects (Müller & Turner, 2007b). Secondly, TFL effectiveness in line organisations differs from TFL in temporary organisations (Keegan & Den Hartog, 2004) and depends on project characteristics (Tyssen, Wald, & Spieth, 2014). Organisational structure and climate influence TFL processes (Menges et al., 2011; Oc, 2018; Walter & Bruch, 2010). This

confirms the assessment in section 2.4.2 that governance needs to be considered when observing leadership and TFL phenomena in temporary organisations such as project teams. Diversity (culture, gender, age, ...) of project team members also needs to be considered in TFL examinations, as followers react differently to applied TFL (e.g. Anderson et al., 2017; Douglas, 2012; Rudolph et al., 2018; Takahashi et al., 2012). A further key finding is that project identification mediates TFL (Ding et al., 2017).

There are also some gaps in the literature. The understanding of mediating underlying TFL processes and causal models (Van Knippenberg & Sitkin, 2013) as well as the understanding of facilitating and limiting factors applied on TFL (Oc, 2018; Yukl, 1999) are still limited (GAP1). As elaborated in 2.4.1 this is also valid for contexts (Behrendt et al., 2017; Dinh et al., 2014; Gardner et al., 2010; Parry, 1998; Takahashi et al., 2012) such as project teams. In section 2.4.2 it has been demonstrated that there is a gap regarding the understanding of the causal relation governance & governmentality and project success (Müller et al., 2017), and therefore this indicates also a research gap (GAP2) in how governance and governmentality should address TFL effectiveness.

2.4.4. Social Identity Theory of Leadership and Project Management

The social identity theory of leadership, a follower-centric theory (Uhl-Bien et al., 2014) introduced by Hogg (2001), is mainly based on social psychological works on social categorisation (Tajfel, 1972) and social identity (Tajfel & Turner, 1979). Ramarajan (2014) used a loose definition in his study, where identity is “the subjective knowledge, meanings, experiences that are self-defining” and stated, that multiple identities exist.

Epitropaki et al. (2017) reviewed the literature on leadership and followership identity and identified three levels of analysis: intrapersonal level, interpersonal level and group level. The differences are connected to the levels of self that are analysed in literature. Studies on the “intrapersonal level” focus on the personal self as self-concept. Epitropaki et al. (2017, p. 107) summarises the

work of Oyserman and Markus (1998) and state that self-concepts and identities “comprise the preservative of the “self.” Self-concepts are cognitive structures that can include content, attitudes, or evaluative judgments and are used to make sense of the world, focus attention on one's goals, and protect one's sense of basic worth.” Representation of the self can be individual or collective (Oyserman & Markus, 1998). Self-schemata are components of self-concepts (Epitropaki et al., 2017) and “cognitive generalisations of the self, derived from past experience, that organise and guide the processing of the self-related information contained in an individual's social experience” (Markus, 1977, p. 63).

Studies on the “interpersonal concept” focus on the relational self. The self-concept is derived from role relationships with others (Brewer & Gardner, 1996).

“Social Identity” is represented on the “group level” where the collective self is the focal point of analysis (Brewer & Gardner, 1996). Thus, project leaders and project employees have three levels of self-concepts. According to Kark et al. (2003), transformational leadership is positively related to identification with the leader and social identification with a group and might influence interpersonal and collective self-concepts. In accordance with the social identity theory of leadership, leader and follower are in the same group, team or organisation (Epitropaki et al., 2017). Hogg (2001) describes leadership as group processes, generated by social categorisation and prototype-based depersonalisation. Tajfel and Turner (1979) argues that self-image of individuals derives from social categories to which someone perceives himself as belonging. A person can socially categorise in parallel with several groups (Tajfel & Turner, 1986), such as nations, football teams, religious groups, gender groups, age groups, families or even companies and project teams. A social category provides a system for self-reference and defines the place of an individual in society, and social categorisation can be understood as a cognitive tool that segments, classifies or orders the social environment to undertake social actions (Tajfel & Turner, 1979).

Social categorisation is a cognitive process. The world is segmented into “in-groups” or “out-groups” by an individual and other people are mapped to one of these categories, called “prototypes” (Hogg, 2001). Hogg (2001) describes prototypes as context specific and multidimensional fuzzy-sets of cognitive perceived attitudes, feelings, and behaviours that characterise one group and differentiate from another group. People in one group have prototypical similarities. Hogg (2001) calls the overall process “depersonalization” where people are not seen as unique individuals, but as matches to one in- our out-group prototypes. For example, a most prototypical group member is empowered to influence others by social attraction processes derived from depersonalisation, where followers agree to the ideas of the leaders (Hogg, 2001).

Leadership should be effective, and this is also an ongoing research topic (Day et al., 2014). It has been shown by van Knippenberg and Hogg (2003) that prototypical leaders are likely to be more effective as leaders, due to influence, consensual social attraction, attribution and trust. Follower trust is a key theme in the social identity theory of leadership. where the aspects of trustworthiness are benevolence, integrity and ability (van Knippenberg, 2011).

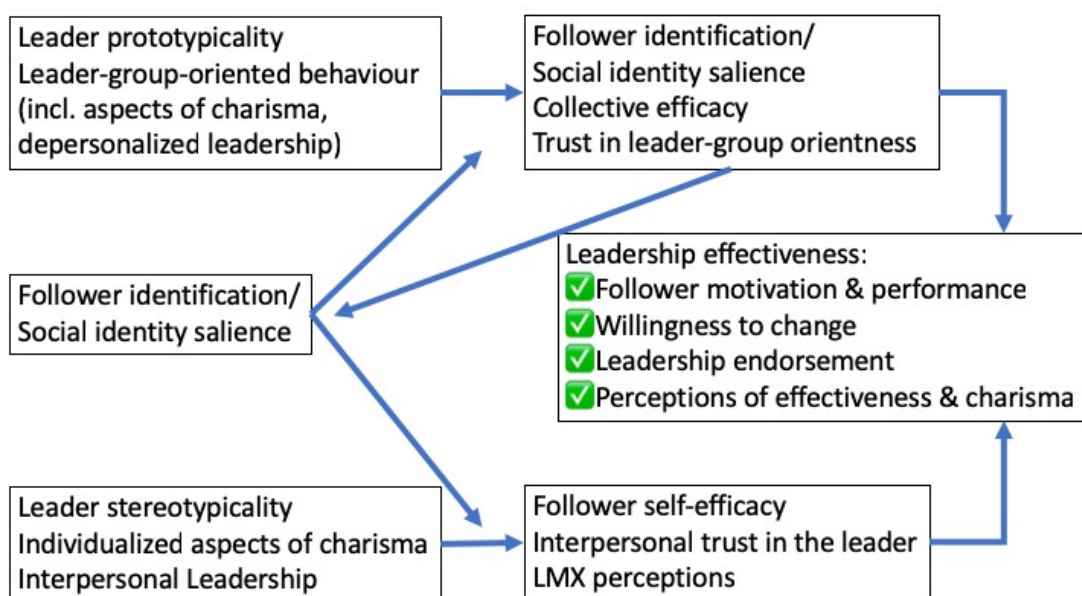


Figure 7: Overview of the Core Propositions of the Social Identity Model of Organisational Leadership (Source: van Knippenberg and Hogg (2003, p. 284))

The relations of social identity and effective leadership are displayed in Figure 7 (van Knippenberg & Hogg, 2003, p. 284). This kind of leadership, which leads to a high identification with an organisation also leads to high motivations of followers to promote success of this organisation (Meleady & Crisp, 2017). An antecedent of success is work engagement of employees and prototypical leadership, which leads to more efforts spent by the employees (Cicero et al., 2008).

Randel et al. (2018) augment social identity by their introduced inclusive leadership style for diverse groups and find that factors such as pro-diversity beliefs, humility and cognitive complexity facilitate group belongingness and value uniqueness of group members. However, according to the perspective of Brown (2017), there are 5 types of combinable identity works in organisations: discursive, dramaturgical, symbolic, socio-cognitive and psychodynamic. For him social identity is caused by the use of the language of the leader in conversations, by behaviour of the leader, by utilising (e.g. physical) object symbols, through cognitive processes such as categorisation, and/or through sense making and through the operation of unconscious ego defences such as inducing fantasy to maintain self-esteem (Brown, 2017). Brown (2017) prefers to examine identity work with qualitative instead of quantitative approaches.

The effectiveness of social identity related leadership in an organisation depends on “(a) how group prototypical the leader is perceived to be; and (b) the extent to which the leader is perceived to act with the group’s best interest in mind (i.e. is group-oriented)” (van Knippenberg & Hogg, 2003, pp. 250-251). Steffens, Haslam, Reicher, et al. (2014) detailed the latter and introduced the “Identity Leadership Inventory (ILI)” to assess a leader’s social identity management by looking at four dimensions. In addition to “identity prototypicality,” they suggest that, due to recent theoretical developments, identity leaders also need “identity advancement,” “identity entrepreneurship” and “identity impresarioship” in order to mobilise followers.

Identity prototypicality represents the unique qualities that define the group. With identity advancement, leaders promote and defend shared interests and contribute to the realisation of group goals. Identity entrepreneurship means to bring people together and to define values, norms and ideals. Finally, identity impresarioship means to develop structures, events, and activities that give weight to the group's existence and allows group members to live out their membership (Steffens, Haslam, Reicher, et al., 2014). Steffens, Haslam, Reicher, et al. (2014) suggest more research in organisational contexts. Hence, it would be interesting to have an understanding of the causal relations by identifying events in a project context that would lead to these four identity leadership traits.

In a recent study, carried out by van Dick et al. (2018), the ILI has been evaluated in 20 countries, including Germany. The authors find that the ILI scales can be used to assess leaders' ability to manage identities in a range of national and cultural contexts. For example, according to Braun et al. (2013), identification with the organisation is one condition for OCB which leads to effectiveness in temporary organisations and to success of IT projects (Yen et al., 2008). In addition, Chrobot-Mason et al. (2016) found that strong identification of individuals with a company or a work team is more likely to lead to leadership relations and to leadership effectiveness. In the same direction lead the results of Zhang et al. (2017) who found out that organisational identity is positively related to work engagement and OCB. They suggest within their study, performed in China, establishing respectful relationships and to induce pride by creating a positive image of the company.

Epitropaki et al. (2017) suggest conducting further qualitative and quantitative research in an organisational context to understand social identity processes because prior research was mainly conducted in experimental settings. The importance of identity work in project teams is emphasised in several articles (e.g. Cowen & Hodgson, 2015; Tse & Chiu, 2014). Projects in companies are often supported by external IT consultants who are part of a particular project team. There is also identity work of great importance (Wallgren & Hanse,

2011). Therefore, the research question in this study is narrowed to the organisational context of project teams.

Relevant findings in this section:

One key finding is that prototypical leaders are more effective as leaders because of the social identity processes they cause (van Knippenberg & Hogg, 2003) and that social identity, which leads to OCB has a positive impact on project team performance and success in IT projects (Braun et al., 2013; Yen et al., 2008). Beyond that, recent theoretical developments brought up further identity leadership traits: identity advancement, identity entrepreneurship and identity impresarioship. This has been conceptualised to an ILD that leads to social identity and mobilises followers (Steffens, Haslam, Reicher, et al., 2014). The ILI has been evaluated in 20 countries, including Germany, with the result that the scale is useful to measure the ability of a leaders to manage group identities with a quantitative approach (van Dick et al., 2018).

A recent literature review regarding identities has shown that there is lack of qualitative and quantitative research concerning group identities (Epitropaki et al., 2017) and there seems to be a gap in the literature and thus, more research is needed to understand social identity processes and identity leadership traits in a project context (Steffens, Haslam, Reicher, et al., 2014). This further shapes GAP 1 and strengthens the idea to conduct qualitative research for in-depth understanding. As trust in the leader seems to be essential (Menges et al., 2011; van Knippenberg, 2011) it would be interesting to understand the causal relation of leadership events, which lead to interpersonal trust and trust in group-orientedness of leaders by followers.

2.4.5. Transformational Leadership and Social Identity in Project Teams

According to van Dick et al. (2018), social identity leadership is positively associated with transformational leadership. In the following section the

mediation of social identity and TFL is further analysed. Findings in literature in terms of the relation of the four TFL components II, IM, IS and IC to social identity are critically discussed.

Bass and Steidlmeier (1999) states that real transformational leaders are authentic, have character and behave ethically, therefore TFL can also be named as authentic transformational leadership and should be distinguished from pseudo-transformational leadership. Authenticity is displayed in each TFL component. It has a positive impact on follower ethics, group ethics and related ethical behaviour (Zhu et al., 2011). This statement has also been differentiated (Price, 2003), but this is not the focus of this work. Important at this point is, authenticity and authentic leadership positively impacts personal and social identity by mediating the relationship between authentic leadership and hope, trust and positive emotions (Avolio, Gardner, et al., 2004).

Idealised Influence (II) is also understood as charisma (Bass & Bass, 2008). Leaders are perceived as role models and followers try to emulate them. Followers identify with the leaders and followers trust, respect and admire them (Bass & Riggio, 2006). However, followers with high social identification perceive leaders with high group affiliation and prototypicality as more charismatic (Seyranian, 2014; Steffens, Haslam, & Reicher, 2014). Seyranian (2014) suggests inclusive language as a communication tactic for leaders to increase prototypicality and to be perceived as a charismatic leader. Prototypicality can also be understood as a component of charisma (van Knippenberg & Hogg, 2003).

Huettermann et al. (2014) identified nine leadership behaviours aggregated to four leadership dimensions leading to team identification in the context of UN peace building operations. Three of leadership behaviours show similarities to TFL. The leadership behaviour "leading by example" corresponds to II and is one of the triggers for social identification. The two others correspond to inspirational motivation. Inspirational Motivation (IM) means to motivate meaningfully and challenging for a future goal as well as to inspire followers by enthusiastic and optimistic communication and behaving with the highest

integrity (Avolio, 2010). Based on Joshi et al. (2009), followers like to maintain their social identity, which motivates them to exert efforts on behalf of the team to achieve a collective goal. Based on Huettermann et al. (2014) the leadership behaviours “clarify team goals” and “addressing and motivating team” correspond to IM and are the second and third trigger for social identity (the first trigger was mentioned under II). IM might address project-related motivation to achieve success in IT projects (Bass & Riggio, 2006; Pankratz & Basten, 2018).

Both TFL components, idealised influence and inspirational motivation, constitute charisma (Bass & Bass, 2008). The two TFL components have the commonality that they intend to achieve a collective vision with efforts of the entire group by creating a bond between leaders and followers (group-focused leadership). They trigger self-categorisation with the group (Wu et al., 2010) and moderate group performance (Lorinkova, 2019). Intellectual Stimulation is the ability to stimulate followers to be creative and innovative in developing and implementing their ideas (Bass & Riggio, 2006). A study at a University in Iran emphasised that IS had the strongest effect on organisational identity on faculty members (Ali Pourmahmoud et al., 2019). According to Lai et al. (2018) IS moderates collective promotion.

Applying the TFL component Individualised Consideration (IC) means that leaders treat followers as individuals and they serve as coach or mentor by accepting individual differences. They listen carefully, and interactions are personalised. A relationship between leaders and followers is unstable at the beginning and IC leads to a strengthened relationship and a commitment to the project, and increases social identity with the project team (Ding et al., 2017; Tyssen, Wald, & Heidenreich, 2014). However, the relation of social identity and IS or IC needs further research (Steffens, Haslam, & Reicher, 2014).

IS and IC triggers self-efficacy and identification with the leader (Individual-focused leadership) (Wu et al., 2010) and according to Wu et al. (2010), the divergence of self-efficacy among group members can lead to negative group

effectiveness. By drawing on LMX, the leadership-member exchange theory of leadership, this claim is supported from the synthesis of other studies. LMX aims to focus on the interpersonal level of the leadership dyad and based on van Knippenberg and Hogg (2003), LMX is more effective, if the leadership relation is personalised (van Knippenberg & Hogg, 2003). IC can be perceived as complementary to LMX (Henderson et al., 2009). As this TFL component is personalised this would be in contradiction to the depersonalisation requirement for being a prototypical leader (van Knippenberg & Hogg, 2003). The review by Epitropaki et al. (2017) supports this, as they mention only findings, where LMX quality is related to identity on the interpersonal and intrapersonal level, but not the group level. In contrast Luo et al. (2016) for instance performed a study in the hospitality industry and argued, that TFL leads to collective self-concepts by LMX. Harris et al. (2014) stated that LMX leads to group engagement and organisational citizenship behaviour. This is also supported by Nohe and Michaelis (2016) who claim that trust in the leaders on an individual level is positively related to team OCB. Carnevale et al. (2019) state in a recent study that humble leaders moderated by LMX behaviour cause identity with the leader that finally leads to a helping behaviour fostered by a sense of shared identity. Hogg et al. (2005) dissolve the contradictory discourse by arguing that LMX relations should be depersonalised to induce social identity and increase leadership effectiveness. This is also dependent on the follower. For example, individualists, people who value personal goals higher than collective goals, might see it differently compared to collectivists (Hogg et al., 2005). Drawing from this and also derived from findings by Phaneuf et al. (2016), it can be concluded that the context of a project can facilitate depersonalisation of leadership relations by individual consideration in terms of support of project employees and collective goal oriented collaboration.

These are hints that social identity is also affected by leadership at an individual level. Therefore it might be interesting to understand, how individual-focused leadership such as IS and IC can prevent negative group-effectiveness or better how it can trigger also social identity processes in project teams. One important commonality in TFL and SI theories is trust as a

mediator for leadership. Building trust in terms of leaders-group orientedness is a necessary element to achieve prototypicality and social identity salience (van Knippenberg, 2011; van Knippenberg & Hogg, 2003), as well as being perceived as a transformational leadership (Bass & Riggio, 2006; Zhu et al., 2013).

Most of the studies address the relation of TFL and SI in a general context or out of the project context in the IT industry. Buil et al. (2019) examined TFL and organisational identity in the hospitality industry in Spain for instance and they find that organisational identity mediates TFL and this positively impacts work engagement, which in turn positively impacts job performance. Research of this relation in the project context is scant (Ding et al., 2017). In a recent study, lack of knowledge regarding group-focused aspects of transformational leadership and the link to social identity has been confirmed, as there are only a few studies available in literature. Further research in this area is recommended (Lorinkova, 2019). Ding et al. (2017) performed his study on the infrastructure sector in China based on surveys. Tyssen, Wald and Heidenreich (2014) performed their study in an interindustrial context in Germany, Switzerland and Austria by analysing answers of a provided online questionnaire.

The commonalities of the studies are that they do not address the understanding of underlying processes, either causalities in a specific IT project context, or in regard to the complexity of leadership processes. The identified recent studies that address TFL and aspects of SI in a project or temporary organisation context use hypothesis testing as a method and do not analyse the underlying processes of each TFL component (e.g. Ding et al., 2017; Tyssen, Wald, & Heidenreich, 2014). Derived from this, more research is needed regarding causalities in the project context, by conducting a qualitative approach.

2.4.6. Findings and Gaps

The following relevant findings summarise section 2.4:

Firstly, there are clear hints in literature that social identity mediates TFL with positive effects on work engagement (Buil et al., 2018; Ding et al., 2017). The examination of literature per TFL component underpins that II, IM are triggers for social identity, as their application is group-focused, by providing collective visions, goals and motivation. Synthesising this with the findings of Pankratz and Basten (2018), this mediation would impact project-based motivation as a central success factor for IT projects. IS and IC are triggers for identity with the leader and based on Wu et al. (2010) it can negatively affect group effectiveness (Wu et al., 2010). However, the impacts of IC and IS on social identity are still not clear, based on the reviewed studies, as they might depend on the application of these TFL components. As identification with the leader can cause OCB and helping behaviour (Carnevale et al., 2019; Nohe & Michaelis, 2016), it is a clear hint, that identity with the leader mediates SI. The identified studies do not address underlying leadership processes and causalities in specific project contexts. Further qualitative research, by particularly analysing the TFL components II, IM, IS and IC in specific project contexts might shed light on causal relations to social identity in project teams and close some gaps. In particular it is interesting to understand how prototypicality will be achieved based on team perceptions. Based on the findings in section 2.4, GAP1 is further shaped.

GAP1 (addressed by RQ1): Lack of understanding of leadership processes regarding the relation of transformational leadership and social identity and how it impacts work engagement as a contributor for project success.

A second, and important finding is that governance and governmentality might have an impact on leadership behaviour and social identity processes and facilitate or limit leadership effectiveness (Biesenthal & Wilden, 2014; Davis et al., 1997; Joslin & Müller, 2015, 2016; Keegan & Den Hartog, 2004; Müller, 2017; Müller, 2019; Müller et al., 2017; Müller et al., 2016; Oc, 2018; Turner, 2020a, 2020b). This applies to vertical leaders such as the project manager and horizontal leaders such as project team members (Pilkienė et al., 2018). Therefore, governance approaches as well as governmentality have to be considered, when leadership processes are examined. Based on the findings in section 2.4, GAP2 is further shaped.

GAP2 (addressed by RQ2): lack of knowledge on how governance and governmentality can impact leadership behaviour and contribute to project success.

The findings of this section lead to a model that is displayed in Figure 8.

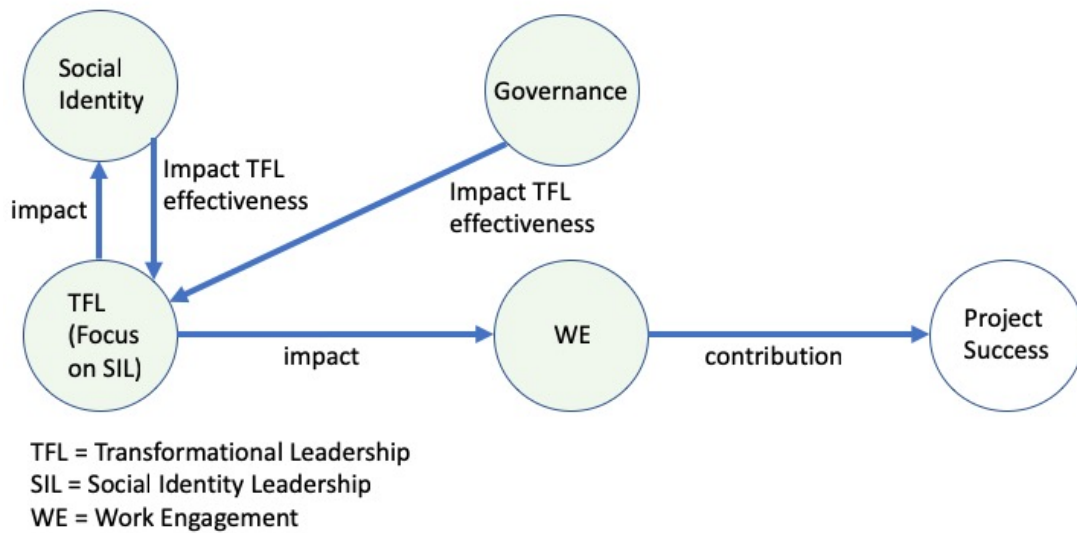


Figure 8: The Relation of TFL and SI and its Impacts

2.5. Analysis

The literature review in the area of leadership theories, particularly TFL and SIL, with focus on project management practice led to some important findings. Firstly, it's important to realise the relevance of this research. Many studies emphasise the increasing relevance of projects and project management for the economy, business and companies (Schoper & Ingason, 2019; Schoper et al., 2018; Thiry & Deguire, 2007; Turner et al., 2013). This finding is also valid for the IT industry in Germany (Bitkom e.V., 2020; Hays AG, 2015; Schoper et al., 2017). The ongoing problem is that a considerable number of projects in the IT Industry fail which leads to significant losses for companies (Alami, 2016; Blas & Oré, 2020; Carvalho et al., 2015; Papke-Shields & Boyer-Wright, 2017; Sirisomboonsuk et al., 2018), although a lot of

research has been performed to find answers on how to achieve project success. Several schools of thought in project management have evolved over the years, where researchers analyse success and failures in projects (Turner et al., 2013). Multiple project characteristics and contexts lead to a very complex issue. Continuing project failures in practice with negative impacts on companies' business, combined with suggestions for further research in this area (Turner et al., 2013) to obtain more understanding of success and its components such as success factors and success criteria, underpin the relevance of this study. Furthermore, as projectification is significant in Germany's IT industry (Schoper et al., 2018), it confirms, that the IT industry in Germany is an appropriate case for further examinations.

A second important finding in 2.3 is that research regarding project success factors has many directions (Turner et al., 2013) and, in particular, that leadership is a critical success factor for projects including IT projects (Blas & Oré, 2020; Nixon et al., 2012). Haselberger (2016) argues that leadership is of particular importance for success in IT projects and distinguishes IT projects from others, due to specific challenges in such as task complexity, rapid technological change, and changes in requirements, collaboration of diverse expert groups or global team member distribution. This is an interaction of the success school of thought and the behaviour school of thought in project management, and supports the findings of Turner et al. (2013) that interactions between the school of thoughts occur in project management research. Recent studies show that there is still a lack of knowledge in this area. According to Haselberger (2016), there is a gap in the understanding of leadership processes in IT project teams. In his study, Haselberger (2016) sees "motivation" as one among a number of other risk categories concerning interpersonal relationships. Connected with the findings of Pankratz and Basten (2018), that project-related motivation is a central success factor for IT projects, this indicates that we need to understand the leadership processes that induce project-related motivation in IT projects.

A third important finding in this LR are the particular roles of TFL and SI in terms of work engagement and its effects on project performance. In section

2.4 it has been elaborated that TFL is an already well researched and also an ongoing, frequently researched leadership style, which is assumed to be very effective with positive impacts on performance (Aga et al., 2016; Bass, 1985; Bass & Bass, 2008; Deinert et al., 2015). Beyond that, TFL is positively perceived related to project success in many academic studies (Aga et al., 2016; Nixon et al., 2012). Furthermore, TFL is also recognised as an adoptable leadership style by practice in project teams (Project Management Institute, 2017b). However, there is also some question in literature of whether TFL is appropriate for projects. Keegan and Den Hartog (2004) state that TFL might be weaker in projects than in line organisations. They found higher commitments and motivations of employees in line organisations, and claim leadership that addresses unstable social relations and that build a sense of belonging. According to Müller and Turner (2007b) these findings occurred because the authors did not differentiate by project type, and they state, that TFL is appropriate in medium and high complex projects because of the importance of communication, motivation and emotional resilience. It is obvious that the likelihood of project failure increases by increasing complexity. Thus, we might consider whether the relevance of TFL to be applied in projects remains important.

According to Tims et al. (2011) and Bakker (2017), TFL impacts positively on work engagement and job performance. Tims et al. (2011) argue that based on their findings in the Netherlands, daily TFL fosters work engagement. It is likely, that the conclusion is valid for Germany as well, because of the closed geographical location of the two countries in Europe. Bakker (2017) suggests that as well as strategic human resource management approaches, daily transformational leadership interventions positively influence work engagement of employees. He proposes setting performance and development goals, providing ongoing feedback and recognition, managing employee development, conducting appraisals and creating a climate of trust and empowerment as important HRM activities. The HR activities mentioned in this study show patterns of TFL, TAL and corporate governance as well because goal setting is included in MBE, providing feedback in IC. Employee

development or rules for recognitions are part of corporate governance if policies are concerned.

One more derivation out of the literature is the connection between IM and project-related motivation. IM is one of the four TFL components (Bass & Riggio, 2006), as described in section 2.4.3, hence it seems to be obvious that TFL is well conditioned to address the central success factor project-related motivation, mentioned by Pankratz and Basten (2018), in order to contribute to project success by increased work engagement (WE). WE can be understood as a motivational state, which is characterised by physical, emotional and cognitive engagement (Kahn, 1990) and, according to Saks (2017), WE leads to a better performance of an organisation. Derived from this, the conclusion is that WE is an antecedent of project success and leadership is an antecedent of WE. As TFL is a very effective leadership style for projects, it can be assumed that likelihood of WE increases by applying TFL.

Some gaps in the literature could also be identified. Firstly, based on Chen and Lin (2018), there is currently less attention on work engagement in project teams in the literature and this should be changed by addressing it in this study. According to Pankratz and Basten (2018), the understanding of project-related motivation is still insufficient. This is supported by findings of Caniëls et al. (2019) who state that we need to understand how employees effectively collaborate in project teams. Thus, there might be a gap regarding the understanding of processes, as most of the studies follow quantitative approaches (e.g. Acuña et al., 2015; Gardner et al., 2020; Gelbard & Carmeli, 2009; Lindsjörn et al., 2016). Qualitative approaches are more sufficient to find answers about meaning, or to explain phenomena (Parry et al., 2014).

These findings confirm that further research in TFL might contribute to knowledge in leadership and in project management. In particular, there is a need to have a greater understanding of TFL effectiveness in project teams to improve work engagement. It has been shown in section 2.4.3 that it is a good advice to consider diversity of employees and cultures (Anderson et al., 2017; Douglas, 2012; Parr et al., 2013; Rudolph et al., 2018; Takahashi et al., 2012)

and working from distance (Daim et al., 2012; Han et al., 2020; Howell et al., 2005; Purvanova & Bono, 2009; Zander et al., 2012) in the context of examinations. The applicability of TFL seems to differ in terms of geography (Takahashi et al., 2012), gender (Douglas, 2012), age (Anderson et al., 2017; Rudolph et al., 2018) and health (Parr et al., 2013) and therefore this aspect needs to be considered, as projects are often setup by diverse employees and influenced by different cultures. Another important aspect is working from distance. In many projects, communication and collaboration are computer-mediated due to geographical dispersion of the team members. According to (Howell et al., 2005), distance negatively impacts the effectiveness of TFL. In contrast, Purvanova and Bono (2009) find that TFL has stronger effects in teams that use only computer-mediated communication than in teams that use face-to-face communication.

Although these are contrasting findings and no preferred conclusion can be derived, it has to be ascertained that TFL face-to-face and TFL at a distance are different and need to be considered during TFL examinations in projects. Current research focuses on commonalities between leadership theories (Dinh et al., 2014) and researchers try to find mediators by combinations of leadership theories. Dinh et al. (2014) claim more research should be carried out on how leadership theories relate or operate simultaneously, their commonalities, as well as the impact on processes, influenced by context. Recent studies examine social identity approaches combined with TFL and show that SI mediates TFL effectiveness to achieve work engagement and team performance (e.g. Buil et al., 2018; Ng, 2017; Wang & Howell, 2012). A further key finding (explained in section 2.4.5) in a project context is that project identification mediates TFL (Ding et al., 2017) and impacts work engagement. Ding et al. (2017) performed the study in the banking industry in China, but it is a hint that it might be also valid for the IT industry in Germany. Furthermore, the claims of Keegan and Den Hartog (2004), such as “building a sense of belonging” and “to address unstable social relations,” might be addressed by social identity approaches (Hogg & Rinella, 2018). Therefore, the identified issue regarding applied TFL in projects, articulated by Keegan and Den Hartog (2004), seems to be covered by SI.

Section 2.4.1 discussed whether there is insufficient understanding regarding causal relations and leadership processes in a specific context (Behrendt et al., 2017; Dinh et al., 2014; Gardner et al., 2010; Parry, 1998; Takahashi et al., 2012). Overall, this indicates a research gap regarding the understanding of TFL and SI processes in a project context, and how this impacts work engagement as well as implying the need for further examinations.

One key finding in 2.4.4 is that prototypical leaders are more effective as leaders, because of the social identity processes they cause (van Knippenberg & Hogg, 2003). In section 2.4.5, each TFL component has been analysed and it shows that each TFL component can trigger SI processes. Hence, the goal of a project-based organisation might be to have prototypical project managers that connect employees to the project by increased work engagement. However, there seems to be a lack of understanding of social identity processes and prototypicality in a project context (Steffens, Haslam, Reicher, et al., 2014). On the one hand we need to know how prototypicality of project leaders can be achieved, and on the other hand, as TFL can lead to project identification (Ding et al., 2017) we need to know how this occurs with followers in project teams. One key element seems to be building trust in the leader's group-orientedness, as trust is an important commonality of TFL and SI theories (Bass & Riggio, 2006; van Knippenberg, 2011; van Knippenberg & Hogg, 2003; Zhu et al., 2013).

Quantitative studies confirm that SI mediates TFL (e.g. Buil et al., 2018; Ding et al., 2017; Ng, 2017; Wang & Howell, 2012) and based on Ding et al. (2017) project identification mediates the relationship of TFL and work engagement. Leadership identity traits, as stated by Steffens, Haslam, Reicher, et al. (2014), and explained in section 2.4.4, paired with TFL behaviour could lead to causality directions. To obtain an understanding of the relation of TFL and SI, it makes sense to analyse the processes at a component level as suggested by several authors (e. g. Carreiro & Oliveira, 2019; Steffens, Haslam, Reicher, et al., 2014). This means that in this case, the relations of the four TFL components (II, IM, IS, IC) to each of the four SI components (identity

prototypicality, identity advancement, identity entrepreneurship and identity impresarioship) need further examinations.

The analysis of SI per TFL component in section 2.4.5 demonstrates that each TFL component has the potential to trigger SI processes. II can be understood as the charisma of a leader. II provides a collective sense (Bass & Riggio, 2006) and arouses strong follower emotions (Aga et al., 2016). Therefore, it is understandable, that followers with high social identification perceive leaders with high group affiliation and prototypicality as more charismatic (Seyranian, 2014; Steffens, Haslam, Reicher, et al., 2014). Furthermore, van Knippenberg and Hogg (2003) understand prototypicality as a component of charisma. Merging TFL and SI, “leading by example” (Huettermann et al., 2014) and “inclusive language” (Seyranian, 2014) might trigger social identity processes. Agreeableness and cognitive ability are identified as strong predictors for II (Banks et al., 2017).

By applying IM, leaders motivate and inspire their followers, where team spirit and a shared vision should be an objective (Bass & Riggio, 2006). From an SI perspective, Huettermann et al. (2014) suggest “clarifying team goals” and “addressing and motivating team” as desired behaviours to trigger SI. II and IM are group-focussed and they induce self-categorisation with the group (Wu et al., 2010), where in this case the group is equal to the project team.

IS and IC are individual-focussed TFL components and they trigger identity with the leader (Epitropaki et al., 2017). There are contrasting statements in literature regarding individual-focussed components in relation to social identity. According to Wu et al. (2010), IS and IC trigger identification with the leader and self-efficacy, where self-efficacy can negatively impact group-effectiveness. The two components are personalised, where depersonalisation is a SI requirement. In contrast, there are studies in the LMX area, where LMX is suggested to induce social identity, group engagement or OCB (Carnevale et al., 2019; Harris et al., 2014; Luo et al., 2016). LMX has similarities to IC and IS (Henderson et al., 2009; Li et al., 2014). This seems to be understandable, as it is imaginable, that possible individual communications

between leader and follower can influence the follower's group behaviour. Derived from this, it is dependent on how IC and IS are applied to trigger SI processes. Thus, the understanding of how the application of TFL leads to a SI perception, which drives followers to increased work engagement, and is analysed at TFL and SI component levels, contributes to knowledge and practice in terms of more successful projects. This leadership process to be analysed is displayed in Figure 9.

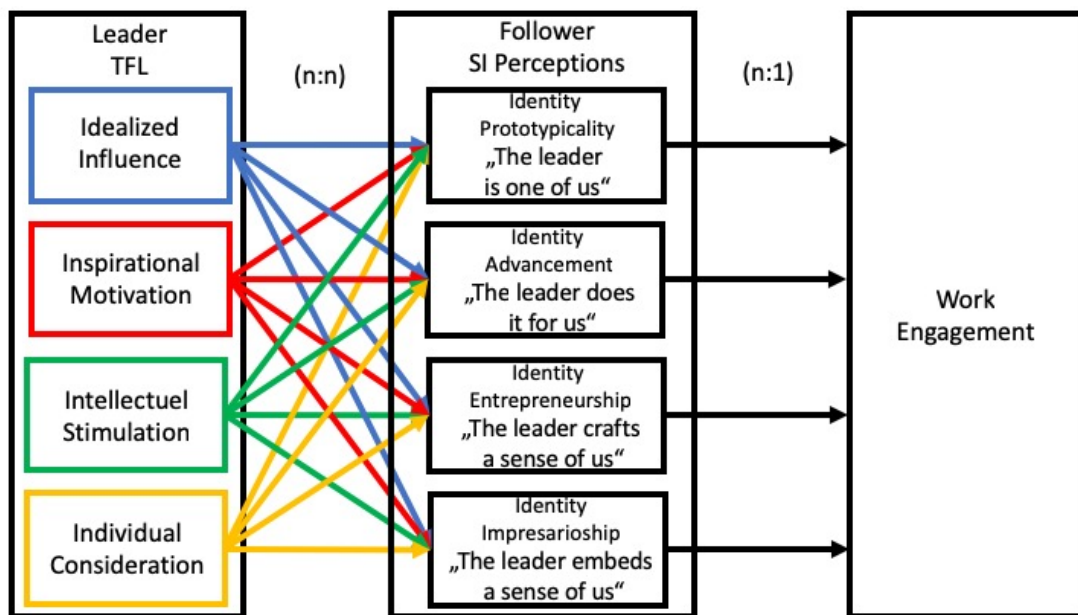


Figure 9: TFL and SI Perceptions by Followers as Triggers for Increased Work Engagement

The desired effect of these leadership processes should lead to high work engagement in projects. In section 2.3.2 it has been elaborated, that work engagement might be reflected in traits as proposed by Rich (2010). The derivations of the job engagement items, developed by Rich (2010) for this specific leadership context are displayed in Table 13.

| Physical engagement | Emotional engagement | Cognitive engagement |
|-------------------------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------------|
| The follower works with intensity on her/his project. | The follower is enthusiastic on her/his project | At work, the followers mind is focused on her/his project. |
| The follower exerts his full effort to her/his project. | The follower feels energetic at her/his project. | At work, the follower pays a lot of attention to her/his project. |
| The follower devotes a lot of energy to her/his project. | The follower is interested in her/his project. | At work, I focus a great deal of attention on my job |
| The follower tries his hardest to perform well on her/his project. | The follower is proud of her/his project. | At work, the follower is absorbed by her/his project. |
| The follower strives as hard as she/he can to complete his/her project. | The follower feels positive about her/his project. | At work, the follower concentrates on her/his project. |
| The follower exerts a lot of energy on her/his project | The follower is excited about her/his project. | At work, the follower devotes a lot of attention to her/his project. |

Table 13: Desired Work Engagement Traits in Projects Caused by SI Mediated TFL (Source: adapted from Rich (2010))

In summary, we need to learn how the mediation occurs by understanding causal relations within underlying leadership processes. As these quantitative studies cannot make statements regarding the understanding of causal relations, in particular their underlying processes, in specific project contexts (Hu & Cao, 2015), we need obtain an understanding by analysing the dependencies at least at component level. To find an understanding regarding the TFL effects on SI perceptions, a matrix of TFL components and identity perceptions based on the ILI are proposed in Table 14.

| Component | Sample | Perception | | | |
|----------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| | | Identity Prototypicality | Identity Advancement | Identity Entrepreneurship | Identity Impresarioship |
| TFL | | This leader is a model member of the project team | This leaders acts as a champion for the group | This leader creates a sense of cohesion within the project team | This leader creates structures that are useful for group members |
| Idealized Influence (attributed) | My leader instills pride in me for being associated with him or her | How does "attributed idealized influence" lead to perceptions of "identity prototypicality"? | How does "attributed idealized influence" lead to perceptions of "identity advancement"? | How does "attributed idealized influence" lead to perceptions of "identity entrepreneurship"? | How does "attributed idealized influence" lead to perceptions of "identity impresarioship"? |
| Idealized Influence (behaviours) | My leader specifies the importance of having a strong sense of purpose | How does "behavioural idealized influence" lead to perceptions of "identity prototypicality"? | How does "behavioural idealized influence" lead to perceptions of "identity advancement"? | How does "behavioural idealized influence" lead to perceptions of "identity entrepreneurship"? | How does "behavioural idealized influence" lead to perceptions of "identity impresarioship"? |
| Inspirational Motivation | My leaders articulates a compelling vision of the future | How does "inspirational motivation" lead to pereptions of "identity prototypicality"? | How does "inspirational motivation" lead to perceptions of "identity advancement"? | How does "inspirational motivation" lead to perceptions of "identity entrepreneurship"? | How does "inspirational motivation" lead to perceptions of "identity impresarioship"? |
| Intellectual Stimulation | My leader seeks differing perspectives when solving problems | How does "intellectual stimulation" lead to perceptions of "identity prototypicality"? | How does "intellectual stimulation" lead to perceptions of "identity advancement"? | How does "intellectual stimulation" lead to perceptions of "identity entrepreneurship"? | How does "inspirational motivation" lead to perceptions of "identity impresarioship"? |
| Individual Consideration | My leader spends time teaching and coaching | How does "individual consideration" lead to perceptions of "identity prototypicality"? | How does "individual consideration" lead to perceptions of "identity advancement"? | How does "individual consideration" lead to perceptions of "identity entrepreneurship"? | How does "individual consideration" lead to perceptions of "identity impresarioship"? |

Table 14: Analysis of TFL Effects on SI perceptions

The research gap in literature and the occurring questions regarding the relation of each component as displayed in Table 14 induce the following encompassing research question:

| |
|------------------------------------------------------------------------------------|
| RQ1: How can TFL cause SI in project teams that lead to increased work engagement? |
|------------------------------------------------------------------------------------|

Derived from this question, the first objective (RO1) of this study is to obtain an understanding regarding causal relations of SI processes and TFL that impact perceived work engagement in project teams in the IT Industry in Germany. The evolution of RO1 is summarised in Table 15.

| Section | Synthesis of Key Findings | Section | GAP | Research Question | Research Objective | Contribution to Theory and to Practice |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.2 | Project-based business and PM relevant for economy and companies in Germany (Martens et al., 2018; Schoper et al., 2019; Schoper et al., 2018; Thiry et al., 2007; Turner, 2013; Cavalieri et al., 2019; Asbjørn et al., 2021; Ekstedt, 2019; Neugebauer et al., 2016; 2019; Umer et al., 2020; Vlad et al., 2020; Bitkom e.V., 2020; Hays AG, 2015) | 2.2 | Lack of theoretical foundation, weak theories (Sydow et al., 2018; Padalkar et al., 2016) | RQ1: How can TFL cause SI in project teams that lead to increased work engagement? | RO 1: to identify causal relations of SI and TFL that lead to work engagement in project teams. | Contribution to leadership theories by identifying causal relations of SI and TFL and finding mediating commonalities in leadership theories TFL and SIL. |
| 2.2 | PM is established practice (Ahlemann et al., 2009; Padalkar et al., 2016; PMI, 2017) | 2.2 | Understanding of project-based motivation or work engagement on project context is still insufficient (Pankratz, 2018; Caniels, 2019) | | | Contribution to project management practice by contribution to project success in terms of desired leadership in companies conducting project-based business. |
| 2.2 | PM research draws from other fields of management research (Turner et al., 2013; Sydow et al., 2018) that build the underlying theories for the theoretical framework. LS theories are incorporated in PM research (Kaulio, 2008) | 2.2 | Inductive and qualitative approaches needed to advance project leadership research (Kaulio, 2008; Gardner, 2020, 2010; Stentz, 2012; Takahashi, 2012; Pankratz, 2018) | | | |
| 2.2 | Project identity and project-related motivation leads to project team performance that is important for project success. (Smith, 1988; Pankratz; 2018, Braun, 2012) | 2.2 | Causal models and relations to mediating processes missing (van Knippenberg, 2013) | | | |
| 2.2 | Leadership is critical success factor in IT projects (Carmen et al, 2020; Goparaju, 2012; Taxen et al., 2016; Nixon et al., 2012; Verburg, 2013; Thite, 2000) | 2.3 | Commonalities of LS styles (Dinh, 2014; Buil et al., 2019) | | | |
| 2.2 2.3 2.4 | TFL is effective leadership style (Dinh, 2014; Deinert, 2015), the effectiveness of TFL for project success empirically supported (Aga, 2016) and Prototypical leaders are more effective as leaders (van Knippenberg, 2003) | 2.3 | Facilitating and limiting factors on TFL (Yukl, 1999; OC, 2018) | | | |
| 2.3 | SI mediates TFL (Tse, 2014; Ng, 2017; Wang, 2012; Wu, 2010; Etipokati, 2017; Steffens, 2014) | 2.3 | Understanding of SI Leadership and organizational context (Steffens, 2014) | | | |
| 2.2 | subjective views are needed as well in leadership research (Stentz, 2012) | 2.2 | Understanding of underlying leadership processes in project context (Tyssen, 2014; Ding, 2017; Carmen, 2020; OC, 2018) | | | |

Table 15: Evolvement of Research Objective 1

In 2.4.2 it has been elaborated, that leadership occurs in a project environment and project governance significantly characterises the environment for leadership in project teams as it provides roles, processes and structures (Project Management Institute, 2016). The literature distinguishes between governance and governmentality (Müller, 2019). Governmentality is understood as the mentality and attitude of how to govern organisations (Müller et al., 2017). There are also other influences towards the project environment, but governance and governmentality are actively manageable by companies. In the literature, only a few studies regarding governance as an oversight function for leadership processes could be found. In recent studies the governance of “horizontal” leadership is in focus (e.g. Pilkienė et al., 2018), but research in governance of “vertical” leadership seems to be scant. As authority and empowerment are controlled by governance (Biesenthal & Wilden, 2014), it might influence leadership processes. If governance is in charge of processes, it can be concluded that leadership processes are part of it.

It is worth taking a closer look at governance issues when examining leadership processes, because governance is seen as an important enabler for project success in academic and practice literature (Biesenthal & Wilden, 2014; Joslin & Müller, 2016; Project Management Institute, 2016). Depending on the applied governance or governmentality paradigm it might cause identity processes in project teams (Biesenthal & Wilden, 2014; Müller et al., 2016). For example, projects have different characteristics and project leadership occurs in different environments. Several stakeholders influence the project team, including the project manager, and for this study it is important to understand that governance and governmentality impact behaviour of people within the project team by setting policies, processes and roles and responsibilities.

Based on Müller et al. (2017), governance sets the structural context and human interactions; the ways of how governing an organisation are directly connected with project success. Müller et al. (2017) suggest further qualitative

studies to examine causal relations and moderating effects between governance/governmentality and project success.

The conclusion, drawn out of literature, is that project governance impacts leadership by setting the leadership environment in projects and that therefore it needs to be considered when examining leadership in project contexts and that the causal relations of governance or governmentality and leadership needs to be further examined. According to Albrecht et al. (2018), contextual factors, such as senior leadership support, clarity of organisational visions and goals, organisational climate and HR practices impact work engagement of employees. These contextual factors are also influenced by governance. This also means that this research is an intersection of the success school of thought, the behaviour school of thought, and the governance school of thought in project management as proposed by Turner et al. (2013).

As elaborated in sections 2.4.3, 2.4.4 and 2.4.5, the effectiveness of TFL is empirically supported in literature (Deinert et al., 2015) and recognised as an adoptable leadership style by practice (Project Management Institute, 2017b). TFL is positively related to project success (Nixon et al., 2012), and project identification has been identified as a mediator for TFL (Ding et al., 2017). However, it might not be universally applicable for all types of projects (Müller & Turner, 2007b).

Following the statements of Müller and Turner (2007b) and Keegan and Den Hartog (2004), the project environment and characteristics impact the effectiveness of TFL in temporary organisations. This finding confirms the assessment, that governance and governmentality need to be considered when examining TFL in temporary organisations such as project teams. In support of this are the statements of Biesenthal and Wilden (2014) and Müller et al. (2016), who state that governance and governmentality impact identity processes. This leads to the second research question:

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|-------------------------------------------------------------------------------------------------------|
| RQ2: How can governance and governmentality facilitate SI related TFL effectiveness in project teams? |
|-------------------------------------------------------------------------------------------------------|

Derived from this, the second research objective (RO2) of this study is to develop an understanding of the facilitating and limiting factors for SI mediated TFL effectiveness in project teams, caused by governance and governmentality. By taking into account the findings regarding RO1, the involvement of RO2 is shown in Table 16.

| Section | Synthesis of Key Findings | Section | GAP | Research Question | Research Objective | Contribution to Theory and to Practice |
|---------|--------------------------------------------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.3 | Governance is enabler for successful projects (Biesenthal, 2014; Joslin, 2016; PMI, 2016, Mashiloane et al., 2018) | 2.2 | Causal models and relations to mediating processes missing (van Knippenberg, 2013) | RQ2: How can governance and governmentality facilitate SI related TFL effectiveness in project teams? | RO 2: to analyse the influence of governance and governmentality on the SI mediated TFL effectiveness in project teams. | Contribution to governance & leadership theories by identifying the influence of governance and governmentality on transformational leadership processes |
| 2.3 | Each project needs its own governance structure (Zwikael et al., 2015) | 2.2 | Claim for context influence (Dinh, 2014) | | | Contribution to project management practice by recommendations for governance and governmentality in companies conducting project-based business. |
| 2.3 | Governance influences leadership behaviour (Joslin, 2015; Joslin, 2016; Müller, 2017) | 2.3 | Lack of causal relations between governance/governmentality, project team performance and project success (Müller et al., 2019, Müller 2017) | | | |
| 2.3 | Stewardship paradigm might cause social identity processes (Biesenthal, 2014) | 2.3 | Facilitating and limiting influence on TFL (OC, 2018; Phaneuf et al., 2016; Yukl, 1999) | | | |
| 2.3 | Interplay of governance and governmentality is important to impact project performance (Müller et al., 2019) | | | | | |
| 2.3 | Liberal governmentality approaches are often used in customer delivery projects (Müller et al., 2017) | | | | | |
| 2.3 | Neo-liberal governmentality approach addresses collective interests (Müller, 2016) of the project team. | | | | | |
| 2.3 | TFL effectiveness depends on project characteristics & situations (Tyssen, 2014) | | | | | |

Table 16: Evolution of Research Objective 2

Leadership plays an important role in IT projects, but success factors and success criteria depend on the context and need to be determined on a case-by-case basis (Blas & Oré, 2020; Nixon et al., 2012). The decision on determining desired leadership behaviour as well as monitoring and improving leadership performance is a task of governance (Mashiloane & Jokonya, 2018; Project Management Institute, 2016). Nixon et al. (2012) claims more research in leadership performance management and its effects on project outcomes is needed, and state that lack of leadership performance monitoring could lead to project failure. They propose developing key performance questions (KPQ) for each individual project before defining key performing indicators (KPI). Furthermore, there is little literature on how to evaluate project managers (Peters & Moreno, 2017). According to (Varajão et al., 2018) there is lack of knowledge regarding success management processes in IT projects, where leadership might be part of such processes. As Van Knippenberg and Sitkin (2013) find, that causal models of mediating TFL processes are missing and Nixon et al. (2012) state, that there is a lack of leadership performance monitoring. Thus, there seems to be a need for a causal model and a leadership framework that helps to understand causal relations in theory, and also describes desired leadership behaviour in projects. Beyond that, this would be the condition for leadership performance monitoring by governing bodies as the need has been clearly addressed (Nixon et al., 2012; Peters & Moreno, 2017). The result could be useful as a tool for practice as well as for further academic research in different contexts to advance leadership and governance theories. This finally leads to the third research question:

| |
|----------------------------------------------------------------------------------------------------------|
| RQ3: How can leadership performance be measured and improved for project-based business in IT companies? |
|----------------------------------------------------------------------------------------------------------|

Derived from this, the third research objective (RO3) of this study is to find possibilities to measure leadership effectiveness and to find possibilities for continuous leadership improvements in companies for their project-based business. Considering the findings of RO1 and RO2, the evolvement of RO3 is shown in Table 17.

| Section | Synthesis of Key Findings | Section | GAP | Research Question | Research Objective | Contribution to Theory and to Practice |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.2 | Success factors and success criteria depend on the context in IT projects (Carmen et al., 2020; Ika, 2009; K. Khan et al., 2013; Varajão et al., 2018) | 2.2. | Leadership performance research connected with project outcome is scant (Nixon et al., 2012; Peters, 2017; Todorovic et al., 2015; Varajao et al., 2018) | RQ3: How can leadership performance be measured and improved for project-based business in IT companies? | RO3: to find possibilities to measure leadership effectiveness and to find possibilities for continuous leadership improvements in companies for their project-based business. | Contribution to project management theory by providing insights regarding leadership KPIs and project KPIs. |
| 2.2. | Lack of performance monitoring can lead to project failure (Nixon et al., 2012; Peters et al., 2017) | 2.3 | Lack of causal models and relations to mediating processes (van Knippenberg, 2013; Varajao 2018) | | | Contribution to project management practice by providing insights for measuring and improving leadership behaviour to be integrated into the governance framework in companies. |
| 2.3 | Performance monitoring is a topic of governance (OECD, 2015; Project Management Institute 2016; Mashiloane, 2018) | | | | | |

Table 17: Evolvement of Research Objective 3

RQ1, RQ2 and RQ3 take care of the research gaps in causal relations regarding underlying leadership processes and the findings shall enhance knowledge in theory and practice. The majority of leadership research has been performed by quantitative methods and there is a gap in understanding causal relations and underlying leadership processes in specific contexts (Behrendt et al., 2017; Dinh et al., 2014; Gardner et al., 2020; Gardner et al., 2010; Parry, 1998; Takahashi et al., 2012).

Thus, it makes sense to analyse which existing theories are touched in this research. The leading domain in this study is project management. Searching for foundational theories, it transpires that project management is an established practice with well-developed standards (Ahlemann et al., 2009; Project Management Institute, 2017b), but it is still a young academic discipline with weak underpinning theories (Padalkar & Gopinath, 2016). Some articles mention the term “project management theories,” but other authors state, that foundational theories in project management research are lacking (Sydow & Braun, 2018), so established theories need to support research in project management. Based on Turner et al. (2013), project management has its roots in operations research, and research in project management draws on and contributes to other fields of management research. A key

characteristic of projects is the temporary organisation (e.g. Sydow & Braun, 2018) and the theoretical foundations of project management can be found in organisation theories (e.g. Lundin & Söderholm, 1995; Turner & Müller, 2003). The temporary organisation is equivalent to the project team. Leadership processes are the objects of analysis in this study. Kaulio (2008) argues that leadership theories are incorporated in project management research. Project management research draws also from governance theories (Biesenthal & Wilden, 2014). Following this view, project management is treated as practice, and developed theories build the theoretical frame in this study. In particular, leadership theories and governance theories are included as well as organisation theories. Turner et al. (2013) summarise and explain nine schools of thought of project management research and suggest connecting success, behaviour and governance for instance. This is applied in this study. The fourth research objective (RO4) is to conceptualise the findings of this study into a leadership framework for project-based business as a contribution to leadership and governance theories as well as project management practice.

| Section | Synthesis of Key Findings | Section | GAP | Research Question | Research Objective | Contribution to Theory and to Practice |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1 | PM research draws from other fields of management research (Turner, 2013) that build the underlying theories for the theoretical framework. LS theories are incorporated in PM research (Kaulio, 2008) | 2.1 | Lack of theoretical foundation, weak theories (Sydow, 2018; Padalkar, 2016) | RQ1, RQ2, RQ3 | RO4: to conceptualise the findings of this study and create a leadership framework for project-based business as a contribution to leadership and governance theories as well as project management practice | Contribution to leadership and governance theories to enhance project management research by a comprehensive leadership framework |
| | | 2.3 | Lack of causal models and relations to mediating processes (van Knippenberg, 2013; Varajao 2018) | | | Contribution to project management practice by providing a leadership framework to improve companies in terms of leadership and governance for education purposes or to be integrated into the governance framework of companies doing project-based business |

Table 18: Evolvement of Research Objective 4

2.6. Findings in Literature and Conceptual Framework

This section concludes this chapter. A conceptual framework is derived from

the findings from the literature and the four research objectives of this study are provided.

2.6.1. Findings in the Literature

The literature has been carefully reviewed and several relevant findings and research gaps have been identified. The intention of this review was to give an overview on the current state of research, to indicate some research gaps, and to emphasise the relevance for further research.

Transformational leadership is one of the most researched areas in leadership theories and the general effectiveness in organisations is empirically supported (Deinert et al., 2015; Dinh et al., 2014; Gardner et al., 2020). An important impact of applied TFL is an increased work engagement of employees in organisations that increases the likelihood of high performance. It is also empirically supported that effectiveness of leadership in project teams is one important contributor to achieve success in projects (Nixon et al., 2012). This is an important aspect, because project-based business is relevant for the economy and business companies, but project-based business is still affected by failures that lead to economic losses (Blas & Oré, 2020; e.g. Carvalho et al., 2015; Papke-Shields & Boyer-Wright, 2017). The findings in literature indicate, that the applicability of TFL in project teams is dependent on several factors, such as project characteristics and environments.

Based on the literature review “social identity” mediates transformational leadership in project teams (e.g. Ding et al., 2017). This relation can be facilitated or limited by different project characteristics or organisational factors. Examples of different project characteristics, such as time, size or team culture were identified. Organisational factors can have their origin from the permanent organisation and are a matter of governance and are actively manageable by companies.

Research gaps regarding the understanding of underlying leadership processes in the mediating relation of TFL and SI could be identified. The understanding of the role of corporate and project governance in regard to TFL

and SI is still scant as well. Thus, the explanation of underlying leadership processes and causal relations need further research. Some researchers claim more inductive approaches to address these phenomena and derived from the literature review qualitative studies can shed light on the gap to enhance theory and project management practice. Traits of WE, TFL and SI have been identified in literature to obtain findings during interviews.

2.6.2. Conceptual Framework

This thesis has its theoretical foundation primarily in leadership theories and governance theories and secondarily in organisation theories that build the frame of the conceptual framework that is illustrated in Figure 10. These theories are applied to project management practice.

Project teams are temporary organisations, which have their scientific roots in organisation theories (e.g. Lundin & Söderholm, 1995; Turner & Müller, 2003). Governance provides the environment for project teams, such as rules and policies, organisational structures and relationships (Biesenthal & Wilden, 2014; Joslin & Müller, 2016; Project Management Institute, 2016).

Leadership theories can be grouped in different sub theories (Dinh et al., 2014, p. 40). The mediation of research established transformational leadership theories and emerging social identity theories of leadership is a focal area of this thesis. Applied to project teams, there seems to be underlying leadership processes that lead to an increase of leadership effectiveness that should result in improved work engagement and contribute to project success.

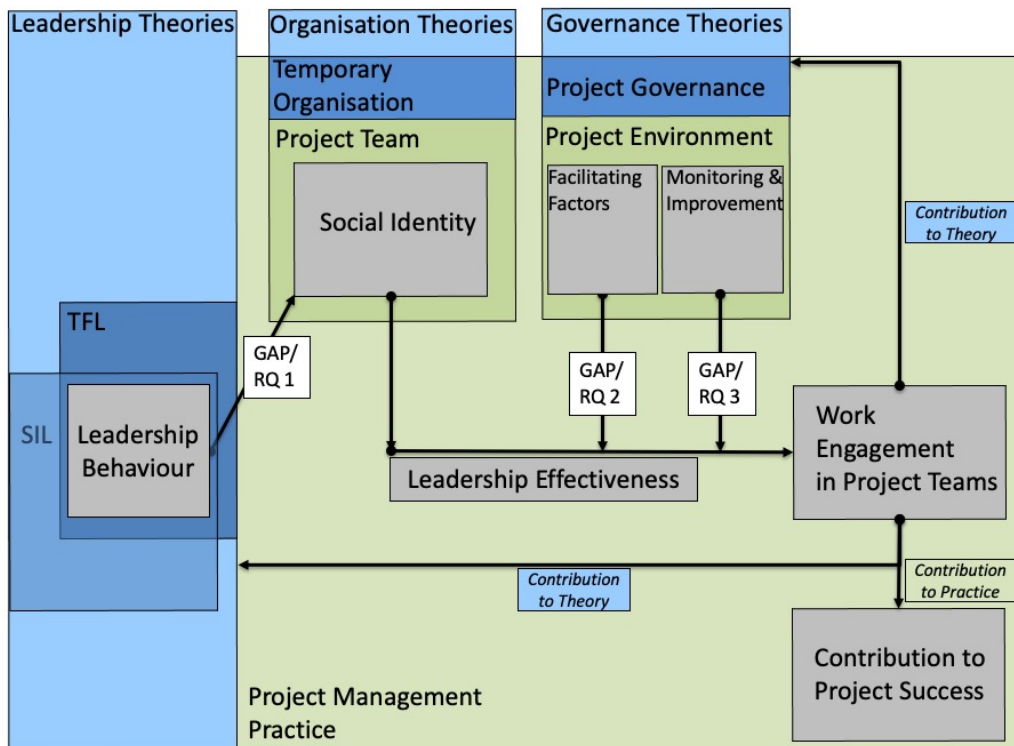


Figure 10: Conceptual Framework

Based on the literature review and further analysis in section 2.5, research gaps can be indicated regarding causalities and underlying processes in the relation of TFL and SI in project teams in terms of its mediation (RQ1) and facilitating factors (RQ2). Beyond that there is a gap regarding monitoring and improving leadership (RQ3).

The following research objectives are derived from findings from the literature and research questions (RQ1, RQ2 and RQ3):

1. In the previous sections it has been elaborated, that commonalities of leadership theories such as TFL and SIL are in current research interest and that the understanding of causal relations in specific contexts is still scant. Contexts like (temporary) project organisations are relevant to be researched. Project management theories are still weak, therefore other theories such as leadership theories need to be incorporated in project management practice. The understanding of causalities that make TFL leaders to be perceived as prototypical

leaders should become more effective and the understanding of the SI as mediator for TFL mediator are still sparsely researched. Therefore, specific context based causal relations need to be identified. The derived first research objective is

RO 1: to identify causal relations of SI and TFL that lead to work engagement in project teams.

2. The literature review identified environmental factors such as project characteristics, situations, other leadership influences, project governance or events that facilitate or limit leadership effectiveness. Governance is the part that is actively manageable by companies. Therefore, the second research objective is

RO 2: to analyse the influence of governance and governmentality on the SI mediated TFL effectiveness in project teams.

3. Leadership performance needs to be measured and continuously improved within companies that perform project-based business. Thus, the third research objective is

RO 3: to find possibilities to measure leadership effectiveness and to find possibilities for continuous leadership improvements in companies for their project-based business.

4. The findings need to be conceptualised into a leadership framework, because it helps to establish the causal model for mediating underlying leadership processes for project management practice and to advance theory. The fourth research objective is:

RO 4: to conceptualise the findings of this study and create a leadership framework for project-based business as a contribution to leadership and governance theories as well as project management practice.

2.7. Conclusion

In this chapter an overview has been given on the research carried out so far in the areas of project management research and leadership research with particular focus on TFL and SIL and governance research and the impacts of governance & governmentality on leadership. Furthermore, the relevance of this research has been deduced from literature and research gaps with particular focus on project teams in Germany's IT industry have been identified.

In the following chapter 3, methodology and methods are described to address these research objectives and research questions in an appropriate way in order to close the identified research gaps.

3. Methodology and Methods

3.1. Introduction

This chapter addresses the identified research gaps. The assumptions and beliefs of a researcher are important to discuss because of the impact on the selected research philosophy and research design (Saunders et al., 2016). These assumptions point out how the research questions and findings are understood (Crotty, 1998). Firstly, the research paradigm is explained. Derived from this, the research design is developed and explained, and the qualitative research approach justified. Finally, the data are collected and analysed. Furthermore, ethical considerations are presented.

3.2. Research Paradigm

A research paradigm can be understood as a basic set of beliefs or worldviews of a researcher that guide actions (Guba & Lincoln, 1994, p. 107). The differentiation of research paradigms is not homogenous in literature. Guba and Lincoln (1994, p. 107) propose positivism, post positivism, and critical theory as well as other paradigms such as feminism and constructivism (or interpretivism) as competing paradigms. Denzin and Lincoln (2018, p. 110) accept these with these distinctions and have just added the participatory paradigm. Due to the ongoing debates on philosophical stances which have been ongoing for thousands of years, it can be concluded that there cannot be any claim for ultimately truthfulness (Guba & Lincoln, 1994, p. 107). Furthermore, Kirk et al. (1986) suggest that this debate should be left to philosophers and theologians. According to Guba and Lincoln (1994, p. 107) the basic beliefs must be simply accepted on faith, but well argued. In this sense, this study is in favour of the constructivism paradigm, but as the term constructivism is not consistently used in literature (Pernecky, 2012), the research paradigm needs to be further shaped, by arguing the encompassing ontology, epistemology, axiology and methodology (Denzin & Lincoln, 2011). The paradigm is worked out and sharpened in the following sections by

elaborating the ontological, epistemological and axiological assumptions of this study. This is important as it implies methodological consequences for this research.

3.2.1. Ontological Position

Ontology assumptions are concerned about the nature of the world or reality (Saunders et al., 2016). Guba and Lincoln (1994, p. 111) explain the differences as follows:

Positivists (or naïve realists) think for instance, that there is one reality that can be comprehended. Critical realists also believe in one reality, but for them reality is obscure and can only be comprehended imperfectly. Critical theorists (historical realists) believe in a reality that can be comprehended and consists of historical situated structures. Constructivism differentiates most from the three others from an ontological point of view. Guba and Lincoln (1994, p. 111) suggest that constructivists have a relativist ontology. This means that they do not believe in one ultimate reality. Constructivists believe in “multiple, comprehensible and sometimes conflicting social realities that are the products of human intellects, but that may change as their constructors become more informed or sophisticated” (Guba & Lincoln, 1994, p. 111). In an ontological relativist worldview (Denzin & Lincoln, 2018; Easterby-Smith et al., 2012), there are no meta-criteria to judge if something is right or wrong. Truth depends on variable contexts of assessments and therefore there are several perspectives on what is true (Baghrmian, 2015). One good example is all about morality to justify this worldview. For moral relativists there is no one truth, no ultimate right or wrong regarding morality. Truth depends on the moral framework that individuals or social groups accept (Harman, 2015). Thus, it is legitimate to view truth as subjective and to discard positivist or realist positions, as these require objectivism.

Hammersley (1992) is sceptical and questions if relativism research is useful and whether this approach contributes to knowledge. If all findings in different situations have legitimacy, then there is no reason to prefer one to another (Andrews, 2012; Hammersley, 1992). However, the aim of this study is to

enhance existing leadership theories and governance theories, where phenomena are salient and recurring in different cases. The realist approach would be at the other end of the spectrum, as the assumption is that reality is objective (Andrews, 2012). This view is also not the preferred view for this study, as constructed interpretations of findings are the aim of this study so that an understanding about phenomena can be found, which would be ignored in a realist worldview as findings are only accepted if they are considered as truth in an independent reality (Andrews, 2012). Hammersley (1992) introduces “subtle realism” as a philosophical position between realism and relativism, where phenomena are independent, and knowledge is constructed by the investigator. Truth in this study is socially constructed by language and interactions of the different project stakeholders. This means that the study is not searching for one reality in the research, but for causalities and insights in different contexts.

The study follows Burr (2015) who argues that by the acceptance of the possibility of many different realities constructed within different historical and cultural contexts, there is no way of asserting that one of these is the right one. Thus, there might be no one truth applicable for all situations and, therefore, the construction of a truth within the project stakeholder community is sought. However, the premise of this study is that truth is socially constructed and can be either objective or subjective. Thus, objective reality and subjective reality are both acceptable (Andrews, 2012) in this study. Social constructionists do not claim an ontological perspective, but they need an epistemological perspective (Andrews, 2012) as explained in section 3.2.2.

3.2.2. Epistemological Position

Epistemology assumptions are concerned about “the grounds of knowledge - about how one might begin to understand the world and communicate this as knowledge to fellow human beings – about how one might to understand the world and communicate this as knowledge to fellow beings” (Burrell & Morgan, 2017, p. 1). Epistemological assumptions can be determined at extreme

positions, where the view is that knowledge is objective and can be acquired, or that knowledge is something subjective or spiritual that can be experienced or is created by personal insights (Burrell & Morgan, 2017).

In this study social constructionism is the assumed epistemological research paradigm. Social constructionism has been introduced to social science by Berger and Luckmann (1966) with strong influences by the work of the philosopher Alfred Schuetz. The epistemological assumption as a social constructionist is that knowledge is historically and culturally specific. Language constitutes rather than reflects reality. This is seen as a pre-condition for thought and a form of social action. There is a strong need for contextualisation, and focus of examinations should be on interaction, processes, and social practices (Gergen cited in Young & Collin, 2004). Based on the epistemological assumption, knowledge is created by the interactions of the researcher and the participant. This can include a conversation, for instance. Findings are a construct of the inquiry process itself (Guba cited in Doucet et al., 2010). Social constructionists have a subjective view of knowledge construction (Burr, 2015).

“Constructivism” and “constructionism” are sometimes used interchangeably in literature (Young & Collin, 2004) and may be used with adjectives such as cognitive, social or strong, for instance (Pernecky, 2012). The main differentiation is how reality is constructed by individual minds or by a collective generation and how the transmitting of meaning takes place (Crotty, 1998). Teater (2014, p. 76) explains that a “constructivist reality is constructed by one’s biology, processes and cognitive structures. Human mind is essential to reality construction.” By contrast, for a social constructionist “reality is constructed through the use of language in interactions with society. Social processes are essential to reality construction” (Teater, 2014, p. 76). For social constructivists, “reality is equally constructed by both, individual and social factors” (Teater, 2014, p. 76). According to Burr (2015) some social constructionists believe that nothing exists that does not exist in discourse. This is of course an extreme position and not relevant for this study as the existence of a material world will not be questioned in this research, but it underlines the importance of language, as this study aims to get an

understanding of human interactions by examining the discourse within leadership relations. According to Crotty (1998), meaning is not discovered or interpreted in social constructionism, but meaning is constructed.

The rationale for this approach is that projects have a unique and temporary nature and leadership research has called for consideration of context factors (Tyssen, Wald, & Spieth, 2014). To find answers to the research questions, it is important to get an understanding of the complex issue in a project environment. Human interactions in a specific context and language are of great interest in social constructionism research (Burr, 2015). Therefore, leadership processes are analysed in particular project contexts, and knowledge is socially constructed by considering perceptions of project stakeholders. It's a subjective view on phenomena to close the research gaps in a specific context that should lead to new insights for theory and practice.

3.2.3. Axiological Position

Axiology is concerned about values and ethics within the research process (Saunders et al., 2016). Because of the described epistemological approach in section 3.2.2 where personal interactions are required to find new insights, the reflection of values is of importance because values of the researcher could influence or bias the research process. For example, my background includes being educated by my parents in valuing human life, having respect for people and being always straight and honest. This might be the reason, why this research is concerned with human behaviour and interactions between people. In different life situations my own opinion regarding truth was strengthened in that truth is not universal, but in the eye of the beholder and depends on the context. The social constructionist epistemology is therefore in line with my value picture.

The risk in this research is, that outcomes may be influenced by personal experience and beliefs and that there may be some bias as a result. This cannot be completely avoided, but it is considered in the research design by some quality measures. Ethical considerations are described in section 3.3.7

3.2.4. Methodological Consequences

The ontological, epistemological and axiological assumptions imply some methodological consequences. Due to the applied constructivism research paradigm, the suggestion of Doucet et al. (2010) to consider hermeneutic approaches is followed. This means that when searching for answers to the research questions, it is intended to find a deep understanding of meaning by deep reflections that are embedded in the experiences of the project team members (Doucet et al., 2010).

Because of the epistemological social constructionism assumption, the undertaken literature review with a “narrative” approach is justified in section 2.2.

Quantitative and qualitative research strategies are the two main data collection techniques. In addition, mixed-method techniques are applied by researchers, where these two techniques are combined (e. g. Saunders et al., 2016).

Quantitative research is generally connected with a positivist worldview, by applying surveys, questionnaires, structured interviews and structured observations (e. g. Saunders et al., 2016). This research approach is based on the view that social reality exists as an objective reality (Bryman & Bell, 2015). This deductive approach is usually applied, if hard data such as numbers are concerned, and variables or hypotheses should be tested (Neuman, 2013, p. 167). As this was not intended in this study, a quantitative approach was not selected.

Mixed methods are generally associated with (critical) realist or pragmatist worldviews, for instance (e. g. Saunders et al., 2016). There is an ongoing debate between academics regarding the applicability of methods related to paradigms. The “paradigm wars” in the 1980s, where quantitative and qualitative approaches were fundamentally different, were a catalyst for the

development of mixed methods research as a third research method. (Tashakkori et al., 2003). In the meantime, some researchers state that referring to paradigms is old fashioned, and as a consequence a mixed method approach can be applied regardless of the paradigm, and researchers should not permanently reflect the epistemological position (Kelle, 2017). In this study Denzin and Lincoln (2018) are followed, who disagree that paradigms are outmoded. They are sceptical regarding mixed methods research and state that “criticism of mixed methods research include the incompatibility thesis, a pervasive postpositivist bias, the tendency to subordinate qualitative to quantitative approaches, cost, superficial methodological bilingualism, and an entanglement in superficial philosophical debate (e.g. forms of pragmatism)” (Denzin & Lincoln, 2018, p. 314). In this study, it is important to gain an understanding of what people perceived in leadership situations in a specific context by interactions and discourse to socially construct knowledge. Therefore, a mixed methods approach is not used as quantitative data does not fit the epistemological view and is not compatible with the research questions.

Qualitative research supports multiple interpretive practices such as constructivism (Denzin & Lincoln, 2018). Holstein (2018, p. 405) argues that “constructionism is now thoroughly embedded in the analytical landscape of qualitative inquiry.” Qualitative inquiry is the natural approach for constructionism research. This view is also supported by Stake and SAGE. (1995) and by Merriam (1998) for case study research within a constructivist paradigm. This approach is applicable, if soft data such as words or sentences are included and detailed examinations of cases in a specific context need to be performed (Neuman, 2013, p. 167). A comparison of quantitative and qualitative research suggested by Neuman (2013, p. 176), is displayed in Table 19.

| Quantitative Research | Qualitative Research |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Researchers test hypothesis that are stated at the beginning. | Researchers capture and discover meaning once they become immersed in the data. |
| Concepts are in the form of distinct variables. | Concepts are in the form of themes, motifs, generalizations, and taxonomies. |
| Measures are systematically created before data collection and are standardized. | Measures are created in an ad hoc manner and are often specific to the individual setting or researcher. |
| Data are in the form of numbers from precise measurement. | Data are in the form of words and images from documents, observations and transcripts. |
| Theory is largely causal and is deductive. | Theory can be causal or noncausal and is often inductive. |
| Procedures are standard, and replication is frequent. | Research procedures are particular, and replication is rare. |
| Analysis proceeds by using statistics, tables, or charts and discussing how what they show relates to hypothesis. | Analysis proceeds by extracting themes or generalizations from evidence and organizing data to present a coherent, consistent picture. |

Table 19: Quantitative Research Versus Qualitative Research (Source: Neuman (2013, p. 176))

Qualitative research is very helpful and necessary, if the understanding of meaning of local phenomena and the interactions that create that meaning are concerned (Bartunek & Seo, 2002). It seems to be important as well, if good communication for being an effective leader or the integrity of the leaders in terms of trust by followers need to be examined (Bryman, 2004). According to Parry et al. (2014), who summarised their findings in literature, advantages of qualitative research on leadership are:

- flexibility to follow unexpected ideas during research and explore processes effectively,
- sensitivity to contextual factors.
- ability to study symbolic dimensions and social meaning,
- increased opportunities...
 - to develop empirically supported ideas and theories
 - for in-depth and longitudinal explorations of leadership phenomena
 - for more relevance and interest for practitioners (Parry et al., 2014, p. 133)

This study follows Parry et al. (2014), who suggest qualitative research, to obtain a better understanding and insights regarding complex leadership

research phenomena, because it is the intention to explore leadership processes where SI mediates TFL. To obtain an understanding of the leadership phenomena, transactional knowledge is valued (Denzin & Lincoln, 2018). Social constructionists value knowledge construction by language and discourse (Burr, 2015). As a consequence, conducting interviews would be a suitable qualitative approach (Bryman & Bell, 2015). Knowledge would be socially constructed by both, interviewer and interviewee.

The research questions developed in Chapter 2 aim to analyse causal relationships in the areas of leadership and governance in order to gain a better understanding of them. Causality is often rejected in qualitative research because it is associated with a positivist paradigm and seen as incompatible with an interpretivist understanding of human thought and action (Maxwell, 2012). Maxwell (2012) argues that it is perfectly possible to explore causality with a realist ontology and a constructivist epistemology so that we better understand how things work and how one variable influences the other by focussing on processes, rather by simply stating that relations exist. For him, the prerequisite is that we perceive causation as real (Maxwell, 2012). As described in section 3.2.1, there are no ontological claims in this study. The causal relationships refer to the given context where they were identified by interviewees. So, causal relations are “real” in the particular context. Causality in the sense of this study should not be understood deterministically. This would indeed be problematic, since in the field of leadership and governance a single cause does not trigger a single effect in terms of behaviour change. Boddy (2019) therefore proposes “probabilistic” causality. The idea is that an event tends to contribute to an effect. This idea was taken up in this study as it analysed how behaviours and measures (causes), supported by mediators, contribute to triggering effects. In line with the views of Goertz and Mahoney (2012), it is not a matter of measuring which causes lead to which effect, but of better understanding the concept of the relationship between cause and effect.

Inductive research approaches are usually associated with qualitative research, if theory shall be generated, whereas deductive research approaches are associated with quantitative research, if theories are to be

tested. To overcome these two approaches, a pragmatist applies abduction as a research approach, where inductive and deductive approaches are combined (Bryman & Bell, 2015). The purpose of this research is, to find new insights to enhance theory by finding answers to the research questions in a constructivist paradigm. Therefore, the research approach in this study to identify occurring phenomena within data is inductive. However, the research approach is also deductive as identified phenomena were checked if pre-existing theories are involved (Azungah, 2018).

The understanding of leadership processes is in focus and according to Denzin and Lincoln (2018) traditional positivist criteria such as internal and external validity are replaced by trustworthiness and authenticity. Validity and reliability are not appropriate for constructionism research, because this would require objectivism, and this is an impossibility for social constructionists. But it is important to perform qualitative research with as much rigour as possible (Burr, 2015). As a consequence, triangulation, a systematic approach particularly for qualitative research by having at least two perspectives on leadership phenomena in project teams (Denzin & Lincoln, 2018), has been applied as demonstrated in section 3.3.3. As mixed methods and quantitative approaches have been rejected due to the given reasons, a qualitative triangulation has been applied. This has been done by interviewing different stakeholder groups.

The position of the researcher to the participants in this research is displayed in Figure 11. The researcher conducts a purposive conversation to gather data and to gather insights of leadership relations. As the researcher is the primary research instrument the fact that human beings make mistakes, are influenced by personal biases and may miss opportunities needs to be taken into account (Merriam, 1998).

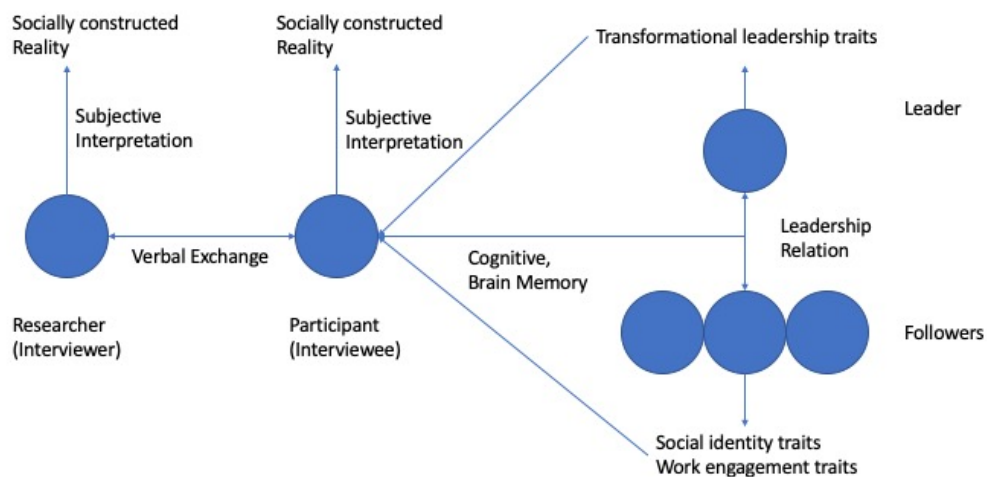


Figure 11: Position of the Researcher and Creation of Knowledge

3.3. Research Design

The research design provides the framework for collection and analysis of data (Bryman & Bell, 2015). This research has been designed as a case study with a social constructionist epistemology where a thematic analysis has been conducted. Research takes place within the IT industry (solution/project business) in Germany as it is relevant for practice because IT project business is increasing in Germany (Schoper et al., 2017). Furthermore, leadership issues in German project teams are evident in the daily experiences of the researcher who works within this sector. The research approach is qualitative, and the outcomes of semi-structured interviews provide the data to be analysed, and this answers the research questions. The justification for this approach is provided in this section.

3.3.1. Case Study

In this study, a single-case design has been applied and the case encompasses 20 units of analysis. A case study was selected because case studies should provide in-depth understanding of situations, processes and contexts (Merriam, 1998), which is desired in this research.

There is no consensus regarding case designs and approaches in literature (Yazan, 2015). Yin (2014, p. 16) defines a case study as “an empirical inquiry that investigates a contemporary phenomenon (the ‘case’) in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident”. According to Yin (2014), case studies are appropriate, if research deals with “how” and “why” questions, and the focus is on temporary events over which the researcher has no control. He further states that a rationale for single-case designs is, having “a critical, unusual, common, revelatory, or longitudinal case” (Yin, 2014, p. 51). The requirements are fulfilled, as the case is a common case and “how” or “why” research questions are addressed. However, the methodologist Robert Yin shows positivist viewpoints on case study research although this is not explicitly articulated by himself (Crotty, 1998; Yazan, 2015). For this study and according to Yazan (2015), approaches of the methodologists Sharan Merriam and Robert Stake need also to be considered when doing case study research, as the epistemology viewpoints are aligned with a constructivist perspective (Harrison et al., 2017; Yazan, 2015). Both refer to Smith (1978) where a case is a bounded phenomenon, (Merriam, 1998; Stake & SAGE., 1995), such as a group or community (Merriam, 1998).

The case in this study is the community of the IT industry in Germany where leadership processes within several project teams are units of analysis. The IT industry can be viewed as a unique or single case and it can be seen as similar to the ideas of Stake and SAGE. (1995, p. xi) who find that case study research is "the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances." Furthermore, Merriam (1998, p. xiii) defines qualitative case study research as “an intensive, holistic description and analysis of a bounded phenomenon such as a program, an institution, a person, a process, or a social unit.”

Examination takes place in several different IT service companies in Germany, where project management is an applied practice within the organisation. A singular project team with its leadership processes represents one unit of

analysis. Selection of the units of analysis is based on identified leadership behaviours that induce social identity and work engagement traits.

Stake and Merriam prefer qualitative inquiry by interviews, observations or analysing documents (Merriam, 1998; Stake & SAGE., 1995). As suggested by Merriam (1998), a five step approach has been undertaken to perform the case study: a literature review has been conducted (step 1) and the theoretical framework has been constructed (step 2); the research problem has been identified (step 3); and the research questions have been crafted and sharpened (step 4) as outlined in chapters 1 and 2. Beyond this, sampling has been selected as described in this chapter (step 5). The study relies on Stake and SAGE. (1995) who suggest the simultaneity of data collection and analysis. Furthermore, the case design evolves during the research (Stake & SAGE., 1995). The final case design is displayed in Figure 12. Merriam (1998) recommends that researchers need to acquire the necessary skills to conduct effective interviews, and this has been done by attending online webinars and reading resources from literature.

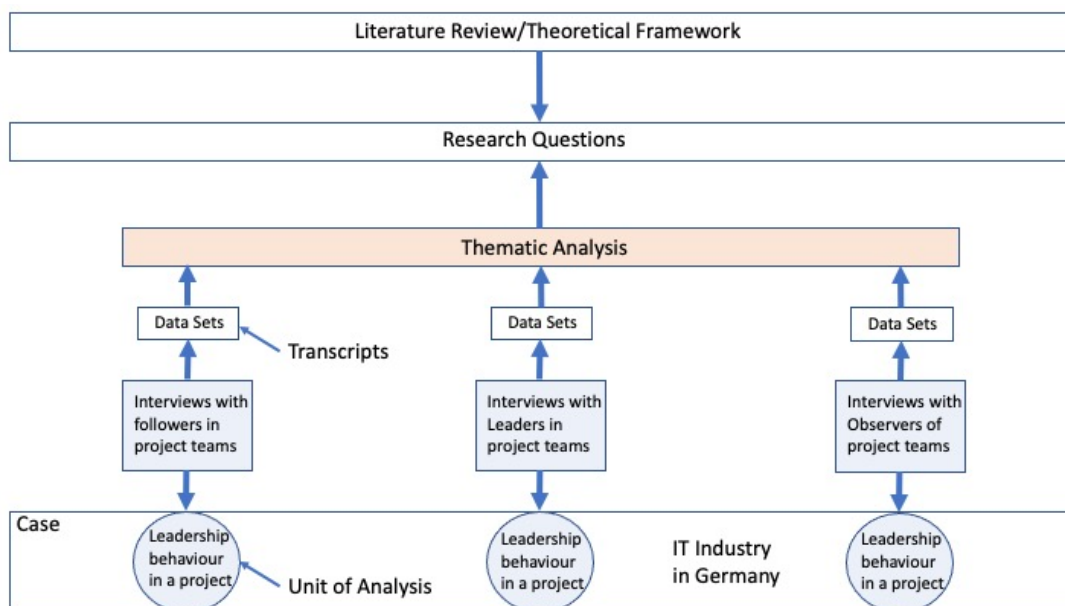


Figure 12: Case Design

3.3.2. Qualitative Research

Qualitative research supports the understanding of leadership (Parry et al.,

2014) and is appropriate for social constructionists (Burr, 2015). It is the chosen research approach for this study as justified in section 3.2.4. Qualitative researchers usually collect data by interviews, focus groups, ethnography or participant observation, document or text analysis, or language-based approaches, such as discourse and conversation analysis (Bryman & Bell, 2015). Interviewing was selected because this method provides deep understanding through conversation with voluntary and willing participants. Furthermore, this is aligned with the epistemological assumption, as social constructionists value knowledge construction by language and discourse (Burr, 2015). The aim of interviewing people is to produce knowledge by conversation. It is intended to learn “how people experience the world, how they think, act, feel, and develop as individuals and in groups” (Leavy, 2014). In this sense, knowledge is socially constructed by language and discourse of both, interviewer and interviewees. Conger (1998) suggests employing observations combined with interviews as a powerful methodology and he furthermore criticises the lack of observation in leadership research. Participant observation was rejected for several reasons. Access to a particular project with the desired characteristics in the given timeline was not feasible, because it is not clear beforehand, if leadership relations show the desired phenomena. Furthermore, the presence of the researcher in a particular project at a particular location could not be assured. Another reason is that observations do not provide data regarding “feelings, thoughts and intentions” (Patton & Fund, 2002, p. 341). Nevertheless, feelings and thoughts are important to reach an understanding of identity processes, for instance. Focus groups were not selected because it was intended to gather different and independent views of the participants. Furthermore it was intended to create a discrete and confidential atmosphere to gather more insights of feelings, and this is more likely in individual interviews (Leavy, 2014). Analysis of documents or conversations were not accessible due to confidentiality or policy reasons of the companies and beyond this, feelings, thoughts, or intentions are not likely to be documented in company documents. This is also the justification of why data triangulation has been applied instead of methods triangulation as described in 3.3.3.

It is common to distinguish between highly structured, unstructured and semi-structured interviews (Merriam, 1998). Structured interviews have the same logic as questionnaires. These are a passive recording of answers and this kind of interview is not optimal for getting a deeper understanding, due to a lack of flexibility. At the other end of the continuum lie unstructured interviews. These are useful for life stories where the researcher's main role is to remain a listener after the opening questions. These interviews need a lot of time (Leavy, 2014). Semi-structured interviews were employed, as this allows the coverage of topics derived from research questions, while at the same time maintains flexibility to follow-up the responses of the interviewees (Bryman & Bell, 2015).

Managers (e.g., project sponsors), project managers and project employees belong to the target group and were invited for interviews.

3.3.3. Quality Criteria

Research results should be trusted and valid and reliable knowledge needs to be conducted in an ethical manner (Merriam, 1998). However, Burr (2015) has been followed, who finds that objectivity is regarded as an impossibility for social constructionists. The perspective on social identity in project teams is dependent on personal assumptions. Research is a co-production of the researcher and people who are the researched (Burr, 2015). Thus, results are subjective opinions that provide insights. Interviews have strengths in that they are targeted, focus on the study topic and are insightful (Yin, 2014). However, according to Yin (2014), interviews also have a bias risk in terms of poorly articulated questions, responses, poor recalls and reflexivity.

Nevertheless, research needs to be rigorous and with quality criteria. There is not one unique quality standard for reliability and validity in qualitative research in place and the debate on quality is ongoing (Denzin & Lincoln, 2018). According to Yin (2014) construct validity, internal validity, external validity and reliability need to be met as quality criteria in case study research. Denzin and Lincoln (2018, p. 98) find that for constructivism research,

“traditional positivist criteria of internal and external validity are replaced by such terms as trustworthiness and authenticity.” Guba and Lincoln (1989) and Lincoln and Guba (1985) suggest credibility, transferability, dependability and confirmability as quality criteria for qualitative inquiry to achieve trustworthiness. Nowell et al. (2017) suggest measures to meet these trustworthiness criteria for the later introduced “thematic analysis” approach (see section 3.3.6.1) which has been considered in this study.

Credibility can be understood as internal validity and is concerned with the believability of findings. To fulfil this requirement, triangulation has been applied to receive data from multiple sources by interviewing more than one project stakeholder concerning the same or similar phenomena. Three kinds of sources were considered: different companies within the IT industry; different projects (some of them in same companies); and different types of stakeholders (leader/follower/observer) as displayed in Figure 13 and later summarised in Table 20. Methodological triangulation has not been applied due to the reasons explained in section 3.3.2. To strengthen internal validity as suggested by Merriam (1998), member checks have been conducted with some of the stakeholders to obtain confirmation of joint understanding of occurred phenomena. The developed leadership framework in this study has been discussed with two participants of this study to evaluate its suitability and to obtain confirmation, that they have been understood correctly and accuracy is given. The information shared with participants during the Member Check & Review Session is presented in Appendix 5. Furthermore, it has been intended by this measure that knowledge in particular contexts has been socially constructed. As a further measure of transparency, all interpreted quotes are

included in this study.

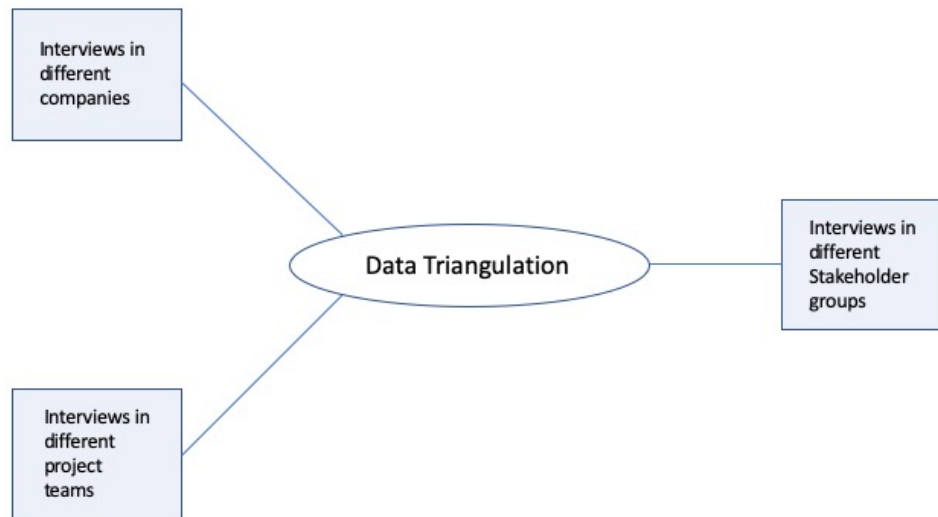


Figure 13: Data triangulation

Transferability is parallel to external validity and deals with the question of whether the findings are able to be generalised and if they also apply to other contexts (Bryman & Bell, 2015). Generalisation is of course an issue for a social constructionist, as situations and contexts are always unique and interpreted subjectively. Social constructionists do not claim generalisability (Burr, 2015). The intent of this study is to understand particularities in depth to obtain insights within a specific context and not to generalise. However, the transferability requirement has been served by comparing the phenomena in different companies with different cultures and company policies, but generalisability is of course limited in this study. Discussion on the findings as so called “thick descriptions” strengthens the external validity requirement as suggested by Merriam (1998).

Dependability is parallel to reliability and refers to the question of whether findings are likely to apply at other times as well (Bryman & Bell, 2015). Confirmability can be understood as objectivity (Bryman & Bell, 2015). Denzin and Lincoln (2018) suggest audit trails to achieve dependability and objectivity. As a consequence, this research has been made as transparent as possible to

give readers the opportunity to follow the research process. All records & transcripts have been kept. The interview process has been described in detail as well as the process of analysing data. Relevant data from transcripts have been quoted.

Authenticity is unique for constructivist inquiry and there is no parallel in the positivist paradigm, however, literature regarding authenticity techniques is still scant (Shannon & Hambacher, 2014). The authenticity criteria are fairness, ontological authenticity, educative authenticity, catalytic authenticity and tactical authenticity (Guba & Lincoln, 1989). According to Guba and Lincoln (1989) it is desirable to achieve a temporary consensus about truth.

Fairness is covered by picking up different viewpoints concerning phenomena of interviewees and discussing them in a fair manner (Shannon & Hambacher, 2014). This means that different realities need to be taken into account (Guba & Lincoln, 1989). The viewpoints are expressed by interviewees who were leaders, followers, or observers in a particular situation. The conversations were semi-structured and characterised by open questions to give the participants a voice. Value was given to each statement of any interviewee and to avoid counter arguments. This behaviour also supports confidence of interviewees during the interview. All statements were valued to limit bias. Furthermore, interesting phenomena from every participant have been quoted which should enrich the study.

Ontological authenticity shall assure that a better understanding of situations is achieved by project stakeholders after the research (Shannon & Hambacher, 2014). This has been covered by explaining and discussing the purpose of the research prior to the interview, quoting, and assigning statements into a particular context in this study and giving them access to the findings. Educative authenticity shall help to give a better understanding of perspectives from others, and catalytic authenticity provides an impetus for stakeholders to take action for change, whereas tactical authenticity provides an empowerment for stakeholders to take necessary actions. (Shannon & Hambacher, 2014). This will of course be possible, as this study will be

accessible for the participants and others. The study informs theory and contains contributions for practice to be applied by employees of companies in the IT industry.

The authenticity criteria are controversially discussed in literature and have an affinity with action research (Bryman & Bell, 2015). As this is a case study with interviews as the data collection technique, the criteria are met by reflecting thoughts of others during the interviews and the transparency of the research as well as conceptual framework as a contribution to knowledge and a contribution to practice.

3.3.4. Sampling

There are various sampling techniques for qualitative research described in literature and these are either conceptually-driven such as purposive and theoretical sampling, or non-conceptually-driven such as convenience and opportunistic sampling (Farrugia, 2019). In this study, it was important to select samples that could provide answers to the research questions. The samples have been selected by addressing interviewees with profound experience in project-based work in different project roles within the IT industry in Germany. Hence, a purposive sampling technique was the selected approach (Farrugia, 2019).

According to Bryman and Bell (2015, p. 429), “the goal of purposive sampling is to sample cases/participants in a strategic way, so that those sampled are relevant to the research questions that are being posed.” This was possible, because I am experienced within the IT industry Germany as well and have access to some IT managers and IT experts in this market.

There are several types of purposive sampling discussed in literature such as extreme or deviant case sampling, typical case sampling, critical case sampling, maximum variation sampling, criterion sampling, theoretical sampling, and snowball sampling, ... (Palys, 2008; Patton, 1990). The first idea was to apply snowball sampling, as it would have generated different perspectives on leadership issues on the same leadership phenomena within

a project. This strategy was rejected due to confidentiality reasons. The interviewees did not want to nominate new candidates within the same project. Thus, “typical case sampling” has been applied as the sampling strategy. Two criteria were relevant to be chosen. Firstly, participants should have had experience in at least one project within the IT industry in Germany, where the project delivered an IT solution or an IT service to a customer and secondly, they should have perceived that leadership of a project stakeholder caused social identity in a particular project team that led to increased work engagement of project employees.

The sample is displayed in Table 20. To achieve triangulation requirements the samples were selected from different job roles, companies, and projects. Company names have not been disclosed, but each company has been mapped to a company code (from “A” to “I”). The same character means the same company. This makes it possible to differentiate in terms of data triangulation. Participants of this study reported on their perception of projects in nine different companies. Most of the companies are big firms with more than one hundred thousand employees world-wide and a significant market share in Germany. Eight participants reported on projects in the same company “A” and two participants reported on projects in the same company “I”. The participants reported on twenty different projects. The role of the participant within the project is categorised with “L” for leader, “F” for follower and “O” for observer based on his own categorisation and perception of his/her role.

| ID | Company Code | Current role / position | Role in described projects | Role Code | Age Group | Years of experience in IT projects | Interview Date | Wave |
|-----|--------------|----------------------------------|----------------------------|-----------|-----------|------------------------------------|----------------|------|
| #1 | D | Client Executive | Sponsor/PM | L | 40 - 49 | > 10 | 28.08.2019 | 1 |
| #2 | B | CIO | Sponsor | O | 40 - 49 | > 10 | 09.10.2019 | 1 |
| #3 | A | IT Expert | Sub-Project Manager | L | > 60 | > 10 | 10.10.2019 | 1 |
| #4 | A | Consultant | IT Expert / Developer | F | 30 - 39 | > 10 | 03.02.2020 | 2 |
| #5 | I | Practice Head Project Management | Project Management Office | F | 40 - 49 | > 10 | 07.02.2020 | 2 |
| #6 | A | Vice President Consulting | Project Manager | L | 50 - 59 | > 10 | 18.02.2020 | 2 |
| #7 | E | IT Expert | IT Expert | F | 40 - 49 | > 10 | 18.02.2020 | 2 |
| #8 | F | Practice Head Project Management | Deputy Project Manager | F | 30 - 39 | > 10 | 19.02.2020 | 2 |
| #9 | G | Manager / Team Leader | Project Manager | L | 30 - 39 | > 10 | 08.05.2020 | 3 |
| #10 | H | IT Expert | IT Expert | F | 40 - 49 | > 10 | 11.05.2020 | 3 |
| #11 | C | Practice Head Project Management | Project Manager | L | 40 - 49 | > 10 | 12.05.2020 | 3 |
| #12 | F | Senior Project Manager | Project Manager | L | 40 - 49 | > 10 | 19.05.2020 | 3 |
| #13 | A | Team Leader Software Development | Sub-project Manager | F | 30 - 39 | > 10 | 04.06.2020 | 3 |
| #14 | A | Team Leader Project Management | Sub-project Manager | F | 50 - 59 | > 10 | 05.06.2020 | 3 |
| #15 | A | Department Head | Client Manager | F | 40 - 49 | > 10 | 16.11.2020 | 4 |
| #16 | A | Industry Leader | Sponsor | O | 40 - 49 | > 10 | 19.11.2020 | 4 |
| #17 | J | Sector Head | Manager | O | > 60 | > 10 | 24.11.2020 | 4 |
| #18 | K | Partner | Sponsor | O | 50 - 59 | > 10 | 25.11.2020 | 4 |
| #19 | I | Consulting Head | Consultant | F | 30 - 39 | > 10 | 26.11.2020 | 4 |
| #20 | A | Industry Leader | Project Manager | L | 40 - 49 | > 10 | 03.12.2020 | 4 |

Table 20: Sample

A high degree of diversity within the interviewees in terms of seniority, age, culture, and gender would be desired. As described in section 2.4.3, transformational leadership is not applicable to each human being with a similar impact in the same manner. This would also support specific findings regarding leadership and identity related to diverse groups. However, it was intended to obtain insights from people who have experienced many projects during their working life. The rationale is that experienced people have a broader view on best practices based on subjective perceptions than people who have experience based on only one or a few projects. The participants were all very experienced in project work for many years, had a big choice of projects and could identify a suitable project, where social identity and increased work engagement has been observed within the project team. As shown in the literature review, perceptions of social interactions such as leadership and governance are dependent on cultural background. Therefore, it was important for the study to gain insights from employees who share the same cultural background and only German employees were selected.

The sample consisted of only two female interviewees but represents more or less the proportion of female employees in the IT industry. Hence, this population is also scant within the sample. According to the German IT

industry association Bitkom, only 17% of IT experts in Germany were female in 2019 (Bitkom e.V., 2019).

There are no principle guidelines in the literature regarding the sample size in purposive sampling in the literature, but in most of the cases sample size is related to theoretical saturation or that no more new information or themes can be identified in the data (Guest et al., 2006). Saturation can be the justification for the sample size (Boddy, 2016). Boddy (2016) analysed sample size for qualitative research and suggests that sample size is contextual, and that the philosophical paradigm needs to be considered. The sample size of in-depth interviews within a constructivist paradigm will require justification if it extends thirty interviews. Large sample sizes do not permit case oriented deep analysis (Sandelowski, 1995). According to Morse (2000), saturation depends on several factors such as experience or the ability of interviewees to reflect on a particular topic or how to articulate. Therefore, sample size cannot be determined upfront (Morse, 2000). Guest et al. (2006) performed a study with sixty interviews and they found that saturation is achieved after 12 studies. After only six interviews the authors found basic elements for meta themes. In this study, twenty interviews in four waves have been performed, as displayed in Table 20. Each wave followed an analysis phase of the new transcripts and the prior conducted transcripts as well as a check of saturation. Wave 1 represents the pilot phase, where initial codes have been identified. After wave 2 and eight interviews, approximately two hundred codes have been identified. After wave 3 saturation has been achieved and themes were developed. Wave 4 was conducted to check if any more relevant information regarding saturation could be observed, which was not the case.

3.3.5. Data Collection

Data was collected by conducting semi-structured interviews, as this allows the coverage of topics derived from research questions, while at the same time maintaining flexibility to follow-up the responses of the interviewees (Bryman & Bell, 2015).

3.3.5.1. Interview Process

The interviews took place in the time frame from August 2019 to December 2020. Some delays in terms of postponed interviews and analysis occurred due to the corona virus crisis in 2020. The interview phase was performed in four waves. With each wave an analysis phase took place and all interview records were analysed again (back and forth) regarding new upcoming findings. Wave 1 was the pilot phase to check the feasibility of the study and to adjust the interview guide. According to Merriam (1998), pilot interviews are important to test the interview questions and to give practice in interviewing. Wave 2 brought up 90% of the codes and themes were developed, and with wave 3 saturation has been achieved. Wave 4 was used to get a deeper understanding of the findings and to check if more codes would occur. This is explained in detail in section 3.3.6. In preparation for the interview meetings, invitation letters (Appendix 2) were sent to each person who wanted to participate in this study. The content of this letter explained the purpose of the study and the request for thinking about a project in the past where leadership caused social identity and work engagement. Thus, this measure should provide transparency about the research and assure that interviewees have had reflected about a project with SI and WE saliences prior to the meeting. Interviewees confirmed the selection of the project at the beginning of the meeting and described its characteristics. The interview process was guided by a prior developed interview guide which set the frame of the interviews. The interviews were planned with a time frame of 75 minutes plus an additional 15 minutes free time buffer to avoid any time pressures. The interviews were recorded by a voice recorder, if the participant agreed and notes were taken during the conversation.

3.3.5.2. Interview Guide

Semi-structured interviews allow reaction to responses of the interviewees to get a better understanding of phenomena. It was intended to conduct the interviews as a guided conversation. As the interviewer is the instrument of this qualitative research, competence and skills as an interviewer are of

importance (Rowley, 2012), and these were improved by reading articles prior to the interviews and practice during the pilot phase. The interviews were conducted in a respectful manner, were non-judgmental and nonthreatening as recommended by Merriam (1998). A list of questions was developed and included in an interview guide to explore leadership relations in particular situations and to find answers to the research questions (Merriam, 1998). As this research is inductive, interview questions were derived from research questions and they were informed by previous theory (Rowley, 2012). Wording is important to ensure the desired information is obtained and questions should be asked in such a way that they are clear to the interviewee (Merriam, 1998). Interview questions were only asked, if they were relevant to the research, and the most appropriate order of the questions was also considered (Rowley, 2012).

As recommended by Merriam (1998), multiple questions, leading questions as well as yes-or-no questions were avoided. Multiple questions are either double questions or a series of questions (Merriam, 1998). Questions were asked in a way that allowed interviewees to answer them one by one. Beyond that, the questions contained more clarity. Leading questions contain assumptions and could cause bias and yes-or-no questions do not provide any sensible information for this study (Merriam, 1998). Furthermore, Rowley (2012) suggests that interview questions should not be too general or in any sense invasive. All this has been avoided and taken into account while developing the interview guide. All three research questions are how-questions, in order to obtain an understanding of how the leadership process worked in particular situations. Derived from this, most of the interview questions were also framed as how-questions. According to Jaworski (2009) there are three types of how-questions: how-questions of manner, of cognitive resolution, and analytical how-questions. The latter are very suitable for this study as they might provide insights about method, means, and mechanism (Jaworski, 2009). In such a way it is possible to have an understanding about underlying leadership processes and causal relations. Interview questions were mainly shaped to find answers in the form of gerunds (Sæbø, 2015) to identify activities in the context of leadership behaviour.

The interview guide (Appendix 2) has three parts.

The intention of part one is to introduce each other, to introduce the study, to explain its purpose and the process of the interview. Personal introductions were not needed as the researcher and participant knew each other.

Furthermore, the administrative issues were covered, and some warm-up questions were asked. The interviewee should feel comfortable during the conversation. It is important, that the letter of consent (Appendix 2) is explained and signed. As recommended by Rowley (2012) this introduction is a good start for the conversation. The planned time frame was ten minutes.

Part two is the main part of the interview and it deals with particular questions derived from research questions developed from the literature review. The planned time frame was one hour. The first set of questions address RQ1 (How can TFL cause SI in project teams that lead to increased work engagement).

The basic idea of the interview strategy is to discover TFL and SIL traits, identified in literature (chapter 2), by asking questions, to get an understanding of how the process in this causal chain works. To secure this, additional dedicated supporting questions were developed to give the interviewee hints to think about, if it had not been addressed by herself or by himself. The questions lead to understandings of how SI-related TFL induce SI and increase work engagement. The model of this strategy is displayed in Figure 14. TFL is the independent variable and SI or WE are dependent variables, as SI and WE were conditions for project selection.

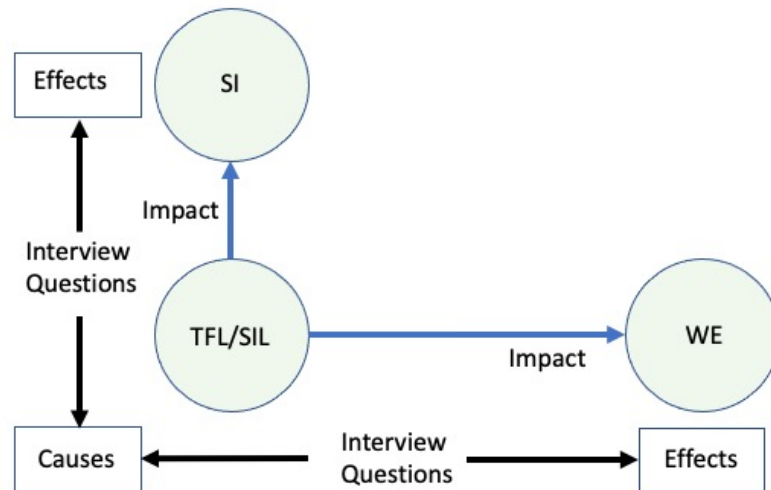


Figure 14: RQ1 Interview Strategy

The derived interview questions are displayed in Table 21 and the purpose and the rationale are explained.

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Research Objective | |
| RO1: to identify causal relations of SI and TFL that lead to work engagement in project teams | |
| Research Question | |
| RQ1: How can TFL cause SI in project teams that lead to increased work engagement? | |
| Interview Question | Purpose |
| 2.1 Can you tell me something about projects where leadership by a manager, a team member or any project stakeholder, led to perceived group identity with the project team? Please explain the project characteristics and what you have perceived. | Identification of projects with perceived social identity traits by the interviewee |
| 2.2 How did leadership create a group identity? How did it influence work engagement of team members? | Discovering causal relation of social identity occurrences and work engagement |
| 2.3 What role did the person have? How did the person do it? Please give an example and explain what it has triggered in you or | Getting more context of project situations and discovering behaviour of a selected leader that led to SI and WE salience. |
| 2.4 Why did you identify yourself with the project team? | Identifying cognitive self categorisation processes of the |
| 2.5 Why did you have a higher group identity than usual? | Identifying cognitive self categorisation processes of the |
| 2.6 What distinguished the project from others in this respect? | Understanding project characteristics |
| 2.7 Why was your project work intensity higher than usual with respect to triggers by leadership behaviour? | Understanding triggers for work engagement - focus on physical engagement |
| 2.8 Please explain how leadership behavior triggers your emotional situation regarding your personal project work. | Understanding triggers for work engagement - focus on emotional engagement |
| 2.9 Please explain how leadership behavior triggered your way of thinking regarding your personal project work. | Understanding triggers for work engagement - focus on cognitive engagement |
| 2.10 What did you perceive observing other team members? | Broadening perspectives, looking on same phenomena |
| 2.11. Were there any particularities in the project with regard to diversity of team members, cultural characteristics, spatial dislocation, language or means of communication? | Understanding the context - focus on mediators out of LR |
| 2.12. Was there anything that promoted the situation in terms of group identity or work commitment? Why was this favourable? | Identifying facilitators |
| 2.13.1 How did she/he embody, what the group stands for? Please give an example and explain what it has triggered in you or others! | Connecting leadership behaviour to social identity traits (identity prototypicality) |
| 2.13.2 How did she/he promote the interests of the group? Please give an example and explain what it has triggered in you or others! | Connecting leadership behaviour to social identity traits (identity advancement) |
| 2.13.3 How did <the leader> create a sense of cohesion within the group. Example! | Connecting leadership behaviour to social identity traits (identity entrepreneurship) |
| 2.13.4 How did <the leader> create structures that are useful for group members? How did she/he arrange events that helped the group function effectively? Example! | Connecting leadership behaviour to social identity traits (identity impresarioship) |
| 2.14.1 How did charisma of the leader influence your perceived identity with the group? How did she/he operate as a role model for you? Why did she/he get admired, respected, and trusted and how did this incude your identity with the group? Did she/he take any risks? What was the impact regarding your identity with the leader or the group? Did consistency influence your identity with the group? | Understanding idealized influence behaviour and attributes. Connecting idealized influence to social identity |
| 2.14.2 How did inspirational motivation of the leader influence your perceived identity with the group? How did she/he provide meaning and challenge? How did she/he arouse Team spirit? How did she/he display enthusiasm and optimism? How did she/he provide a shared vision with clear expectations that project team members should meet? | Understanding inspirational motivation behaviour. Connecting inspirational motivation to social identity |
| 2.14.3 How did intellectual stimulation of the leader influence your perceived identity with the group? How did she/he encourage creativity and new approaches? Do you have an example, where she/he questioned assumptions? How did she/he reframe problems? How did she/he approach old situations in new ways? How did she/he handle criticism? What did she/he do, if ideas differed from the leader's ideas? | Understanding intellectual stimulation behaviour. Connecting intellectual stimulation to social identity |
| 2.14.4 How did individual consideration of the leader influence your perceived identity with the group? How did she/he pay special attention on each individual project team member? How did she/he develop project team members to higher levels of potential? How did she/he cope with individual differences? How did she/he | Understanding individual consideration behaviour. Connecting individual consideration to social identity |
| 2.15. In your opinion, what should be done with regard to leadership to increase your identity with the group and thus your commitment to work? | Open question to identify further desired social identity traits |

Table 21: RQ1 Interview Questions

A further set of questions address RQ2 (How can governance and governmentality facilitate SI processes and TFL effectiveness in project teams?). The interview questions lead to identified governance phenomena and governmentality phenomena, which facilitate leadership effectiveness. The model is displayed in Figure 15. Governance & Governmentality are the independent variable, and TFL and SI are dependent variables.

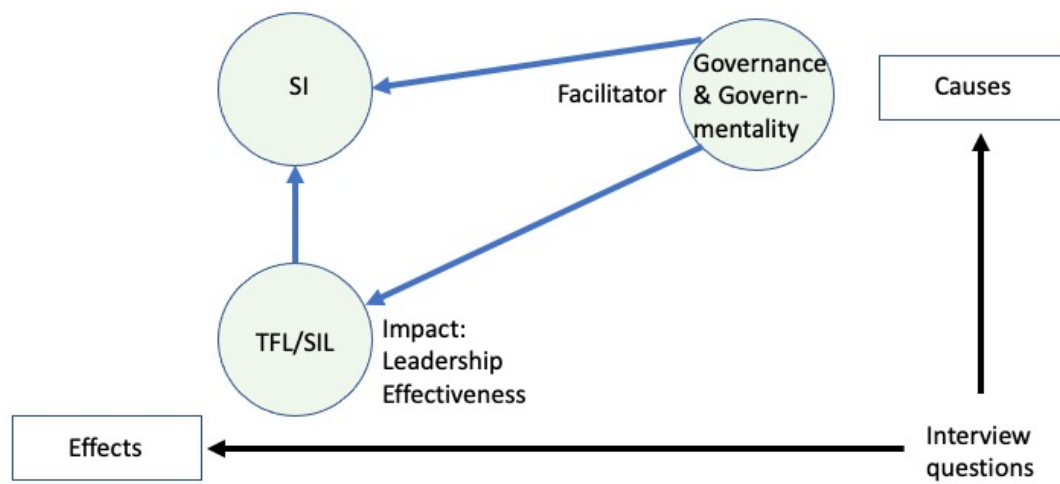


Figure 15: RQ2 Interview Strategy

The derived interview questions with their related purpose are displayed in Table 22.

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Research Objective | |
| RQ2: to analyse the influence of governance and governmentality on the SI mediated TFL effectiveness in project teams | |
| Research Question | |
| RQ2: How can governance and governmentality facilitate SI processes and TFL effectiveness in project teams? | |
| Interview Question | Purpose |
| 2.16. How did company rules influence the effectiveness of management in terms of project identities? What role did business processes play? What role did the company organization play? What role do management reviews play? | Identification of company rules, processes, structures and controls, that were perceived as facilitating factor regarding leadership effectiveness. |
| 2.17. How did project rules influence the effectiveness of management in terms of project identities? What role did project processes play? What role did the project organization play? What role did project reviews play? | Identification of project rules, processes, structures and controls, that were perceived as facilitating factor regarding leadership effectiveness. |
| 2.18. How did the way corporate or project governance has been executed by senior management facilitate or limit leadership effectiveness in regard to social identity or work engagement? | Identification of governing body behaviour, that was perceived as facilitating factor regarding leadership effectiveness. |
| 2.19. What role did the governing body play in this context and what would you expect from the role owners? | Understanding the role of the governing body. Understanding expectations. |
| 2.20. What role did the project sponsor play in this context and what would you expect from the role owner? | Understanding the role of the project sponsor as part of the governing body and report line to the project manager. |
| 2.21. What should be done in regard to project governance or in regard to corporate governance to facilitate leadership effectiveness in regard to social identity or work engagement? In your opinion, are there any improvements in the area of rules, structures, processes or controls that need to be implemented? | Understanding desired corporate or project governance to improve leadership effectiveness. |
| 2.22. How can corporate or project governance help leaders to establish a clima of trust caused by leadership within a project team? | Understanding how trust as a key aspect of TFL and SI can be supported in leadership relations by corporate or project governance. |
| 2.23. How should people of the governing bodies behave to facilitate leadership effectiveness in project teams in regard to social identity or work engagement? | Understanding desired behaviour of members of governing bodies. |

Table 22: RQ2 Interview Questions

A third set of questions addressed RQ3 (How can leadership effectiveness be measured and improved on for project-based business in IT companies?). The intention is to identify ways to measure and to improve leadership effectiveness. These measures are the independent variable, and TFL is the dependent variable. The model is displayed in Figure 16.

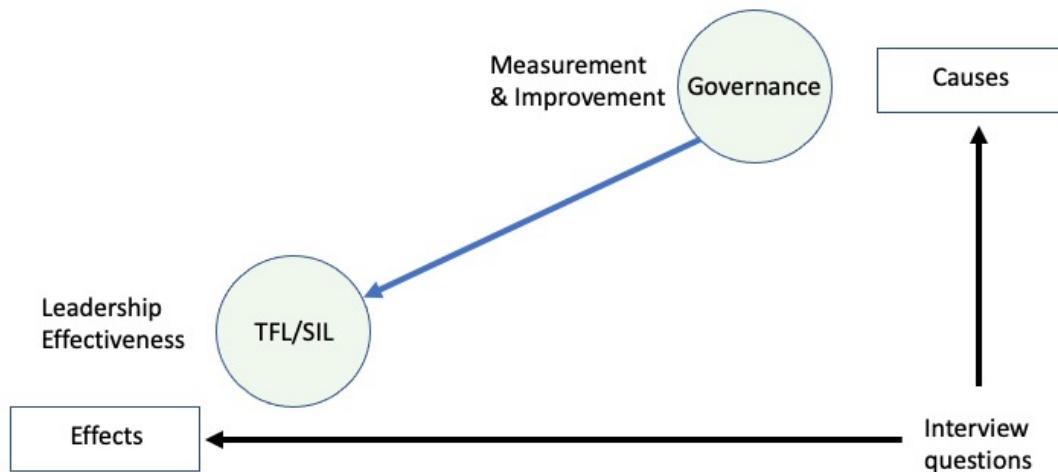


Figure 16: RQ3 Interview Strategy

Additional questions, displayed in Table 23, were asked during the interview, in order to obtain more ideas and opinions on that issue.

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Research Objective | |
| RO3: to find possibilities to measure leadership effectiveness and to find possibilities for continuous leadership improvements in companies for their project-based business | |
| Research Question | |
| RQ3: How can leadership performance be measured and improved for project-based business in IT companies? | |
| Interview Question | Purpose |
| 2.24. How could experiences and insights, such as yours, be made available to the company in a suitable form so that the company can learn how leadership triggers group identity processes that lead to greater commitment to work in project teams? | Getting insights, how to measure and to improve leadership effectiveness and how to implement the findings in a leadership framework. |
| 2.25. In your opinion, how could the efficiency of leadership in relation to group identity processes or work commitment be made visible and measurable? | Getting insights, how to measure and to improve leadership effectiveness and how to implement the findings in a leadership framework. |
| 2.26. Do you have recommendations, what companies should do, to implement leadership control in its project or corporate governance to assure leadership effectiveness? | Getting insights, how to measure and to improve leadership effectiveness and how to implement the findings in a leadership framework. |
| 2.27. Do you have recommendations on what companies should do to establish best practice leadership and the possibility of continuous improvement in leadership in the company's governance for project-related business? | Getting insights, how to measure and to improve leadership effectiveness and how to implement the findings in a leadership framework. |

Table 23: RQ3 Interview Questions

Additional questions were asked to find out if interviewees had something more to add, and to identify other interviewees in order to have the possibility of triangulation.

Part three is the closing of the interview and farewell with a planned time

frame of five minutes. The interviews were conducted in German and the transcripts have also been written in German.

3.3.5.3. Interview Environment

The interviews took place at different locations in Germany close to the interviewees' residences or workplaces. Efforts were made to take care of the interviewee's comfort. In some cases, meeting rooms of companies were used to achieve a silent and private atmosphere. Refreshments were available. In other cases, interviews were accompanied by a dinner in a restaurant with special attention given to the location of the table to secure confidentiality. The interviewees were observed during the interview to see if there was any sign of discomfort. Building a trusting relationship with the interviewees was important to get honest answers, and as much information as possible. During the corona crisis in 2020 the interviews were conducted via skype or phone. According to Block and Erskine (2012) interviews by phone could be a barrier to the collection of data. It seemed that these interviews were not less comfortable for the interviewees, as the researcher and participant had known each other for many years and a relationship based on trust had already been established.

3.3.5.4. Pilot Interviews

Three pilot interviews were performed as a pre-study to test the feasibility of this study. The pre-study helped to find out if answers to the research questions could be found. In particular, adjustments to the interview process and reframing of interview questions were carried because of this measure. Furthermore, pilot interviews helped to improve practice as an interviewer.

3.3.6. Data Analysis

Qualitative data focus on "naturally occurring, ordinary events in natural settings, so that we have a strong handle, what 'real life' is like" (Miles et al., 2018, p.

7). Data is captured more in words than in numbers and the target is to transform raw data in an understandable pattern (Miles & Huberman, 1994). A central step of qualitative research is data analysis (Flick, 2013). The aim of data analysis in this study is to describe how phenomena of TFL based social identity leads to increased work engagement of employees and to compare several cases.

3.3.6.1. Data Analysis Process

The data analysis process of this study is shown in Figure 17 and derived from Miles et al. (2018) who summarised a classic set of analytical moves. Coding is the chosen way, to analyse data. According to Saldana (2015, p. 4), “a code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data.” The different phases and the findings are explained in some detail, as this represents the recorded analytical memos. Analytical memos as suggested by Saldana (2015) were especially important during the pilot interview phase, where the core of the coding system had been developed and the interview guide was adjusted. The rationale for this approach is that a suitable audit trail was put in place to ensure credibility and authenticity.

| Steps | Implementation |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1a Pilot Interviews | 3 pilot interviews conducted and recorded in digital audio files (*.wav) |
| 1b Transcriptions | Transcription of audio files into (word) text documents (*.docx) and its verification |
| 1c PreAnalysis | Import of transcripts into CAQDAS tool (MAXQDA Analytics 2020), Categorizing, coding & identifying relationships as well as finding improvements regarding the interview guide |
| 2 Adaption | Performing adaptations on the interview guide document |
| 3a Interviews | Conducting further interviews until saturation is assumed |
| 3b Transcriptions | Transcription of audio files into (word) text documents (*.docx) and its verification |
| 3c Analysis | Import of transcripts into CAQDAS tool Coding, identifying relationships Thematic analysis |

Figure 17: Data Analysis Process

According to Braun and Clarke (2006), thematic analysis is a flexible method, useful to identify and analyse patterns, as well as applicable for social constructionist epistemology. Phenomena were identified and analysed in this study to give answers to the research questions, and thematic analysis is a possible appropriate choice for phenomenological studies (Miles et al., 2020). Braun and Clarke (2006) suggest a six-step approach to conduct thematic analysis. The data analysis process of this study is derived from this and displayed in Table 24. In addition, measures to meet trustworthiness criteria, as suggested by Nowell et al. (2017), have been complemented.

| No. | Phase | Description of the process | Quality measures |
|-----|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| #1 | Familiarising yourself with your data | All interviews were transcribed and carefully read: ~180.000 word; field notes and analytical memos were recorded. | Theoretical thoughts incorporated in interview guide; Raw data stored; records of all transcripts kept. |
| #2 | Generating initial codes | Interesting phenomena were coded and categories were defined after 8 interviews (wave 1 + 2): ~ 200 codes | Coding framework; audit trail: initial coding approach in wave 1 conducted and changed in wave 2. |
| #3 | Searching for themes | Potential themes elaborated after 11 interviews (wave 3). | Codes mapped to categories; quotes mapped to themes |
| #4 | Reviewing themes | Themes reviewed after 14 interviews (wave 3) - saturation achieved - Themes reviewed again after 20 interviews (wave 4). | Themes evaluated with raw data and literature |
| #5 | Defining and naming themes | Themes finally named as described in chapter 4. | Themes evaluated with raw data and literature; member checking |
| #6 | Producing the report | Evidence provided as quotes and connected to literature in chapter 4. Report as conclusion of the research in chapter 5. | Member checking, thick descriptions |

Table 24: Thematic Analysis Derived from Braun and Clarke (2006) and Nowell et al. (2017)

New knowledge as well as insights for practice have been created as shown in Figure 18. Data was captured by interviews and codes have been created and later aggregated to themes. Thematic analysis is suitable for inductive and

deductive approaches to the analysis of data (Braun & Clarke, 2006). The themes were deductively derived with reference to existing theories. Nevertheless, an inductive approach was also used to generate the codes in order to draw new holistic insights from the data without limitations. The advantages of combined methods with inductive and deductive approaches were confirmed by Azungah (2018) and others. The codes were collapsed into higher-level categories and later aggregated into themes. Evidence, if TFL and SIL is involved, or if governance & governmentality are involved, has been proven by literature. Themes provide answers to the research questions of this study and contribute to knowledge in theory and practice.

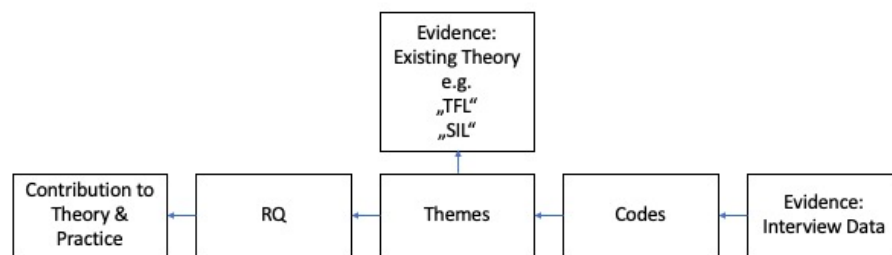


Figure 18: Knowledge creation

3.3.6.2. Operational Research Tools

The interviews were recorded by a digital voice recorder (Olympus LS-P4) in *.wav audio files. Each audio file has been transcribed (step 1b/3b, Figure 17) into a Microsoft word text document in *.docx format. A sample transcript can be found in Appendix 4.

The amount of data is high in qualitative research and CAQDAS software has been used to support the operational research activities (Oliveira et al., 2016).

There are several tools available in the market. Silver and Lewins (2014) provide an overview on software for qualitative research including MAXQDA. Oliveira et al. (2016) have analysed the usability of MAXQDA for thematic content analysis and compared it with NVIVO. The authors find that both tools are useful. MAXQDA Analytics 2020 has been chosen finally, because it worked better on the system used in the research study and fulfilled all requirements for thematic content analysis. Hence, all transcripts were imported to MAXQDA Analytics 2020 to analyse data (step 1c/3c, Figure 17).

3.3.6.3. Pre-Study: Pilot Interviews

Initially (step 1a, Figure 17), three interviews (wave 1) were performed within a small pre-study. The idea was to test the interview guide regarding feasibility to meet the research objectives and to find answers for the research questions. Furthermore, it helped to become familiar with the data and to choose a suitable coding method. Purposive sampling was applied and the selection criteria for the candidates were that they should have had long and diverse project experience, and they should work in different companies in Germany. The interviewees were informed by letter about the purpose of the interview and asked to prepare and think back to projects in which the following characteristics could be identified: a sense of belonging to the project team, and a high level of commitment to employees by leadership.

Two coding cycles were carried out as suggested by Saldana (2015). The intention within the first cycle was to perform “process coding” to observe activity, actions, the behaviour by the leader and its consequences (Saldana, 2015) by also identifying particular conditions, contexts, and mediators to be noted as “in vivo codes” (Saldana, 2015). The aim of the second coding cycle was to normalise, to reorganise and to condense the codes to achieve a smaller number of codes as well as to link the identified codes to categories from theory. Figure 19 displays the categories and subcategories after the second coding cycle. Each action by project stakeholders has been assessed against saliences of transformational leadership, social identity, governance and governmentality, as outlined in Chapter 2 (literature review), and

3.3.6.4. Interview #P1

Project overview: #P1 was the first interviewee in this research. #P1 acted as a sponsor and reported on his own leadership in the project and on perceived follower engagement and perceptions. The project size was approximately ten people and the team was dispersed in several German cities. The team used conference calls with tools such as Skype or Circuit for communication. The aim was to carry out an innovative IT solution for a customer. He reported that the project was successful, and that saliences of social identity and work engagement appeared.

Initial Findings: The very first but important finding after analysis of the transcript of #P1 was that codes could be defined and mapped to categories related to theory. Figure 20 illustrates the identified codes and categories after evaluation of the first transcript. Leadership behaviour causes social identity traits as well as social identity saliences. Furthermore, aspects of governance and governmentality could be identified as mediators and finally, some insights and suggestions regarding the leadership framework were gained. This means that findings contribute to RO1, RO2 and RO3. A second important finding was that leadership independent mediators with a strong influence on social identity processes and work engagement appeared. These codes were grouped together in a new “mediator” category.

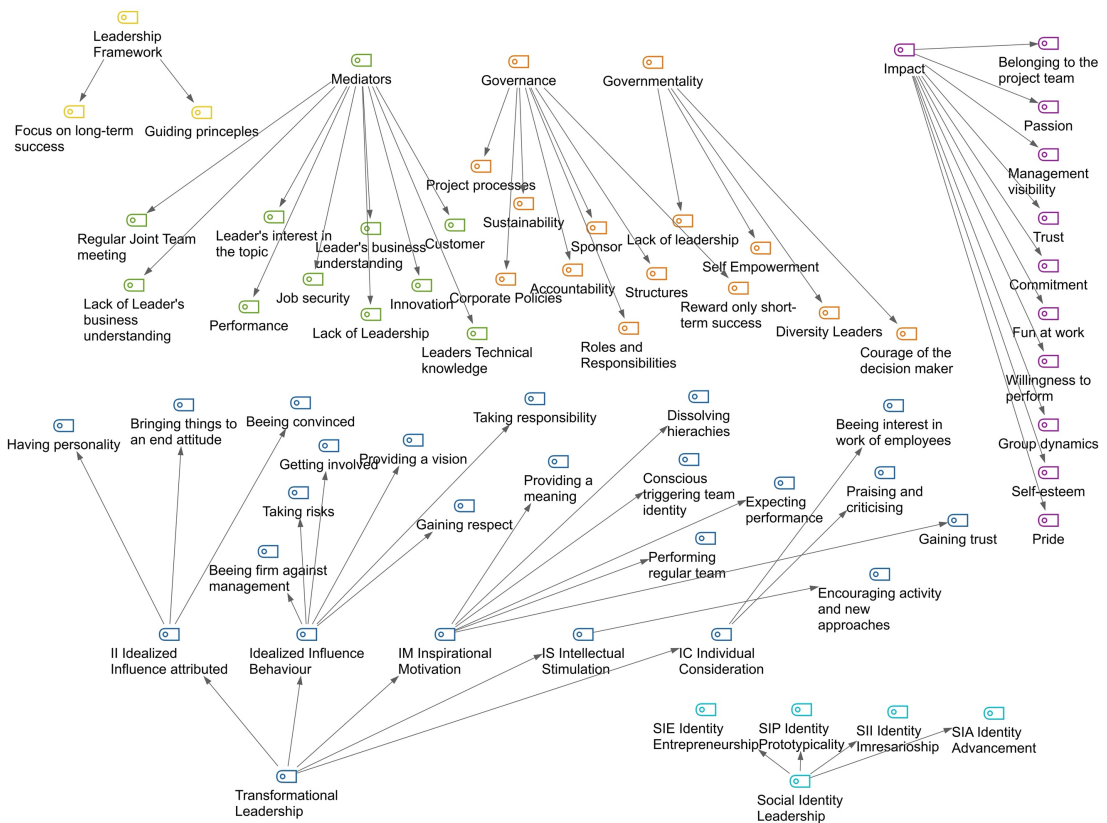


Figure 20: Code Landscape #P1

After examination of the relations of the codes, the codes were added into a causation matrix as displayed in Table 25. This exercise was performed manually, and transcripts as well as field notes were used. The aim was to focus on a first overview, and the number of codes were limited to a maximum of ten causation sequences. In the case of #P1, a saturation of codes was achieved by only nine aggregated causation codes. A leadership action was facilitated by a mediator (antecedent) and led to an outcome. Antecedents are either governance/governmentality mediators or further mediators derived from the project context. As in some cases only parts of the sequence were mappable, and some variables remained blank. This is intentional.

| No. | Antecedent | Leadership Action (Cause) | TFL Cat | SI Cat | Outcome (Effect) |
|-----|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------|--------|----------------------------------------------------------------------|
| #1 | | Bringing things to an end attitude | II | IP | Group dynamics |
| #2 | Innovation | Conscious triggering team identity + Providing a vision | IM | IE | Fun at work |
| #3 | Job security intention | Providing a meaning + providing a vision | II IM | IE | Willingness to perform.+ belonging to the project team |
| #4 | Leaders business understanding + Leaders interest in the topic | Expecting performance + being interested in work of employees + Encouraging activity and new approaches | IM + IC + IS | IE | Commitment |
| #5 | lack of leadership + lack of leaders business understanding + self empowerment | taking responsibility + being firm against management + being convinced + taking risks | II | IP | Group dynamics + Belonging to the project team |
| #6 | Regular Joint Team Meetings + project policies | Performance expectation + Praising & criticising | IM | IE | Willingness to perform |
| #7 | | Dissolving Hierarchies + Performance expectation + treating people equal | IM | II | Willingness to perform |
| #8 | Customer | Gaining trust + getting involved + having personality | IM | IP | Trust + Willingness to perform |
| #9 | Performance | | | | Self-esteem + management visibility + pride + belonging to the group |
| #10 | | | | | |

Table 25: Causation Matrix #P1

Leadership actions were categorised by TFL and SIL behaviour to establish a link between causes and categories derived from TF and SIL theory.

Content-wise the following major findings could be identified. Firstly, the leader was able to use the innovation of the project as facilitator to articulate a vision for the team connected with long-term sustainability. The possibility of further job security was a further driver, and targeted joint personal benefits that answers the “what’s in for me” question. Secondly, the leaders gained trust, by getting the customer behind the project on his own. Furthermore, the leader used the situation of leadership gaps of other stakeholders, was firm against management and took over the responsibility for the success of the project. This was connected with personal risks of course.

In terms of project governance, the simple project rule was to jointly discuss the progress and to not accept any excuses for making no progress. The position of the project employee within the company did not matter. This was paired with the readiness to discuss individual challenges.

3.3.6.5. Interview #P2

Project overview: The interview partner reported on a project where new IT services should be implemented within the company. #P2 was project sponsor and leadership by the project manager was an impressive experience for him. Project size was at approximately fifteen people, where one half of the project population built the core team. The project was very important for the company and many employees questioned the successful implementation of the new IT service. Scrum was the selected PM method.

Findings: Several leadership actions could be classified as TFL and SIL behaviour. Beyond this, some mediators appeared that supported SI and WE salience as an outcome. After careful analysis of the transcripts and codes, the following causation matrix was assumed to be important:

| No. | Antecedent | Leadership Action (Cause) | TFL Cat | SI Cat | Outcome (Effect) |
|-----|-----------------------------------------------------------------|-------------------------------------------------------------------------|---------|--------|-------------------------------------|
| #1 | Leader's professional experience + Leader's Technical Knowledge | Imparting Knowledge | li | II | People development |
| #2 | Same Location | Getting involved | IA IP | IA IP | Performance |
| #3 | Employees get the meaning | Providing a meaning | IE | IE | Belonging to the project team |
| #4 | Innovation | | | | Fun at work + self-esteem |
| #5 | Agile PM Method/Scrum | Performing regular team meetings | II | II | Team cohesion |
| #6 | Project rules | Dissolving hierarchies | II | II | Belonging to the project team |
| #7 | project processes | Holding on determined premisses + being firm against other stakeholders | IE | IE | success |
| #8 | Good people join together | | | | Belonging to the project team |
| #9 | Senior management involvement | Representing the group | IA | IA | Self-esteem + management visibility |
| #10 | Project brand | Conscious triggering team identity | II | II | belonging to the project team |

Table 26: Causation Matrix #P2

Content-wise the following findings could be identified. Firstly, the innovation of the project was helpful to cause fun at work. Secondly, the leader's professional knowledge and experience connected with the behaviour to impart knowledge caused high people development impacts. As #P1 did, the leader addressed personal benefits. For example, he provided a meaning and ensured that they understood the purpose of the project. Furthermore, the core team worked at the same location and this was found to be an important condition for project performance by #P2. In addition, the leader was

personally involved and successfully tried to bring the top management behind the project.

Project rules such as daily scrum meetings helped to achieve team cohesion. A further important factor was that the leader maintained determined premises and avoided uncertainties within the project. Finally, the interviewee mentioned, that good people try to find good people. This could be a further reason for SI and WE.

3.3.6.6. Interview #P3

Project overview: The project took place on several customer sites and its aim was to provide IT systems for an important customer. Team size was approximately forty employees, and the inquired sub-project team size was approximately ten project employees. This team worked at the same location, where direct access to each sub-project team member was possible. #P3 was a project employee and responsible for performing the required customising and the acceptance tests.

Findings: In multiple situations during the interview, #P3 mentioned that technical knowledge is an important enabler to find the link between leader and follower. Another finding is that taking care of people in a comprehensive way makes people feeling comfortable and increases their willingness to perform. The analysis of the transcript leads to the coding as displayed in Table 27.

| No. | Antecedent | Leadership Action (Cause) | TFL Cat | SI Cat | Outcome (Effect) |
|-----|------------------------------|-----------------------------------------------------------------------------------------|---------|--------|----------------------------------------------------------------------|
| #1 | Leader's technical knowledge | Taking care + having personality + gaining acceptance | IM | IE | willingness to perform |
| #2 | Leaders' network | Taking care | IM | IE | willingness to perform |
| #3 | same location | Taking care | IM | IE | feeling comfortable |
| #4 | customer | Taking Care + dissolving hierachies | IM | IE | feeling comfortable + belonging to the project team + group dynamics |
| #5 | team events | Taking employees seroiusly + paying social attention on employee | IC | IE | belonging to the group |
| #6 | team size | Taking employees seroiusly + paying social attention on employee | IC | IE | employee follows |
| #7 | | Beeing firm against management + representing the group + displaying management loyalty | II | IA | |
| #8 | | Getting involved | II | IP | willingness to perform |
| #9 | Lack of leadership | Having personality | II | | |
| #10 | | Brings things to an end attitude | II | | |

Table 27: Causation Matrix #P3

The leader's technical knowledge was important to have a personal connection to the team. He acted as a carer or servant for the team and did everything so, that the team had a good work environment and felt comfortable. Furthermore, the leader took every colleague seriously and paid individual social attention.

3.3.6.7. Pre-Study: Initial Analysis and Consequences

This initial analysis checks the feasibility of the study and, fortunately, some initial findings supported the chosen approach of the study.

An important initial finding is that process coding could be applied in favour of RQ1. As displayed in Table 25, Table 26 and Table 27, process codes have been noted as causation codes, derived from the suggestions made by Saldana (2015) and follow the logic: antecedent > TFL and/or SI leadership action (cause) > outcome (effect). The results of causation coding were not convincing as not only one leadership action implies one impact. The situations described were more complex. However, the application of process coding (Saldana, 2015) in the sense that many leadership actions lead to SI and WE, were more convincing as the interviewees had been asked to present a project with perceived SI saliences and perceived increased WE as an impact. Therefore, process coding was found to be applicable for further

analysis. Because of this decision, codes were created that show actions by using gerunds (-ing) as well as TFL traits and SI traits (Bass & Avolio, 1995; Bass & Bass, 2008; Bass & Riggio, 2006; Saldana, 2015; Steffens, Haslam, Reicher, et al., 2014; van Dick et al., 2018).

A second important finding is that governance and governmentality mediators could be identified in favour of RQ2. This happened not only in questions related to RQ1 or RQ2, but these mediators were also mentioned by interviewees independent of the question sections of the interview guide. “In vivo coding” (Saldana, 2015) was found to be applicable for analysis due to the findings, as the meaning of a statement can easily be captured (Saldana, 2015). Decisions for codes were taken, if governance or governmentality had been assumed according to literature (Müller, 2017; Müller et al., 2017; Müller et al., 2016; Pilkienė et al., 2018; Project Management Institute, 2016, 2017b; Turner, 2020a, 2020b; Zhu et al., 2019). The same considerations were made with regard to RQ3, where for the same reasons “in vivo coding” was considered to be target-oriented.

A very interesting further finding was that new mediators appeared that facilitated SI related TFL and led to impacts that supported the success of the particular project. Therefore, the coding system was adjusted and a new “mediator” category established. These mediators have been captured as “In vivo” codes (Saldana, 2015).

Finally, some traits of leadership behaviour in different project contexts show commonalities. For example, “getting involved” and “dissolving hierarchies” could be identified in each of the three transcripts. This led to the assumption, that commonalities would also appear in future interviews as well as new codes. Therefore, it was decided to code the transcripts in more than one cycle according to recommendations by Saldana (2015) and these aligned with the four interview waves. The aim has been to aggregate and collapse the codes into themes after analysis (Braun & Clarke, 2006; Saldana, 2015).

3.3.6.8. Pre-Study: Interview and Interview Guide Adjustments

The aim of the pre-study was to find out if answers to the research questions of this study could be found, as well as to find out what adjustments to the interview process and interview questions need to be done. Further experiences during the pilot phase led to necessary adaptations of the interview guide (step 2, Figure 17). The assessment by the researcher was as follows:

- The format of the interview guide needed to be adjusted. The arrangement of the questions needed to be changed to get a better overview to support a more fluent conversation. Furthermore, some questions needed to be simplified. No changes were needed on part one (interview questions 1.5 – 1.8) of the interview guides.
- RQ1 interview questions: The analysis of the transcripts led to new codes. The first set of codes were the leader's actions. The interview questions 2.1 – 2.15 including supporting questions addressed the TFL and SIL categories. It was possible to develop "action codes" and to map these codes to TFL and SIL categories from theory. These codes are intended to present leadership behaviour as the causes of impacts on followers. A second set of codes represents the impacts of leadership behaviour. Interviewees reported on some particular impacts. Although the projects were chosen because of SI within project teams, remarks regarding SI saliences and WE saliences were still too scant. Sometimes the answers seemed to be too generic. However, it is desirable to access more insights about this and, it would also provide evidence that leadership leads to SI salience. To obtain more in-depth insight about causalities, interviewees were requested to provide dedicated examples and to explain events, mediators, and effects in the particular contexts. In particular, the salience of social identity and work engagement need to be permanently addressed. The set of questions, where the majority were "how-questions", should be supported by further "why questions" in some situations to work out the causality.
- RQ2 interview questions: The questions 2.16 – 2.23 addressed

governance and governmentality issues and a set of codes could be derived from the transcript. The codes could be linked to governance and governmentality categories and could be placed as a mediator variable in the causation sequence. However, this topic seemed to be understood differently by each interviewee. The impression given was that the questions were too complex and needed to be simplified. Therefore, these sets of questions were divided and simplified and given a dedicated focus on structures, processes, rules and control, for instance.

- RQ3 interview questions: The aim of this set of questions 2.24 – 2.27 was to obtain some advice regarding monitoring and improvement of leadership. The findings should support the comprehensive analysis of this topic. A couple of codes could be derived from the transcript. No issues were identified; thus, the interview questions remain untouched.
- Timing: The interview time needed to be increased by 15 minutes. Including the buffer, the planned time slot was 90 minutes. The time buffer was also helpful to write down field notes.
- Sampling: Snowball sampling had been intended, but none of the three interview partners proposed a further interview partner. Thus, the situation could be understood as an “assessment situation” by the participants. Confidentiality issues and ethical issues are imaginable. Thus, purposive sampling was applied, as this sampling method avoids confidentiality issues such as connections between interviewees and could be avoided. Beyond this, it could be assured, that interviewees had a certain experience in project-related business.

3.3.6.9. Further Interviews and Analysis

In three further waves seventeen further interviews were performed (step 3a, Figure 17), transcribed (step 3b, Figure 17) and analysed (step 3c, Figure 17) based on the adjusted interview guide; five interviews within the scope of wave 2; six interviews within the scope of wave 3; and six within the scope of wave 4. Within each wave the interviews were conducted, analysed and saturation assessed. Beyond this, the previous waves were reviewed a second time.

Following the analysis of wave 3, 188 codes were noted in MAXQDA in addition to the “a priori” categories and subcategories drawn from TFL (Table 28) and SIL (Table 29). Of these, 57 leadership codes mapped to five TFL components (Table 30), 34 governance/governmentality codes (Table 32), 47 mediator codes (Table 31), 19 leadership framework codes (Table 33), and 31 impact codes (Table 34). Relevant codes have also been mapped context based to SIL subcategories (Table 29) to find commonalities in TFL and SIL theory. Wave 4 was conducted after aggregation to themes. No more codes occurred in the last wave.

In order to identify leadership behaviours that show both TFL and SIL characteristics, it was important to first label passages with leadership activity codes (-ing form). Then it was considered to which TFL component and to which SIL component the leadership behaviour most closely belonged. The text passage was then labelled with the respective TFL and SIL category. This was done using the relevant TFL and SIL literature as well as literature on coding methods (Bass & Avolio, 1995; Bass & Bass, 2008; Bass & Riggio, 2006; Saldana, 2015; Steffens, Haslam, Reicher, et al., 2014; van Dick et al., 2018). Codes that could not be assigned were discarded. Furthermore, it was checked whether an aspect influenced the leadership behaviour and, if necessary, a mediator code was assigned. In addition, it was examined whether a direct impact of the behaviour was indicated. If this was the case, the text passage was also labelled with an impact code. After assigning all codes with wave 3, each text passage was analysed again, and the codes were aggregated into a theme to answer RQ1. Since mediators seem to have a special significance, the relevant mediators were also included alongside the theme in order to get even clearer answers to the how question.

| Theory/category | Subcategory |
|-----------------------------|-------------------------------------|
| Transformational Leadership | II Idealized Influence (behaviour) |
| Transformational Leadership | IM Inspirational Motivation |
| Transformational Leadership | II Idealized Influence (attributed) |
| Transformational Leadership | IC Individual Consideration |
| Transformational Leadership | IS Intellectual Stimulation |

Table 28: Transformational Leadership Components

| Theory/category | Subcategory |
|----------------------------|-------------------------------|
| Social Identity Leadership | SIE Identity Entrepreneurship |
| Social Identity Leadership | SIA Identity Advancement |
| Social Identity Leadership | SII Identity Impresarioship |
| Social Identity Leadership | SIP Identity Prototypicality |

Table 29: Social identity Leadership Components

| Theory/category/subcategory | Code |
|-------------------------------------|----------------------------------------------------|
| IC Individual Consideration | Paying social attention on employee |
| II Idealized Influence (behaviour) | Getting involved |
| II Idealized Influence (attributed) | Bringing things to an end attitude |
| II Idealized Influence (behaviour) | Representing the company |
| II Idealized Influence (attributed) | Having personality |
| II Idealized Influence (attributed) | Being honest |
| II Idealized Influence (behaviour) | Providing a vision |
| II Idealized Influence (attributed) | Being convinced |
| IM Inspirational Motivation | Conscious triggering team identity |
| II Idealized Influence (behaviour) | Being firm against management |
| II Idealized Influence (behaviour) | Taking responsibility |
| II Idealized Influence (behaviour) | Taking risks |
| IM Inspirational Motivation | Gaining trust |
| IM Inspirational Motivation | Dissolving hierarchies |
| IM Inspirational Motivation | Performing regular team meeting |
| IC Individual Consideration | Being interest in work of employees |
| IM Inspirational Motivation | Expecting performance |
| IM Inspirational Motivation | Treating people equal |
| IS Intellectual Stimulation | Appreciative Behaviour |
| IM Inspirational Motivation | Arouse Team Spirit |
| II Idealized Influence (behaviour) | Being consistent |
| IS Intellectual Stimulation | Respecting ideas that differ from leader's ideas |
| IM Inspirational Motivation | Clear goals |
| II Idealized Influence (attributed) | Being trusted |
| II Idealized Influence (attributed) | Being Approachable |
| IC Individual Consideration | Providing support |
| IC Individual Consideration | Being approachable and accessible |
| II Idealized Influence (attributed) | Being admired |
| IS Intellectual Stimulation | reframes problems |
| IS Intellectual Stimulation | question assumptions |
| IS Intellectual Stimulation | good argumentation |
| IS Intellectual Stimulation | Anticipating problems |
| II Idealized Influence (attributed) | Being authentic |
| IS Intellectual Stimulation | Establishing positive error culture |
| II Idealized Influence (behaviour) | Gaining respect |
| IS Intellectual Stimulation | Giving feedback |
| II Idealized Influence (behaviour) | Exemplifying team decisions |
| IM Inspirational Motivation | Swearing to project premises |
| II Idealized Influence (behaviour) | Holding on determined premises |
| IC Individual Consideration | Reporting regarding Teammembers to Sponsor |
| II Idealized Influence (behaviour) | Sacrificing for the group |
| IS Intellectual Stimulation | Imparting knowledge |
| IM Inspirational Motivation | Drinking a beer together |
| IM Inspirational Motivation | Providing a meaning |
| IM Inspirational Motivation | Being enthusiastic |
| IS Intellectual Stimulation | Encouraging activity and new approaches |
| IC Individual Consideration | Accepting individual differences |
| IC Individual Consideration | Praising and criticising |
| IC Individual Consideration | Developing followers to higher levels of potential |
| IS Intellectual Stimulation | Avoiding public criticism |
| IC Individual Consideration | Listening effectively |
| II Idealized Influence (attributed) | Being open minded |
| II Idealized Influence (behaviour) | Gaining acceptance |
| IC Individual Consideration | Taking Care |
| II Idealized Influence (behaviour) | Representing the group |
| II Idealized Influence (attributed) | Displaying management loyalty |
| IC Individual Consideration | Taking employees seriously |

Table 30: Leadership Codes Mapped to TFL Components

| Theory/category | Code |
|-----------------|----------------------------------------------------------|
| Mediator | Team diversity |
| Mediator | Team events |
| Mediator | Workplace same location |
| Mediator | Employee's individual advantage |
| Mediator | Employee's individual disadvantage |
| Mediator | Leader's professional experience |
| Mediator | Job security |
| Mediator | Innovation |
| Mediator | Ignoring Firm DNA and Behaviours |
| Mediator | Difficult People |
| Mediator | Sharing Values |
| Mediator | Speech |
| Mediator | Humour |
| Mediator | Distributed Team |
| Mediator | Accepting Flows of sw developpers |
| Mediator | Trying to get an understanding |
| Mediator | Problem classes |
| Mediator | Attitude Center of Value creation center of appreciation |
| Mediator | Joint Goal |
| Mediator | Lack of leaders technical knowledge |
| Mediator | Haribo |
| Mediator | Eye level |
| Mediator | Leader's interest in the project |
| Mediator | Beeing together |
| Mediator | Story Telling |
| Mediator | Relationship with employee at the beginning |
| Mediator | Socializing |
| Mediator | Individueel Recruiting |
| Mediator | Agile PM Method/Scrum |
| Mediator | Reflective behaviour |
| Mediator | Regular Joint Team meeting |
| Mediator | Leaders's network |
| Mediator | Performance |
| Mediator | Lack of Leader's business understanding |
| Mediator | Clear Plan |
| Mediator | Far away from home |
| Mediator | Work result visible part of the solution |
| Mediator | same department |
| Mediator | Employee's get the meaning |
| Mediator | Good people join together |
| Mediator | Leader's ambition |
| Mediator | Lack of Leadership |
| Mediator | Leader's business understanding |
| Mediator | Leader's interest in the topic |
| Mediator | Project brand |
| Mediator | Leaders Technical knowledge |
| Mediator | Customer |

Table 31: Mediator Codes

Where governance and governmentality statements were identified, codes were assigned in the categories of the same name. The codes were checked

beforehand using the relevant governance literature (Müller, 2017; Müller et al., 2017; Müller et al., 2016; Pilkienė et al., 2018; Project Management Institute, 2016, 2017b; Turner, 2020a, 2020b; Zhu et al., 2019). After assigning all codes in Wave 3, all text passages were analysed again, and the codes were aggregated into themes to answer RQ2.

| Theory/category | Code |
|-----------------|-------------------------------------------------|
| Governmentality | Lack of leadership |
| Governance | Department size |
| Governmentality | Avoid Micro Management |
| Governance | Protected room for projects |
| Governmentality | line organization service provider for projects |
| Governance | Staffing |
| Governmentality | Join Decisions |
| Governmentality | Steering creativity |
| Governmentality | high level of freedom |
| Governmentality | Senior Management involvement |
| Governance | Project processes |
| Governmentality | Clear communication |
| Governmentality | Show importance for Organisation |
| Governmentality | Taking decisions |
| Governmentality | Setting priorities |
| Governance | reliable |
| Governance | Empower project manager |
| Governmentality | Project Manager informed |
| Governmentality | Diversity Leaders |
| Governance | Reward only short-term success |
| Governmentality | Courage of the decision maker |
| Governance | Core team |
| Governance | Target definition |
| Governmentality | Alignment |
| Governance | Sponsor |
| Governance | Project policies |
| Governance | Determine general conditions |
| Governance | Structures |
| Governance | Accountability |
| Governance | Corporate processes |
| Governmentality | Self Empowerment |
| Governance | Corporate Policies |
| Governance | Sustainability |
| Governance | Roles and Responsibilities |

Table 32: Governance/Governmentality Codes

With the Leadership Framework category, everything should first be included in the form of codes that provides ideas on the leadership framework as such to achieve RO4, but also ideas for measuring and improving leadership to answer RQ3 to achieve RO3. These codes were not checked against the

literature in advance, as the initial aim was to generate ideas. The linking with the literature took place later with the developed themes.

| Theory/category | Code |
|----------------------|-----------------------------------------|
| Leadership Framework | Monitoring |
| Leadership Framework | Talent groups |
| Leadership Framework | Top Management Coaching by Sw Developer |
| Leadership Framework | Management Projects |
| Leadership Framework | Master Student Model |
| Leadership Framework | Visible Change of the situation |
| Leadership Framework | Survey |
| Leadership Framework | Training |
| Leadership Framework | Communication platform / PM Community |
| Leadership Framework | Coaching |
| Leadership Framework | Feedback |
| Leadership Framework | Employee satisfaction |
| Leadership Framework | PM Career |
| Leadership Framework | Project success (KPI) |
| Leadership Framework | Turnover intention |
| Leadership Framework | Exchange Peer Level (+) |
| Leadership Framework | Guiding principles |
| Leadership Framework | Self-assessment by project team |
| Leadership Framework | Focus on long-term success |

Table 33: Leadership Monitoring and Improvement Codes

The "Impact" category was originally established with the aim of conducting causation coding. Although the idea was discarded after the pilot interviews, the category was retained to support subsequent interpretation of text passages for theme development.

| Theory/category | Code |
|-----------------|----------------------------------------------|
| Impact | Employee follows despite personal challenges |
| Impact | Willingness to perform |
| Impact | Perceived Feasibility |
| Impact | conflict |
| Impact | Leader out of group |
| Impact | Negative Perception |
| Impact | Belonging to the project team |
| Impact | Team cohesion |
| Impact | project success |
| Impact | Management visibility |
| Impact | Fun at work |
| Impact | Intrinsic motivation |
| Impact | Trust |
| Impact | Personal development |
| Impact | Career promotion |
| Impact | Commitment |
| Impact | Outgroup curiosity |
| Impact | Passion |
| Impact | no fear |
| Impact | positive work atmosphere |
| Impact | Perceive appreciation |
| Impact | Being approachable |
| Impact | Understanding importance |
| Impact | Leader admired |
| Impact | Facilitate Leadership |
| Impact | Self-esteem |
| Impact | Performance |
| Impact | Pride |
| Impact | Avoid negative influences |
| Impact | Feel Comfortable |
| Impact | Group dynamics |

Table 34: Impact Codes

All codes and their related quotes have been analysed and resulted in themes such as those suggested by Braun and Clarke (2006) during the analysis phase.

For analysis, all transcripts were loaded into MAXQDA 2020 software. This made it possible to compare the quotes of individual interviewees and to assign quotes to codes. The tool offers many quantitative measures to show clusters of quotes and relationships. Nevertheless, in line with an epistemological social constructionist paradigm it was more important for the study to gain insights from leadership behaviour and to understand the meaning of data than quantitative statistics. For example, while it was possible to see which codes occurred in which transcripts, thus establishing some relevance, it was not important to note clusters of codes in individual groups,

as this does not provide an indication of the importance of a phenomenon. Individual phenomena can have a higher significance than the accumulation of the same phenomenon. Nevertheless, accumulations of codes were included in the interpretation. In this way, themes on leadership behaviours reported by all stakeholder groups could be developed to address the triangulation criteria. During the development of the themes, care was taken to ensure that all stakeholder groups were represented to meet triangulation criteria.

The preliminary code allocation was carried out after wave 3 and is presented in Appendix 6 with the final themes. After wave 4, each paragraph of all transcripts was reviewed, and final adjustments were made. The developed themes are presented and justified in chapter 4.

3.3.7. Research Ethics

Research ethics and the guidelines in the handbook of research ethics of the University of Gloucestershire were respected in this research. Informed consent of all people who provided data were obtained, and the study and the use of data was explained verbally and in written form. The interviewees received an invitation letter with clear explanations prior to the interview appointment. It was clearly stated that participation was voluntary and could be stopped at any time during the interview. Privacy, anonymity and the well-being of the research participants were ensured as far as possible. This means that names of the candidates and names of third parties that were mentioned during the interview as well as company names were anonymised in the transcripts. Transcripts have been stored by securing data with high encryption. This research took place partly at the workplace of the researcher. The dual roles as a researcher and a colleague requires particular ethical considerations (Bryman & Bell, 2015). The people involved could have dependencies, e.g., in terms of command or power structure, and any harm needs to be avoided. As these employees might feel forced to participate or may be afraid to say “no,” or tell stories that the interviewer would like to hear, the selection of interviewees within the command structure of the researcher were completely avoided, although the access to this population would have

been much easier. Merriam (1998) points out that the interviewer probably induces unanticipated long-term effects in in-depth interviews, if awareness of something painful appears out of memories of the interviewee, for instance. She recommends improving the conditions of an interview by asking about positive experiences such as successes. This has been taken into account and during the interview process, questions were asked in such a manner that the conversation went around successful cases in the perception of the interviewee. The attitude of the researcher was to gather data to construct a joint reality and not to change the interviewee, as recommended by Patton (1990). An ethical issue may occur, if interpretations are influenced by theoretical positions or personal biases (Merriam, 1998). Therefore, mainly open-ended questions were asked, honesty and accuracy were paramount. Being transparent was a key attitude of this study, and possible identified biases have been outlined in this report. No sponsorship has been received, and there were no dependencies to investors as requested by Merriam (1998). Thus, no issues regarding control of data have been identified.

3.4. Conclusion

The aim of this chapter has been to provide the rationale regarding methodology and methods, and the research process has been presented. The study followed a social constructivist epistemology with no ontological claims regarding subjective or objective reality. Leadership relations are dependent on context and situations; therefore, truth is subjective. Knowledge is socially constructed by people who experience particular situations and also by the researcher who tries to develop an understanding of these situations. As a consequence, this research has been designed as a qualitative case study where interviews have been conducted to gather data. Thematic analysis of data has been applied to produce the findings.

4. Data Analysis and Discussion

4.1. Introduction

In chapter 2, the literature review, research gaps have been analysed regarding SI related transformational leadership, the facilitating influence of governance and governmentality and the monitoring and improvement of effective leadership. Beyond that, a theoretical framework has been provided. In chapter 3, the philosophical position and methodological consequences have been justified. Semi-structured interviews provided data and a thematic analysis was selected to be applied. This chapter 4 presents the findings of the thematic analysis after the interviews as well as a discussion to connect findings to literature. Findings are provided as themes in this chapter, and evidence to each related theme is provided and discussed. In section 4.2.1 themes to answer RQ1 to achieve RO1 in terms of leadership behaviour are presented; these are identified as SI related TFL to increase social identity and work engagement in project teams. In section 4.2.2 themes of governance and governmentality to facilitate SI related TFL to answer RQ2 to achieve RO2 are presented. In section 4.2.3, measures to monitor and to improve leadership effectiveness are presented and discussed, in order to answer RQ3 to achieve RO3. In section 4.2.4. a synthesis of findings is conducted and a proposal for a leadership framework is offered to meet RO4.

4.2. Findings

Interviewees reported on leadership behaviour during the interviews. These activities were assessed if they had SI related TFL traits and they have been collated into themes. Themes regarding RQ1 to achieve RO1 are displayed in Table 35.

| No. | Research Question | Theme | Section |
|-----|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------|
| #1 | How can TFL cause SI in project teams that lead to increased work engagement? | T1.1: Sharing and retaining values and beliefs | 4.2.1.1. |
| | | T1.2: Becoming passionately involved in the collective goal | 4.2.1.2. |
| | | T1.3: Dissolving hierarchies and providing empowerment to project team members | 4.2.1.3. |
| | | T1.4: Providing and keeping clear joint goals & performance expectations | 4.2.1.4. |
| | | T1.5: Explaining the meaning of the project | 4.2.1.5. |
| | | T1.6: Establishing a strong discussion culture and arguing convincingly | 4.2.1.6. |
| | | T1.7: Approaching project team members and being approachable | 4.2.1.7. |

Table 35: Themes Related to RQ1

During the analysis phase it became more and more evident that leaders used particular mediators to facilitate social identity effects. These mediators were either antecedents, or they were actively created by the leader. As a consequence, mediators that were salient in relation to TFL behaviour, have been assessed as important factors for facilitating leadership activities. The usage of these mediators also contributes to the “how” questions. If these mediators showed traits of governance or governmentality issues, they were also analysed in regards to RQ2, as it has been done in sections 4.2.2.6 - 4.2.2.10.

Interviewees reported on the influence of governance and governmentality on leadership effectiveness. Themes regarding RQ2 to achieve RO2 are displayed in Table 36.

| No. | Research Question | Theme | Section |
|-----|--------------------------------------------------------------------------------------------------|-------------------------------------------------------|-----------|
| #2 | How can governance and governmentality facilitate SI related TFL effectiveness in project teams? | T2.1: Empowerment of project role holders | 4.2.2.1. |
| | | T2.2: Jointly agreed project rules | 4.2.2.2. |
| | | T2.3: Taking and maintaining decisions | 4.2.2.3. |
| | | T2.4: Clear communication on collective project goals | 4.2.2.4. |
| | | T2.5: Project sponsor involvement | 4.2.2.5. |
| | | T2.6: Appropriate skills | 4.2.2.6. |
| | | T2.7: Team events & meetings | 4.2.2.7. |
| | | T2.8: Project location | 4.2.2.8. |
| | | T2.9: The customer | 4.2.2.9. |
| | | T2.10: Project artefacts | 4.2.2.10. |

Table 36: Themes Related to RQ2

Interviewees reported on how to measure and how to improve leadership performance. Themes regarding RQ3 to achieve RO3 are displayed in Table 37.

| No. | Research Question | Theme | Section |
|-----|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------|
| #3 | How can leadership performance be measured and improved for project-based business in IT companies? | T3.1: Individualised leadership effectiveness KPI definition and monitoring | 4.2.3.1. |
| | | T3.2: Frequent experience exchange and reflection | 4.2.3.2. |
| | | T3.3: Leadership coaching | 4.2.3.3. |

Table 37: Themes Related to RQ3

The next three sections emphasis on the elaborated themes to answer the research questions. Some statements by the interviewees are quoted to demonstrate evidence regarding the findings. The names of the interviewees have been coded by a confidential reference table (e.g., #P1) to assure anonymity of the participants of this study. To meet the triangulation criteria, it was verified that stakeholders from different companies in the German IT industry and different roles (leader, follower, and observer) were represented. By this measure it is proven that perceptions come from different roles and perspectives. Evidence is provided by the below sample quotes.

#P1 has been in a leader’s role from company “D”:

“Basically, because everyone was treated equally - regardless of hierarchy. (...) And I also believe that they had the impression that it was fair. So that people say, okay, yes, most of them can certainly remember what happened last time. And (...) that it basically has consequences for everyone equally. (...) so that they have the confidence that there is some form of justice (...).” (#P1)

#P7 has been in a follower’s role from company “E”:

“That was fun from so far, so this strictly hierarchical organization, where you are strictly told from above what you have to do, was almost non-existent. The guidelines were roughly clear.” (#P7)

#P16 has been in an observer’s role from company “O”:

“(…) he has reorganised the entire organisation (...) reorganised again. He has completely integrated product development into the team and no longer says: ‘Hey, we have product development and then I have the project team’. Instead, he said: ‘Hey, product development must immediately become part of the team and they must also have immediate customer contact in the requirements workshops (...)’. Flat hierarchies and a leadership culture that is appropriate to the industry and the times and that can also change and that you also exemplify. And that is the issue for large companies, I think, to reduce hierarchies and to look at what is the core and the core of what I do and where is the trust.” (#P16)

The three interviewees had different roles and they worked for different companies. The perceptions in this sample are similar and are related to T1.3, where these quotes show the necessity of dissolving hierarchies. This triangulation of sources was important in the phase of interpreting data and developing themes.

4.2.1. Transformational Leadership and Social Identity (RO1)

The first objective (RO1) of this study is to identify causal relations of SI and TFL that lead to work engagement in project teams by finding answers for RQ1. Themes, that have been identified after analysis of the interviews have been allocated to TFL and SIL and evidence has been provided by relevant

literature. By this measure it is demonstrated that leadership behaviour has been transformational and is also related to social identity. Leadership style is represented by its components, and allocation of behaviour might of course have multiple relations. Regarding evidence it is suggested that there should be at least one interpretation of salient commonality of TFL and SIL. The following sections provide findings from interview data that provide answers regarding RQ1.

4.2.1.1. T1.1: Sharing and Retaining Values and Beliefs

Most of the interviewees mentioned that the leader shared and retained values and beliefs, while leading the team.

The story of #P8 is particularly enlightening. #P8 made good experiences with a specially scheduled “values workshop” for this purpose at the beginning of the project, where the team actively discussed about values and beliefs.

“He also made sure very early on that the team found each other at all, regardless of content issues. One format that I really appreciate is a so-called values workshop: To get to know each other in the beginning, especially with so many people, what is important to us as a team, as a new team, what is actually important to us as a team? What are our values? (...) The people left this workshop mega satisfied with a feeling of team - after that already (...)” (#P8)

The results of the workshop were integrated into the project policies. It was also important that leaders “walk the talk” as also suggested by Simons (1999). #P1, #P2, #P3, #P10, #P11, #P12, #P16 and #P19 mentioned that leaders were straight and consistent regarding their convictions and in this way, SI occurred in the team. This is shown in the below quote from #P2:

“And this own motivation, that is, this outward appearance, that in principle he himself is massively convinced of the goal, that he really drinks, breathes and eats that, that was very important in the situation.” (#P2)

This behaviour was also interpreted as having the attribute "personality of the

leader". Sharing values was also noticed in the context of appreciation. #P4, #P6, #P7, #P8, #P11, #P13, #P14, #P15, #P16, #P18, #P19 and #P20 reported that the leader actively tried to integrate team members into the team by appreciation. #P6 put it this way:

“Yes, first of all through the feeling that you are on a common mission and that you share certain values, which is exactly what the professionalism of these trades and what you deliver is. (...) your own personal experience that you hold the appreciation for your own profession so high. And I think that is very important for all of us here in this business field, (...)” (#P6)

It was noticeable that team events & joint meetings were used in some cases as communication platforms for value work. Evidence is given by the quote of #P8, for instance, who conducted the values workshop. A further finding is, that commitments towards the customer were strong parts of the values that supported justification for all team efforts as reported by #P1, #P4, #P11, #P12, #P16, #P18 and #P19. The quote below indicates that:

“An identity was created, so to speak, on the subject of ‘we create the jobs of the future’ or ‘we create added value for the customer’ (...). But the point was that I was actually convinced that the way was the right one anyway, that is, to do it through some form of persuasion” (#P1)

The theme “sharing and retaining values and beliefs” can be assigned to the TFL component “idealised influence (behaviour)” as the MLQ uses a similar sample to measure TFL: “my supervisor talks about his/her most important values and beliefs” (Avolio, Bass, et al., 2004). The personality of the leaders also played a role to facilitate this behaviour. This can be derived from the statements of #P2, #P3, #P10, #P11 and #P12 as they match to the MLQ samples “go beyond self-interest for the good of the group,” and “display a sense of power and confidence.” Thus, “idealised influence (attributed)” has been salient as well (Avolio, Bass, et al., 2004). Furthermore, the theme can be assigned to the SI component “identity entrepreneurship,” as discussions about values and valuing the team have been intended to craft a sense of the team (Steffens, Haslam, Reicher, et al., 2014). This means that this TFL behaviour is also social identity leadership and confirmed by literature. The

idealised influence of leaders induces trust on an interpersonal level, and trust in the supervisor is a central factor for team effectiveness (Gillespie & Mann, 2004). Trust in leaders mediates organisational identity (Nisar Khattak et al., 2020; van Knippenberg & Hogg, 2003). Findings demonstrate that this is also valid for project teams within the IT industry in Germany.

Findings 1.1: It was noticed that TFL can cause SI by “sharing and retaining values and beliefs” to increase work engagement in project teams. Idealised influence behaviour/attributed (TFL) and identity entrepreneurship (SIL) were the most suitable components. Joint team events & team meetings were sometimes used as communication platform as they facilitate this behaviour. The commitments towards the customer were sometimes part of the values and a rationale for efforts in the project. Furthermore, the personality of the leader supports this behaviour.

As a result of this analysis, “sharing and retaining values and beliefs” contributes to answering RQ1, as this transformational leadership behaviour causes social identity in project teams with an impact on increased work engagement.

4.2.1.2. T1.2: Becoming Passionately Involved in the Collective Goal

All interviewees provided examples to show that leaders became personally involved in the collective goal, and acted as role models for their followers. It was particularly noticeable that leaders represented the project team towards other stakeholders and that they took their engagement with passion. Leaders acted as role models for their followers. This behaviour can be allocated to the TFL component “idealized influence (behaviour)” (Bass & Riggio, 2006). From an SI perspective this behaviour is at first prototypical as the leader shows the group by his own activities that he/she is part of the group (Steffens, Haslam, Reicher, et al., 2014). #P1, #P3, #P9, #P14 expressed that this is a habit you need to adopt, if you would like to motivate others to do it in a similar way. #P1, #P4, #P5, #P6, #P7, #P9, #P12, #P16, #P17 reported that leaders’ involvement was beneficial for the group. This can be understood as “identity

advancement” (Steffens, Haslam, Reicher, et al., 2014). #P11, #P14 reported that leader’s involvement has been used to craft the team, and this is “identity entrepreneurship.” Finally, strong involvement for the collective goal can of course show all kinds of SI traits. However, prototypicality traits were perceptible in each project sample. Some mediators were noticeable as well. #P2, #P5, #P9, #P16, #P19, #P20 reported the advantage of the same project location. Teams can permanently observe the involvement of leaders. #P1, #P4, #P9 reported “identity advancement” traits, because leaders represented the team in front of the customer. A good example is the statement by #P9.

" 'Look, how can we solve this together now? So now it is not only your problem, but I as project manager am standing somewhere in front of you, I represent you at the customer' (...). I mean, team spirit (...) you don't leave anyone hanging somewhere, (...), 'Well, I'm also here on site now', even if working on site is perhaps not always easy and very pleasant (...) or to send a signal, (...). And classically, the project manager somehow goes home with the last employee." (#P9)

#P11 mentioned the importance of team events for “identity entrepreneurship.”

“I took time with these people one at a time. Of course we did the usual team-building things: We went out for beers in the evening ... but that, I thought, was just part of it. When you fought together during the day.”
(#P11)

Interviewees reported particularly that leaders were involved and represented the project team towards stakeholders outside the project teams. #P1, #P3, #P4, #P5, #P8, #P11, #P12, #P13, #P14, #P16, #P18, #P20 mentioned discussions or negotiations with the customer. For example, #P8 said:

"I'm putting myself in front of the team. So I had spoken for the team, even if they were unpleasant topics towards the customer or something... never pass things through, never get out of the way and say: 'The problem was caused by the member of my team.' (...) I'll clear it up." (#P8)

#P9, #P10, #P15 emphasised the representation towards the senior management. For example, #P15 said:

“In the course of the internal hurdles or restrictions that we have, I would say that it has pre-clarified these things with the management in

order to eliminate things that could be difficult, to clear hurdles out of the way.” (#P15)

This behaviour can be allocated to the SIL component “identity advancement” as the leaders did something for the group. It can be also assigned to the TFL component “ideal influence” as the leader acts as role model for their followers.

In particular the importance of passion of leaders was noticeable during the interviews. One could still clearly perceive the passion in the interviews, as with #P7:

“(…) we want to work together towards a goal, towards a goal and we want to achieve it together, and that brings us more if we work together sensibly than if we bash our heads in, (…) I think that brings with it a high level of optimism right from the start.” (#P7)

“Talk enthusiastically about what needs to be accomplished” is a sample of the MLQ and measures “inspirational motivation” (Avolio, Bass, et al., 2004, p. 95). “Arousing team spirit” is mappable to IM as well (Bass & Riggio, 2006, p. 6). Therefore, this behaviour can accordingly be allocated to this TFL component. With passionate behaviour leaders embody, what the project team stands for. This can be interpreted as prototypical behaviour. By arousing team spirit as well, leaders also develop an understanding of what it means to be a member of the team. This can be allocated to “identity entrepreneurship” (Steffens, Haslam, Reicher, et al., 2014).

Some mediators were also noticeable. If project work took place in projects with an innovative character, as reported by #P1, #P2, #P6, this situation eased, thus inducing enthusiasm. #P6 said:

“(…) that he spoke about ServiceNow in such a tone as almost of his lover... he has in principle (...) described the target state very (...) colourful, (...) which has actually occurred to a large extent. And this own motivation, (...) this outward appearance, that he is in principle massively convinced of the goal himself, that he really drinks, breathes, eats that, that was very important.” (#P6)

For #P8, the leader’s speech and communication capabilities helped to raise

enthusiasm.

“(...) but so really such enthusiasm in the language, so with a lot of energy (...) And also through, I'd say, good storytelling, but not at all like that, (...) so no, so the stories really sell well, so really well presented with this enthusiastic voice, with a lot of body language, be present. (...) he was always there anyway, showed himself and stood physically in front of the people. And body language and things like that are part of it. From my point of view, these are a few topics that help to generate enthusiasm and to be credible.” (#P8)

Team meetings and team events also developed team spirit as stated by #P5, #P11, #P12, #P13, #P16.

“Yes. So in any case by regular meaningful attendance, (...) also team events. So it was very important for the team to get together again and again in a non-project framework, to have team events there, i.e. climbing garden, team trip, dinner - all these soft factors were a very, very important component.” (#P5)

Findings 1.2: TFL can cause SI by “getting passionately involved for the collective goal” to increase work engagement in project teams. “Ideal influence (behaviour)” and “inspirational motivation” (TFL) as well as “identity prototypicality”, “identity advancement” & “identity entrepreneurship” (SI) were most salient. Working at the same location or team events facilitated perceptions of followers, as they can permanently observe the leader. Representing the team towards the customer or towards the management facilitated team identity. Innovation projects made leaders’ passionate involvement more noticeable. Leader’s speech and communication skills helped followers to perceive the leader passionately involved. As a result of this analysis, “getting passionately involved for the collective goal” contributes to answer RQ1 as this transformational leadership behaviour causes social identity in project teams with an impact on increased work engagement.

4.2.1.3. T1.3: Dissolving Hierarchies and Empowering Project Team Members.

Interviewees reported that project leaders tried to dissolve existing hierarchies and tried to provide empowerment for dedicated tasks to team members. Thus, project leaders need to manage shifting power between project team members. Dissolving hierarchies is two-fold. Firstly, hierarchies of the line organisations need to be dissolved during the engagement of managers and employees within a project team. Employees have a position in the permanent or line organisation. #P1 brought it to the point:

“Basically, because everyone was treated equally - regardless of hierarchy. (...) And I also believe that they had the impression that it was fair. So that people say, okay, yes, most of them can certainly remember what happened last time. And (...) that it basically has consequences for everyone equally. (...) so that they have the confidence that there is some form of justice (...)” (#P1)

This means that the project leader managed those positions in the line organisation which had no influence on power on the project team. The statement of #P16 goes in the same direction. Secondly, dissolving hierarchies needs to be achieved within the project team. A good example is #P6 who stated the importance of putting the team at eye-level in relation to the project manager.

“And then you'd be at eye level and then you can talk to them. So and this job application situation, which then led to the fact that he opened up completely to me.” (#P6)

#P3, #P7. #P8 see it in the same way. In addition, #P5 sees the need to break “silo-thinking” in the project team and by this he means supporting outside the box thinking to achieve the joint target. #P19 sees the need for a collaborative way of working independently of status and hierarchies. #P13 emphasised the importance of information distribution. Responsibilities could change during the project time.

Empowerment of team members means, that they can work on some tasks on their own responsibility, either as an individual or as a group. Leaders also used this leadership behaviour also to unfold creativity of their followers and to

encourage responsibility for new approaches.

The empowerment of project team members regarding the responsibility of work tasks was especially emphasised by #P1, #P2, #P11, #P13, #P15, #P20.

“There was a clear division of tasks, which was distributed in the kick-off and then also in the status meetings. That is, there was a person responsible for each task and someone who supported the whole topic, in the sense of group work. And then a reviewer was defined, i.e. someone who did the quality assurance again.” (#P15)

In addition, #P1, #P2, #P13 and #P20 stated that leaders had clear expectations on fulfilment of the tasks. #P20 said:

“(…) that you clearly define - really as stupid as it sounds - who is in charge of the individual streams and what the expectations are of the respective sub-project leaders (...). ‘You don't need to coordinate every piece of s* (abbreviated by the author) with me. Because, as I said, if it gets technical, (...)’ I don't care as long as it works.” (#P20)

#P1 finds it important that someone who is empowered to do something has also to be committed to the result of the task. #P4, #P6, #P9, #P10, #P16, #P17, #P18, #P19 appreciated the freedom that the project leader provided to try things out, to solve problems, or to be creative.

“Creative freedom, meaning that the group has the freedom to solve things in a way that is somehow helpful for the group.” (#P19)

#P7 mentioned that this behaviour also leads to feeling responsible for things that need to be done to achieve the common goal. This leadership behaviour values the expertise of experts and can be derived from statements from #P4, #P8, #P11, #P17 and #P20.

Charismatic leaders are successful leaders, irrespective of hierarchies (Tyssen, Wald, & Spieth, 2014). Thus, this behaviour can be mapped to “ideal influence” or “inspirational motivation” as these are charismatic TFL components (Bass & Bass, 2008). Providing empowerment to employees has the potential to establish a climate of trust that increases team spirit. This behaviour can be mapped to all four TFL components (Choi et al., 2016). The potential of this behaviour to arouse team spirit indicates that “identity entrepreneurship” is involved (Steffens, Haslam, Reicher, et al., 2014). As

empowerment provides new structures with new ways of working, “identity impresarioship” is involved as well (Steffens, Haslam, Reicher, et al., 2014). Clear communication was noticed as the most salient mediator for these activities by the author.

The statements by the interviewees show also saliences of “intellectual stimulation” as well as “individual consideration,” because leaders helped team members to develop their strengths and to unfold creativity (Bass & Riggio, 2006). Team meetings were the platform to present the results to be integrated in the project solution. This identity work can be allocated to “identity entrepreneurship” as “leaders make people feel as if they are part of the same group” (Steffens, Haslam, Reicher, et al., 2014, p. 1021).

Findings 1.3: TFL can cause SI by “Dissolving hierarchies and empowering project team members” to increase work engagement in project teams. All four TFL components and “identity impresarioship” & “identity entrepreneurship” (SI) were most salient. Clear communication facilitated leadership behaviour. Team meetings were the platform to present work results. As a result of this analysis, “dissolving hierarchies and empowering project team members” contributes to answer RQ1 as this transformational leadership behaviour causes social identity in project teams with an impact on increased work engagement.

4.2.1.4. T1.4: Providing and Maintaining Clear Joint Goals & Performance Expectations

The commonality of the reports by the interviewees is that all project leaders defined and announced clear joint goals combined with a strong will to jointly achieve them. Orientation has been provided to the team members by providing joint goals. The meaning of goals in this sense covers several aspects. Firstly, the communication of the joint project goal was found to be important by #P2, #P3, #P7, #P8, #P13, #P14, #P15, #P17, #P18, #P19, and #P20. For example, #P17 said:

“I think it is immensely important to communicate to all team members

what the goal is, what you want to achieve, what it is all about. (...) And it has to be as concrete as possible and comprehensible to everyone in the team from their perspective. (...) It is perhaps a bit idealistic, but it must be clear to everyone in the team what the commander's intent is, so to speak." (#P17)

#P2 emphasised keeping to this goal during the project time.

"So in this particular case it was first of all really important to have a goal first (...) And then it was essential in the situations that you stick to what you had identified as the project premise." (#P2)

Secondly, the discussion on near-time work goals within the team was also important as stated by #P1, #P2, #P4, #P5, #P6, P#9, #P10, #P11, #P12, #P15, #P16, #P18, #P20. With this continuous discussion, orientation within the project plan was provided and expectations were communicated. #P11 said:

" 'We'll do exactly that by the end of the week, we'll get that done'. Then we presented it at the end (...) We had this big, long hallway and it was really hanging (...) A0 printer prints out the complete project plan with a bar like this, where we are right now, where everyone saw every day, there we are. There was also moved on every day to see where we are, where we should have been, where we are now, what happens next. So there was a relatively high degree of transparency - inwards, but also, of course, outwards. " (#P11)

This leadership behaviour "crafted a sense of cohesion" of the team and can be assigned to the SI component "identity entrepreneurship" (Steffens, Haslam, Reicher, et al., 2014, p. 1021) as well as to the TFL component "inspirational motivation" as leaders "create clear expectations that followers want to meet and also demonstrate commitment to goals and the shared vision" (Bass & Riggio, 2006, p. 6). Some interviewees, for example, #P1, #P2, #P4, #P10, #P13, #P16, #P20 stated that communication took place during joint team meetings. #P10 said:

"So what was extremely important was the progress of the project (...) And I think it was important to him that the group really delivers output and stands for it (...) Well, we had our daily group meetings with a whiteboard. (...) and then at the next meeting we came back to the

points and asked for progress (...) What (...) he did was the detailed planning, (...) through team meetings and individual assignments, intermediate goals and clear assignment, (...) who does what (...) and because he also always gave a general picture of the situation, (...) But of course he also formulated it clearly. (#P10)

#P10, #P11 and #P20 stated also that they visualized their goals by project artefacts such as plans so that everyone can see them, when passing the floor or attending a meeting.

Findings 1.4: TFL can cause SI by “providing and keeping clear joint goals & expecting performance” to increase work engagement in project teams. “Inspirational motivation” (TFL) and “identity entrepreneurship” (SI) were most salient. Communication took place during team meetings and facilitated SI related leadership behaviour. Visible project plans helped to provide orientation to the project team. As a result of this analysis, “providing and keeping clear joint goals & expecting performance” contributes to answering RQ1, as this transformational leadership behaviour causes social identity in project teams with an impact on increased work engagement.

4.2.1.5. T1.5: Explaining the Meaning of the Project

Interviewees reported that it was important for project leaders to explain the meaning of the project.

It is important to explain what the project is about as stated by #P1, #P2, #P4, #P6, #P7, #P8, #P11, #P12, #P13, #P16, #P18, #P19, #P20. #P1 stated the meaning as a vision:

“(…) that I was trying to create a vision of sustainability (…) an identity came, so to speak, on the subject of ‘we are creating the jobs of the future’ (…) ‘we create added value for the customer’ (…) and this basic idea has led to (…) dissolve this lethargy a little bit (…) to go the extra mile.” (#P1)

#P6 went in a similar direction:

“And that really got the (…) people excited in the end, because they

said: 'Wow, that's a cool number.' (...) I always try to have a sort of mission statement where we say: "That's the big story, the big narrative." (...) that's worth doing. I've always tried that." (#P6)

#P2 and #P8 emphasised that the "question of why" must be clear. In the case of #P4 it became clear that the work of the project employee was meaningful, because he perceived that his work contributed well to the solution. #P5 reported that investments in social events took place, and this led to the perception, that the project was important. #P7 and #P12 stated that the overall picture needed to be clear.

"(...) clearly communicated (...) so it doesn't help me if I just throw small aspects of what I'm doing on the wall and again no one understands why we're doing this in the first place - maybe also create an understanding for an overall picture that might also create a bit more focus (...)" (#P7)

This behaviour can be assigned to TFL component "inspirational motivation," because transformational leaders "inspire those around them by providing meaning" (Bass & Riggio, 2006, p. 6) as well as the SI component "identity entrepreneurship," as the leader "crafted a sense of cohesion" of the team by explaining the meaning of the project (Steffens, Haslam, Reicher, et al., 2014, p. 1021). Several mediators used by the project leaders could be identified. #P1, #P2, #P6, #P11 mentioned that their projects intended to deliver innovations to their customers. This might have eased the explanation of meaning. #P1, #P4, #P6, #P7, #P8, #P11, #P12, #P13, #P15, #P16, #P18, and #P19 argued with the customer.

"We want to bring this red project to a meaningful conclusion, which will also benefit the client." (#P11)

It seemed to be very important for project teams to bring values to the customer as someone who pays for the project results. #P1 also explained the benefit for the team members, when they succeed. #P4, #P7, #P8, #P11, #P12, #P15, #P16 and #P18 mentioned the importance of communication to do this. #P5, #P13, #P15 used team events to communicate it. For #P13 it made sense to apply this behaviour early in the project, as he used the project kick-off meeting:

"In the context of the kick-off meeting (...): 'Each of us knows the

announcement of the (...)’ and has then structured it in this way and explained to us how important the topic is for the customer (...) ‘Yes, and that's how it really looks in concrete terms, and that's what has to be done, or these are the topics that the (...) expects from us.’ He got that across very well. (#P13)

Findings 1.5: TFL can cause SI by “explaining the meaning of the project” to increase work engagement in project teams. “Inspirational motivation” (TFL) and “identity entrepreneurship” (SI) were the most salient. Innovations have the potential to ease explanations of meanings by leaders. Values for the customer or the own team were important topics. As a result of this analysis, “explaining the meaning of the project” contributes to answering RQ1, as this transformational leadership behaviour causes social identity in project teams with an impact on increased work engagement.

4.2.1.6. T1.6: Establishing a Strong Discussion Culture and Arguing Convincingly

It seems to be an advantage for identity work within a team, if a strong discussion culture has been established. #P1, #P2, #P4, #P5, #P6, #P8, #P9, #P11, #P14, #P15, #P16, #P17, #P18 and #P20 reported that discussions within the team were appreciated and project team members were integrated during the decision-making process. #P4 said:

“But there was just a good exchange with the architects. They simply asked the developers for their opinion. And then they came up with a good solution together (...) these architects then also influenced the project managers and (...) then correspondingly brought about the, yes, that is, the changes, that is, brought about the changes (...) argumentatively (...) very factually argued at that point (...)’Okay, we as a team have built up a lot of bullshit at this point.’ And then said accordingly: ‘Okay, how can we look ahead?’ ” (#P4)

If someone wanted to enforce his/her intended actions, he/she needed convincing argumentation as stated by #P1, #P2, #P4, #P5, #P6, #P8, #P17, #P19. This integrative process, can be interpreted as “Identity

Entrepreneurship” as the leader “makes people feel as if they are part of the same group” (Steffens, Haslam, Reicher, et al., 2014, p. 1021).

As the leader listens to his team, this is comparable to the MLQ sample “seek differing perspectives when solving problems” and therefore this behaviour can be assigned to “intellectual stimulation” (Avolio, Bass, et al., 2004, p. 95). There were also strong hints for a positive error culture as stated by #P4, #P8, #P11, #P16, #19, #P20. For example, #P8 put it this way:

“(…) No cheating, no unnecessary politics or similar things, but simply (….) saying and doing what I mean. Be straightforward. (….) Respectful interaction - no moaning, no shouting around- (….) even if people have made a mistake. Which brings me to the subject of "error culture". So mistakes are permissible (….) so through a very good language, so in terms of emotional language (….)” (#P8)

This is also a hint for “intellectual stimulation”, as new approaches and creativity by team members are supported (Bass & Riggio, 2006). To make discussions in the group happen, team meetings and team events served as mediators. For arguing convincingly, leaders also needed professional experience & skills as well as communication skills.

Findings 1.6: TFL can cause SI by “establishing a strong discussion culture and arguing convincingly” to increase work engagement in project teams. “Intellectual stimulation” (TFL) and “identity entrepreneurship” (SI) were most salient. Professional experience & skills facilitated argumentation capabilities of the leader. Joint team meetings were used as a communication platform which facilitated team building discussions and arguing. As a result of this analysis, “establishing a strong discussion culture and arguing convincingly” contributes to answering RQ1 as this transformational leadership behaviour causes social identity in project teams with an impact on increased work engagement.

4.2.1.7. T1.7: Approaching Project Team Members and Being Approachable

It was found important that teams found their leaders approachable, and in turn leaders were comfortable in approaching members of the teams. The initial aim was to socialise with the team members or at least to cope with personal issues as stated by #P2, #P3, #P5, #P6, #P7, #P8, #P9, #P10, #P11, #P12, #P16, #P18, #P19. Furthermore, #P2, #P10 used the opportunity to analyse strengths and weaknesses of the individuals to craft a team by giving work packages to the most suitable team members. #P2 said:

(...) that they have also done some things together in private, that he can already very strongly assess the strengths and weaknesses (...) But it turned out very well that almost the entire core team was then sitting in the same office. (...) they really got into such an agile working mode, (...) with a modified Scrum approach - they had their morning meeting in the morning. (#P2)

For example, #P3 persuaded a team member to join the group, after socialising and establishing a link to the employee:

“You always have time to talk to them. And then you also get topics, what hobbies he has. (...) But if you can catch it in conversations, you know where it lies. And above all, whatever it is, look in advance, is it possible, is it suitable for them. And if you have done that three or four times, then you can also say on the fifth time: "Look, we still need you. Can't you postpone it?" (#P3)

Another view was given by #P6 who considers leadership as being an application situation for the leader, in which the leader as applicant approaches the team member in order to create an open basis for communication:

“So and this application situation, which then led to the fact that he opened himself completely to me. And then we noticed what we used to do together, for example. And then we talked about what else we did. And then he told me for example: (...) And then you suddenly have a completely different basis. And already in the third, fourth conversation you start talking about things, "what would we like to do? And then there's a project. And then we just think about what we are convinced of. And when you find a consensus, then you're there.” (#P6)

#P8, #P12 approached employees to give them a voice because some team

members are shy than others. #P12 said:

“So that was a very important point, that you simply talk to people about things, a little bit (...) about the professional side, of course, what's going on in the project, but also to check out what kind of person he is, (...). Because even at team meetings there are simply people who are more reserved than others. And that's where the bilateral conversation is important, (...) that it's still a relaxed atmosphere.” (#P12)

#P4, #P9, #P15, #P19 stated that leaders approached some members of the teams to offer support if needed. #P5, #P11, #P13, #P14, #P16, #P19 found it important for their employees that leaders were approachable. #P19 said:

“And actually through the theme of helping each other. So, it was always the case that if you (...) asked someone, they always got up, went to you, explained something to you (...). So, we also had a lot of that, that sometimes people were simply taken aside for certain topics and one-to-one conversations were held. And to do that in such a call marathon is also difficult.” (#P19)

Being aware of personal concerns and treating people individually as a whole person is allocated to the TFL component “individual consideration” (Bass & Riggio, 2006). This is also supported by Alimo-Metcalfe and Alban-Metcalfe (2001) who developed a different MLQ, where accessibility and approachability is part of the individual consideration TFL component. This social base of communication enabled identity work as leaders “make people feel as if they are part of the same group” (Steffens, Haslam, Reicher, et al., 2014, p. 1021). Although technical work was the focus of the project teams, the human factor was important for project leaders and project team members as well. A communication channel could be established by socialising at an individual level, and this has been one enabler for social identity work. Working at the same project location, team meetings or team events facilitated this leadership behaviour.

Findings 1.7: TFL can cause SI by “approaching project team members and being approachable” in order to increase work engagement in project teams. “Individual consideration” (TFL) and “identity entrepreneurship” (SI) were most salient. Working at the same project location, joint team meetings and team

events were used as communication platforms that facilitated confidence in approaching employees and the approachability of leaders. As a result of this analysis, “approaching project team members and being approachable” contributes to answering RQ1 as this transformational leadership behaviour causes social identity in project teams with an impact on increased work engagement.

4.2.1.8. Discussion

In this section, the meaning of the findings for theory and practice will be interpreted and discussed. Relations to RQ1 and the literature review are demonstrated to achieve RO1.

The literature review in chapter 2 indicates a research gap (GAP 1) in leadership theory, as there is a lack of understanding of leadership processes regarding the relation of transformational leadership and social identity, and how it impacts work engagement as a contributor for project success. While previous research mainly focused on quantitative surveys (e.g. Ding et al., 2017; Tyssen, Wald, & Heidenreich, 2014), RQ 1 has been answered by asking experienced employees during interviews in the IT industry about their experiences and opinions to obtain an understanding of the leadership processes. Initially, the results indicate at first the salience of seven leadership behaviour measures, which might be characterised as SI related transformational leadership, and secondly, the salience of applied mediators to facilitate leadership.

Leadership behaviour, as presented in the previous sections, caused social identity that led to increased work engagement in project teams in a sample within the IT industry. This was the particular discussion within the interviews. The interviewees presented a project, where they perceived that a leader caused social identity that led to increased work engagement. The questions of particular areas of TFL and SIL were asked to understand how leaders behaved. All projects were undertaken in the IT industry in Germany. As described in Chapter 3, the behaviour of the leader is the cause of SI and WE,

and is defined as an independent variable in this study. In addition, SI in the project team also increased work engagement and is a corresponding effect. These effects are dependent variables and were previously determined criteria for the samples. The analysis of data led to seven particular behaviours which to answered the question of how leaders caused SI in project teams. As outlined in the previous sections, the results suggest that behaviours T1.1 to T1.7 (themes of sections 4.2.1.1 to 4.2.1.7) might be characterised as TFL as well as SIL, and cause SI in project teams. Evidence has been proved by relevant TFL and SI literature. Leaders used particular mediators as analysed and described in the previous sections. These mediators were either given project characteristics (e.g., innovation) or actively used (e.g., social events) to facilitate leadership effectiveness. These findings have some implications for theory and practice, and the results build on existing theory of SI related TFL in the context of IT projects in Germany. Themes T1.1 to T1.7 with their mediating factors M1 – M7 are displayed in Table 38.

| No. | Research Question | Leadership behaviour | Mediators | TFL | SIL |
|-----|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------|---------------|
| #1 | How can TFL cause SI in project teams that lead to increased work engagement? | T1.1: Sharing and retaining values and beliefs | M1: Personality, team events & meetings, customer | II (a), II (b) | SIE |
| | | T1.2: Becoming passionately involved in the collective goal | M2: Project location, team events & team meetings, representing the team, innovative projects, appropriate skills | II (b), IM | SIA, SIE, SIP |
| | | T1.3: Dissolving hierarchies and providing empowerment to project team members | M3: Clear communication, team events & meetings | II, IM, IS, IC | SII, SIE |
| | | T1.4: Providing and keeping clear joint goals & performance expectations | M4: Visible project plan, team events & meetings | IM | SIE |
| | | T1.5: Explaining the meaning of the project | M5: Innovative projects, values for customer or team | IM | SIE |
| | | T1.6: Establishing a strong discussion culture and arguing convincingly | M6: Professional experience, appropriate skills, team events & meetings | IS | SIE |
| | | T1.7: Approaching project team members and being approachable | M7: Project location, team events & meetings | IC | SIE |

Table 38: Leadership Behaviours and their Mediating Factors

The importance of T1.1 to T1.7 for theory and practice is as follows:

T1.1 has been allocated to TFL components idealised influence (attributed) because of personality and idealised influence (behaviour) (Avolio, Bass, et al., 2004), and also allocated to SIL component IE (Steffens, Haslam, Reicher, et al., 2014) in section 4.2.2.1. According to Tajfel and Turner (1986), a person

could be categorised in either in-group or out-group, based on the value system. Team meetings and team events were used as communication platforms and, in the particular case of #P8, a “value workshop” was conducted. Shared values might induce trust at an interpersonal level, and trust in the supervisor is a central factor for team effectiveness (Gillespie & Mann, 2004). Trust in a leader mediates organisational identity (Nisar Khattak et al., 2020; van Knippenberg & Hogg, 2003). Important mediators have been identified, which contribute to the question of how the leader did it. Team events and team meetings were used for discussions in the collective, e.g. to conduct the value workshop. By sharing values in collective team discussions, team building is fostered that mediates TFL (Aga et al., 2016). This fits also with the theory that performance of team meetings is important for project success (Ericksen & Dyer, 2004; Goparaju, 2012). Beyond this, the role of the customer has been included in thinking of values by some of the interviewees. This is understandable, as the literature confirms the desired goal of customer satisfaction of project teams. (Rivera & Kashiwagi, 2016; Zwikael et al., 2019). The special role of team meetings and team events as well as the role of customers are discussed in sections 4.2.2.7 and 4.2.2.9 as they should be implemented in the governance framework of a company. The personality of the leader also played an important role. This is in line with a study conducted in Lithuania, where it is suggested that personality traits such as extraversion and agreeableness influence social identity and impact transformational leadership perception (Stelmokiene & Endriulaitiene, 2015). T1.1 is also important for practice. For example, sharing values at the beginning of the project might be a solid base for further collaboration in the temporary environment. Team meetings and team events and, in particular “value workshops” can be used to mediate this behaviour.

T1.2 has been allocated to the TFL component “idealized influence (behaviour)” (Bass & Riggio, 2006) in section 4.2.1.2. as role model traits were noticed. From an SI perspective this behaviour is at first prototypical as the leader shows the group by his own activities that he/she is part of the group (Steffens, Haslam, Reicher, et al., 2014), and secondly as “identity advancement” (Steffens, Haslam, Reicher, et al., 2014) because the leader’s

involvement has been used to represent the team in front of stakeholders outside the project team, in particular in front of the customer or the senior management. Thirdly, the leader crafted the team, and this is “identity entrepreneurship” (Steffens, Haslam, Reicher, et al., 2014). Finally, strong involvement for the collective goal can of course show all kinds of SI traits. This is obvious, as activity is necessary for TFL.

Involvement of leaders is an essential factor in servant leadership theory (Flotman & Grobler, 2020) and studies confirm the positive influence of servant leadership and social identity and work engagement (e.g. Akbari et al., 2014). Servant leadership theory with its roots in the 1970s (Greenleaf, 1977) and transformational leadership theory have different characteristics or components, with similarities and differences. A similarity might be “Serve others’ needs before their own” or “model appropriate behaviour” that suits T1.2 quite well to be allocated to the TFL component idealised influence (Smith et al., 2004, p. 83). Other similarities are “envisioning the future” or “clarify goals,” which are allocated to inspirational motivation (Smith et al., 2004, p. 83).

In addition, some mediators were also noticeable. For example, working at the same project location might have given followers the opportunity to observe their followers. The work location has impact on identity work and is confirmed by literature (Au & Marks, 2012; Lin et al., 2017). This specific mediator will be discussed in section 4.2.2.8 as this aspect should be considered in governance structures. Team events were again seen as important. Leaders’ passionate behaviour aroused team spirit and is a trait of “inspirational motivation” as well (Avolio, Bass, et al., 2004; Bass & Riggio, 2006). The passionate behaviour that leaders embody to show what the project team stands for, is prototypical behaviour. By also arousing team spirit, leaders develop an understanding of what it means to be a member of the team. This can be allocated to “identity entrepreneurship” (Steffens, Haslam, Reicher, et al., 2014). This analysis supports the theory that the passion of the leader induces followers to develop passion and work identity (Ho & Astakhova, 2020), and the involvement of the leader leads to social identity. Some mediators were clearly noticeable. Innovative projects seem to support the

passion of leaders and followers (Andreassen et al., 2015; Laura-Maija & Lindfors, 2019) and according to literature, innovation mediates TFL to achieve team performance (Khan et al., 2018). From an SI perspective, reputations of projects attract customers and encourage project team members to engage if projects are labelled as innovative, and the task of the project leaders is to convince (Sergeeva, 2017). The occurrence of innovative projects is common within the IT industry, as information technology is the base for all digitisation efforts like industry 4.0 or IoT, and this might be supportive for leadership.

A leader's speech and communication capabilities help to encourage enthusiasm, and this is also supported by literature (Cohrs et al., 2019). Team meetings and team events serve as communication platforms and facilitated as well to arouse team spirit.

Leadership behaviour T1.3 has been allocated to all four TFL components in section 4.2.1.3, and identity entrepreneurship and identity impresarioship were shown to be most salient. Based on the findings it is important that project leaders dissolve existing hierarchies and empower individuals or groups of project employees. The results build on existing evidence that TFL is positively related to empowerment and empowerment is positively related to social identity and team performance (Akbari et al., 2017; Jung & Sosik, 2002). The desire for empowerment of employees is positively related to applied transformational leadership, especially in countries like Germany (Gill et al., 2010). Theory is enhanced by providing evidence for the case of projects in the IT industry of Germany. Furthermore, as a contribution to practice there is evidence provided that it is the empowering behaviour of leadership styles in projects which support leadership effectiveness.

In section 4.2.1.4 it has been suggested that T1.4 might be allocated to inspirational motivation and identity entrepreneurship. Team meetings and visible project plans were used to communicate and to facilitate T1.4. Providing collective goals and the expectation of performance by transformational leaders, where individual and social identity and collective

performance is induced, is also supported by other studies (Akbari et al., 2017; Chang et al., 2017; Pradhan et al., 2018), including the Indian IT industry (Pradhan et al., 2018). Proper communication is essential to influence collective goals (Akbari et al., 2017), and project artefacts such as plans on whiteboards make goals visible for the team and support identity work in projects (Brown, 2017; Paring et al., 2017). The results enhance theory as T1.4 has been salient in projects within the German IT industry. These should be taken into account to improve practice by the communication of collective goals and expectations during team meetings, for instance.

T1.5 has been allocated to inspirational motivation and identity entrepreneurship in section 4.2.1.5. Innovation projects and customer values eased the communication for the leader. To ensure that project team members understand the meaning of a project, the application of inspirational motivation is important because meaningfulness of projects has a positive impact on social identity and employee engagement (Ghadi et al., 2013; Pradhan & Pradhan, 2016; Sahu et al., 2018). Clear communication, the use of project artefacts in projects and explaining customer benefits supported this behaviour. The role of communication is further explained in section 4.2.2.4. A great utility for #P1 to achieve social identity was the individual advantage for employees that could be derived from meeting the project goal. Drawing on work from Brown (2017) in the particular context of this project, identity work has been performed by psychodynamic approaches to mitigate anxieties of project team members. Furthermore, it has been supportive for leaders as, if projects had innovative characteristics, they could be included in their communication. Data further suggests that T1.5 enhances the theory, as this TFL behaviour also causes social identity and work engagement in German IT projects. Practice should consider this in communication towards the project team.

In section 4.2.1.6, leadership behaviour T1.6 has been allocated to intellectual stimulation and identity entrepreneurship. Professional experience and skills such as communication skills were supportive for the leader, and joint team meetings were used again as a communication platform. According to a study in the healthcare sector, TFL positively mediates reflections, including team

discussions and team discussions improve team performance (Anselmann & Mulder, 2020). Transformational leaders need to convey their visions so that people accept them (Bromley & Kirschner-Bromley, 2007). Furthermore, results enhance theory as T1.6 improves social identity and work engagement in German IT projects. In addition, T1.6 contributes to practice as this desired behaviour has an impact on the required skills and values of a leader. Executives need to ensure, that leaders are equipped with the right skills.

In section 4.2.1.7 leadership behaviour T1.7 has been allocated to individual consideration and identity entrepreneurship. According to literature, transformational leaders are approachable (Alimo-Metcalfe & Alban-Metcalfe, 2001; Pastor & Mayo, 2008) and approachability of leaders in low power distance countries such as Germany might be culturally expected by followers (Hofstede, 1984). This behaviour builds trust in the leader and can be used for building collective identities (Theron et al., 2004). As leaders affect their followers' self-concepts and self-categorisations, they also influence cohesiveness in groups and build social identity (Sanders & Schyns, 2006). T1.7 contributes to theory as it has been proved that a leader's approachability is desired in projects in the German IT industry, and it contributes to practice as the behaviour should be applied by leaders to create social identity.

As discussed in the literature review, some researchers see the importance of distinguishing between the components instead of only measuring encompassing TFL. Furthermore, this approach provides deeper understanding of the underlying leadership processes (e. g. Carreiro & Oliveira, 2019; Van Knippenberg & Sitkin, 2013). Therefore, the relation of SI and TFL needs further discussion regarding the TFL components. In section 2.4.5, the literature regarding the 4 TFL components in relation to social identity has been examined. It has been elaborated that idealised influence and inspirational motivation are group-focused leadership components as they moderate group performance (Wu et al., 2010). Furthermore, the question remains open, of how individual-focussed leadership components, intellectual stimulation and individual consideration induce social identity. The findings in sections 4.2.1.1 - 4.2.1.7 shed light on the underlying processes in the

particular context of projects in the IT industry in Germany. All four TFL components have been covered and the majority of themes have been allocated to the group-focused TFL components of idealised influence, and inspirational motivation. This is shown as follows:

T1.1, T1.2 and T1.3 were salient and allocated to the first group-focused TFL component idealised influence. This builds on TFL theory as leaders share their values, are involved and provide empowerment to team members. Leaders in these samples acted as role models and built trust. In temporary organisations such as project teams, it is important to build trust very fast. This is of course understandable, as people often do not know each other at the beginning of a project and trust might be a good base to develop team cohesion. Themes have been also allocated to the second group-focussed TFL component. T1.2, T1.3, T1.4 and T1.5 have been allocated to inspirational motivation. Describing and clarifying the goal, explaining its meaning, and aligning the team to it, by being permanently involved as a leader, provided inspirational motivation to the team. The sense of a project is to achieve its project goal and the project team needs to be aligned to it. Therefore, a leader's communication skills and visibility are necessary, for the leader to achieve this. Team meetings, team events, or working at the same project location mediated this endeavour.

The group-focused TFL components idealised influence and inspirational motivation cause social identity to improve work engagement. The findings suggest the dedicated behaviour T1.1 to T1.5 causes social identity in a project context in the IT industry in Germany.

According to the literature review, the situation of individual-focused TFL is still unclear. On the one hand, it is argued in the literature that this behaviour contradicts social identity as it contradicts depersonalisation (van Knippenberg & Hogg, 2003; Wu et al., 2010). On the other hand, there are examples to show that intellectual stimulation causes social identity in a specific context (Ali Pourmahmoud et al., 2019; Carnevale et al., 2019; Lai et al., 2018; Nohe & Michaelis, 2016), or that personalised leadership in terms of individual consideration causes a base for social identity (Ding et al., 2017; Lord et al.,

1999; Sanders & Schyns, 2006; Tyssen, Wald, & Heidenreich, 2014) as well. In this study individual focused TFL was also shown to cause social identity. T1.3 and T1.6 have been allocated to intellectual stimulation. Establishing a strong discussion culture at eye-level, and good argumentations by the leader build intellectual stimulation leadership. Furthermore, knowledge sharing within a project team is important for project success and TFL especially, if mediated by trust. Moreover, justice encourages project team members to take part in a discussion and to share their knowledge (Phong Ba & Hui, 2017; Zhu et al., 2019). A further finding shows that diversity and error culture support team learning and team discussions (Rupert et al., 2019) and consensus in team meetings aligned with the intention of leaders can be brought out by TFL via convincing arguments (Wodak et al., 2011). In the context of school leadership in Norway, trust in the community including discussions represent TFL (Aas & Brandmo, 2016). According to Chang et al. (2017) transformational leaders have the intention to demonstrate the importance of unit values and discussions are used to share values accordingly. This finding might connect T1.6 with T1.1. To make TFL happen, communication skills are essential for transformational leaders and communication training might improve TFL (Cohrs et al., 2019). Professional (or technical) skills can be seen as prototypical. These help leaders to show their competencies and might mediate leadership leading to work engagement (Graham & Snape, 2020).

Themes were also allocated to the second individual-focussed TFL component of individual consideration, and this is where T1.3 and T1.7 have been allocated. Low hierarchies combined with the opportunity to approach a leader or follower by everyone without barriers were most salient, as individual consideration leadership that caused social identity. Approachability facilitates the building of a relation between leader and follower. Leaders, as demonstrated in 4.2.1.7, can use relationships to influence self-concepts of followers and to integrate team members to the project team (Lord et al., 1999). As leaders find consensus of this leadership behaviour, it will also contribute to cohesiveness in the group (Sanders & Schyns, 2006).

The results provide new insights into the relationship of social identity and transformational leadership and closes some of the gaps in the literature. For the first time, the organisational context of projects in the IT industry in Germany has been chosen, and commonalities of TFL and SI have been addressed, contributing to the claims of Porter and McLaughlin (2006) and Dinh et al. (2014). Furthermore, the research gap in the understanding of underlying leadership processes in this particular context (Behrendt et al., 2017; Gardner et al., 2010; Hoffman & Lord, 2013; Parry, 1998; Takahashi et al., 2012; Tse & Chiu, 2014; Van Knippenberg & Sitkin, 2013; Wang et al., 2017) have been served by providing leadership behaviour and, in particular, project contexts by this qualitative study. As a conclusion, these findings can provide the answer to RQ1 of this study related to RO1.

4.2.2. Governance and Governmentality as Facilitator (RO2)

The second objective (RO2) of this study is to obtain an understanding of how governance and governmentality facilitates SI related TFL effectiveness in project teams.

The following sections provide findings that provide answers regarding RQ2. Themes in sections 4.2.2.1 to 4.2.2.5 have been identified based on specific interview questions regarding governance and governmentality. Themes in sections 4.2.2.6 to 4.2.2.10 have been identified as leadership mediators where governance or governmentality might be concerned, based on specific interview questions regarding SI related TFL.

4.2.2.1. T2.1: Empowerment of Project Role Holders

In section 4.2.1.3, the provision of empowerment to project role holders has been seen as important leadership behaviour. The empowerment of project role holders has also been identified by the interviewees, as an important factor regarding governance & governmentality.

The difference between T1.3 and T2.1 is that T1.3 is a leadership behaviour or activity, whereas T2.1 is a policy or rule in terms of governance, or an attitude in terms of governmentality. Empowerment in terms of governance is two-fold. Firstly, empowerment for the project manager and, secondly empowerment for the project employees is desired. #P2, #P4, #P5, #P9, #P10, #P11, #P13, #P19 reported on desired empowerment for project employees. #P5 #P15, #P16 and #P18 see a strong need to provide empowerment to the project manager to facilitate his/her leadership activities. For example, #P5 said:

"(...) but you knew exactly who was responsible for what (...). And to create something together as a team (...) that you simply say that everyone has known how to do his role, how to function. And it gave you the feeling, 'I know what I'm doing here, the others know what to expect from me' (...). By giving the project manager the empowerment to (...) decide on issues independently, and by providing support from within the governance structures, which is an added value for him. So, empowerment and support positions (...)you have to look at every organization and say: What are the absolutely necessary control elements that I absolutely must have?" (#P5)

#P8 said that missing empowerment leads to lack of decisions. Leadership would not be possible as it is connected to decision making. For #P15 and #P18 it is a matter of trust. #P9 sees empowerment as incentive and this can of course increase self-esteem. #P13 mentioned that it is important for leadership that you can stand by what you have said. #P6 finds that missing empowerment puts a project in danger because the project is dissolved somehow, thus missing empowerment also limits leadership activities. He said:

"The project itself must have a (...) clear perimeter in the sense of a shelter, where loyalty and subordination and also the management processes and procedures within the project are also perceived as the property of the project. This means that the project manager is not constantly talked into it from the outside, but is fully empowered and recognised as the temporary superior (...) Because if you reintroduce from the outside from the line organisation into the project, you practically have no more project organisation (...) You take away the

empowerment from the project manager, you tell the people actually you are not so important in the project - this endangers the whole motivation, mission, goals. And by re-governing you also create conflicts where you can't see them (...)." (#P6)

#P1 explained that empowerment was desired, but not provided, so he took empowerment by himself.

Missing empowerment can also be present, if managers intervene in single project activities by applying so called micromanagement as stated by #P6 and #P18, or if corporate governance sets rules that hinder project activities, as stated by #P8, #P11, #P13, #P14. For example, #P11 said:

"So, as I said, you have to allow a certain amount of freedom, you have to (...) make sure that you have people in the right places who don't just tick the numbers, but who also tick a bit with their heart - within the bounds of what we can afford financially, that's for sure. (...) What else is important? The processes should be designed to support you rather than hinder you. That applies generally (...). They should be as light as possible, lightweight, not so heavyweight, where you administrate yourself to death. But that's actually part of the support." (#P11)

The empowerment of project team members for specific tasks has been identified as important in SI building TFL behaviour and is found in section 4.2.1.3. If empowerment respectively authority is given to project team members, governance in projects is concerned (Biesenthal & Wilden, 2014).

As governmentality is the attitude of how people govern others (Müller et al., 2016) it is therefore also a matter of governmentality. People need to be trusted if empowerment is provided to project managers or project team members (Zwikael et al., 2019). If employees are empowered by their managers and equipped with very high sovereignty, governmentality might be characterised as a neo-liberalist attitude of these managers (Müller, 2019), and this behaviour is aligned with governance based on stewardship principles (Beata & Bogusław, 2015).

A result of this section is that empowerment of project managers and project employees facilitates leadership effectiveness and missing empowerment limits leadership effectiveness. The establishment of empowerment in the governance framework at project level and an attitude of superiors who have confidence in their employees facilitate leadership effectiveness.

Findings 2.1: Governance can facilitate leadership by establishing “empowerment of project holders” in the governance framework according to stewardship principles. Governmentality can facilitate leadership by having confidence in project holders by empowering them to do their job on their own responsibility, according to neo-liberalism principles. As a result of this analysis, the theme “empowerment of project role holders” contributes to answer RQ2, as the provision of empowerment might facilitate leadership effectiveness, and lack of empowerment or management interventions from outside might limit leadership effectiveness.

4.2.2.2. T2.2: Jointly Agreed Project Rules

Interviewees find it important that project teams jointly agree on rules within the project. #P14, #P8, #P16 and #P20 emphasised explicitly a need for communication rules. #P20 said:

“The first was that we had a relatively clear communication structure. It always sounds simple, but you have to do it. That is, daily huddle every day at half past seven. They were all in, no matter what local time it was. Half an hour, where we stand, a short presentation, for all of the five streams we have, and the HR part at the back. Everybody's there. It always worked well (...). It brought people together at one point of the day, (...) both Indians and Germans, (...) I think that you have to design your own processes to some extent in the project.” (#P20)

#P8, P#10 mentioned, that rules should be accepted by the team. #P10 said:

So, these team rules must - (...) well, that's my personal opinion now, but that's what you asked for, I think - (...) they should actually be accepted in the team. (...) Ideally, therefore, they should not be

predetermined, but should be formed or at least accepted by the team. (...) Most of the time, if you have a good team leader, then he or she can set a rule and it will be accepted. But the acceptance is important in this case. And in my opinion, if a good leader finds out that he has no acceptance, then he should change the rule. (...). (...) then I can only lose them by not accepted rules. And then there I have the chance to reach a consensus on the rules. (#P10)

#P2, #P5, #P13 and #P19 find it important that rules facilitate and do not hinder project work. #P2 said:

“Yes, I've found that to be more conducive, in fact, because it's so tailored or adapted to the project, the project rules, that it promotes rather than hinders cooperation.” (#P2)

#P4 explicitly emphasised that rules create identity within the project team:

Rules play a big role - simply by the fact that by doing so you actually get a framework in which you can move. On the one hand, they also restrict freedoms in a certain way, but in principle they also leave some leeway (...) Yeah, that affects the project identity. And I'd say it's also positively affecting it at that point. So, because this set of rules actually creates an identity. (#P4)

Project rules are part of project governance (Project Management Institute, 2017b), and attitudes, or how rules have to be defined might be characterised as governmentality (Müller et al., 2016). Based on the findings, jointly agreed project rules facilitate leadership effectiveness. Project rules mentioned by the interviewees follow neo-liberal principles regarding governmentality at corporate level, as employee behaviour is not determined at corporate level, but at project level. At project level the attitude of governors follow liberal governmentality as rules are determined but rules on decision making are not centralised (Müller, 2019) due to empowerment of project managers and project employees.

Findings 2.2: Governance can facilitate SI related leadership by “jointly agreed

project (communication) rules.” Governmentality can facilitate SI related leadership by introducing “jointly agreed project (communication) rules,” by applying neo-liberal attitudes at corporate level and liberal attitudes at project level. As a result of this analysis, the theme “jointly agreed project (communication) rules” contributes to answer RQ2 as this can facilitate leadership effectiveness.

4.2.2.3. T2.3: Taking and Maintaining Decisions

Interviewees see the importance that decisions have to be taken and maintained. #P1, #P13 and #P20 find that decisions by senior management are important. #P1 said:

“(…) that people, especially those in hierarchies, have a form of backbone, (…) - whatever you want to call it - (…) that they have first of all an understanding of what their business actually is, and secondly, that they do what they are in the hierarchy for, namely they make decisions. (…) And I believe that every decision is better than no decision. Because decisions can be handled and decisions can be corrected. If you don't make a decision, it's just extremely difficult.”
(#P1)

#P2 sees it important that announced decisions are also executed.

“And (…) but the most important thing in this case has been to really go through what you announce, to really do what you announce, to really do, (…).” (#P2)

#P6, #P7, #P8 mentioned collective decision making. #P6 said:

"All right, folks, 15 minutes of chitchat. Everybody says what he wants. And in the end, there doesn't have to be a result. And everybody knows that now. Then we have half an hour, and, in the end, there has to be a decision." (#P6)

#P4, #P5 want the leader to decide based on priorities. #P17 mentioned that lack of decisions led to leadership failure. Taking decisions is a governance task (Hjelmbrekke et al., 2014) and authority or empowerment is the antecedent of it. Governmentality is the way of how power is exercised

(Simard et al., 2018). These different views on decisions have been interpreted as follows:

The reports about decisions are twofold. Derived from the reports of #P1, #P13, #P17 and #P20, project managers and other stakeholders expect clear strategic decisions from senior management, which might be associated with authoritarian governmentality (Müller, 2019). This is understandable and aligned with Müller and Turner (2007b) who suggest that strategy or vision is unimportant and not a task for project managers, but for project sponsors. At an operational level, a collective decision-making process, as reported by #P6, #P7 and #P8, supports social identity within the project team (Turner & Pratkanis, 1998) and shows neo-liberal governmentality traits. The maintenance of decision making in the sense of rules shows liberal governmentality traits. (Müller, 2019).

Findings 2.3: Governance can facilitate SI related leadership by “taking and maintaining decisions.” Strategic decisions conducted with authoritarian governmentality might facilitate leadership. Operational collective decisions within the project team are characterised by neo-liberal governmentality and facilitate leadership. As a result of this analysis, the theme “taking and maintaining decisions” contributes to answering RQ2, as this action might facilitate leadership effectiveness.

4.2.2.4. T2.4: Clear Communication on Collective Project Goals

Interviewees found it important, that “clear communication on collective project goals” took place. For example, #P4 said:

“In my opinion it is also important that these goals are communicated and transparent for the employees, because as a member of a department or project team you can understand some motivations of the bosses or project managers.” (#P4)

Most of the interviewees mentioned that team meetings were used as a communication platform. It was salient during the interviews, that T2.4 mediated leadership behaviour T1.3, T1.4, T1.5 and T1.6.

Interviewees see the importance that “clear communication on collective project goals” is applied to facilitate SI related leadership effectiveness. This is supported by Bang et al. (2010), who did research on effectiveness in top management group meetings, and suggest that goal clarity mediates social identity processes. Communication processes within projects are part of project governance (Hjelmbrekke et al., 2014) and decisions on goals are also part of project governance (Project Management Institute, 2016, 2017b). These communication processes need to be defined by the governing body at project level and conditions such as (virtual) rooms or technical equipment to enable team meetings need to be provided to the project team. The attitude of how to govern communication on joint goals is part of governmentality as communication is a type of interaction (Müller et al., 2016), but this has not been salient during the interviews.

Findings 2.4: Governance can facilitate leadership providing guidance regarding “clear communication on collective project goals”. As a result of this analysis, the theme “clear communication on collective project goals” contributes to answer RQ2 as this behaviour might facilitate leadership effectiveness.

4.2.2.5. T2.5: Project Sponsor Involvement

The involvement of project sponsors has been claimed by the interviewees.

Interviewees in the roles of project sponsors executed project sponsor involvement in different ways. For example, #P1 used his position to actively cause group identity:

“I was even aware that I (note: as a project sponsor) wanted to consciously cause it (note: the group identity).” (#P1)

And #P2 convinced executive management for the mission of the project:

"And that also means that we have been able to win over our board of directors for this topic as (...) We presented it there, he says: 'Yes, it's a good project, it's important, we are behind it.' (...) And that strengthened the role of me as a real project sponsor and of course as a project manager (...)"

Project team members and project managers also desired project sponsor involvement in different ways. For example, #P3 requested appreciation of the team by sponsoring team events, whereas #P4, #P15, #P19 found it important that the project sponsor represents the project team towards the customer and towards their own management. #P19 said:

"I would expect them to (...) keep relevant customer relationships at the highest customer level to (...), in terms of escalations, in terms of strategic developments, in terms of putting things in context that happen and so on. (...) and the sponsor should help the team to create a working context in which they can be successful. So in the sense of (...) I lack certain resources and I may not have the power to organise these resources myself. (...) the sponsor also has the task to somehow bring in visions, (...) customer culture, (...), to explain the customer context, but on a management level (...)." (#P19)

#P5 wished that the sponsor would be interested in the project and value the team members:

"And then the senior management came, and they just opened the door, looked in. We were all sitting at our desks, smiling. And then after 20 seconds, they were gone. But just the excitement that was there – 'oh, here comes someone now and this is important' – (...) But so, what would be desirable is that the senior management is there, is present, shows interest in what is going on and in the best case shows that it has a bearing on what you are working on." (#P5)

However, #P6, #P16 claimed understanding of projects by project sponsors was important. #P7, #P8 claimed, that project sponsors should clearly communicate goals of the project, and #P11, #P12, #P14, #P15, #P16, #P18,

#P19, #P20 found it important that project sponsors support the PM if needed or that backing is provided. Furthermore, #P13, #P19 claimed, that project sponsors should be firm in the subject to integrate the project in a strategy or vision. For example, #P13 said:

“One could say that he must also be behind it to some extent in terms of content. But I assume that, because otherwise he wouldn't spend any money on it. (...) But otherwise I would have now concretely - that would be my main topic that comes to my mind right now. To be steadfast in the subject, even if it doesn't work immediately (...) or a decision has been made, hopefully on the basis of a strategy. And then a concrete project that implements something is also an important building block for achieving the results that arise from the strategy.” (#P13)

#P16, #P17, #P18 wanted the project sponsor to govern the project manager, and #P10 didn't know, what a project sponsor is about.

T2.5 has a direct link to T1.2 as desired transformational leadership behaviour. The project sponsor is part of the governing body (Project Management Institute, 2017b) and involvement as a type of interaction can be seen how governance is applied. Therefore, involvement of project sponsors is also a topic of governmentality (Müller et al., 2016).

Findings 2.5: Governance can facilitate SI related leadership by providing a project sponsor who becomes involved on behalf of the project.

Governmentality can facilitate SI related leadership by “project sponsor involvement” in a sense of support for the project. As a result of this analysis, “project sponsor involvement” contributes to answer RQ2 as this can facilitate leadership effectiveness.

4.2.2.6. T2.6: Appropriate Skills

Appropriate skills facilitated leadership. #P1 emphasised the professional skills of senior management:

“I assume you must have a plan of business (...), what innovations I have to make so that the business remains quasi sustained, so that I can continue to do my business and you (...) the customer doesn't tell me, 'you're actually exchangeable for some corner shop' (...).” (#P1)
#P2, #P4, #P10 were impressed by the technical skills of the project manager.
#P10 said:

“I would say by example. (...) So what was extremely important was the progress of the project. And he himself worked very hard on it and also worked on it technically. (...) And I think it was important to him that the group really delivers output and stands for it.” (#P10)

For #P6 it is important that senior management at least understands what the team is doing, in order to value their work. #P7, #P8, #P9 see implicitly skills at the technical level as important as at the inter-personal level. For example:,
#P7 said:

“(...) be accessible, both for content and technical questions, but in my opinion especially for interpersonal issues.” (#P7)

#P11, #P12, #P13, #P16, #P17 find it important that project managers have a communication interface to the project team due to their technical skills. #P17 said:

“He was insanely convinced of this methodology. In the past, there was - I don't know if the term still exists - the beautiful expression "evangelist" of this agile programming. And that's basically what he was (...). And especially the young developers or something said "yes, that's the way forward" or something like that. You could say he was a charismatic figure, to use the rather old-fashioned term. In other words, to have an idea, to be able to sell the idea well and to do that in communication, and at the same time to convey the feeling: "Yes, there is someone ahead who knows the way. We just have to follow him.”
(#P17)

For #P14 the relevance of technical skills depends on the project characteristics such as team size:

“The smaller the team is, the more important is the technical component (...) has the big picture in view and is also very well versed in many topics (...).” (#P14)

The examples in section 4.2.1.6 show that appropriate skills are facilitators to run discussions or to develop clear argumentations as contributions for SI related TFL. There have been observed phenomena, that T2.6 mediated T1.2 and T1.6. A combination of technical & interpersonal skills is desired (Elliott & Dawson, 2015). Derived from this, project leaders should be trained by the company and carefully selected.

It is a task of governance to oversee and to decide that project managers with suitable skills are appointed to projects.

Findings 2.6: Governance can facilitate leadership by appointing project managers with appropriate skills to projects. As a result of this analysis, “appropriate skills” contribute to answer RQ2 as this can facilitate leadership effectiveness.

4.2.2.7. T2.7: Team Events & Meetings

Interviewees reported that joint team meetings and team events facilitated leadership. Team meetings were held on a regular basis as part of the project processes. Team events were special and sometimes needed approval by senior management due to extra costs. #P2, #P11, #P18 used scrum as an agile project management method, where the entire team communicates about the project and decides what to do next on a daily base. #P2 said:

“(…) with a modified Scrum approach - they did their morning meeting in the morning (…). If something goes wrong, stand in front of people, go for a beer in the evening, teach them something, impart knowledge (…).”
(#P2)

#P3 values team events as incentives for the team:

“(…) there must be something coming across somewhere. And those were the events in the past, which unfortunately no longer exist today. It does not always have to be a bonus or something like that. Maybe even a big barbecue party.” (#P3)

#P4, #P5, #P8, #P15 found it important to have joint team events at the beginning of the project as a “kick-off” meeting to talk about joint goals.

“The kick-off meeting was used in the sense of bringing the team together, getting to know each other and distributing roles, assigning roles and tasks. Exactly. And to make clear the roadmap of the project from today's status to the submission of the bid and to answer questions (...) The sense of cohesion, that was through the topic of regular updates, jour fixe, these status meetings that we had there to simply look at how far we are in the project.” (#P15)

Policies and processes within a company or a project are involved if team meetings or team events are held. Team events & meetings are a communication platform, where leaders can collectively interact with the project team, as everyone is present. Followers can observe their leaders. This mediator might be useful to mediate leadership behaviour in T1.1, T1.2, T1.4, T1.5 and T1.7. Corporate governance is involved if decisions have to be taken by senior management regarding this issue, and project governance is involved if team events & meetings are part of project policies & processes (Project Management Institute, 2016, 2017b).

Findings 2.7: Corporate & project governance can facilitate leadership by deciding on performing “team events & team meetings”.

As a result of this analysis, “team events & team meetings” contribute to answer RQ2 as this can facilitate leadership effectiveness.

4.2.2.8. T2.8: Project Location

Working at the same project location facilitated leadership in project teams. Team building and socializing worked much more easily. Expert support could be given by short links as well.

#P2 observed that the project team “got into such an agile working mode”, because they sat together in the same office:

“But it turned out very well that almost the entire core team was then sitting in the same office. And that turned out to be tremendously advantageous for the project, because they really got into such an agile working mode, really almost textbook.” (#P2)

#P3 sees the need for “longer conversations” to achieve team building and he would have had difficulties with that “by phone”:

“So, by phone I would have my difficulties with. You can't build something like this over the phone. You hang up the phone and the man is out the window. I don't think that's gonna work. If you really want to talk here about (...) team building, about forming interests, about commitment, that can only be done in a personal conversation - and also in longer conversations, not just in one or two days, but only by building up a cooperation.” (#P3)

In addition, #P4 finds it important “to really get to know the people”:

Right, they were all in one place. And so they were also further away from home. That's the reason why it favoured that all (laughing) team members left together. Yes, exactly (...) to be there to really get to know the people. And what I am doing now, gestures and facial expressions, so that you get to know them, so that when you are on the phone or by mail or video phone, you still get to know what is going on around you and how it is called, how he reacts to it.” (#P4)

#P6 elaborated the difference between leading people face to face or leading people over the distance:

“When you have the team on site, you can put all your personal gestures and credibility, right down to your tangled hair and sweaty shirt, into the equation. (...) And with that you have a much faster and much better (...) under the aspect of Transformational Leadership a possibility to achieve something. Creative processes also work much better this way. When you work in our distributed teams with all our web conferences, I think you need - maybe that's a slightly distorted picture - but I think you need language (...), you need humor, you need (...) something that makes people say, "I'm kind of going along with this"

#P6 also stated that “the possibility to achieve something” is “much faster and much better.” This is of course important, because projects have time

constraints and project team members possibly do not know each other prior to the start of the project. In addition, #P6 pointed out the importance of language skills and humour for work over the distance, and said that people say: "I'm kind of going along with this." In the cases of #P7 and #P15 the leader could demonstrate by being at the same project location that the team is not alone. #P15 said:

"So a very concrete example was that in the last phase of this offer we really sat together with the project management in the team in one room and worked together on the offer, really face to face, and so to speak also (...) phoned each other together on the weekend to put the finishing touches to the offer. And the manager didn't say, "I'm not here for you now", but "I'll do this together with you" (...) So, the work is basically also possible remotely, so that everyone can work from their location, wherever it is. But I have noticed, (...), when you go the extra mile or are in the finalisation or elaboration of certain things, it is even more motivating for the individual if you know you are not sitting there alone." (#P15)

#P19 emphasised that onsite work might ease perceptions of team member behaviour. In the case of #P20, the project leader could build cultural bridges. During the interviews, working at the same project location has been salient to mediate leadership behaviour T1.2 and T.1.7.

Working at the same location suggests it is beneficial for relationship building (Henderson & Stackman, 2010) and therefore it might facilitate project teambuilding and social identity (Au & Marks, 2012). Based on my work experience, working at one project location is not desirable in every case as travel costs may be high, or willingness of employer & employees may not be forthcoming. However, the choice of location can either be decided by the customer or by the company responsible for the delivery of the project. If this decision is taken by the company, corporate or project governance is involved, depending on the empowerment policies (Project Management Institute, 2016, 2017b).

Findings 2.8: Corporate & project governance can facilitate leadership by deciding on project work at the same location. As a result of this analysis, the

identified theme “project location” contributes to answer RQ2 as this can facilitate leadership effectiveness.

4.2.2.9. T2.9: The Customer

The customer has a special role in the project as this role is the rationale for project delivery due to the contract in this type of projects. Thus, the customer has an authority towards the project team.

#P1, #P3, #P6 used working with the customer to do something beneficial for the project team. #P1 said:

“I convince the customer that this is the right thing to do - point 1. point 2: I get the customer to express his appreciation of the fact that he is co-financing this accordingly, even though, (...).” (#P1)

#P5, #P14 reported that the project manager represented the project team towards the customer. #P5 said:

“(...) he has managed to create this group feeling for the entire project team, including the customer (...) so to go into advance work, to have massive discussions with the customer, to fight internally – for example, internally within the company that we don't get various audits. So, he already took a risk with this project. If it had failed, he would have been gone.” (#P5)

#P9, #P16 and #P20 reported that the project manager defended the team in front of the customer. #P9 said:

“Or if somebody has somehow clashed with the customer and there were problems somewhere, that you then talk about measures with them and say: "Look, how can we solve this together now? So now it's not just your problem, but I as project manager am standing somewhere in front of you, I represent you at the customer.” (#P9)

These examples show that the customer has a good possibility to carry out “identity advancement” by project leaders. #P4, #P13 commented on praise by the customer to give team members a positive feeling, initiated by the project manager. #P13 said:

“He has made this known in the form of customer praise. He made it very transparent to the customer. That was actually very clever (...) or he then really specifically praised the employees who did it and quasi lobbied for them. And that always led to direct, very positive feedback.”

(#P13)

This caused an increase in self-esteem for team members and “we-feeling” within the team, as stated by #P4:

“There the customer also listened to it and stop, which is of course always nice, then also praised the developers accordingly, who then brought in these ideas accordingly, whereby the developers then naturally felt positive again, accordingly also a we-feeling entered there and the developers also appreciated themselves, always new ideas also brought in again.” (#P4)

Furthermore, #P11, #P18, P19 mentioned that customers might be connected with the meaning of a project, as demonstrated in section 4.2.1.5. #P18 said:

“But then you simply missed to somehow create this common ground with the client in the sense of: Why are we here now for the client? And that is, I think, a very important aspect. And that combined with: How do we proceed in our company in projects with this individual translation on a project team value system? I think that is something that has a positive effect.” (#P18)

In the case of #P17 the customer was not covered well by the project manager, which led to project failure. This demonstrates how important the relation to the customer is and what can happen, if this “leadership advancement” does not take place. Overall, working with or for the customer facilitated leadership.

This mediator has been salient in leadership behaviour T1.1, T1.2 and T1.5. Corporate governance is concerned as company policies can regulate the appointment of only suitable project managers to projects who have the appropriate skills to work with their customers. It can also provide guidance or a rule at company level that project managers are obliged to be in close contact with their customers, as this is critical. Customer work can be also

integrated in project processes and policies. In this case, project governance is involved.

Findings 2.9: Corporate governance can facilitate leadership by appointing suitable project managers that have the capabilities to work with the customer. Furthermore, project governance can facilitate leadership by integrating “working with the customer” into project policies and processes. As a result of this analysis, the identified theme “the customer” contributes to answer RQ2 as this can facilitate leadership effectiveness.

4.2.2.10. T2.10: Project Artefacts

Interviewees reported on project artefacts that facilitated identity leadership. Project artefacts in this sense are defined as virtual or physical means, tools or symbols that can be used for leadership work.

#P10, #P11, #P12 used a whiteboard to make their works visible for the team. For example, #12 said:

(...) to pin the most important points on a whiteboard regarding the project. So this topic of visibility: What are we doing anyway? Who are we, anyway? To record an organization chart. (...) we did some things in Visio - where we often put the photo into documents. Yes, there we stood together, which is also important for the customer. That was the basic idea, which was usually already clear in a whiteboard scribble, which we are now pursuing. And we deliberately took the photo, even more beautiful in Visio, with them. (...) Everyone who reads it knows "yes, that's right, we were standing there". (#P12)

They used it in meetings for team discussions. In the case of #P12 the team combined whiteboard work with electronic tools such as MS Visio. #P6 used mission statements and plans with MS project, and #P20 used logos for group identification. It was not mentioned explicitly in the interview, but it was used within power point presentations, for instance. Derived from this it can be concluded that making things physically or electronically visible to team

members while jointly being together supported leadership. #P2, #P16 used an own closed WhatsApp group for communication. #P16 invited his “core-team” to the WhatsApp group. #P16 said:

“Instead, he has built up a core team of 15 to 20 key people whom he trusted, where he still has his own WhatsApp chat and has then built up the hub with those he can rely on. So it wasn't with 120 people, but with a core team of sub-project leaders or chief architects, of people whom he trusted to do something, who could really make a difference, that he gathered around him and with whom he communicated, made this esprit de corps, in order to essentially carry the other 70 or 80 with him, who then also made the concrete development.” (#P16)

This might induce or strengthen the perception of team members of being part of the team. #P13 reported that the developed tool had been given the name of the project manager. This is quite interesting, because the statement of #P13 suggests the naming showed that the team identified with the leader, and on the other side the leader induced team identity by talking with inclusive language: “we'll do that.”

T2.10 mainly mediated T1.1, T1.2 and T1.5. These examples show that project artefacts can contribute to inducing social identity. Project artefacts can be used as part of project policies or project processes; thus, project governance is involved.

Findings 2.10.: Project governance can facilitate leadership by integrating “project artefacts” in the governance framework. As a result of this analysis, the identified theme “project artefacts” contributes to answering RQ2, as this can facilitate leadership effectiveness.

4.2.2.11. Discussion

In the previous sections it has been proved that governance and governmentality influence leadership effectiveness. In this section, the meaning of the findings for theory and practice will be interpreted and discussed. Relations to RQ2 and the literature review are demonstrated to

achieve RO2.

The literature review in chapter 2 indicates a research gap (GAP 2) in governance theory, as there is lack of understanding of how governance and governmentality influence leadership processes and how it impacts work engagement as a contributor for project success. RQ 2 has been answered by asking experienced employees in the IT industry during interviews about their experiences and opinions, to obtain an understanding of the leadership processes. The results identified five themes, as demonstrated in sections 4.2.2.1 to 4.2.2.5. Furthermore, five further themes were identified as mediators by asking for TFL issues as demonstrated in sections 4.2.2.6 to 4.2.2.10.

Based on the findings in section 4.2.2.1, T2.1 facilitates leadership in terms of governance and governmentality. This builds on theory, as lack of empowerment and interventions of leaders lead to reduced work engagement (Friebel & Schnedler, 2011), and an empowerment climate mediates effective transformational leadership (Choi et al., 2016; Nixon & Pillay, 2013), work engagement (Amor et al., 2020), and success of projects (Goparaju, 2012). This is a sign that leaders trust their followers, if empowerment is provided (Zwikael et al., 2019), and trust mediates (Avolio, Zhu, et al., 2004) social identity and vice versa (Costa et al., 2018). Transformational leaders empower their followers and encourage them to take decisions (Birasnav, 2014). This sounds contradictory because if everyone took their own decisions, where would be the collective decision making? However, the fact that role clarity and clear responsibilities lead to social identity within teams is empirically supported (DeFillippi & Sydow, 2016; Turner, 2020a). If employees are empowered by their managers and equipped with very high sovereignty, governmentality might be characterised as a neo-liberalist attitude of these managers (Müller, 2019). This behaviour in these German IT projects is aligned with governance based on stewardship principles as trust, work engagement, collectivism and low power distance (demonstrated in section 4.2.1.8) (Beata & Bogusław, 2015). These findings build on theory, as T2.1 has been proved in the context of projects in the IT industry in Germany.

These findings contribute to practice, as the application of stewardship principles and neo-liberal governmentality might improve project governance of projects in the IT industry in Germany.

Based on the findings in section 4.2.2.2, T2.2 facilitates leadership in terms of governance and governmentality. The importance is also supported in literature by Pinto et al. (1993) who find that project rules have a direct significant impact on cooperation, tasks and psychosocial outcomes. Project rules limit leadership effort and if these rules are jointly agreed, there might be collective acceptance of these rules. According to Pradhan et al. (2018), rules are complementary and supplemental to TFL, as they avoid dissonances within the project team, which leads to stronger commitments towards leaders and teams. Thus, rules provide certainty. In countries with high uncertainty avoidance values, TFL mediates team performance better than in countries with low uncertainty values (Crede et al., 2019). Hence, rules have a positive relation to TFL in achieving project team performance. They have a constitutive part and might lead to social identity (Martins, 2009) within the project team. This is understandable, as organisational values discussed in section 4.2.1.8, can be determined as rules of course and positively influence social identity (Zollo et al., 2019). The way how rules are communicated depends on the leader and might lead to social identity (Prati et al., 2009) within the project team. Project rules mentioned by the interviewees follow neo-liberal principles regarding governmentality at corporate level, as employee behaviour is not determined at corporate level but at project level. At project level, the attitude of governors follow liberal governmentality, as rules are determined, but rules on decision making are not centralised (Müller, 2019) due to empowerment of project managers and project employees. Interviewees reported that rules should be flexible and adaptive (e.g., #P10). This is aligned with stewardship theory as rules may be changed if circumstances change (Müller & Martinsuo, 2015). Therefore, theory is enhanced because evidence has been provided that determined project rules might facilitate SI related TFL in projects in the IT Industry in Germany. Furthermore, stewardship governance and liberalism governmentality are involved. This finding is also important for practice, as governing bodies

should decide on rules at the beginning of a project and change them if needed at any time.

In section 4.2.2.3 it has been demonstrated, that T2.3 facilitates transformational leadership. The condition for T2.3 is to empower a project role holder and provide him with authority as demonstrated in section 4.2.2.1 (Birasnav, 2014). Transformational leaders take risks and therefore they make fast decisions (Birasnav, 2014). The findings build on theory as decisions at project level might mediate social identity (Turner & Pratkanis, 1998) and improve project team effectiveness (Chang et al., 2017). On the other hand, social identity in a project team might influence decisions as the leader likes to be part of the group (Foscaches et al., 2019). Decisions by leaders without approaching the project team depend on the influence of self-concepts of followers, as they might impact social identity (Hogg, 2001; Hogg & Smith, 2007; Huettermann et al., 2014). Therefore, a neo-liberalist governmentality might be considered to take decisions. However, as decisions should be maintained and as decisions are like rules, they are to be considered as liberal governmentality (Müller et al., 2016). This approach is associated with stewardship theory. Like rules, as explained in section 4.2.2.2, T2.3 can provide certainty and is perceived as goal-directed behaviour and can maintain social identity. Findings enhance theory by providing evidence that this is valid in projects in the IT industry in Germany. As practical implications, leaders or governing bodies are encouraged to take swift jointly agreed decisions with their project teams and maintain them.

Based on the findings in 4.2.2.4, T2.4 facilitates SI related transformational leadership. In recent studies the existence of clear project goals has been identified as a critical success factor in software projects (Goparaju, 2012) and TFL effectiveness is strongly dependant on an adequate communication style and existing communication skills of the leader (Cohrs et al., 2019). According to Caillier (2016), who performed a study in the USA, suggests that goal clarity mediates TFL with positive impacts on employee performance and organisational behaviour. It is further suggested that clear goals should be communicated periodically, as goals can become blurred (Caillier, 2011). A

study in Norway suggests that goal clarity and focussed communication is beneficial for team relationships and team effectiveness (Bang et al., 2010). The findings enhance theory as there is evidence that validity in the context of projects in the German IT industry is given. In practice, it should be assured, that permanent communication of clear goals in joint project team meetings takes place.

Findings in section 4.2.2.5 provide evidence, that T2.5 facilitates SI related leadership. This is supported in studies where authors state that senior management involvement has been identified as a critical success factor in software projects (e.g. Goparaju, 2012; Too & Weaver, 2014). The project sponsor is part of the governing body and the critical link is between the project as a temporary organisation and the company as a permanent organisation (Too & Weaver, 2014). In the governing role, the mindset and behaviour of the project sponsor contributes to perceptions of project governmentality. The project sponsor shall support and motivate project manager and project team (Zwikael et al., 2019). According to Andersen (2012) it is important that the project owners are involved in socializing activities in order to achieve project success. Derived from this, there might be an influence on transformational project leaders that can lead to social identity. From a practitioner's viewpoint, the selection of the right project sponsors for projects is crucial, and it should be ensured that project sponsors have time for involvement in project teams.

The findings in section 4.2.2.6 provide evidence that T2.6 facilitates SI related leadership. Based on literature, a focus on professional skills in relation to social identity seems to be sparse. However, a recent study supports the findings as the skills of leaders have a positive impact on work engagement and task completion times of highly skilled professionals in the IT industry (Madiedo et al., 2020). Another recent study states that professional skills might induce prototypicality (Graham & Snape, 2020). More focus in the literature seems to be on the claim for interpersonal skills for leaders (e.g. Elliott & Dawson, 2015; Sobral & Furtado, 2019). Furthermore, empirical evidence that communication competencies contribute to TFL, productivity and

employee satisfaction, support the findings (Cohrs et al., 2019; Henderson, 2008). The findings build on theory, as T2.6 in terms of professional skills (incl. technical skills) and interpersonal skills might be considered in projects within the German IT industry. This finding contributes to practice, as company leaders need to select or to educate their project leaders in professional and interpersonal skills.

In section 4.2.2.7, it has been demonstrated that T2.7 facilitates SI related leadership. Project teams often work at different locations and team meetings and team events offer a platform, where the entire team or at least parts of the team can meet to have a collective conversation. Hence, this platform is important for a leader, as he can shape team cohesion during the time spent and work on joint project goals. Important team-building measures in project teams, such as goal setting, improving social relations, clarifying roles, solving tasks and interpersonal issues (Aga et al., 2016) need a place where all this can be discussed. This need is also obvious particularly as transformational leaders are supposed to communicate well (Cohrs et al., 2019). According to Goparaju (2012), the performance of team meetings has been identified as a critical success factor in software projects. Furthermore, Ericksen and Dyer (2004) suggests running early team events to improve project team development over a short duration. Theory is enhanced by these findings, as they prove, that they are valid in the IT industry in Germany. They also contribute to practice. Team meetings and team events should be seen in project management work to shape social identity in project teams.

In section 4.2.2.8 it has been demonstrated, that T2.8 facilitates SI related TFL. This supports the findings of Howell et al. (2005) who conducted surveys in the banking industry and found that TFL is facilitated by working at the same work place. Large companies tend to use more and more resources around the globe in their projects for a best fit approach, use IT for communication, and have to cope with increasing complexities and leadership challenges (Henderson & Stackman, 2010; Mukherjee et al., 2012; Tworoger et al., 2013). Working times at the same project location may be significantly reduced in the future compared to former times, as companies try to save on travel costs.

However, working at the same location has some advantages. For example, project managers and project team members see each other daily and the barrier for communication is less than if working from a distance, where you need to set up a phone or video call with one or more project team members.

According to Au and Marks (2012), who performed a study outside Europe, identification with local work teams is higher because of proximity, the work environment, cultural practices and working patterns, than identification with virtual teams. The importance of developing social identity if working from distance or in virtual teams is emphasised in recent literature (Au & Marks, 2012; Lin et al., 2017). This means that social identity measures need to be developed to balance out the advantages of working at the same project location and in practice it needs to be assessed, why, when and to what extent working at the same location is beneficial for facilitating leadership effectiveness or to evaluate communication in virtual teams. Monitoring and improving language skills, as explained by #P6 might help to balance out the advantages of working at the same project location. Furthermore, the project leader needs to find ways to become more visible towards the project team members (Han et al., 2020).

Based on the findings in section 4.2.2.9, T2.9 facilitates SI related leadership behaviour. The customer has a special role in a project. He or she is an important project stakeholder without being part of the project team. Customer satisfaction is an important goal for many customer related project teams (Rivera & Kashiwagi, 2016; Zwikael et al., 2019). According to a study in the Indian IT sector, perceived customer perception leads to psychological empowerment of employees, because employees might perceive that their work has an impact on the customer (Jha, 2013). Therefore, it can be deduced that customer feedback or engagement towards the customer is important for social processes within the team. It can be concluded that if the project manager visibly engages for the team towards the customer, identity advancement is involved. Perceived impact for the customer can underline, that the project goals are meaningful and achievable. Therefore, as a contribution to practice, the encouragement of project managers and frontline

project team members to closely work with the customers to facilitate leadership effectiveness is recommended.

T2.10 facilitates SI related TFL, as demonstrated in section 4.2.2.10. However, different artefacts have been used in projects, such as WhatsApp groups, whiteboards, mission statements, or brands. The findings are confirmed by the literature. Brand prestige and distinctiveness positively influence self-categorisation of project team members (Mousavi et al., 2017). Project artefacts, such as whiteboards have symbolic properties and their use might mediate social identity (Brown, 2017; Paring et al., 2017). Hence, the use of project artefacts in project management work might benefit leadership effectiveness and should be considered in practice.

Agency theory and stewardship theory are two complementary governance theories. Governors, who follow agency principles, prefer to conduct control-based governance, where supporters of stewardship principles prefer to conduct trust-base principles (Müller et al., 2016). The agency perspective is aligned with an authoritarian governmentality and the stewardship perspective is aligned with liberal or neo-liberal governmentality (Müller et al., 2016).

According to Müller et al. (2016) liberal governmentality is typical for customer delivery projects as analysed in this study. Governmentality traits, as demonstrated with T2.1, T2.2 and T2.3, provide evidence that governmentality is desired somewhere between neo-liberalism, such as empowerment and decision making, and liberalism, such as rules and maintaining decisions, to facilitate social identity. Claims for authoritarian governmentality for project governance were not present in this study. Findings are aligned with the literature (Davis et al., 1997; Donaldson & Davis, 1991; Müller et al., 2017) and contribute to closing a research gap, as this study sheds light on causalities between project success and governance/governmentality (Müller et al., 2017). Furthermore, leadership effectiveness as moderator for project success has been addressed. This research contributes to knowledge, as its findings demonstrate how to facilitate transformational leadership effectiveness in the context of projects in the IT industry of Germany.

Furthermore, findings shed light on the mechanism of stewardship approaches as claimed by Biesenthal and Wilden (2014). As a conclusion, these findings answer RQ2 of this study as a contribution to achieving RO2.

4.2.3. Leadership Monitoring and Improvement (RO3)

The third objective (RO3) of this study is to find possibilities to measure leadership effectiveness and to find possibilities for continuous leadership improvements in companies for their project-based business.

The following sections 4.2.3.1, 4.2.3.2 and 4.2.3.3 provide findings that answer RQ3 related to RO3. Findings are discussed in section 4.2.3.4.

4.2.3.1. T3.1: Individualised Leadership Effectiveness KPI Definition and Monitoring

Interviewees have drawn a heterogenous picture regarding the meaningfulness of KPIs in leadership topics. #P5 and #P19 proposed financial KPI, customer satisfaction and employee satisfaction as variables to measure leadership. #P5 said:

“(...) from the company's point of view: contribution to the project's results, for example profit, am I making a profit with this thing? Point 2: Customer satisfaction (...) Point 3: Employee satisfaction, for example, what do the people on this project say, how (...) satisfied are they with the project and then also with the company? You can probably measure it conditionally by such topics as retention, so people stay there even though the situation is perhaps catastrophic.” (#P5)

#P15 is in favour of measuring employee satisfaction and 360-degree feedbacks:

“I think I can actually make it visible by looking at how employee satisfaction is (...). That employee surveys are to be carried out in the sense or that the topic of 360-degree feedback is then introduced again for a manager in order to simply see, okay, yes, how is it, how is it lived.” (#P15)

#P10, #P17 proposed measuring just the financial output of the project. For #P7 numbers are too technical for this issue and he states that leadership is not a technical issue at all. #P12 mentioned that it is difficult to compare projects as they are unique and sometimes good leadership is not related to project success and vice versa:

“I consider project management to be extremely difficult, because I always need to compare a parallel project under exactly the same conditions. (...) In this respect, I can say from many years of experience that there are projects that look as if they are going great, everything is running perfectly, "must be a great project manager" - where I say I don't need to do anything at all. (...) And others that look like that from the outside - especially in between - it's catastrophic where you do everything, but still they look bad. But you don't get any comparison how someone else would do it (...). So it's incredibly difficult to make project management success at KPIs, so to speak, suitable for management - incredibly difficult from my experience.” (#P12)

#P20 is in favour of setting criteria beforehand. In all interviews, the impression was received that this question is more difficult to answer than others, because there were more breaks for thinking prior to the answer and uncertainty was perceivable. A good example is #P14 who had no spontaneous idea of how to measure effective leadership. #P16 also sees it as difficult to assess but made some examples such as how many people leave or join the team.

Findings 3.1.: The opinions and ideas of the interviewees are heterogenous. Based on the interviews, there is no clear unique result for proposed KPIs for leadership, and there seems to be no direct link between quantitatively measured leadership KPIs and quantitative project success KPIs such as profit. Derived from this, projects need to be treated individually, which means that suitable KPIs should be discussed and determined for each single project. As a result of this analysis, the identified theme “leadership effectiveness KPI monitoring” contributes to answer RQ3, but there is no clarity on the KPIs based on the findings identified.

4.2.3.2. T3.2: Frequent Experience Exchange and Reflection

Interviewees found it important that leaders discuss their applied leadership behaviour and the corresponding employee satisfaction with the project team members to get feedback and to have the possibility to improve. Surveys were seen as an indicator but not sufficient, as the measurement does not give any details which provide an understanding of applied leadership behaviour.

#P2, #P4, #P5, #P7, #P8, #P11, #P13 find it beneficial to ask the team members their opinions to obtain an understanding. The usefulness of surveys to obtain an understanding are questionable, as commented on by #P4, #P8, #P15. #P6 recommends that senior management should go to the teams and take perspectives as a follower to obtain leadership insights:

“(...) reverse mentoring, i.e. experiencing how things work at the grassroots level – (...). "Think about what that means. Because you could be a follower, you could be a leader. But why would you be a follower? (...) then (...) you think about it, if you were a leader, what would your followers do with you? Then ask them." Yeah, and to ask is, "Would you follow this?" (#P6)

#P14 finds exchange at peer-level helpful, whereas #P11, #P13 and #P20 find the support of a moderator or coach valuable. #P15 and #P19 propose 360-degree feedbacks, and #P18 proposes reflecting on the past projects at least once a year:

“Of course, this is something where you should put a clear focus on every employee, regardless of their development level, at least once a year in development meetings (...). (...) to take into account the past projects, the project feedback for this employee and to simply transfer this to the further development steps as well as to include it in the possible annual individual target agreements and to reward this in the target agreements or target achievement meetings in such a way that the employee does not only have qualitative quantitative feedback, but of course also learns about the variable remuneration, how you are satisfied with his (...) performance in the role as project manager.” (#P18)

#P19 finds having an established feedback culture is very important, if feedback is to be given:

“(...) 360-degree feedback (...), I personally take it very much to heart. I find it valuable. And (...) it also helps how you are perceived from both sides. But that only works if I have created a culture beforehand where I receive such feedback honestly. So it doesn't work if I'm in a culture of fear.” (#P19)

Findings 3.2.: According to the reports of the interviewees, frequent experience exchange and reflection might be beneficial as part of a leadership framework, to continuously improve leadership behaviour and might be integrated as guidance or a rule into the corporate governance of a project-based IT company. As a result of this analysis, the identified theme “frequent experience exchange and reflection” contributes to answer RQ3, as this action can bring clarity on perceived leadership behaviour, in order to continuously improve leadership.

4.2.3.3. T3.3: Leadership Coaching

Interviewees found it beneficial, if experienced leaders with leadership skills coached young leaders during projects to improve in leadership topics. In particular, 1:1 coaching was mentioned. This measure would retain and improve leadership skills with a company. #P2 has a Japanese master – student model in his mind and observed that the team was ready to learn due to skills of the project manager. In a similar direction are the ideas of #P6, as he is much behind a guild concept, where masters with high skills are natural authorities for their journeymen.:

“Then there are these master-disciple models. I also think very much that experienced people should not only be called mentors, but really masters. That's why I'm very much behind this guild concept, which I still hope that (...) will somehow manage to implement. Or now in our new organization maybe one day. Because these are the natural authorities, the masters. And the masters have journeymen, and these

journeymen want to become as great as the master. And now we have such top architects here, and young up-and-coming people are already flocking around them. They look up and say: "Wow, I'd like to be able to design such a cool solution here, and design it like that. And we have to encourage that, too. How can you create such guilds that have nothing to do with organization anymore, but only with social commitment through enthusiasm and appreciation. I find that fascinating. And that's the way these new software cultures are very often now. And that makes us dinosaurs against them. We come from a world of service providers based on the division of labor. And the others come from this world of enthusiasm. And if you put them together, it could be something. But we're not there yet." (#P6)

#P4 also finds it important to provide experience to young professionals by providing a mentoring model where an experienced professional takes care of a junior professional. #P12 reported on situations where a trainee was assigned to him and he provided some examples, where he explained his behaviour. He also mentioned that coaching might be difficult for companies because of the effort. #P11 really suffered in his role as project manager because the project has been in a crisis situation and there was no one supporting him in leadership issues:

"After the project was changed in 2013, it was taken over by C*. They gave us this coach. And at the end he actually did the lessons learned with us in such a way that he talked to each of us for one and a half hours, conducted interviews and then pulled the results out of there and used them sensibly for the next follow-up project. So I still think that's a very good story that has been done. So you get a consultant, a project manager who has been doing projects for 25 years and knows exactly where it hurts. And he just comes along, talks to you, looks in - not to hurt you, but really to help you. And I would have needed something like that back then. So a project coach or something." (#P11)

Based on the findings, leadership skills might be improved by leadership coaching during practical project work, and these efforts seem to be a good investment for companies. Several models were suggested by interviewees,

but a best one has not been identified in this study and could be a question for further research.

Findings 3.3.: Coaching young leaders by experienced leaders would help to improve leadership skills. This measure helps to retain and improve leadership skills within the company. As a result of this analysis, the identified theme “leadership coaching” contributes to answer RQ3 as leadership skills can be approved by this action based on the findings.

4.2.3.4. Discussion

Findings regarding RQ3 have been demonstrated in the previous sections. In this section, the meaning of the findings for theory and practice is interpreted and discussed. Relations with RQ3 and the literature review are demonstrated, in order to achieve RO3.

Knowledge in leadership performance management is scant (Nixon et al., 2012) and indicates a gap in the literature (GAP 3). RQ 3 has been answered by interviewing experienced employees in the IT industry about their experiences and opinions regarding this important topic. The results identified three themes, as demonstrated in sections 4.2.3.1, 4.2.3.2 and 4.2.3.3. Themes of measuring and improving leadership performance provide answers on how to conduct this endeavour in IT companies in Germany with project-based business.

Nixon et al. (2012) suggest developing key performance questions dedicated to individual projects and to determine key performance indicators for transformational leadership. Based on the findings in section 4.2.3.1 there were some heterogenous ideas (as well as no ideas) for determining T3.1. This demonstrates that there is no clarity regarding this topic, and that no standard pattern can be applied for all projects. This is reasonable and in line with the opinion of #P12, who emphasised the uniqueness and incomparability of projects by demonstrating the difficulties of determining KPIs. However, KPIs could be agreed for each single project depending on what should be

achieved (Nixon et al., 2012). A suitable combination of KPI, such as cost, budget, time, customer & employee satisfaction, could be selected as this was recommended by the interviewees. This is in line with the thoughts of Nixon et al. (2012), who suggest developing KPQs individually per project and after this, defining KPIs. They also brought up the example question “Is there universal agreement on what the end-goal looks like?” (Nixon et al., 2012, p. 213). This KPQ could be further shaped and mapped to the transformational leadership theme T1.4 (Providing and keeping clear joint goals & expecting performance). Derived from this, one or more KPQs could be developed per leadership theme (T1.1 – T1.7), if suitable to the project. KPIs such as adjusted MLQ ratings based on Bass and Avolio (1995) or checks of the use of leadership mediators such as “team meetings” are imaginable. Nixon et al. (2012) opened a new research agenda on leadership performance and this study confirms their findings in the particular case of the IT industry in Germany. Furthermore, hints for possible KPQs could be provided to be derived for individual projects. Further research could further analyse KPQ and KPI and develop frameworks concerning SI related TFL.

T3.2 and T3.3. as demonstrated in 4.2.3.2 and 4.2.3.3 were valuable measures to improve leadership effectiveness in the opinion of the interviewees. Reflection, which can be conducted by T3.2 and T3.3., is key for leadership effectiveness (Boyatzis, 1993) and is supported by the literature, as recently stated by Vilkinas et al. (2019). The combination of T3.2 and T3.3 might be recommended and is supported by literature, as leaders sometimes receive feedback, but do not change (Ulrich & Smallwood, 2013). Sharing thoughts about what can be done better within the project team might cause future acceptance of leadership behaviour and increase team cohesion. This would be a further step to achieving social identity. These findings contribute to practice, as they could be integrated in the governance framework of companies. As a conclusion, these findings can answer RQ3 of this study and contribute to achieving RO3.

4.2.4. Leadership framework (RO4)

In the previous sections, RQ1, RQ2 and RQ3 have been answered by the findings from the interview data and achieve RO1, RO2 and RO3. The aim of this section is to achieve RO4 by conceptualising the findings in a leadership framework for project-based business as a contribution to leadership and governance theories as well as project management practice. The initial conceptual framework was developed from findings of the literature review and demonstrates the interplay of leadership and governance theories. Furthermore, it addresses research gaps as well as research questions. This is displayed in Figure 10 in section 2.6.2. The leadership framework, displayed in Chapter 5 in Figure 21, completes this framework by findings of this study. This leadership framework contributes to closing some gaps in the literature. As project management theories are still weak, claims to enhance the body of knowledge in project management theories have been served by non-deterministic approaches and by drawing theoretical foundations from leadership and governance theories (Padalkar & Gopinath, 2016; Sydow & Braun, 2018). Research in the context of temporary organisations including projects have been conducted to enhance knowledge regarding team behaviour and project success (Braun et al., 2013; Braun et al., 2012; Sydow & Braun, 2018). In particular, leadership theories in the domain of project management have been addressed by inductive approaches (Kaulio, 2008). The interrelation of the governance school of thought, the behaviour school of thought and the success school of thought has been considered (Turner et al., 2013). Furthermore, this framework delivers answers of how motivation of employees in the IT industry can be positively induced by leadership behaviour, governance measures and governmentality, to collaborate in a collective to positively influence project success (Caniëls et al., 2019; Green et al., 2017; Pankratz & Basten, 2018). Furthermore, this study addresses the issue of leadership performance monitoring (Nixon et al., 2012) and delivers further insights to develop leadership performance KPI and to improve leadership effectiveness. As there has been scant qualitative research to understand underlying processes or phenomena, where behaviour of people impacts project success, this study, with a qualitative approach, contributes by the provision of its leadership framework to close this gap (e.g. Acuña et al., 2015; Gelbard & Carmeli, 2009; Lindsjörn et al., 2016; Parry et al., 2014).

Desired leadership behaviour, governance and governmentality factors to facilitate leadership effectiveness as well as improvement measures for leadership have been compiled to provide an interrelated leadership framework. This framework shall contribute to leadership and governance theories with new insights. Its application should increase work engagement of employees in project teams in the IT industry in Germany as a contribution to practice.

Seven types of leadership behaviour with commonalities in TFL and SIL theory have been identified with a positive impact on social identity and work engagement. Thus, TFL and SIL theory have been enhanced, as the findings characterise underlying causality processes in project contexts (Behrendt et al., 2017; Buil et al., 2019; Dinh et al., 2014; Hoffman & Lord, 2013; Porter & McLaughlin, 2006; Steffens, Haslam, Reicher, et al., 2014; Tse & Chiu, 2014; Van Knippenberg & Sitkin, 2013). Based to the findings, liberal governmentality with some tendencies to neo-liberal governmentality and a stewardship approach facilitate SI related TFL behaviour. Governance theories are enhanced, and this study also sheds light on causalities in the context of projects in the German IT industry (Biesenthal & Wilden, 2014; Müller et al., 2017; Turner, 2020a). To monitor and improve leadership in project-based companies, data suggest measures to be implemented into the leadership framework. This part of the framework serves claims to manage success factors in the governance of a company based on the project context (Ika, 2009; Khan et al., 2013; Nixon et al., 2012; Todorović et al., 2015; Varajão et al., 2018). The leadership framework is interrelated. This means that leadership effectiveness is influenced by SI related leadership behaviour, by governance measures and governmentality as well as by measuring for monitoring and improvements. This framework has been developed by considering social constructionism epistemological assumptions. Thus, the body of knowledge is enhanced by social construction of knowledge.

In practice, the leadership framework can be utilised in several ways. Firstly, leadership behaviour T1.1 – T1.7 can be used as guidance for project leaders,

or in leadership trainings for project leaders. Secondly, components of this leadership framework can be needs-oriented integrated in the governance system of a project-based company. T2.1 – T2.10 can be determined as company or project guidance, if suitable. Thirdly, measures T3.1 – T3.3 for leadership monitoring, and reflection in project teams or accompanied coaching for continuous improvement can also be determined as company rules.

4.2.5. The Impact of Crisis Situations such as the Covid-19 Pandemic

During this study, the Covid-19 pandemic began in 2020 and has since drastically changed the behaviour of people in our society, but also working practices in companies. In this study, only projects prior to the Covid-19 crisis were examined and the study does not claim to be generalisable due to the social constructivist epistemology. Nevertheless, the applicability of the Leadership Framework is presented here.

Of course, due to the short period of time, there are not yet many studies on the effectiveness of transformational leadership during the pandemic. Nevertheless, there are already a few articles that confirm the effectiveness of transformational leadership in this crisis situation (Dwiedienawati et al., 2021). The following effects of the pandemic are significant for the findings of the study: Firstly, the lack of information about the situation leads to uncertainty among staff (Dwiedienawati et al., 2021). For example, many people are afraid of losing their jobs in these times of crisis. Or there is too much work to do as clients accelerate their digital transformation (Antonopoulou et al., 2021). There are many reasons for uncertainty. The application of the Leadership Framework helps to mitigate the uncertainties. With leadership behaviour T1.1 common values are addressed, with T1.2 the leader shows that he actively supports the team and with T1.7 ensures that the leader is always close enough to discuss any problems. Another supportive element is T2.4. Clear communication was also seen as helpful by Dwiedienawati et al. (2021)

Secondly, many employees have moved from the office to the home office and

work remotely. For project-based work in the IT industry, the pandemic has meant that, on the one hand, work in virtual teams has increased and, on the other hand, onsite work has had to be carried out with the utmost caution so as not to endanger the safety of customers and employees (Ng et al., 2020). T2.8 addresses this aspect, and it was identified as an important mediating factor for transformational leadership and working onsite is preferred to induce social identity. This does not mean that no social identity can be achieved with virtual work. However, it is important to take this into account. Onsite work and remote work need to be balanced and if only remote work is possible, there need to be measures in place to develop social identity. In a recent study Mysirlaki and Paraskeva (2020) suggest transformational leadership to achieve team performance in virtual teams during the pandemic situation.

In summary, based on what we know so far regarding the impact of the pandemic crisis on leadership issues, the leadership framework developed might also be robust in these difficult times.

4.3. Conclusion

In the previous sub-sections, some important findings have been provided to suggest answers for RQ1, RQ2 and RQ3. Initially, themes could be identified that answer the question of how TFL can cause SI in IT projects. Secondly, some issues in terms of governance and governmentality could be identified that influence leadership effectiveness in project teams and, lastly, contributions to the answer regarding measurability and improvements in leadership performance were represented. In the next chapter, the findings are discussed and conceptualised in a leadership framework according to RO4.

5. Conclusions

5.1. Introduction

This research aims to enhance knowledge regarding the relation of social identity and transformational leadership in project teams. This chapter concludes this study. The importance of this research is highlighted, the main findings are summarised, and as a result a comprehensive leadership framework is suggested. Furthermore, contributions to theory and practice are demonstrated. The limitations of this study are indicated and areas for further research are suggested. A reflective commentary is also provided followed by some final remarks.

5.2. Relevance of the Research

The literature review has shown that project-based business is becoming more and more relevant for companies in the IT industry in Germany, especially in the digital age. Leadership is considered as an important factor to complete projects, and this means that effective leadership is required. Derived from the literature review, social identity related transformational leadership is suggested to increase work engagement of project team members and to contribute making projects successful. It is important to learn more about how this relationship works to support this industry.

Companies in the IT industry in Germany that deliver IT solutions or services by projects to customers have been examined. This research study provides important findings with new insights, which have been conceptualised in a comprehensive leadership framework. Desired Leadership behaviour with commonalities of transformational leadership and social identity leadership theories have been identified as being effective. Furthermore, desired measures regarding governance and governmentality have been developed. Continuous monitoring and improvement ideas have also been presented. That the application of the leadership framework contributes to a better leadership performance should help to make more projects successful in the German IT industry.

5.3. Research Results

5.3.1. Main Findings and Leadership Framework Development

Derived from the literature review, a theoretical framework was developed and four research objectives with three research questions were formulated. Looking through social constructionism lenses, data has been analysed and a comprehensive leadership framework has been created.

Research Objective 1 (RO1)

The first objective (RO1) of this study is to obtain an understanding regarding causal relations of SI processes and TFL that impact perceived work engagement in project teams in the IT Industry in Germany. As shown in the literature review, the effectiveness of transformational leadership is higher if group identities are induced. Therefore, it was important to find commonalities between SIL and TFL. Findings suggest that applying seven leadership behaviours T1.1 – T1.7 (Appendix 7) and answering RQ1 achieves RO1. This leadership behaviour has traits of transformational leadership (TFL) as well as social identity leadership (SIL). The identified themes describe activities that are highly effective in inducing social identity and increasing the work engagement of project team members. In particular, the identification of useful mediators M1 – M7 to be used in leadership activities contributes to answer the how-question. A very important result to answer RQ1 is that not only group-focused TFL behaviours (II and IM) were identified to induce group identities, but also individual-focused TFL behaviours (IS and IC). This means that all TFL components can be involved in shaping social identities. All SIL components (SIA, SIE, SII and SIP) were also attributable to leadership behaviour. It is noticeable that SIE was included in all seven leadership behaviours. It is evident in a particular project context that applying this leadership behaviour might induce social identity and increase work engagement of project team members.

Research Objective 2 (RO2)

The second research objective (RO2) of this study is to obtain an understanding of facilitating factors for SI mediated TFL effectiveness in

project teams, caused by governance and governmentality. Based on findings in literature, governance is an important part of the project context and needs to be considered in regard to leadership. Governmentality is an attitude of how governance is applied and is also important. Findings suggest ten particular governance measures, T2.1 – T2.10 (Appendix 7) to facilitate leadership in temporary organisations such as project teams, and answers RQ2 to achieve RO1. These measures can be applied independently, and the feasibility of the application is dependent on the context. Mediators of the themes T1.1 - T1.7 could also be identified, which contribute as a governance measure with T2.6 - T2.10 to answer RQ2. In this way, companies can secure the consideration of mediators. Furthermore, stewardship governance approaches and neo-liberal or liberal governmentality attitudes are suggested in particular project contexts. Governance measures and leadership behaviour is related and there is a dependence. This means that social identity related transformational leadership is influenced by these governance and governmentality measures and need to be considered within the proposed leadership framework, because leadership in project teams might become more effective and thereby increase work engagement.

Research Objective 3 (RO3)

The third research objective (RO3) of this study is to find possibilities to measure leadership effectiveness and to find possibilities for continuous leadership improvements in companies for their project-based business. Companies need to know if leadership behaviour of project leaders is properly in place. They need to check, and they need to improve leadership effectiveness. Thus, there needs to be a mechanism for continuous leadership monitoring and leadership improvement in the leadership framework. It is evident that three possible measures T3.1 – T3.3 (Appendix 7) should be applied to measure and to improve leadership in IT companies conducting project-based business. These findings answer RQ3 to achieve RO3. These three measures enhance the leadership framework to measure if applied leadership behaviour is effective and improves leadership effectiveness to increase work engagement in project teams.

Research Objective 4 (RO4)

Finally, the fourth research objective of this study is to conceptualise the findings and create a leadership framework for project-based business as a contribution to leadership and governance theories as well as for project management practice. The findings of this research have been conceptualised in a leadership framework as shown in Figure 21.

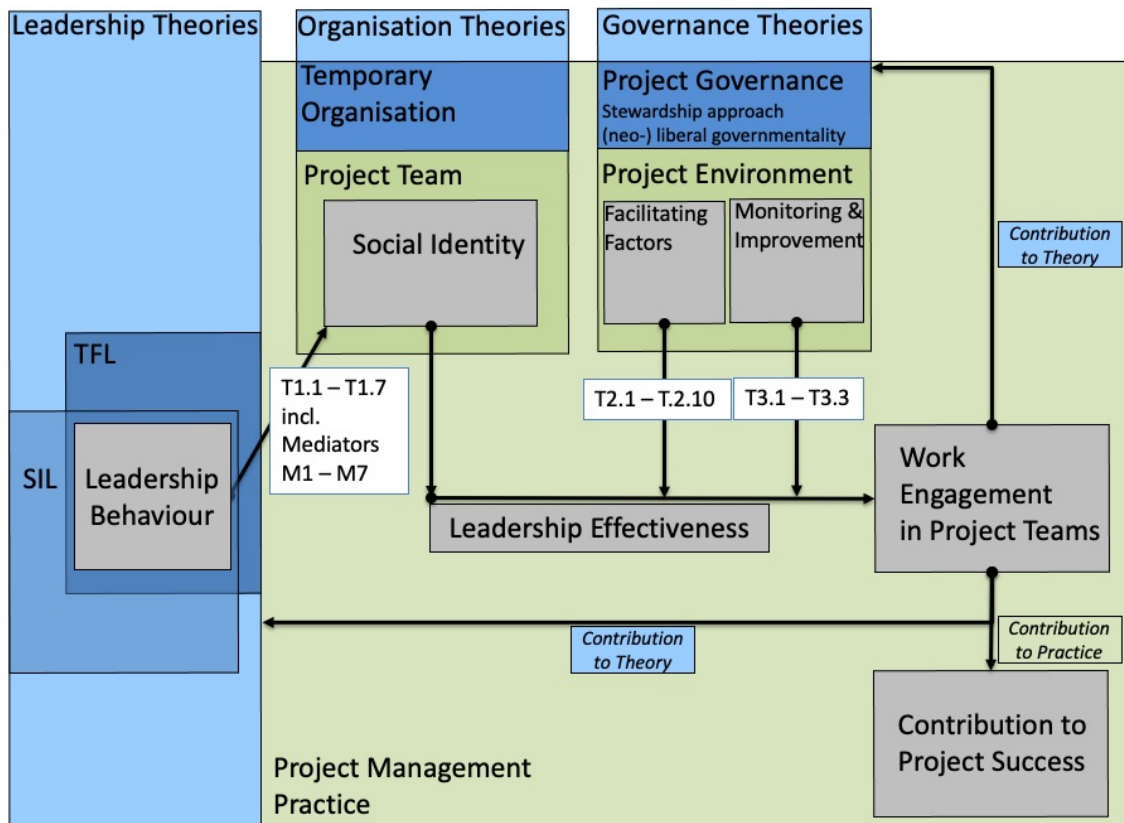


Figure 21: Leadership Framework

This is the first comprehensive leadership framework that considers SI-related TFL behaviour, facilitative governance measures and continuous improvement of leadership effectiveness. This final leadership framework is constructed by desired leadership behaviour T1.1- T1.7, governance measures T2.1 – T2.10, and leadership monitoring and improvement measures T3.1 – T3.3.

Furthermore, T1.1 – T1.7 represent leadership behaviour with traits in TFL and SI including facilitating mediators. The effect of leadership behaviour might be increased work engagement in project teams. As leadership does not take

place in a vacuum and as it is influenced by contextual factors, T2.1 – T2.10 might be useful as a facilitating influence on applied leadership behaviour. This means that leadership effectiveness is positively influenced by desired governance measures and governmentality. In this way, companies can create a suitable working environment for effective leadership behaviour. Furthermore, monitoring and improvement measures T3.1 – T3.3 influence leadership effectiveness. This can help managers gain awareness of leadership effectiveness in their organisations and ensure that leadership effectiveness is constantly improving. This important concept is empirically validated by the literature as well as by analysed data provided by professional experts in project-based businesses and RO4 is achieved. This leadership framework might be applicable in particular project contexts in the IT industry in Germany and contribute to more successful projects.

5.3.2. Contribution to Theory

This study contributes to close some knowledge gaps and informs theory by providing some new insights. The relevance of this research has been demonstrated in chapter 1. IT projects have become more and more relevant in Germany, but a considerable number of projects have been failing for years. Leadership is an important success factor, but the mechanism of how leadership contributes to project success is still unclear. In chapter 2 (literature review) three research gaps and corresponding research questions were developed. However, project management theories still have some theoretical weaknesses (Sydow & Braun, 2018). Therefore, three theories from different schools of thought in project management were combined (Turner et al., 2013) in this study, and a theoretical framework that demonstrates some important mechanisms regarding leadership effectiveness in the context of projects which contribute to project success has been provided. In addition, three research gaps were identified. Firstly, it was assessed that the understanding of transformational leadership in relation to social identity to increase work engagement in project teams is still sparse (GAP1). As a consequence, RQ1 was developed: how can TFL cause SI in project teams that lead to increased work engagement?

Furthermore, a lack of knowledge of how governance or governmentality can facilitate transformational leadership was proven by the literature review (GAP2). This led to the development of RQ2: how can governance and governmentality facilitate SI processes and TFL effectiveness in project teams?

Finally, theory does not deliver the answers to, how leadership effectiveness can be monitored and continuously improved (GAP3). The corresponding RQ3 is as follows: how can leadership performance be measured and improved for project-based business in IT companies?

A qualitative research method has been developed in chapter 3 by looking through social constructionism lenses. Claims in the literature for more qualitative research to obtain deeper understanding are served by this approach. Experienced professionals have been interviewed to find answers to the research questions RQ1, RQ2 and RQ3 and to obtain new insights. Findings as demonstrated and discussed in chapter 4 produce new knowledge and enhance theory in several areas. Furthermore, leadership behaviour (T1.1 – T1.7) delivers insights and closes a gap in the theory by deepening understanding of causal relations in leadership processes, as this TFL behaviour causes social identity in project teams that might lead to improved work engagement. This enriches transformational leadership theory and social identity theory of leadership equally. Governance measures and applied governmentality (T2.1 – T2.10) enhance governance theories as findings provide insights on how to facilitate leadership effectiveness. In particular, stewardship theory is enhanced by providing causalities in the given sample. Governmentality theory is further enhanced by providing examples, especially for (neo-) liberalism approaches. Finally, insights regarding possibilities for monitoring and improvement of leadership effectiveness have been provided (T3.1 – T3.3) and therefore knowledge is enhanced. The insights are compiled into a unique, comprehensive and interrelated leadership framework that enhances knowledge in several theoretical areas. Firstly, transformational leadership theory is enhanced by providing greater understanding in specific

project contexts. Secondly, the social identity theory of leadership is enhanced in specific project contexts. Thirdly, this study combines TFL and SIL theory and provides new knowledge regarding commonalities. Fourthly, governance theories are enhanced by providing new insights regarding project governance and governmentality. In addition, project management theories are enhanced by combining three schools of thought and providing new insights regarding relations and underlying processes of leadership, governance, and success. Finally, this leadership framework provides new avenues for future research.

5.3.3. Contribution to Practice

In addition to enhancements in theory, this study also provides some important applications and considerable contributions to practice. Project managers might be interested in increasing work engagement of employees within their teams in order to increase the likelihood of project success. The literature review informs practitioners about the relevance of leadership in project-based business and the potential of social identity-related transformational leadership to increase work engagement in project teams. Furthermore, the literature review shows the current findings from science regarding effective transformational leadership and governance in projects with reference to practice and the need for deeper understanding of leadership processes and their influences through governance.

An interrelated and comprehensive leadership framework has been developed to help practitioners in the IT industry to improve leadership in project-based business. The findings were created based on interviews with very experienced professionals in the IT industry in Germany with respectable experiences in business and in project management. Their reflections in sum are views on “best practice” approaches to achieve increased work engagement in project teams. It is clear that improvement in leadership effectiveness will contribute to the successful completion of projects by increasing work engagement of employees. Better project completions might lead to better company results and contribute to an increase in economic values in total.

The applicability of the leadership framework is rich in variations, and touches two important topics in project management practice: leadership and project governance. Application of leadership behaviour (T1.1 – T1.7) causes social identity in project teams and leads to work engagement of employees in project-based companies. The insights gained from this study are presented as themes that recommend leadership behaviours in the form of very concrete activities that can be implemented immediately in project practice. In addition, the use of identified mediators is recommended, which positively influence transformational leadership through the use of e.g., tools or events. This behaviour can be determined as guidance for managers and employees by including it into corporate governance as well as project governance. The findings regarding governance (T2.1 – T2.10) provide project practitioners important measures that can positively influence leadership behaviour in projects. They can be easily implemented in the corporate governance or project governance of project-based companies and provide employees guidance and certainties for their actions. Governmentality is a question of culture in a company and the findings should make companies think about what the attitude towards governance should be in the company. Executive managers should act as role models and exemplify governmentality as stewards according to stewardship theory. Liberal or neo-liberal governmentality approaches might be beneficial for projects and business. It is also important for practice that leadership in a company is monitored and constantly improved. The results of this study contribute to practice by suggesting how to use KPIs to monitor leadership in projects. It is recommended to define individual KPIs per project and monitor them (T3.1). Furthermore, the findings suggest that project leaders should have a permanent exchange of experiences with other practitioners and reflect on them (T3.2). In addition, leadership coaching can also help project practitioners to become better leaders (T3.3). The detailed leadership framework is displayed in Figure 22 (Appendix 8).

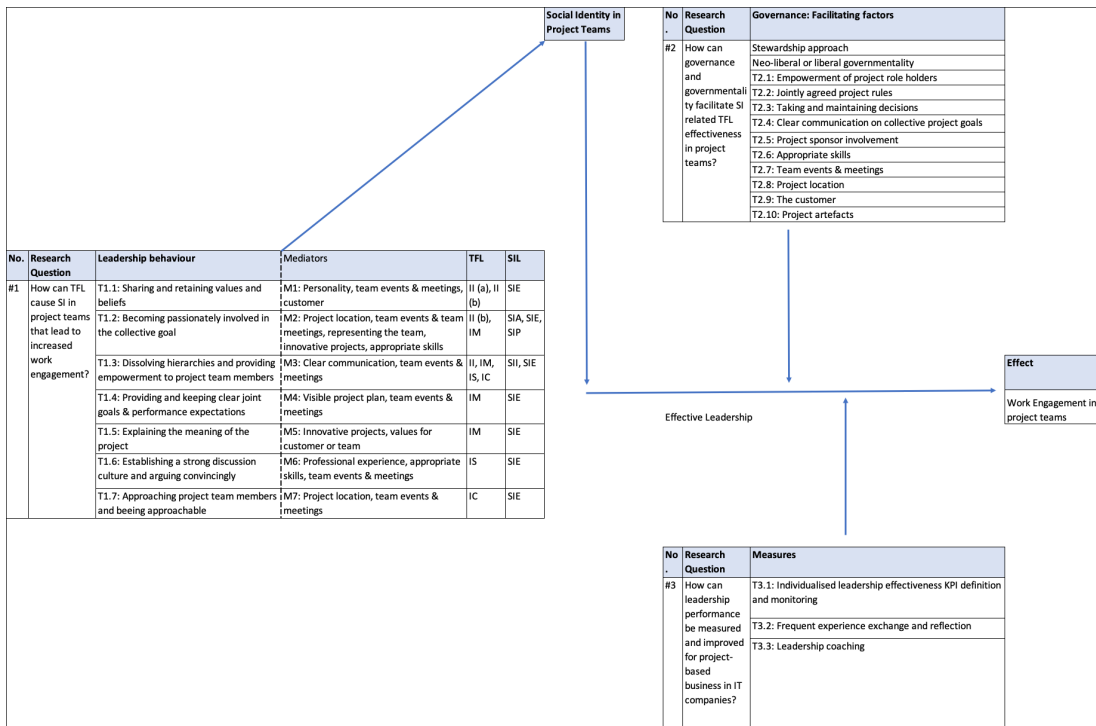


Figure 22: Leadership Framework in Detail as Contribution to Practice

It is useful to use the Leadership Framework in kick-off meetings. In project kick-off meetings, managers and project teams can use the Leadership Framework to reflect together on how they want to be led. For example, when T1.1 "sharing and retaining values and beliefs" is discussed, it can be worked out together what is understood by values in the specific project and what "sharing" and "retaining" in this context means. In this way, questions about project governance can also be asked. It is important to decide how to deal with issues such as T2.8 "project location". Especially in times of pandemics or when work at a specific location is not possible for other reasons, it should be discussed how leadership can be designed to be as effective as possible concerning this point. Furthermore, it can of course be determined in the kick-off meeting how to review and improve leadership effectiveness in the team. Subsequent team events or meetings should then be used to review leadership effectiveness using the leadership framework.

Beyond these suggestions communicating and explaining the entire leadership framework and its meaning to executives and to employees in training sessions or in webinars is recommended. Many companies offer leadership training and seminars for their management. Aspects of the leadership

framework can be integrated into the training. This can also be done via modern learning platforms in companies.

There are several associations for professionals in project management around the world that strive to improve project management practice, such as PMI. Many of these associations offer webinars for continuing education or maintenance of certifications. The Leadership Framework could form the basis for the design of one of these webinars. In addition, presentations could be given in German sections of these project management associations.

In summary, the application of this innovative leadership framework will contribute to professional project management practice to successfully complete more projects in the IT industry in Germany.

5.4. Limitations

This study has of course some limitations which provide opportunities for future research. The first limitation of this study is that the generalisability of the findings is difficult, as a constructivist research approach with a small sample has been conducted (Merriam, 1998). However, the aim of this study is to gain insights into understanding leadership processes and also to apply quality measures to make this research as robust as possible. The view of findings is subjective, truth is socially constructed and represented by interviewees and me.

A second limitation is that participants < 40 years and female participants were in the clear minority. The experience of the participants was more important because the likelihood is higher that the chosen project had been selected out of a set with many samples. If someone has only experienced one project for instance, it would have been difficult to assess that this one had been performed under the given requirements of social identity and work engagement traits. Moreover, female participants were in the minority, but this reflects the situation in the IT industry.

A third limitation is that participants were all German with German residence and German cultural background. No employees of companies from abroad, from nearshore or offshore countries with different cultural backgrounds have participated in this study, because the intention was to examine leadership relationships of people with the same cultural background.

5.5. Future Research

As generalisability might be not provable in research with constructivist approaches, future research can develop hypotheses out of the findings of this study and follow quantitative research approaches. To cross the borders between qualitative and quantitative research fuzzy-set analysis as suggested by Goertz and Mahoney (2012) or Seny Kan et al. (2016) can also be considered in a similar study in future research. By following the qualitative research approach, the sample can of course be adjusted or altered to examine other areas of the German IT industry to obtain further insights. In particular, diversity, opinions of foreign people from different cultures, or different views of male and female for instance, would enrich the knowledge base. Finally, this study provided the opportunity to enhance research in social identity related transformational leadership. Because of a shortage of skilled workers due to demographic change, avoidance of turnover intention in projects, or the retention of employees should be considered for further SI related leadership research.

5.6. Reflective Commentary: My Research Journey

In this section I reflect on my own personal developments during this research.

Bolton (2001, p. xiii) states “Reflective practice is only effectively undertaken and understood by becoming immersed in doing it rather than reading about it or following instructions.”

This doctoral thesis does not only contribute new knowledge to theory and practice, but it has also affected me as a researcher, as an employee of a company and as a person. This study examines leadership behaviour and my passion regarding this topic is easily explained because leadership experiences have accompanied me my entire life. During happy childhood, thanks to my parents, I made my first leadership experiences as class representative at school for many years. Similar leadership experiences have followed, for example, during holiday jobs, such as a young crew chief of a restaurant, as leader and founder of the computer science working group at school, and as youth coach of a handball team. In my time with the German army, I perceived that several people behaved completely different in crisis situations compared with standard situations. During business life I recognised that many project managers failed in crisis situations and my perception was that many senior managers were not capable of supporting these project managers. Many of these senior managers somehow tried to escape the situation instead of finding solutions. More than that, my impression was that senior management always had an important formal responsibility, but very often completely failed in certain situations, where leadership would be demanded. These experiences left a deep impression and affected me, leading to reflections regarding leadership issues.

I spent several years at university and graduated in (German:) Informatik (similar to computer science) at master's level. These studies were very educational and, in particular, skills regarding abstract thinking improved. A second course of university studies in general management (M.Sc.), followed in, where I took dedicated lessons in leadership theories. This was my first encounter with leadership theories, and I was immediately convinced to write my master's thesis in leadership sciences, as I wanted to find answers to my business issues and negative leadership experiences. My personal interests in leadership topics finally led me to the doctoral programme, provided by the University of Gloucestershire.

In my private, military, and business life I had a lot of involvement with leadership issues in practice and a first touch in leadership theories at

University. This has led to my goal in understanding theoretical foundations in leadership, and to examine leadership behaviour in projects of temporary organisations. I would like to contribute to knowledge by identifying new insights and to contribute to practice by improving leadership behaviour.

My DBA journey started in May 2015 together with around fifteen very diverse students with different educational and cultural backgrounds and of different ages: Cohort Cologne 5. Action learning sets were introduced in module 8001 at the beginning of the taught phase of the programme. But honestly, I had some doubts regarding its benefits. Later it turned out that this community was unexpectedly very beneficial for me and we met several times and supported ourselves in our research topics. All issues regarding the research topics, private or business issues could easily be reflected on and discussed together, and with honest feedback being given. These joint reflection sessions continued periodically. The group was very heterogenous and each group member had his own specific research topic. In my opinion, shared values were the basis for cohesion of the team. Moreover, it has been possible to have a view on my own research from different angles. This encouraged me to continue and to eventually adjust my research. This learning in action set triggered in me the realisation that it was possible to have different views on phenomena, and this was a very impressive experience.

Insight was all that I learned about philosophy in module 8003. Different views on truth, knowledge creation and ways of thinking impressed me. In particular, the constructivism paradigm appealed to me most. This was new for me and also changed my way of thinking. Although it seems to be difficult and even if I probably have a spontaneous and biased opinion, I now take time and try to better understand concepts and arguments, and to respect different views in society. I understand more and more why, for example, language is an important factor to construct reality. In considering my research, this led to the decision to go for a constructivist approach.

Learnings about self-categorisation and in-group / out-group phenomena in social identity theory also affected me outside my research, as I now try to

understand causal relations in other contexts. In addition, while my study evolved, I also learned a lot about research during the webinars, conducted by experienced lecturers and researchers of the university. There was never a right or wrong way, but always a very good discussion about justifying an approach. Regarding reflection, the research diary for analytical memos was very important for my research because new ideas could be easily stored, reflected on and later included in the study in a suitable way. Furthermore, feedback from my supervisors has enriched my work. The advice helped me to reflect and to make progress.

My research journey has also affected my business life. For example, in many situations I observed the leadership behaviour of others, and also of myself. Sometimes it was painful, sometimes it was confirming or amusing. Nevertheless, I tried to understand the impact in each situation, and in particular, if social identity had been concerned. Shortly after the first findings were gathered in my research, I reflected on the applicability of the findings in practice, and I think it is obvious that I partly applied the findings myself in my role as a leader of a business unit and I observed, in my view, the positive outcome. I can state that validity of the findings has been given.

Two major incidents were challenging during my research journey. Firstly, shortly after enrolment in the DBA program, UK decided to leave the EU, and secondly, in 2020 the COVID19 crisis affected the entire world. This has shown that there is no reliable stability in the world and potentially everything can change suddenly.

The reflexive process was important for me and my research. I have a goal-oriented mindset, but I believe that this DBA journey is a reward itself.

5.7. Conclusion

In conclusion, this study provides a leadership framework to obtain a better understanding of leadership processes to increase transformational leadership effectiveness by inducing social identity in project teams. Leadership

behaviours and governance measures are suggested to achieve increased work engagement in project teams and thereby increase the likelihood of achieving project success. The findings are suggested to enhance the body of knowledge and to be applied by practitioners in their daily project work. Based on the findings, further research is suggested to further improve leadership effectiveness in project teams.

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Appendix

Appendix 1 Search Strings

Leadership and project management and success

("leadership") AND ("project" OR "project management" OR "project team" OR project organization" or "temporary organization") AND ("success" or performance")

Transformational leadership and social identity

("transformational leadership") AND ("social identity" OR "collective identity" OR "group identity" OR "team identity" OR "organizational identity")

("organizational citizenship behavior" OR "project citizenship behavior") AND ("project" OR "temporary organization") AND ("work engagement" OR "personal engagement" OR "job engagement")

Transformational leadership and project management

("global teams" OR "global virtual teams") AND ("transformational leadership")

Leadership and governance

("leadership") AND ("corporate" OR "project") AND ("governance")

Work engagement

("work engagement" OR "job engagement" OR "personal engagement") AND ("motivation")

("work engagement" OR "personal engagement" OR "job engagement") AND ("project success" OR "project performance")

("transformational leadership" AND ("work engagement" OR "job engagement" OR "personal engagement") AND ("project success" OR "project performance")

Appendix 2 Interview – Letter of Invitation

Letter of Invitation (German)

Jörn Becker
Researcher / Student
Faculty of Applied Science, University of Gloucestershire
Oxstalls Campus, Oxstalls Lane, Gloucester, GL2 9HW

Name der Studie: "The Relation of Social Identity and Transformational Leadership in Project Teams: An examination in the IT Industry in Germany"

Sehr geehrte Teilnehmerin, sehr geehrter Teilnehmer,

ich bin Student an der Universität in Gloucestershire (England) und möchte Sie bitten, an einer von mir durchgeführten Forschungsstudie im Rahmen eines Promotionsprogramms (DBA / PhD) teilzunehmen.

Die Studie befasst sich mit Führungsforschung und ich untersuche IT Projekte in Deutschland. Mein spezielles Interesse gilt der Beziehung von ausgeprägten **Gruppenidentitäten in Projektteams** zur sogenannten „**transformationalen Führung**“, die in der wissenschaftlichen Literatur als eine der effektivsten Führungsmethoden erwähnt wird.

Ich möchte Sie gerne zu einem bilateralen ca. 90-minütigen Gespräch über ihre Erfahrungen einladen. Die Teilnahme ist natürlich freiwillig und die mir zur Verfügung gestellten Informationen werden streng vertraulich behandelt. Wenn Sie es gestatten, werde ich das Interview mit einem Diktiergerät aufnehmen. Das erleichtert mir die spätere Analyse. Es wird nichts veröffentlicht, was Rückschlüsse auf Ihre Person, andere Personen oder auf ihr Unternehmen zulässt.

Für das Interview sind keinerlei Vorkenntnisse zu Führungstheorien erforderlich. Ihre Erfahrung in Projekten ist völlig ausreichend. Zur **Vorbereitung** wäre es jedoch sehr hilfreich, wenn Sie sich vor dem Interview bereits auf Projekte rückbesinnen, bei denen folgende Merkmale erkennbar waren:
Zugehörigkeitsgefühl zum Projektteam + hohes Arbeitsengagement bei Ihnen oder bei anderen, das durch Menschenführung verursacht wurde.

Wenn Sie an der Studie teilnehmen möchten, lesen und unterschreiben Sie bitte auch das beigefügte Einwilligungsformular.

Mit freundlichen Grüßen
Jörn Becker, Student

Letter of Invitation (English translation)

Joern Becker
Researcher / Student
Faculty of Applied Science, University of Gloucestershire
Oxstalls Campus, Oxstalls Lane, Gloucester, GL2 9HW

Name der Studie: "The Relation of Social Identity and Transformational Leadership in Project Teams: An examination in the IT Industry in Germany"

I am a student at the University of Gloucestershire (England) and would like to ask you to participate in a research study I have to carry out as part of a doctoral programme (DBA / PhD).

The study deals with leadership research and I investigate IT projects in Germany. I am particularly interested in the relationship of distinct **group identities** in project teams to so-called "**transformational leadership**", which is mentioned in the scientific literature as one of the most effective leadership methods.

I would like to invite you to a bilateral 90-minute talk about your experiences. Participation is of course voluntary and the information I receive will be kept strictly confidential. If you allow, I will record the interview with a dictation machine. This will facilitate my later analysis. Nothing will be published that allows conclusions to be drawn about you, others or your company.

No previous knowledge of leadership theories is required for the interview. Your experience in projects is sufficient. For preparation, however, it would be very helpful if you think back to projects in which the following characteristics could be identified: A sense of belonging to the project team + a high level of commitment to you or others caused by leadership.

If you would like to participate in the study, please also read and sign the enclosed consent form.

With kind regards,
Joern Becker, Student

Einwilligung
nach Aufklärung zur Teilnahme an folgenden Forschungsprojekt:

Name des Projektes (engl.):

“The Relation of Social Identity and Transformational Leadership in Project Teams:
An examination in the IT Industry in Germany”

Teilnehmer:

Jörn Becker (Interviewer)

Px (Interviewter)

Diese Forschungsstudie wird durchgeführt, um soziale Identitätsprozesse in Projektteams zu untersuchen, die durch sogenannte „transformationale Führung“ verursacht werden. Die erhaltenen Informationen werden verwendet, um ihre Auswirkungen auf das Arbeitsengagement zu verstehen.

Sie sind herzlich eingeladen, an dieser Studie teilzunehmen. Wenn Sie zustimmen, besteht Ihre Mitwirkung in der Teilnahme an einem ca. 60-minütigen Interview, in dem Ihnen Fragen zu Ihren Erfahrungen als Stakeholder von IT-Projekten gestellt werden. Ihre Teilnahme ist freiwillig, und Sie müssen keine der Fragen beantworten, die Sie nicht beantworten möchten. Sie können jederzeit aufhören, wenn Sie möchten. In diesem Fall werden alle Sie betreffenden Daten vernichtet.

Das Interview wird aufgezeichnet und anschließend transkribiert, wenn das für Sie akzeptabel ist, ansonsten werden schriftliche Notizen gemacht. Die Interviewdaten werden ausschließlich für Forschungszwecke verwendet werden. Alles wird anonymisiert und vertraulich behandelt. Die Daten werden sicher gespeichert und gelöscht, wenn sie nicht mehr für Forschungszwecke benötigt werden. Um Ihre Identität zu verbergen, werden Pseudonyme verwendet. Wenn direkte Zitate verwendet werden, werden alle identifizierenden Informationen entfernt, um Ihre Identität zu schützen. Die in dieser Studie gewonnenen Informationen können in Forschungszeitschriften veröffentlicht oder auf Forschungskonferenzen präsentiert werden, aber Ihre Identität wird streng vertraulich behandelt.

Dieses Projekt entspricht den Vorgaben des „Handbook of Research Ethics“ der University of Gloucestershire.

Wenn Sie zur Teilnahme an dieser Forschungsstudie bereit sind, unterschreiben Sie bitte die untenstehende Erklärung und senden Sie dieses Formular (elektronisch oder per Post) an die folgende Adresse:

Jörn Becker, [REDACTED]

UnitedKingdom; e-mail: [REDACTED]

Oder bringen Sie das unterschriebene Formular einfach zum Interviewtermin mit.

Ich habe die vorgenannten Informationen gelesen, oder sie wurden mir vorgelesen. Ich hatte Gelegenheit, Fragen dazu zu stellen, und alle Fragen, die ich gestellt habe, wurden zu meiner Zufriedenheit beantwortet. Ich stimme freiwillig zu, an dieser Studie teilzunehmen. Ich habe eine Kopie dieses Einwilligungsformulars erhalten.

Name des Teilnehmers _____

Datum / Unterschrift des Teilnehmers _____

Ich bestätige, dass ich der oben genannten Person die Art und den Zweck dieser Studie erklärt habe. Ich bestätige, dass ich alle gestellten Fragen beantwortet und die obige Unterschrift überprüft habe. Eine Kopie dieses Einwilligungsformulars wurde dem Teilnehmer zur Verfügung gestellt.

Name des Interviewers: Jörn Becker

Datum / Unterschrift des Interviewers _____

Informed consent

to participate in the following research project:

Name of the project:

“The Relation of Social Identity and Transformational Leadership in Project Teams:
An examination in the IT Industry in Germany”

Participants:

Jörn Becker (Interviewer)

Px (Interviewee)

This research study is being performed to examine social identity processes in project teams caused by so-called transformational leadership. The information obtained will be used to understand their impact on work engagement.

You are invited to participate in this study. If you agree, your participation will consist of participating in an approximately 60 minute interview where you will be asked questions related to your experience as a stakeholder of IT projects. Your participation is voluntary, and you do not have to answer any of the questions which you do not wish to. You can withdraw any time if you wish.

In such a case, all information pertaining to you will be destroyed.

The interview will be audio recorded and transcribed afterwards if this is acceptable, otherwise written notes will be made. The interview will only be used for research purposes. Everything will be anonymous and kept confidential. It will be stored securely and will be deleted when no longer required for research purposes. To obscure your identity, pseudonyms will be used. If direct quotes are used, any identifying information will be removed in order to protect your identity. The information gained in this study might be published in research journals or presented at research conferences, but your identity will be kept strictly confidential.

This project conforms to the Handbook of Research Ethics of the University of Gloucestershire.

If you are willing to participate in this research study, please sign the statement below and return this form (electronically or by post) to the following address:

Jörn Becker, [redacted], [redacted] United Kingdom; e-mail: [redacted]

Or simply bring the signed form with you to the interview appointment.

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study. I have received a copy of this Consent Form.

Name of Participant _____

Date / Signature of Participant _____

I certify that I have explained to the above individual the nature and purpose of this study. I confirm that I have answered any questions raised and have verified the signature above. A copy of this Consent Form has been provided to the participant.

Name of Interviewer: Jörn Becker

Date / Signature of Interviewer _____

Interview Guide

Pilot Interview

1. Introduction

10 min

1.1. What is the purpose of this interview? – explanation by the researcher

Research questions:

RQ1: How can TFL cause SI in project teams that lead to increased work engagement?

RQ2: How can governance and governmentality facilitate or limit SI processes and TFL effectiveness in project teams?

RQ3: How can leadership performance be measured and improved for project-based business in IT companies?

1.2. Administration – consent letter, voluntariness, ethics, permission for recording of the interview and use of the transcript

1.3. Interview process – explanation by the researcher

1.4. Warm-up questions – questions regarding role, experience, age and professional background

2. Interview (semi-structured)

60 min

(the questions are asked and answered in *German language*)

Leadership

2.1. Can you tell me something about projects where leadership by a

manager, a team member or any project stakeholder, led to perceived group identity with the project team? Please explain the project characteristics and what you have perceived.

Können Sie etwas über Projekte erzählen, bei dem die Führung durch einen Manager, ein Teammitglied oder einen beliebigen Projekt-Stakeholder zu wahrgenommener Gruppenidentität mit dem Projektteam führte? Bitte erklären Sie die Projektmerkmale und was Sie wahrgenommen haben.

- 2.2. Were there any particularities in the project with regard to diversity of team members, cultural characteristics, spatial dislocation, language or means of communication?

Gab es Besonderheiten in dem Projekt in Bezug auf Diversität der Team-Mitglieder, Ausprägung von Kulturen, räumliche Dislozierung, Sprache oder Kommunikationsmittel?

- 2.3. How did leadership create a group identity that influenced the work engagement of the team members?

Wie wurde durch Führung eine Gruppenidentität erzeugt, die das Arbeitsengagement der Teammitglieder beeinflusst hat?

- 2.4. How did a person do it? What role did the person have? Please give concrete Examples.

Wie hat die Person das gemacht? Welche Rolle hatte die Person? Bitte nennen Sie konkrete Beispiele.

Supporting questions

- 2.4.1. How did <the leader> become a model member of the group? How did she/he embody, what the group stands for?

Wie wurde die <Führungspersönlichkeit> ein Prototyp/Modellmitglied der Gruppe. Wie hat er/sie verkörpert, wofür die Gruppe steht?

- 2.4.2. How did <the leader> become a champion for the group? How did she/he promote the interests of the group?

Wie wurde die <Führungspersönlichkeit> ein Verfechter/ein Fürsprecher der Gruppe. Wie hat er/sie die Interessen der Gruppe vertreten?

- 2.4.3. How did <the leader> create a sense of cohesion within the group. How did she/he shape members perceptions of values and ideals of the group?

Wie hat die <Führungspersönlichkeit> ein Gefühl des Zusammenhalts innerhalb der Gruppe geschaffen. Wie hat sie/er die Wahrnehmung der Mitglieder von Werten und Idealen der Gruppe gestaltet?

- 2.4.4. How did <the leader> create structures that are useful for group members. How did she/he arrange events that helped the group function effectively?

Wie hat die <Führungspersönlichkeit> Strukturen erstellt, die für Gruppenmitglieder nützlich sind. Wie hat sie/er Ereignisse organisiert, die der Gruppenarbeit effektiv halfen?

- 2.4.5. How did charisma of the leader influence your perceived identity with the group? How did she/he operate as a role model for you? Why did she/he get admired, respected, and trusted and how did this induce your identity with the group? Did she/he take any risks? What was the impact regarding your identity with the leader or the group? Did consistency influence your identity with the group?

Wie hat das Charisma <der Führungspersönlichkeit> Ihre

wahrgenommene Identität mit der Gruppe beeinflusst? Wie hat sie/er sich als Vorbild für dich verhalten? Warum wurde sie/er bewundert, respektiert und ihm vertraut und wie hat das Ihre Identität mit der Gruppe beeinflusst? Ist sie/er ein Risiko eingegangen? Was waren die Auswirkungen auf Ihre Identität mit ihr/ihm oder der Gruppe? Hat ihre/seine Konsistenz Ihre Identität mit der Gruppe beeinflusst?

- 2.4.6. How did inspirational motivation of the leader influence your perceived identity with the group? How did she/he provide meaning and challenge? How did she/he arouse Team spirit? How did she/he display enthusiasm and optimism? How did she/he provide a shared vision with clear expectations that project team members should meet?

Wie hat das inspirierende Motivation <der Führungspersönlichkeit> Ihre wahrgenommene Identität mit der Gruppe beeinflusst? Wie hat er/sie Bedeutungen und Herausforderungen herausgestellt? Wie hat sie/er den Teamgeist geweckt? Wie hat er/sie Begeisterung und Optimismus gezeigt? Wie hat sie/er eine gemeinsame Vision mit klaren Erwartungen entwickelt, die Projektmitarbeiter erfüllen sollten?

- 2.4.7. How did intellectual stimulation of the leader influence your perceived identity with the group? How did she/he encourage creativity and new approaches? Do you have an example, where she/he questioned assumptions? How did she/he reframe problems? How did she/he approach old situations in new ways? How did she/he handle criticism? What did she/he do, if ideas differed from the leader's ideas?

Wie hat intellektuelle Anregung <der Führungspersönlichkeit> Ihre wahrgenommene Identität mit der Gruppe beeinflusst? Wie hat er/sie Kreativität und neue Ansätze gefördert? Haben Sie ein Beispiel, wo sie/er Annahmen in Frage stellte? Wie hat er/sie Probleme neu formuliert? Wie ist er/sie mit alten Situationen auf neue Weise umgegangen? Wie ist sie/er mit Kritik umgegangen? Was hat sie/er getan, wenn die Ideen von den Ideen von ihr/ihm selbst abweichen?

2.4.8. How did individual consideration of the leader influence your perceived identity with the group? How did she/he pay special attention on each individual project team member? How did she/he develop project team members to higher levels of potential? How did she/he cope with individual differences? How did she/he personalize interactions? How did she/he listen effectively?

Wie hat individuelle Berücksichtigung <der Führungspersönlichkeit> Ihre wahrgenommene Identität mit der Gruppe beeinflusst? Wie hat sie/er jedem einzelnen Projektmitarbeiter besondere Aufmerksamkeit geschenkt? Wie hat sie/er die Projektmitarbeiter zu einem höheren Potenzial entwickelt? Wie ist er/sie mit individuellen Unterschieden umgegangen? Wie hat sie/er die Interaktionen personalisiert? Wie hat er/sie effektiv zugehört?

2.5. What did it do to you, and what was different than usual?

Was hat es bei Ihnen ausgelöst und was war anders als sonst?

2.6. What did you perceive observing other team members?

Was haben Sie bei der Beobachtung anderer Teammitglieder wahrgenommen?

2.7. In your opinion, what should be done with regard to leadership to increase your identity with a group and thus your commitment to work?

Was sollte in Bezug auf Führung Ihrer Meinung nach, getan werden, um ihre Identität mit einer Gruppe und somit ihr Arbeitsengagement zu erhöhen?

Governance

(short explanation project / corporate governance)

- 2.8. In your opinion, what role does corporate governance or project governance play in terms of rules, processes, structures and controls regarding social identity or leadership effectiveness in project teams?

Welche Rolle spielt ihre Meinung nach Corporate Governance oder Project Governance im Sinne von Regeln, Prozessen, Strukturen und Kontrollen in Bezug auf Gruppenidentitäten und Führungseffektivität in Projektteams?

- 2.9. How did corporate governance (in sense of company rules, procedures, structures, control) or the way it has been executed facilitate or limit leadership effectiveness in regard to social identity or work engagement?

Wie hat die Corporate Governance (im Sinne von Regel, Prozessen, Strukturen und Kontrollen) oder die Art und Weise, wie sie durchgeführt wurde, die Wirksamkeit der Führung in Bezug auf soziale Identität oder Arbeitsengagement erleichtert oder eingeschränkt?

- 2.10. How did project governance (in sense of project structures, rules, procedures, control) or the way it has been executed facilitate or limit leadership effectiveness in regard to social identity or work engagement?

Wie hat die Projekt-Governance (im Sinne von Strukturen, Regel, Prozessen, Kontrollen) oder die Art und Weise, wie sie durchgeführt wurde, die Wirksamkeit der Führung in Bezug auf soziale Identität oder Arbeitsengagement erleichtert oder eingeschränkt?

- 2.11. What role did the governing body play in this context and what would you expect from the role owners?

Welche Rolle haben in diesem Kontext die Entscheider bzw. hat das Entscheidungsgremium gespielt und was würden Sie von den

Rolleninhabern erwarten?

- 2.12. What role did the project sponsor play in this context and what would you expect from the role owner?

Welche Rolle hatte in diesem Kontext der Projekt Sponsor und was würden Sie von dem Rolleninhaber erwarten?

- 2.13. What should be done in regard to project governance or in regard to corporate governance to facilitate leadership effectiveness in regard to social identity or work engagement? In your opinion, are there any improvements in the area of rules, structures, processes or controls that need to be implemented?

Was ist in Bezug auf Projekt- oder Corporate Governance zu tun, um die Effektivität der Führung in Bezug auf soziale Identität oder Arbeitseinsatz zu erleichtern? Gibt es aus Ihrer Sicht Verbesserungen im Bereich Regeln, Strukturen, Prozesse oder Kontrollen, die umzusetzen wären?

- 2.14. How can corporate or project governance help leaders to establish a clima of trust?

Wie kann Corporate oder Project Governance Führungskräften helfen, ein Klima des Vertrauens zu schaffen?

- 2.15. How should people of the governing bodies behave to facilitate leadership effectiveness in project teams in regard to social identity or work engagement?

Wie sollten sich die Mitarbeiter der Leitungsorgane verhalten, um die Wirksamkeit der Führung in Projektteams in Bezug auf soziale Identität oder berufliches Engagement zu erleichtern?

Leadership Framework

- 2.16. How could experiences and insights, such as yours, be made available to the company in a suitable form so that the company can learn how leadership triggers group identity processes that lead to greater commitment to work in project teams?

Wie könnte man Erfahrungen und Erkenntnisse, wie Ihre, dem Unternehmen in geeigneter Form zur Verfügung stellen, damit das Unternehmen lernen kann, wie Führung Gruppenidentitätsprozesse auslöst, die zu höherem Arbeitsengagement in Projektteams führen?

- 2.17. In your opinion, how could the efficiency of leadership in relation to group identity processes or work commitment be made visible and measurable?

Wie könnte man die Leistungsfähigkeit der Führung in Bezug auf Gruppenidentitätsprozesse oder Arbeitsengagement Ihrer Meinung nach sichtbar und messbar machen?

- 2.18. Do you have recommendations, what companies should do, to implement leadership control in its project or corporate governance to assure leadership effectiveness?

Haben Sie Empfehlungen, was Unternehmen tun sollten, um Kontrolle der Führung in der Projekt-Governance zu etablieren, um die Effektivität der Führung zu gewährleisten?

- 2.19. Do you have recommendations on what companies should do to establish best practice leadership and the possibility of continuous improvement in leadership in the company's governance for project-related business?

Haben Sie Empfehlungen, was Unternehmen tun sollten, um bewährte Führungspraktiken und die Möglichkeit der stetigen Verbesserung in der Führung in der Governance des Unternehmens für projektbezogene Geschäfte zu etablieren.

Free Open Question

- 2.20. Is there anything else about leadership and group identity in project teams that you want to add?

Gibt es noch etwas anderes über Führung und Gruppenidentität in Projektteams, das Sie hinzufügen möchten?

Sampling

- 2.21. Do you know someone who has had similar experiences with group membership in project teams (maybe the same project teams) and would be available for an interview? How can I contact him?

Kennen Sie jemanden, der ähnliche Erfahrungen in Bezug auf Gruppenzugehörigkeit in Projektteams (vielleicht in denselben Projektteams) gemacht hat und für ein Interview zur Verfügung stehen würde? Wie kann ich ihn kontaktieren?

3. Farewell

5 min

Thank you very much!

Vielen Dank!

Interview Guide

(adapted after Pilot Phase)

1. Introduction

10 min

1.1. Explanation of the purpose of the study and the role of the participant.

Introduction of the research questions.

Erläuterung, was der Zweck der Studie ist und welche Rolle der Teilnehmer oder die Teilnehmerin hat. Vorstellung der Forschungsfragen.

Research questions:

RQ1: How can TFL cause SI in project teams that lead to increased work engagement?

RQ2: How can governance and governmentality facilitate or limit SI processes and TFL effectiveness in project teams?

RQ3: How can leadership performance be measured and improved for project-based business in IT companies?

1.2. Administration – consent letter, voluntariness, ethics, permission for recording of the interview and use of the transcript

Administration – Einwilligungserklärung, Freiwilligkeit, Ethik, Anonymität, Erlaubnis für Tonaufnahme

1.3. Explanation of the interview process

Erläuterung des Interview-Prozesses

- 1.4. Warm-up questions – questions regarding current job, role in the company, age, professional experience

Warm-up Fragen – aktueller Job, derzeitige Rolle im Unternehmen, Alter, Berufserfahrung

2. Interview (semi-structured)

60 min

(the questions are asked and answered in *German language*)

Leadership

- 2.1. Can you tell me something about projects where leadership by a manager, a team member or any project stakeholder, led to perceived group identity with the project team?
Please explain the project characteristics and what you have perceived.

Können Sie etwas über Projekte erzählen, bei dem die Führung durch einen Manager, ein Teammitglied oder einen beliebigen Projekt-Stakeholder zu wahrgenommener Gruppenidentität mit dem Projektteam führte?

Bitte erklären Sie die Projektmerkmale und was Sie wahrgenommen haben.

- 2.2. How did leadership create a group identity? How did it influence work engagement of team members?

Wie wurde durch Führung eine Gruppenidentität erzeugt? Wie hat das das Arbeitsengagement der Teammitglieder beeinflusst?

- 2.3. What role did the person have?
How did the person do it?
Please give an example and explain what it has triggered in you or others!

Welche Rolle hatte die Person?

Wie hat die Person das gemacht?

Bitte geben Sie ein Beispiel und erläutern Sie, was es bei Ihnen oder anderen ausgelöst hat!

- 2.4. Why did you identify yourself with the project team?

Warum haben Sie sich mit dem Projektteam identifiziert?

- 2.5. Why did you have a higher group identity than usual?

Warum hatten Sie eine höhere Gruppenidentität als sonst?

- 2.6. What distinguished the project from others in this respect?

Was hat sich das Projekt in diesem Bezug von anderen unterschieden?

- 2.7. Why was your project work intensity higher than usual with respect to triggers by leadership behaviour?

Warum war ihre Arbeitsintensität aufgrund von Einflüssen durch Führungsverhalten in diesem Projekt höher als sonst?

- 2.8. Please explain how leadership behavior triggers your emotional situation regarding your personal project work.

Bitte erklären Sie, wie Führungsverhalten ihre emotionale Situation in Bezug auf ihre persönliche Projektarbeit beeinflusst hat.

- 2.9. Please explain how leadership behavior triggered your way of thinking regarding your personal project work.

Bitte erklären Sie, wie Führungsverhalten Ihre Denkweisen in Bezug auf ihre Projektarbeit beeinflusst hat.

- 2.10. What did you perceive observing other team members?

Was haben Sie bei der Beobachtung anderer Teammitglieder wahrgenommen?

- 2.11. Were there any particularities in the project with regard to diversity of team members, cultural characteristics, spatial dislocation, language or means of communication?

Gab es Besonderheiten in dem Projekt in Bezug auf Diversität der Team-Mitglieder, Ausprägung von Kulturen, räumliche Dislozierung, Sprache oder Kommunikationsmittel?

- 2.12. Was there anything that promoted the situation in terms of group identity or work commitment?

Why was this favourable?

Gab es etwas, was die Situation bzgl. Gruppenidentität oder Arbeitsengagement begünstigt hat?

Warum war das begünstigend?

2.13. Supporting Questions SIL

- 2.13.1. How has she/he shown that she/he is part of the project team? How did

she/he embody, what the group stands for?

Please give an example and explain what it has triggered in you or others!

Wie hat er/sie gezeigt, dass er ein Teil der Projektteams ist? Wie hat er/sie verkörpert, wofür die Gruppe steht?

Bitte geben Sie ein Beispiel und erläutern Sie, was es bei Ihnen oder anderen ausgelöst hat!

2.13.2. How did she/he promote the interests of the group?

Please give an example and explain what it has triggered in you or others!

Wie hat er/sie die Interessen der Gruppe vertreten?

Bitte geben Sie ein Beispiel und erläutern Sie, was es bei Ihnen oder anderen ausgelöst hat!

2.13.3. How did <the leader> create a sense of cohesion within the group.

Example!

Wie hat die <Führungspersönlichkeit> ein Gefühl des Zusammenhalts innerhalb der Gruppe geschaffen?

Beispiel!

2.13.4. How did <the leader> create structures that are useful for group members?

How did she/he arrange events that helped the group function effectively?

Example!

Wie hat die <Führungspersönlichkeit> Strukturen erstellt, die für Gruppenmitglieder nützlich sind?

Wie hat sie/er Ereignisse organisiert, die der Gruppenarbeit effektiv halfen?

Beispiel!

2.14. Supporting Questions TFL

2.14.1. How did charisma of the leader influence your perceived identity with the group?

How did she/he operate as a role model for you?

Why did she/he get admired, respected, and trusted?

How did this induce your identity with the group?

To what extent has she/he taken risks?

What was the impact regarding your identity with the leader or the group?

Did consistency influence your identity with the group?

Examples!

Wie hat das Charisma <der Führungspersönlichkeit> Ihre wahrgenommene Identität mit der Gruppe beeinflusst?

Wie hat sie/er sich als Vorbild für dich verhalten?

Warum wurde sie/er bewundert, respektiert und ihm vertraut?

Wie hat das Ihre Identität mit der Gruppe beeinflusst?

In wie fern ist sie/er Risiken eingegangen?

Was waren die Auswirkungen auf Ihre Identität mit ihr/ihm oder der Gruppe?

Hat ihre/seine Konsistenz Ihre Identität mit der Gruppe beeinflusst?

Beispiele!

2.14.2. How did inspirational motivation of the leader influence your perceived identity with the group?

How did she/he provide meaning and challenge?

How did she/he arouse Team spirit?

How did she/he display enthusiasm and optimism?

How did she/he provide a shared vision with clear expectations that project team members should meet?

Examples!

*Wie hat inspirierende Motivation <der Führungspersönlichkeit> Ihre wahrgenommene Identität mit der Gruppe beeinflusst?
Wie hat er/sie Bedeutungen und Herausforderungen herausgestellt?
Wie hat sie/er den Teamgeist geweckt?
Wie hat er/sie Begeisterung und Optimismus gezeigt?
Wie hat sie/er eine gemeinsame Vision mit klaren Erwartungen entwickelt, die Projektmitarbeiter erfüllen sollten?
Beispiele!*

- 2.14.3. How did intellectual stimulation of the leader influence your perceived identity with the group?
How did she/he encourage creativity and new approaches?
Do you have an example, where she/he questioned assumptions?
How did she/he reframe problems?
How did she/he approach old situations in new ways?
How did she/he handle criticism?
What did she/he do, if ideas differed from the leader's ideas?
Examples!

*Wie hat intellektuelle Anregung <der Führungspersönlichkeit> Ihre wahrgenommene Identität mit der Gruppe beeinflusst?
Wie hat er/sie Kreativität und neue Ansätze gefördert?
Haben Sie ein Beispiel, wo sie/er Annahmen in Frage stellte?
Wie hat er/sie Probleme neu formuliert?
Wie ist er/sie mit alten Situationen auf neue Weise umgegangen?
Wie ist sie/er mit Kritik umgegangen?
Was hat sie/er getan, wenn die Ideen von den Ideen von ihr/ihm selbst abweichen?
Beispiele!*

- 2.14.4. How did individual consideration of the leader influence your perceived identity with the group?
How did she/he pay special attention on each individual project team member?

How did she/he develop project team members to higher levels of potential?

How did she/he cope with individual differences?

How did she/he personalize interactions?

How did she/he listen effectively?

Examples!

Wie hat individuelle Berücksichtigung <der Führungspersönlichkeit>

Ihre wahrgenommene Identität mit der Gruppe beeinflusst?

Wie hat sie/er jedem einzelnen Projektmitarbeiter besondere Aufmerksamkeit geschenkt?

Wie hat sie/er die Projektmitarbeiter zu einem höheren Potenzial entwickelt?

Wie ist er/sie mit individuellen Unterschieden umgegangen?

Wie hat sie/er die Interaktionen personalisiert?

Wie hat er/sie effektiv zugehört?

Beispiele!

- 2.15. In your opinion, what should be done with regard to leadership to increase your identity with a group and thus your commitment to work?

Was sollte in Bezug auf Führung, Ihrer Meinung nach, getan werden, um ihre Identität mit einer Gruppe und somit ihr Arbeitsengagement zu erhöhen?

Governance

(short explanation project / corporate governance)

- 2.16. How did company rules influence the effectiveness of management in terms of project identities?
What role did business processes play?

What role did the company organization play?

What role do management reviews play?

Wie beeinflussten Unternehmensregeln die Führungseffektivität in Bezug auf Ausprägung von Projektidentitäten?

Welche Rolle spielten Unternehmensprozesse?

Welche Rolle spielte die Unternehmensorganisation?

Welche Rolle spielten Managementreviews?

2.17. How did project rules influence the effectiveness of management in terms of project identities?

What role did project processes play?

What role did the project organization play?

What role did project reviews play?

Wie beeinflussten Projektregeln die Führungseffektivität in Bezug auf Ausprägung von Projektidentitäten?

Welche Rolle spielten Projektregeln?

Welche Rolle spielten Projektprozesse?

Welche Rolle spielte die Projektorganisation?

Welche Rolle spielten Projektreviews?

2.18. How did the way (corporate or project), governance has been executed by senior management facilitate or limit leadership effectiveness in regard to social identity or work engagement?

Wie hat die Art und Weise, wie (Projekt- oder Unternehmens) Governance seitens des Senior Managements durchgeführt wurde, die Wirksamkeit der Führung in Bezug auf soziale Identität oder Arbeitsengagement erleichtert oder eingeschränkt?

2.19. What role did the governing body play in this context and what would you expect from the role owners?

Welche Rolle haben in diesem Kontext die Entscheider bzw. hat das Entscheidungsgremium gespielt und was würden Sie von den Rolleninhabern erwarten?

- 2.20. What role did the project sponsor play in this context and what would you expect from the role owner?

Welche Rolle hatte in diesem Kontext der Projekt Sponsor und was würden Sie von dem Rolleninhaber erwarten?

- 2.21. What should be done in regard to project governance or in regard to corporate governance to facilitate leadership effectiveness in regard to social identity or work engagement?

In your opinion, are there any improvements in the area of rules, structures, processes or controls that need to be implemented?

Was ist in Bezug auf (Projekt- oder Corporate) Governance zu tun, um die Effektivität der Führung in Bezug auf soziale Identität oder Arbeitseinsatz zu erleichtern?

Gibt es aus Ihrer Sicht Verbesserungen im Bereich Regeln, Strukturen, Prozesse oder Kontrollen, die umzusetzen wären?

- 2.22. How can (corporate or project) governance help leaders to establish a clima of trust?

Wie kann (Corporate oder Project) Governance Führungskräften helfen, ein Klima des Vertrauens zu schaffen?

- 2.23. How should people of the governing bodies behave to facilitate leadership effectiveness in project teams in regard to social identity or work engagement?

Wie sollten sich die Mitarbeiter der Leitungsorgane verhalten, um die Wirksamkeit der Führung in Projektteams in Bezug auf soziale Identität

oder berufliches Engagement zu erleichtern?

Leadership Monitoring and Improvement

- 2.24. How could experiences and insights, such as yours, be made available to the company in a suitable form so that the company can learn how leadership triggers group identity processes that lead to greater commitment to work in project teams?

Wie könnte man Erfahrungen und Erkenntnisse, wie Ihre, dem Unternehmen in geeigneter Form zur Verfügung stellen, damit das Unternehmen lernen kann, wie Führung Gruppenidentitätsprozesse auslöst, die zu höherem Arbeitsengagement in Projektteams führen?

- 2.25. In your opinion, how could the efficiency of leadership in relation to group identity processes or work commitment be made visible and measurable?

Wie könnte man die Leistungsfähigkeit der Führung in Bezug auf Gruppenidentitätsprozesse oder Arbeitsengagement Ihrer Meinung nach sichtbar und messbar machen?

- 2.26. Do you have recommendations, what companies should do, to implement leadership control in its project or corporate governance to assure leadership effectiveness?

Haben Sie Empfehlungen, was Unternehmen tun sollten, um Kontrolle der Führung in der Projekt-Governance zu etablieren, um die Effektivität der Führung zu gewährleisten?

- 2.27. Do you have recommendations on what companies should do to establish best practice leadership and the possibility of continuous improvement in leadership in the company's governance for project-

related business?

Haben Sie Empfehlungen, was Unternehmen tun sollten, um bewährte Führungspraktiken und die Möglichkeit der stetigen Verbesserung in der Führung in der Governance des Unternehmens für projektbezogene Geschäfte zu etablieren.

Free Open Question

- 2.28. Is there anything else about leadership and group identity in project teams that you want to add?

Gibt es noch etwas anderes über Führung und Gruppenidentität in Projektteams, das Sie hinzufügen möchten?

Sampling

- 2.29. Do you know someone who has had similar experiences with group membership in project teams (maybe the same project teams) and would be available for an interview? How can I contact him?

Kennen Sie jemanden, der ähnliche Erfahrungen in Bezug auf Gruppenzugehörigkeit in Projektteams (vielleicht in denselben Projektteams) gemacht hat und für ein Interview zur Verfügung stehen würde? Wie kann ich ihn kontaktieren?

3. Farewell

5 min

Thank you very much!

Vielen Dank!

Appendix 4 Interview – Sample Transcript

| German (Original) | English (Translation) |
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| <p>Smalltalk, Warmup, kurze Einleitung und Erläuterung zum Thema der Studie, den Forschungsfragen und dem Verlauf des Interviews. Der Einwilligungsbogen wurde nochmals besprochen und lag bereits vor Interviewbeginn unterschrieben vor. Es wurde nochmals die Bitte artikuliert ein Projekt auszuwählen, bei dem ein Zugehörigkeitsgefühl zum Projektteam sowie hohes Arbeitsengagement bei Ihnen oder bei anderen ausgelöst wurde, das durch Führung verursacht wurde. Aus Vertraulichkeitsgründen wurden einige Textpassagen gelöscht (...) oder einzelne Wörter (wie z.B. Namen) durch X ersetzt.</p> | <p>Small talk, warm-up, short introduction and explanation of the topic of the study, the research questions and the course of the interview. The consent form was discussed again and had already been signed before the interview began. The request was again articulated to choose a project where a sense of belonging to the project team as well as high work engagement was triggered in you or in others, which was caused by leadership. For reasons of confidentiality, some text passages were deleted (...) or individual words (such as names) were replaced by Xs.</p> |
| <p>I: Kannst du bitte was zur Charakteristik des Projektes berichten?</p> <p>#P16: Ja, also das Projekt war Einführung einer neuen X-software in X bei der X. Grundsätzlich war die angenommene Zeit, die der Kunde sich vorgestellt hat zur Einführung der Software, zu kurz. Das wurde ihm auch klar gemacht, wurde aber im Nachhinein wieder ignoriert, weil die Altsoftware einfach abgelöst werden musste. (...) Und im Wesentlichen hat die Entwicklung in X stattgefunden, aber man musste natürlich das die Anforderung in X aufnehmen. Das heißt, an allen Standorten, allen X erst mal die Anforderungen aufzunehmen. Man hatte dann sozusagen ein Kernteam der X auch dazugestellt bekommen. Das heißt, 80 Leute der X haben nur an dieser Einführung der Software gearbeitet. Das betrifft dann Anforderungen, Test, Rollout – all die Themen, die für so ein Großprojekt zur Verfügung stehen. Auf der X- und auf der X-Seite waren insgesamt knapp 200 Mitarbeiter beteiligt.</p> | <p>I: Can you please tell us about the characteristics of the project?</p> <p>#P16: Yes, the project was the introduction of a new X-software in X at X. The time the client expected to introduce the software was too short. Basically, the time that the client had expected for the introduction of the software was too short. This was also made clear to him, but was ignored again afterwards, because the old software simply had to be replaced. (...) And essentially, the development took place in X, but of course, the requirements had to be taken up in X. This means that the requirements had to be taken up at all locations, at all X. A core team of the X was then also assigned, so to speak. This means that 80 people from X only worked on the introduction of the software. This includes requirements, testing, rollout - all the topics that are available for such a large project. A total of almost 200 employees were involved on the X and X sides.</p> |
| <p>I: 200? Okay. Wirklich ein großes Projekt. Und der Zeitraum, wann war das genau?</p> <p>#P16: Also ich rechne mal zurück. Ende 2017 bis Ende 2019</p> | <p>I: 200? Okay. Really a big project. And the time period, when was that exactly?</p> <p>#P16: Well, I'll do the maths back. End of 2017 until end of 2019</p> |

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| <p>I: Okay. X war in der Rolle Projektleiter?</p> <p>#P16: X war in der Projektleiterrolle für das X-System. Also es gibt drei große Teilblöcke: Es gab die X als Generalunternehmer, die X-software gebaut bauen wollten oder gebaut haben. Dann gibt es den X-systemteil, den die X gemacht hat mit X in der ursprünglichen Rolle als Projektleiter. Und es gab die Firma X, die sozusagen die X, heißt das, also die besondere X, sozusagen Sondermodus, wenn ein X-fall auftritt bei der X oder X, sozusagen präsentieren. Die drei Partner haben ein Gesamtprodukt angeboten und haben dafür den Zuschlag bekommen. Und in der Ursprungsplanung und so, wie das Projekt gestartet ist, war der X Teilprojektleiter für das Thema X.</p> | <p>I: Okay. X was in the project manager role?</p> <p>#P16: X was in the project manager role for the X system. So there are three big sub-blocks: There was the X as general contractor who wanted to build or built X-software. Then there is the X-system part that X did with X in the original role as project manager. And there was the X company, which, so to speak, presented the X, that is, the special X, special mode, so to speak, when an X case occurs at the X or X. The three partners offered an overall product. The three partners offered an overall product and were awarded the contract for it. And in the original planning and the way the project started, the X was the sub-project leader for the X topic.</p> |
| <p>I: Und wie ist ihm durch Führung, durch seine Einflussnahme, gelungen, eine Identität für die Gruppe zu entwickeln?</p> <p>#P16: Also genau, also das Thema war so, also er hat ein sehr junges, Team aus X bekommen und hat da sehr viel, extrem viel privat gemacht, aber auch einfach den gesamten X-prozess begleitet. Also er hat ein Team gehabt, was er durch gutes Verhalten, durch persönliche Anteilnahme, aber auch private Veranstaltungen und so weiter geführt hat, was eine sehr gute Performance gebracht hat. Und das hat dazu geführt, dass der X-Bereich in den Teilprojekten immer funktioniert hat. Die X hat auch noch funktioniert. Was nicht funktioniert hat, war die X mit ihrer X-software. Und nach einem Jahr Projektlaufzeit ist man in die Situation gekommen, dass der Projektleiter von Anfang an unter Beschuss stand, also der Gesamtprojektleiter der X. Und nach mehreren Gesprächen, Vorschlägen, Diskussionen haben wir dann oder hat X entschieden, für das wichtigste Projekt, was sie haben, einen externen Projektleiter von X zu nehmen, X, ihn nach X zu verpflanzen, sodass er die restlichen, glaub, 14 bis 15 Monate dieses Projekt zum Erfolg führen sollte, musste, konnte. Und das war</p> | <p>I: And how did he succeed in developing an identity for the group through leadership, through his influence?</p> <p>#P16: Well, exactly, the issue was that he got a very young team from X and did a lot, extremely much privately, but also simply accompanied the entire X process. So he had a team that he led through good behaviour, through personal involvement, but also private events and so on, which brought a very good performance. And that has meant that the X area has always functioned in the sub-projects. The X has also still worked. What didn't work was the X with its X-software. And after a year of project work, we got into a situation where the project manager was under fire from the beginning, i.e. the overall project manager of the X. And after several discussions, suggestions and proposals, the project manager was not able to get the X to work. And after several talks, proposals, discussions, we then decided, or X decided, to take an external project manager from X for the most important project they have, X, to transplant him to X, so that he should, had to, could lead this project to success for the remaining, I think, 14 to 15 months. And that was the situation where he was</p> |

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| <p>dann die Situation, wo er als Fremder ein 120 Mann starkes Entwicklungsteam führen sollte, das vorher nicht aber nachher noch funktioniert hat.</p> | <p>supposed to lead a 120-strong development team as an outsider, which didn't work before but still worked afterwards.</p> |
| <p>I: Wie hat er das denn gemacht, dass sich das Projektteam oder dass sich die Mitarbeiter in diesem Team mit diesem Team identifiziert haben? Hast du da konkrete Beispiele?</p> <p>#P16: Also im X Team, ja. Er hat immer das vorgelebt, was er für richtig gehalten hat. Er hat auch die Kollegen auf Kosten seines Portemonnaies privat abends eingeladen, obwohl er nicht wusste, ob das refinanziert wurde, er hat auch viel Kontakt mit den Kollegen gehabt und hat natürlich auch immer vorgelebt beim Kunden, wie man agieren will oder soll. Und diese Proaktivität hat einfach einen Korpsgeist geschaffen um X herum, um dieses X-Thema, dass man sozusagen auch privat Kontakt hatte, man hatte ein extrem spannendes Thema. Es war das sozusagen erste große X-projekt, wo eine X-system integriert war. Das heißt, man war auch irgendwie (...) Frontrunner und man war dabei irgendwie State-of-the-Art-Software, zu bauen. Und das in Kombination dann mit einer mit einem realen Case, dass man sagen kann, der wird auch bei einer X dann ab 2020 eingesetzt. Glaube, die Kombination hat es dem X ermöglicht, aus einer Rahmenbedingung, die ihm das Projekt und die Technik vorgibt, plus junge Menschen, die sehr ansprechbar waren für auch Vorleben von Führung, privates Austauschen, Essen gehen, der eine oder andere, den hat man sich privat dann auch kennengelernt, und der eine oder andere wurde eingeladen zu einer Hochzeit. Also einfach dieses persönliche Führen, den persönlichen Korpsgeist hat er einfach mal in dem X-Team schon in dem Projekt und auch durch die Vorgängerprojekte gelebt.</p> | <p>I: How did he make the project team or the employees in this team identify with this team? Do you have any concrete examples?</p> <p>#P16: In the X team, yes. He always exemplified what he thought was right. He also invited colleagues out privately in the evening at the expense of his wallet, even though he didn't know whether it was refinanced, he also had a lot of contact with colleagues and of course always set an example to the customer of how one wants to or should act. And this proactivity simply created an esprit de corps around X, around this X topic, that one also had private contact, so to speak, one had an extremely exciting topic. It was the first big X project, so to speak, where an X system was integrated. That is to say, one was also somehow (...) a frontrunner and one was somehow building state-of-the-art software. And that in combination with a real case that you can say will also be used for an X from 2020. I believe that the combination made it possible for the X to get out of a framework that the project and the technology set for it, plus young people who were very responsive to exemplifying leadership, exchanging ideas privately, going out to eat, one or two of them got to know each other privately, and one or two of them were invited to a wedding. So he simply lived this personal leadership, the personal esprit de corps in the X team in the project and also through the previous projects.</p> |
| <p>I: Du hast eben gesagt, dass das Projekt auch Innovationscharakter hatte, und dass das auch eine Komponente war, die jetzt dazu geführt hat, dass sich die Leute da</p> | <p>I: You just said that the project also had an innovative character, and that this was also a component that led to people identifying with it. How did he use that?</p> |

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| <p>identifiziert haben. Wie hat er das denn genutzt?</p> <p>#P16: Also man konnte immer den Bezug machen erst mal: Das wird nachher wirklich gebraucht. Du machst jetzt keine Software wie die Verwaltungsbehörde XY, die dann irgendwie mal drei Cases hat. Sondern du hast dann mehrere X in X, die damit konkret arbeiten müssen und da einen konkreten Nutzen haben. Und dann hast du das Thema, dass es in Deutschland wenig Integratoren dieser X-Software gibt, dass man da auch diesen Elitecharakter – "Jungs, das machen drei Firmen in Deutschland, wir bauen das jetzt in X ein" – dass diese Kombination plus junge dynamische Leute, die sich dann anpassen lassen, dass das natürlich extrem geholfen hat, dass die Kollegen wirklich den Bezug haben: Ich bau hier was. Nicht irgendwie Software im Hinterzimmer, sondern ich kann konkret sehen, die X fährt dann aufgrund meiner X-Systeme (...). Also von daher dieser elitäre Charakter – wir sind wirklich Frontrunner, State-of-the-Art-Software plus realer Nutzen – (...) haben natürlich da X in die Hände gespielt, Leute da auch maximal zu motivieren und zu begeistern.</p> | <p>#P16: Well, you could always make the reference first of all: this is really needed later. You don't make software like the administrative authority XY, which somehow has three cases. Rather, you have several X in X who have to work with it in concrete terms and have a concrete benefit. And then you have the issue that there are few integrators of this X software in Germany, that you also have this elite character - "Guys, three companies in Germany are doing this, we're now building it into X" - that this combination plus young dynamic people who can then be adapted, that this has of course helped extremely, that the colleagues really have the reference: I'm building something here. Not somehow software in the back room, but I can see concretely that X is driving because of my X-systems (...). So from that point of view, this elitist character - we are really frontrunners, state-of-the-art software plus real benefits - (...) have naturally played into X's hands to motivate and inspire people to the maximum.</p> |
| <p>I: Okay. Und wie ist ihm das auf der X-Seite gelungen?</p> <p>#P16: Ja, also die Situation war dann so, dass die Projektleitung dann vom Kunden angeschossen wurde. Also X hatte zwei Gesamtprojektleiter sozusagen verschlissen. Und der Kunde hatte schon immer mal so einen guten Eindruck von X. Dann hatte ich auch mit der Frau X gesprochen. Und der Gedanke war geboren von uns und oder dem Kunden und mir, können wir nicht den X für diese kritische Phase für den X-Termin da installieren, weil erstens dadurch eine externe Komponente reinkommt, X der Einzige zu sein scheint, der größere Mitarbeiterteams führen kann und auch vom System eine Ahnung hat, von dem, was die X betrifft. Und das wurde dann sozusagen als Idee positioniert. Sie konnten natürlich</p> | <p>I: Okay. And how did he manage that on the X side?</p> <p>#P16: Yes, so the situation was then that the project management was then shot by the client. So X had worn out two overall project managers, so to speak. And the client had always had such a good impression of X. Then I also spoke with Mrs. X. And the idea was born by us or the client and me, can't we install X for this critical phase for X's appointment, because first of all, this brings in an external component, X seems to be the only one who can lead larger teams of employees and also has an idea of the system, of what concerns X. And that was then, so to speak, chosen as the project manager. And that was then positioned as an idea, so to speak. Of course they could refuse, but Ms X from the client's side and I of course made an</p> |

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| <p>ablehnen, aber Frau X von Kundenseite und ich hab natürlich ein attraktives Angebot gemacht, weil ich wirklich auch Vorteile dadurch gesehen hab, konnten die überzeugen und wie selber das ein externer Projektleiter hier das Projekt nach vorne bringen kann. Also das mal zur Grundsituation. Dann wurde der X – herzlichen Glückwunsch – (lacht) sozusagen beauftragt von X als externer Projektleiter über X. Und das erste, was er gemacht hat, erst mal nach X gezogen mit seiner Familie, weil da die Entwicklung saß. Du musst ohne Kontakt zur Entwicklung, du hast da auch ein junges Team bei X, so 100 bis 120 Leute, die die Software – das ist keine fertige Software, das war sozusagen eine Software, die noch in Entwicklung war – also die haben kein Produkt verkauft, was fertig war, sondern die haben ein Produkt, was in Teilen fertig war und hätte ausgebaut werden sollen, in der Ausschreibung verkauft. Das heißt also, vor Ort sein. Dann hat er extrem viel Zeit verbracht mit den Kollegen vor Ort – das Gleiche was er bei X gemacht hat. Abends mit denen Trinken gehen, die Probleme hören, die die abends beim Bierchen erzählen. Weil wenn du die in die Meetings reingegangen bist, diese X Kultur ist schon so "das läuft alles, kriegen wir alles hin". Aber es lief nichts. Die hatten Bugs ohne Ende. Also erst mal über die persönliche Schiene versucht Probleme zu identifizieren. Und auf der Kundenseite hat er das Gleiche gemacht. Der ist wirklich zu allen X hingegangen, um wirklich die Knackpunkte zu erfahren, um sich ein Gesamtbild zu machen, was ist wirklich wichtig, was wirklich einwandfrei funktionieren muss, und was sind Sachen, wo ich Fehler tolerieren kann, um den Kunden nicht zu verlieren. Und so ist er reingegangen, hat wirklich eine ganz klare Rückwärtsplanung gemacht auch dann mit dem Kunden besprochen. X hat immer verschoben, verschoben, verschoben und X hat gesagt: "Wir drehen das mal zurück. Also wie viele Monate haben wir Zeit? Wie viele Releases können wir da machen? Und was ist wirklich</p> | <p>attractive offer, because I really saw advantages in it, could convince them and how an external project manager can bring the project forward. So that's the basic situation. Then X - congratulations - (laughs) was commissioned, so to speak, by X as an external project manager via X. And the first thing he did was to find an external project manager. And the first thing he did was to move to X with his family, because that's where the development department was. You have to work without contact to the development, you also have a young team at X, about 100 to 120 people, who sold the software - it's not finished software, it was, so to speak, software that was still in development - so they didn't sell a product that was finished, but they sold a product that was finished in parts and should have been expanded, in the tender. So that means being on site. Then he spent a lot of time with the colleagues on site - the same thing he did at X. He went out drinking with them in the evening, had a drink with them, and then went back to the office. Going out drinking with them in the evening, listening to the problems they tell over a beer. Because if you went into the meetings, this X culture is already like "everything will work out, we'll get everything done". But nothing worked. They had bugs without end. So he first tried to identify problems on a personal level. And he did the same on the customer side. He really went to all X to really find out the sticking points, to get an overall picture of what is really important, what really has to work perfectly, and what are the things where I can tolerate mistakes in order not to lose the customer. And so he went in, really did a very clear backward planning and then discussed it with the client. X always postponed, postponed, postponed and X said: "Let's turn it back. So how many months do we have? How many releases can we do? And what is really realistic?" And then, in combination with the customer, he reduced the scope by 40 to 50 per cent for the acceptance, so to speak, so that it was possible and feasible for the project team. And in</p> |
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| <p>realistisch?" Und hat dann sozusagen in Kombination mit dem Kunden den Scope so reduziert um 40 bis 50 Prozent für die Abnahme, dass das dann für das Projektteam möglich und machbar war. Und in der Kombination, dass er beim Kunden weniger Anforderungen durchsetzen konnte und das Team in dem Stress sehen konnte, "okay, mein Projektleiter tut was für mich, dass ich in einen realistischen Case kommen kann, hier was zu machen, plus der arbeitet auch 18 Stunden und geht abends mit mir noch ein Bierchen trinken und ist interessiert an meinen Problemen", in dieser Kombination konnte er einen Turnaround hinbekommen als externer Projektleiter. Und natürlich mit dem kompletten Backing der Geschäftsleitung. Weil das ist ja eine mittelständische Firma, die von – X – von X so geführt wird, die noch nie in ihrem Leben einen externen Projektleiter auf so einem großen Projekt hatten. Und eine Rahmenbedingung, die ganz klar war, bevor der angefangen hat, war: "Ihr redet mir nicht rein. Ich berichte euch gerne und ihr könnt mir gern Infos geben, aber ihr werdet mich nie korrigieren vor der gesamten Mannschaft." In der Kombination hat er den Turnaround hinbekommen, dass im Wesentlichen zum 1.1.2020 die neue X-software in X an den Start gegangen ist.</p> | <p>the combination that he was able to enforce fewer requirements with the client and the team could see in the stress, "OK, my project manager is doing something for me so that I can get into a realistic case to do something here, plus he also works 18 hours and goes out for a beer with me in the evening and is interested in my problems", in this combination he was able to achieve a turnaround as an external project manager. And of course with the complete backing of the management. Because this is a medium-sized company that is managed by - X - by X, who have never had an external project manager on such a large project in their lives. And one framework condition that was very clear before he started was: "You don't interfere with me. I'm happy to report to you and you're happy to give me info, but you'll never correct me in front of the whole team." In combination, he managed the turnaround that essentially the new X-software in X was launched on 1.1.2020.</p> |
| <p>I: Das heißt, er ist mit seiner ganzen Familie umgezogen?</p> <p>#P16: Ja. Nach X. Also der ist sogar nach X gezogen. Also das ist dann 50 Kilometer entfernt von X.</p> | <p>I: That means he moved with his whole family?</p> <p>#P16: Yes. To X. He even moved to X. So that's 50 kilometres away from X.</p> |
| <p>I: Das ist ja krass. Und das heißt also, so habe ich es verstanden, der Vor-Ort-Einsatz, der war von entscheidender Bedeutung plus den ständigen persönlichen Kontakt mit den Mitarbeitern?</p> <p>#P16: Genau. Also du kannst keine Entwicklung da nicht alleine lassen. Das sind da auch alles junge Leute, das sind jetzt keine – waren auch ein paar erfahrene Entwickler – aber die meisten so 25, 35, die viel Software schon entwickelt haben, aber so ein X-markt und so, dass das wirklich funktionieren muss</p> | <p>I: That's really crass. And that means, as I understood it, that the on-site work was of decisive importance, plus the constant personal contact with the employees?</p> <p>#P16: Exactly. So you can't leave development alone. They are all young people, they are not - there were also a few experienced developers - but most of them are about 25, 35, who have already developed a lot of software, but they were not used to an X-market and so on, that it really has to work</p> |

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| <p>ohne Bug so, waren die auch nicht gewohnt. Die entwickeln gut und sind gute Leute und entwickeln anspruchsvolle Architekturen. Aber dass das wirklich bei der X, die wenig fehlertolerant ist, laufen muss, das war nicht in allen Köpfen drin. Und das kriegst du nur rein, wenn du permanent vor Ort bist. Also der war sieben Tage vor Ort da, also nicht nur fünf Tage die Woche, sondern auch am Wochenende. War immer da und hat sich das alles angehört. Und ohne Kontakt zur Entwicklung und was die da treiben und was die für einen Plan haben, keine Chance. Weil du hast ja immer dann auch das Thema, du hast eine Produktentwicklung und du hast ein Projekt. (...) Und die Produktentwicklung sagt, "ja, das ist schön, dass die X das haben will, aber also wir wollen das eigentlich anders architekturell lösen, weil das müssen wir ja für mehrere Kunden auch lösen". Da musst du dann zu den Jungs sagen: "Nein, Jungs, (lacht) X braucht das jetzt so. Das machen wir jetzt auch so. Und was ihr nachher damit macht, das müsst ihr dann mal gucken." Also diesen Konflikt hat der auch permanent, also dass eine Produktentwicklung, die bisher gewohnt war, "ja, wir haben unser Produkt und dann kommt der Kunde und will so ein bisschen Customizing", jetzt muss man dieses Produkt in einem Projekt entwickeln. Und diesen Spagat kriegst du nur vor Ort hin, wenn Du Kontakt mit allen hast, komplettes Backing der Mannschaft und, wie gesagt, diesen jungen Menschen vorlebst, dass du da 18 Stunden unterwegs bist, voll an Bord bist, aber abends auch noch bereit bist, ein Bierchen zu trinken und zu sagen "hey, gehen wir noch mal lecker essen, lass uns mal Revue passieren, was hier ist". Nur so konnte er den Turnaround hinbekommen und auch einfach diesen Korpsgeist da als Externer bekommen. Weil du bist irgendwie aus X, fährst nach X irgendwie auf das Land – will jetzt nicht sagen, dass es alles Landeier sind – aber das ist schon ein kultureller Unterschied. Plus: In so einer Situation, wo du als Externer zum ersten Mal so ein Projekt machst,</p> | <p>without a bug. They develop well and are good people and develop sophisticated architectures. But the fact that it really has to work with the X, which is not very fault-tolerant, was not in everyone's minds. And you can only get that into your head if you are permanently on site. So he was there seven days a week, not only five days a week, but also at weekends. He was always there and listened to everything. And without contact to the development and what they are doing there and what their plan is, there is no chance. Because you always have the topic, you have a product development and you have a project. (...) And product development says, "yes, it's nice that X wants that, but we actually want to solve it architecturally differently, because we have to solve it for several customers". Then you have to say to the guys: "No, guys, (laughs) X needs it like this. That's what we're going to do now. And what you do with it later, you'll have to see." So he also has this conflict all the time, that a product development that was used to "yes, we have our product and then the customer comes and wants a bit of customising", now you have to develop this product in a project. And you can only manage this balancing act on site if you have contact with everyone, complete backing of the team and, as I said, set an example for these young people that you are on the road for 18 hours, are fully on board, but in the evening you are also prepared to have a beer and say "hey, let's go out for another delicious meal, let's review what's here". That's the only way he could get the turnaround and also just get that esprit de corps there as an external. Because you're somehow from X, you're somehow going to X in the country - I don't want to say that they're all country bumpkins - but that's already a cultural difference. Plus: In a situation like this, where you're doing a project as an outsider for the first time, you had to pull out all the stops or X had to pull out all the stops or did pull out all the stops in order to somehow get something done. So once that, but also externally simply that he could talk</p> |
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| <p>dass du da schon alle Register ziehen musstest oder X alle Register ziehen musste oder gezogen hat, um da irgendwie was hinzubekommen. Also einmal das, aber auch extern einfach, dass er mit dem Kunden reden konnte, "hey, den Scope brauchst du nicht, da müssen wir reduzieren". Also das heißt, die wurden besser in der Entwicklung, haben aber auch gesehen, "hey, der Backlog, den ich da noch entwickeln muss, wird auch weniger, weil der X gut erklären kann, was man braucht und was man nicht braucht, um da hinzukommen". Also es ist nicht so, dass nur die Performance des Teams das hinbekommen hat, der konnte auch parallel auf der Kundenseite durch das Vertrauen Interessen durchsetzen, weil und sagen: "Hey, den gesamten Scope schafft man nicht." Hat er relativ schnell erkannt und hat gemeint "das kriegst du nicht alles".</p> | <p>to the client, "hey, you don't need the scope, we have to reduce it". In other words, they got better at development, but they also saw that "hey, the backlog that I still have to develop is also getting smaller, because X can explain well what you need and what you don't need to get there". So it's not just the performance of the team that got it done, he was also able to assert interests in parallel on the customer side through trust, because and say: "Hey, you can't manage the entire scope." He recognised that relatively quickly and said, "You can't get it all.</p> |
| <p>I: Dieses schnelle Erkennen, hat das was mit der Fachkompetenz zu tun gehabt?</p> <p>#P16: Klar, der ist hat X und X studiert, hat extrem viel Schulung gemacht, hat ein internes Leadership Programm gemacht, der ist extrem erwachsen und extrem weit für sein junges Leben und sehr analytisch und ein Arbeitstier. Also der hat natürlich dadurch, dass er sich schon in der Teilprojektleiter-X-Rolle auch mit dem Gesamtprojektplan hat er natürlich dort schon sehen können, wo die Probleme sind. Aber das hat der relativ schnell auch sehr methodisch, nicht so irgendwie hemdsärmelig, sondern relativ strukturiert analysiert und auch umgesetzt, wie er es an der Uni gelernt hat. Also der hatte schon bisschen Zeit, sich das anzugucken, was da aus seiner Sicht schief läuft, und hatte auch schon da Feedback auch an X gegeben. Aber das dann umzusetzen, dieses, sage mal, Nörgeln, was alles nicht geht, als Teilprojektleiter dann in der Gesamtprojektleitung umzusetzen, sodass das beim Team ankommt, beim Kunden und nachher auch passt, das hat er relativ schnell und sauber hinbekommen.</p> | <p>I: This quick recognition, did it have anything to do with professional competence?</p> <p>#P16: Sure, he studied X and X, did a lot of training, did an internal leadership programme, he is extremely mature and extremely advanced for his young life and very analytical and a workhorse. So of course he has already been able to see where the problems are because he was already in the role of sub-project manager X and also with the overall project plan. But he was able to analyse and implement this relatively quickly and methodically, not in a casual way, but in a relatively structured way, as he had learned at university. So he had a bit of time to look at what he thought was going wrong, and he had already given feedback to X. But he then implemented it, this, let's say, "problem-solving". But he managed to implement this, let's say, nagging about what wasn't working, as a sub-project manager in the overall project management, so that it was received by the team, by the customer and also fit afterwards, relatively quickly and cleanly.</p> |

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| <p>I: Okay. Wie hat er denn verkörpert, wofür die Gruppe steht oder wofür das Projektteam steht? Sind dir da irgendwelche Merkmale aufgefallen?</p> <p>#P16: Verkörpert, ah ok. Er hat sozusagen mit Key-Leuten eine Buddy-Kultur aufgebaut, also so abends mit denen Essen gehen, "was sind eure Probleme", "was können wir da noch machen", Brainstorming, was kann ich dem Kunden auch verkaufen, was geht, was geht nicht (...) und so weiter und so fort.</p> | <p>I: Okay. How did he embody what the group stands for or what the project team stands for? Did you notice any characteristics?</p> <p>#P16: Embodied, ah ok. He sort of built up a buddy culture with key people, so going out to dinner with them in the evening, "what are your problems", "what else can we do", brainstorming, what can I also sell to the customer, what works, what doesn't (...) and so on and so forth.</p> |
| <p>I: Du hattest eben auch mal Vorbildfunktion erwähnt. Sind dir da noch weitere Dinge aufgefallen außer denen, die du jetzt schon genannt hattest?</p> <p>#P16: Ja, nein, also, ich glaub, da habe ich schon alles zu gesagt. Ich glaub, eine hohe Professionalität auch und eine Sachlichkeit beim Kunden. Und die Sachlichkeit hat er auch intern sozusagen walten lassen. Also er hat zwar eine Buddy-Kultur gefördert irgendwie, um Sachen rauszubekommen, die wirklich brennen. Weil es wurde nicht einfach so berichtet, was funktioniert oder nicht funktioniert, sondern das kriegst du meistens erstens beim dritten, vierten Bier abends raus, wo wirklich die Knackpunkte hängen. Weil das vielleicht dann auch persönlich bei den Leuten sind, die das vielleicht für überfordert sind oder Unterstützung brauchen, das aber nicht zugeben wollen. Also die ganzen, sagen wir mal, Dinge, die vielleicht nicht laufen und warum die laufen, kriegst du abends mit. Aber tagsüber, sagen wir mal, extrem sachlich und unpersönlich. Also das konnte er extrem trennen. Und glaube, das war noch mal ein Faktor, der gut angekommen ist, also er dieses Vertrauen nicht ausgenutzt hat und gesagt hat: "okay, die drei sind doof, müssen wir anders machen". Sondern er hat ein Kernteam von den Menschen, denen er vertraut hat, aufgebaut. Also da von 120 Leuten hast du auch, weiß ich nicht, 60, 70</p> | <p>I: You just mentioned the role model function. Did you notice any other things apart from the ones you have already mentioned?</p> <p>#P16: Yes, no, I think I've already said everything about that. I think there was a high level of professionalism and objectivity on the part of the client. And he also applied this objectivity internally, so to speak. He did promote a buddy culture somehow in order to get things out that really burned. Because it wasn't simply reported what worked or didn't work, but rather you usually find out where the sticking points really are after the third or fourth beer in the evening. Because maybe these are then also personal with the people who are perhaps in over their heads or need support, but don't want to admit it. So all the, let's say, things that maybe don't work and why they don't work, you get to know in the evening. But during the day, let's say, extremely matter-of-fact and impersonal. So he was able to separate that extremely. And I think that was another factor that went down well, that he didn't exploit this trust and say, "OK, these three are stupid, we have to do things differently". Instead, he built up a core team of people he trusted. So out of 120 people you also have, I don't know, 60, 70 developers. You don't need that. But he got the hub from 15 to 20 key people, where he still has his own Whatsapp chat and then built it up with those he can rely on. So it wasn't with the 120</p> |

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| <p>Entwickler. Da brauchst du nicht. Aber der hat von 15 bis 20 Key-Leuten, wo er da einen eigenen Whatsapp-Chat immer noch hat und dann aufgebaut hat, mit denen, auf die er sich verlassen kann, hat er dann auch den Hub gekriegt. Also nicht mit den 120 Mann, sondern er hat sich ein Kernteam von Teilprojektleitern oder Chefarchitekten, von Leuten, denen er was zugetraut hat, die wirklich was bewegen können, die hat er um sich geschart und mit denen hat er kommuniziert, diesen Korpsgeist gemacht, um im Wesentlichen die anderen 70, 80 damit zu tragen, die dann auch die konkrete Entwicklung gemacht haben. Das heißt also wirklich, sich die 120 Leute angeschaut, was sind da Key-Leute, was können Leute gut, was können schlecht und wen brauche ich da, um im Wesentlichen (...), Macher, Follower und wen muss ich da adressieren, damit ich da irgendwas nach vorne bewegt bekomme.</p> | <p>men, but with a core team of sub-project leaders or chief architects, of people he trusted with something, who could really make a difference, that he gathered around him and with whom he communicated, made this esprit de corps, in order to essentially carry the other 70, 80 with them, who then also made the concrete development. That really means looking at the 120 people, what are the key people, what can people do well, what can they do badly and who do I need to essentially (...), doers, followers and who do I need to address in order to get something moving forward.</p> |
| <p>I: Und wie hat er die Interessen der Gruppe vertreten? Also nach außen?</p> <p>#P16: Ja also wie gesagt, in zwei Richtungen natürlich: (...) einmal Richtung gegenüber der Geschäftsleitung, die natürlich auch versucht hat, da mit reinzuregieren, obwohl die eine Abmachung hatten. Und dann natürlich immer dann auch sagen konnten "ja, ihr kriegt soundso viel Leute und mehr brauchen wir nicht". Also da immer sich vor die Gruppe gestellt gegenüber der Leitung, wo die Leitung aus Sicht der Mitarbeiter da die falschen Entscheidung treffen. Also da hat er klare Kante gezeigt und auch nicht irgendwie aus Angst, dass er nur externer Projektleiter ist oder so, da hat er immer Klartext geredet – auch vor der Mannschaft, wenn die da größere Entwicklungstreffen hatten mit ihren Architekten. Also immer Klartext, was geht und was geht nicht. Also das mal nach in X. Und zum Kunden hin auch immer ganz klar, aber auch ganz klar mit dem Fokus, was ist machbar und was braucht die X wirklich. (...) mit den Leuten konkret vor Ort gesprochen hat.</p> | <p>I: And how did he represent the interests of the group? To the outside world?</p> <p>#P16: Yes, as I said, in two directions, of course: (...) once towards the management, which of course also tried to interfere, although they had an agreement. And then, of course, they could always say "yes, you get so many people and we don't need more". In other words, he always stood up to the management in front of the group when the management was making the wrong decision from the staff's point of view. So he showed a clear edge and not somehow out of fear that he was only an external project manager or something, he always spoke plainly - also in front of the team when they had larger development meetings with their architects. So he was always clear about what works and what doesn't. So that's what he said in X. And towards the customer, always very clearly, but also very clearly with the focus on what is feasible and what X really needs. (...) spoke with the people on site. And to clarify with the software what has to work in</p> |

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| <p>Und bei der Software zu klären, was muss auf jeden Fall funktionieren, wo können wir vielleicht Abstriche machen. (...)</p> | <p>any case, where can we perhaps make concessions. (...)</p> |
| <p>I: Und wie hat er innerhalb der Gruppe ein Gefühl des Zusammenhalts geschaffen?</p> <p>#P16: Jetzt intern? Ja, wie gesagt, klassisch ein Bierchen abends trinken, mal einen ausgeben, Vorschläge machen, wo man hingehen kann. Auch mal eine Wanderung gemacht, am Wochenende: "Jungs, wir müssen jetzt mal einen Tag hier durchlüften. Lasst uns mal hier die tolle Umgebung nutzen und lasst uns mal hier auf den Berg gehen. (...) Oder lasst uns nach X fahren (...). Also schon so ein Mix, immer zu gucken, wann muss ich auf das Gaspedal treten oder wann muss ich mal hier gemeinsame Erfahrung sammeln. Hauptthema. Wenn du da bis 9 Uhr im Büro bist, dann hatten die da so eine Theke und da kannst du da ein Bierchen nehmen und dann "komm, wir gehen irgendwo essen". Aber er hat auch bewusst gesagt: "Hör mal, wir fahren jetzt mal irgendwie auf die Rodelbahn oder wir machen mal eine Vier-Fünf-Stunden-Wanderung, um einfach mal fit zu bleiben und einfach auch hier zu gucken, wie es ist." Also das hat er auch dann genutzt, um im Wesentlichen da einen Korpsgeist zu etablieren.</p> | <p>I: And how did he create a sense of cohesion within the group?</p> <p>#P16: Internally now? Yes, as I said, the classic way of having a beer in the evening, buying a drink, making suggestions about where to go. We even went on a hike at the weekend: "Guys, we need to air out the place for a day. Let's take advantage of the great surroundings here and let's go up the mountain. (...) Or let's go to X (...). So it's a kind of mix, always looking at when I have to step on the accelerator or when I have to gather some shared experience here. Main topic. If you are in the office until 9 o'clock, they had a bar and you can have a beer and then "come on, let's go eat somewhere". But he also deliberately said, "Listen, we're going to go tobogganing or we're going on a four-five hour hike, just to stay fit and see what it's like. So he also used that to essentially establish an esprit de corps.</p> |
| <p>I: Und wie hat er innerhalb des Projektes Strukturen erstellt, die für die Gruppenmitglieder nützlich waren?</p> <p>#P16: Also der hat die einfach, ich glaub, noch mal (...) die gesamte Organisation sich in Projekt- und Produktentwicklung noch mal neu aufgestellt. Also er hat die Produktentwicklung komplett in das Team integriert und hat jetzt nicht mehr "hey, wir haben eine Produktentwicklung und dann hab ich das Projektteam". Sondern er hat gesagt: "Hey, die Produktentwicklung muss sofort Teil des Teams werden und die müssen auch sofort den Kundenkontakt haben in den</p> | <p>I: Und wie hat er innerhalb des Projektes Strukturen erstellt, die für die Gruppenmitglieder nützlich waren?</p> <p>#P16: Also der hat die einfach, ich glaub, noch mal (...) die gesamte Organisation sich in Projekt- und Produktentwicklung noch mal neu aufgestellt. Also er hat die Produktentwicklung komplett in das Team integriert und hat jetzt nicht mehr "hey, wir haben eine Produktentwicklung und dann hab ich das Projektteam". Sondern er hat gesagt: "Hey, die Produktentwicklung muss sofort Teil des Teams werden und die müssen auch sofort den Kundenkontakt haben in den</p> |

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| <p>Anforderungsworkshops. Was machen wir da?" Weil also du hast das Team, die kommen mit Anforderungen vom Kunden. Und da sagt das Projektteam "nein". (...) Wenn aber der Projekt- oder der Produkt-Owner in dem Workshop sitzt mit dem Kunden, dann sagt der nicht "nein". Weil dann hat er den Kundenkontakt. Weißt du, wenn so ein Interner kommt und sagt "wir hätten das gern so und so, also der Kunde hätte es so und so", und dann sagt der "nein, mache ich nicht". Wenn der aber im Workshop mit dem Kunden sitzt, sagt der nicht "nein". Das heißt, er hat die Produktentwicklung aus ihrem Keller geholt, in das Projekt integriert, diese X sozusagen von den Key-Leuten aus der Produktentwicklung organisiert, dass die sich im Driver Seat fühlen. Nicht das Projektteam, was sich den Arsch aufreißt und eine Produktentwicklung, die sozusagen diese Anforderungen ignoriert, weil sagt: "Das machen wir irgendwie anders. Haben wir immer schon anders gemacht. Da haben wir andere Ideen." Nein, die im Driver Seat an die Kundenfront und dann konnten die mal erklären, warum das alles nicht geht.</p> | <p>Anforderungsworkshops. Was machen wir da?" Weil also du hast das Team, die kommen mit Anforderungen vom Kunden. Und da sagt das Projektteam "nein". (...) Wenn aber der Projekt- oder der Produkt-Owner in dem Workshop sitzt mit dem Kunden, dann sagt der nicht "nein". Weil dann hat er den Kundenkontakt. Weißt du, wenn so ein Interner kommt und sagt "wir hätten das gern so und so, also der Kunde hätte es so und so", und dann sagt der "nein, mache ich nicht". Wenn der aber im Workshop mit dem Kunden sitzt, sagt der nicht "nein". Das heißt, er hat die Produktentwicklung aus ihrem Keller geholt, in das Projekt integriert, diese X sozusagen von den Key-Leuten aus der Produktentwicklung organisiert, dass die sich im Driver Seat fühlen. Nicht das Projektteam, was sich den Arsch aufreißt und eine Produktentwicklung, die sozusagen diese Anforderungen ignoriert, weil sagt: "Das machen wir irgendwie anders. Haben wir immer schon anders gemacht. Da haben wir andere Ideen." Nein, die im Driver Seat an die Kundenfront und dann konnten die mal erklären, warum das alles nicht geht.</p> |
| <p>I: Welche Wirkung hat denn das denn gehabt, also die Nutzung des Kunden im Bezug auf Identitätsausprägung?</p> <p>#P16: Klar, erstens hat die Produktentwicklung (...) haben die auch dieses diesen Korpsgeist, "okay, wir müssen jetzt ein Projekt wirklich hinbekommen", weil die machen erst mal ein Produkt. Ob die Projekte dann funktionieren, da guckt man noch mal. Aber die waren auf einmal involviert: "Oh", jetzt erstens Kundenkontakt und konkrete Anforderungen, konkrete Zeitpläne. Und "oh, ja, das hört sich ja sinnig an, macht ja Sinn" und diesen praktischen Bezug von theoretischen Sachen, die du sonst entwickelst, hat natürlich dazu geführt, dass sie eben wie gesagt, erstens da vielleicht mal ein anderes Projekt, anderes Leben bekommen haben, aber natürlich einfach auch diesen oder diesen direkten Druck des Kunden da</p> | <p>I: What effect did that have, i.e. the use of the customer in terms of identity expression?</p> <p>#P16: Sure, first of all, product development (...) also has this esprit de corps, "OK, we really have to get a project done now", because they first make a product. Whether the projects then work, you have to check again. But they were suddenly involved: "Oh", now first of all customer contact and concrete requirements, concrete schedules. And "oh, yes, that sounds sensible, it makes sense" and this practical reference to theoretical things that you normally develop has of course led to the fact that, as I said, firstly they have perhaps been given another project, another life, but of course they have also perceived this or this direct pressure from the customer. And you can't say in a client meeting: "Well, we have five months before acceptance. Everything is not possible.</p> |

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| <p>wahrgenommen haben. Und da kannst du nicht da im Kundenmeeting sagen: "Also wir haben hier fünf Monate vor Abnahme. Geht alles nicht."</p> | |
| <p>I: Das heißt, er hat geschickt den Kunden dort mit eingebracht in die Diskussion?</p> <p>#P16: Ja, genau. Ja, klar. Also das, weil das war auch ein Hauptproblem: Du hast ein Projektteam, was abhängig ist von der Produktentwicklung. Und das Projektteam kommt mit Hunderten von Anforderungen, die irgendwie anders sind in X als vielleicht X das vorgestellt haben. Und Produktentwicklung sagt immer: "Nein, könnt ihr vergessen. Müsst ihr dem Kunden mal erklären, dass das alles nicht so geht." (lacht) Und diesen Konflikt hat er natürlich früh erkannt, hat gesagt: "Okay, das mischen wir mal alles zusammen in einem Team. Und die Product Owner gehen mal mit zum Kunden und dann erklären die denen das, warum das alles nicht geht." Und das hat natürlich auch einen Mega-Effekt gehabt, dass eben die Produktentwicklung sich dann auch extrem am Riemen gerissen hat und nicht mehr die Ausrede hatte: "Also das machen wir hier alles anders. Weil das verstehe ich nicht. Und was ist überhaupt die Anforderung?" Und das Projektteam nicht mehr alleine im Regen stehen lassen. Weil, die waren gut. Die hatten nur nicht die Produktentwicklung so bewegt bekommen, dass die das machen, was Hessen will. Und das vermischt und dann an in die externe Front, weil da kannst du als Projektleiter sich auch den Mund fusselig reden. Wenn die das nicht persönlich erfahren, wie das ist, wenn der Kunde da einen roten Kopf kriegt, wenn du denen erklärst, dass das alles nicht geht. Dann ist das ein anderes Feedback und eine andere Motivation in einem Projekt, als wenn du da immer von hinten sagen kannst, "das geht alles nicht". Diese persönliche Ansprache ist, glaube ich, da ganz entscheidend.</p> | <p>I: That means he skilfully brought the client into the discussion?</p> <p>#P16: Yes, exactly. Yes, of course. So that, because that was also a main problem: You have a project team that is dependent on product development. And the project team comes up with hundreds of requirements that are somehow different in X than maybe X imagined. And product development always says: "No, you can forget it. You'll have to explain to the customer that it doesn't work like that." (laughs) And of course he recognised this conflict early on and said, "OK, we'll mix it all together in one team. And the product owners go to the customer and explain to them why it doesn't work like that. And of course that had a mega-effect, because the product development team pulled itself together and no longer had the excuse: "Well, we do everything differently here. Because I don't understand that. And what is the requirement anyway?" And no longer left the project team out in the cold. Because, they were good. They just didn't have the product development moved in such a way that they did what Hesse wanted. And they mixed it up and then took it to the external front, because as a project manager you can talk your head off. If they don't personally experience what it's like, if the customer gets a red head when you explain to them that none of this works. Then that's a different kind of feedback and a different kind of motivation in a project than if you can always say from behind the scenes, "none of that works". I believe that this personal approach is crucial.</p> |

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| <p>I: Ja. Du hattest eben erwähnt, er hat eine Whatsapp-Gruppe genutzt. Hatte das irgendeine Auswirkung auf eine Identitätsausprägung?</p> <p>#P16: Ja, natürlich. Also du hast im Kernteam – das waren irgendwie 10 bis 15 Leute in der Gruppe – da hast du dich ausgetauscht über erstens warst du schnell informiert, wenn Kollegen vor Ort waren. Also wenn jetzt irgendwie Rollout-Vorbereitung oder erste Tests waren, hast du sofort Kommunikation gehabt, also bevor eine E-Mail geschrieben wurde oder wie auch immer. Und da hast du aber auch private funny Sachen drüber ausgetauscht. Also es klassisch aus meiner Sicht so eine Key-Gruppe da herausgebildet, die darüber beruflich und privat sich ausgetauscht hat. Und hatte auf jeden Fall diesen Korpsgeist, diesen Gedanken hier "wir rocken das", glaube ich, schon gestärkt. Das ist nicht kriegsentscheidend, aber das sind alles so kleine Thematiken, wie du drin bist. Und der X, obwohl er gar nicht mehr im Projekt ist, kriegt genau mit, was bei der X jetzt noch funktioniert oder nicht funktioniert. (...)</p> | <p>I: Yes. You just mentioned that he used a Whatsapp group. Did that have any effect on an identity expression?</p> <p>#P16: Yes, of course. So in the core team - there were about 10 to 15 people in the group - you exchanged information about firstly, you were quickly informed when colleagues were on site. So if there were any rollout preparations or first tests, you had immediate communication, before an email was written or whatever. And you also exchanged private funny things about it. So, from my point of view, a classic key group emerged that exchanged professional and private information. And it definitely strengthened this esprit de corps, this idea of "we're going to rock it", I think. That's not decisive for the war, but these are all such small issues as you're in. And X, even though he's no longer in the project, knows exactly what's still working or not working at X. (...) He's not in the project anymore. (...)</p> |
| <p>I: Warum haben ihm denn die Teammitglieder vertraut?</p> <p>#P16: Ja, die hatten natürlich Erfahrungen mit ihm aus dem Teilprojekt X. Und dann ist er natürlich ein sehr authentischer, aus X stammender X, der einen sehr offenen Charakter hat und relativ straight ist in dem, was er will und was er nicht will. Und ich glaube, diese Klarheit und Offenheit ist bei den X gut angekommen, die dann doch eher so immer irgendwie verheimlichen, was gut und was schlecht läuft. Und (...) ich glaub, diese Offenheit und Klarheit, (...) die man da auch konkret vor Ort in X gesehen hat und nicht irgendein Projektleiter aus X, der da einmal die Woche einfliegt, sondern der sieben Tage vor Ort hier, und also diese Authentizität, aber auch diese Klarheit, was gemacht werden muss, um hier zum Erfolg zu kommen für eine X, die, glaube ich, haben ihn erfolgreich machen lassen (...)</p> | <p>I: Why did the team members trust him?</p> <p>#P16: Yes, of course they had experience with him from the X sub-project. And then, of course, he is a very authentic X from X, who has a very open character and is relatively straight in what he wants and what he doesn't want. And I think this clarity and openness went down well with the Xs, who tend to hide what is going well and what is going badly. And (...) I think this openness and clarity, (...) which was also seen on site in X and not just some project manager from X who flies in once a week, but who is here seven days a week, and therefore this authenticity, but also this clarity about what has to be done to achieve success for an X, which I think made him successful (...).</p> |

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| <p>I: Okay. Wie hat er denn sein Team motiviert? (...) Oder wie hat er Begeisterung, Optimismus entfaltet?</p> <p>#P16: Ja, also, ich glaub erst mal, die Perspektive, auch mal ein (...) konkretes Produkt, was in der realen Welt eingesetzt wird, einzusetzen. Sind für so Produktentwickler auch immer so Themen: Du baust eine theoretische Software, also konkretes Beispiel X. Und ich glaube, dass man dann auch mal ein Ende, ein Ziel definieren konnte und man nicht endlos in einer Produktentwicklung ist, erstmal Meilenstein X jetzt schaffen, dann haben wir erst mal Luft und dann können wir wieder vernünftig anfangen. Wir brauchen erst mal eine stabile Version und müssen auch aufhören dann mit Entwicklung und müssen wirklich nur Stabilisierungsmaßnahmen machen. Also ich glaube, einfach ein Ziel zu definieren, was alle anfassbar machen können. Und, wie gesagt, dann irgendwie kein (...) Führungsteam, wo die Mitarbeiter den Kopf schütteln und sagen: "Wovon redet der denn gerade? Wir müssen irgendwie Urlaubsstunden abbauen oder so einen Mist." Also sinnvolle Entscheidungen treffen, die einfach die fachlich zeigen, dass er die Fachlichkeit verstanden hat, dass er die Problematik verstanden hat auch von Entwicklern. Weil das ist nicht immer gleich, dass du irgendwie Maßnahmen triffst und (...) "Blödsinn, ich muss hier noch 100 Zeilen Code machen, das bringt mir alles gar nichts. Das ist doch alles Scheiße. Und jetzt eine Architekturänderung jetzt einfach, weil irgendwie was ist." Also überzeugen mich Fachlichkeit und verstehen, was da passiert, ich glaub, das ist ein Riesenvorteil, wo er dann wo viele gesehen haben, okay, mit dem bin ich hier auf Augenhöhe. Ob wir über große Projektleiterthemen geredet haben oder auch ein paar Entwicklungssachen, wo er drin ist, der jetzt sozusagen den Code schreiben müsste, aber mal so versteht, was die Probleme der Entwicklung da sind, um gewisse Sachen abzubilden. Ich glaube,</p> | <p>I: Okay. How did he motivate his team? (...) Or how did he develop enthusiasm, optimism?</p> <p>#P16: Yes, well, I think first of all the perspective of using a (...) concrete product that is used in the real world. These are always such topics for product developers: You build a theoretical software, i.e. concrete example X. And I believe that you could then also define an end, a goal, and you are not endlessly in a product development, first create milestone X now, then we have some breathing space and then we can start again sensibly. We first need a stable version and then we have to stop with development and really only do stabilisation measures. So I think it's important to simply define a goal that everyone can grasp. And, as I said, then somehow no (...) management team where the employees shake their heads and say: "What is he talking about right now? We have to cut down on holiday hours or some crap like that." In other words, making sensible decisions that simply show that he has understood the technicalities, that he has understood the problems of developers. Because it's not always the same that you somehow take measures and (...) "Nonsense, I still have to make 100 lines of code here, it's all useless. It's all shit. And now an architectural change now simply because somehow something is." So being professional and understanding what's going on convinces me, I think that's a huge advantage, where many people have seen, okay, I'm on the same level with him here. Whether we were talking about big project manager topics or also a few development things, where he is inside, who would have to write the code, so to speak, but understands what the problems of the development are there, in order to map certain things. I think this (...) the scalability of deep-down topics and correctly understanding what the problems are and defining the right measures, plus discussing the overall topic, what the goal is, whether this mix of the leadership</p> |
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| <p>dieses (...) die Skalierbarkeit von Deep-down-Themen und da richtig verstehen, was die Probleme sind, und richtige Maßnahmen definieren, plus eben das Gesamtthema zu besprechen, was das Ziel ist, ob dieser Mix von der Führungspersönlichkeit ist da bei so einem Projekt kriegsentscheidend.</p> | <p>personality is decisive in such a project.</p> |
| <p>I: Wie hat er denn Kreativität und neue Ansätze gefördert?</p> <p>#P16: Also (...) er hat den Key-Leuten – also nicht allen, aber den Key-Leuten – schon in diesem Kernteam, was er geformt hat, die hatten dann schon relativ große Freiheiten gelassen. Also da hat er denen auch nicht dann reingeredet. Also klar haben sie immer geschaut, was können wir, was können wir nicht tun. Aber dann hat er dann auch, wenn er Key-Leute, denen er vertraut hat, die haben dann schon Freiheiten bekommen. Alle anderen, die dann, sage mal, nicht – also nicht vertraut – aber die nicht die Performance gezeigt haben über einen gewissen Zeitraum, die hat er dann schon eher an die Kandare genommen. Also von daher, gute Arbeit hat dazu geführt, dass sie Freiraum bekommen und Kreativität zugelassen. (...) Aber er hat den Leuten, denen er vertraut hat, dann auch gesagt, "okay, macht es, wie es richtig ist", sich kurz erklären lassen. Dann haben die auch machen dürfen, ja.</p> | <p>I: How did he encourage creativity and new approaches?</p> <p>#P16: Well (...) he gave the key people - not all of them, but the key people - already in this core team that he formed, they had relatively great freedom. So he didn't tell them what to do. Of course they always looked at what we could do and what we couldn't do. But then, when he trusted key people, they were given freedom. All the others who, let's say, didn't - didn't trust him - but who didn't perform as well as he did over a certain period of time, he took them by the scruff of the neck. So from that point of view, good work led to them being given freedom and creativity. (...) But he also told the people he trusted, "OK, do it the right way", and let them explain briefly. Then they were also allowed to do it, yes.</p> |
| <p>I: Wie ist er mit Kritik umgegangen?</p> <p>#P16: Ja, ganz offen, auch vor der gesamten Mannschaft. Die hatten dann immer so auch so große Team Meetings, wo dann die 120 Entwickler in X(...) alle da waren. Und dann wurde auch immer alle zwei Wochen der Status besprochen. Also (...) Software gebaut, dieses Team durfte vorstellen: "Wir sind jetzt hier und hier dran. Das sind die Probleme." Und so einen Erfahrungsaustausch gemacht. Und wenn da Kritik aus dem Team kam, hat er das auch – (...) – aber hat sich dem auch gestellt. Also er hat sich nicht in ein Zimmer verzogen und irgendwie dann nur mit drei Leuten geredet,</p> | <p>I: How did he deal with criticism?</p> <p>#P16: Yes, quite openly, even in front of the whole team. They always had big team meetings where all 120 developers in X(...) were there. And then the status was always discussed every fortnight. So (...) software was built, this team was allowed to present: "We are now here and here. These are the problems." And so we exchanged experiences. And if there was criticism from the team, he also - (...) - but he also faced it. So he didn't withdraw into a room and somehow only talked to three people, but he always faced the whole team. So sure, he had his core team, but this 120 team - he</p> |

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| <p>sondern er hat sich immer der gesamten Mannschaft gestellt auch. Also klar, hat er sein Kernteam gehabt, aber diese 120 Team – da hat er mir auch mal Fotos von geschickt – diese 120 Jungs in einem großen Saal da zusammenzubekommen, und dann wurde mal einen halben Tag besprochen, was geht in dem Teilbereich, was geht hier, was sind Probleme. (...) Du musst dem Kunden das und das erzählen. Da ist er offen und transparent, aber auch ganz klar gegenübergetreten. Da sagte er immer: "Jungs, wir müssen Lösungen finden, keine Probleme. Und wenn ich da hingehen muss zum Kunden und sagen muss 'hey, das geht nicht, weil die Anforderung Blödsinn ist oder wir das einfach nicht schaffen', da mach ich das mit guten Gründen. Aber einfach zu sagen 'kriegen wir nicht hin', geht auch nicht." Also immer dieses Zuckerbrot und Peitsche: "Hey, ich kann natürlich, wenn wir gute Gründe haben, zum Kunden gehen und dem das erklären, warum wir das bis zur Abnahme nicht machen. Aber wenn ihr das nicht habt, dann müsst ihr das und das bringen." Und das relativ transparent zu machen, dass da keine Spielchen getrieben werden, was aber für X neu – (...) aber X haben eine andere Führungskultur. Und auf einmal kommt ein X und dann noch ein da irgendwie rein, das hat dann auch mal bei dem einen oder anderen jungen Menschen da ein Tor geöffnet, dass man auch anders führen kann. Da sind die positiv drauf angesprungen.</p> | <p>sent me photos of it once - to get these 120 guys together in a big hall, and then they discussed for half a day what works in the subarea, what works here, what are the problems. (...) You have to tell the customer this and that. He was open and transparent, but also very clear. He always said: "Guys, we have to find solutions, not problems. And if I have to go to the customer and say 'hey, that's not possible because the requirement is nonsense or we simply can't do it', I do that with good reasons. But just saying 'we can't do it' doesn't work either." So it's always this carrot and stick: "Hey, of course, if we have good reasons, I can go to the customer and explain to him why we won't do it until the acceptance. But if you don't have that, then you have to bring this and that." And to make it relatively transparent that no games are being played, which is new for X - (...) but X have a different management culture. And all of a sudden an X and then another one somehow come in, and that has opened a door for one or two young people that you can also lead differently. They jumped at it positively.</p> |
| <p>I: Du hast eben erwähnt, er hat irgendwie alle zwei Wochen Statusmeeting gemacht? Wie wichtig waren denn Team Meetings, um den Zusammenhalt hinzubekommen? #00:37:31#</p> <p>#P16: Ja, sehr wichtig. Also es gibt natürlich verschiedene Strukturen, aber ein Beispiel war diese 120-Mann-Meetings. Erstens durften sich viele präsentieren, die sonst vielleicht irgendwie wirklich im Keller sitzen. Und alle haben die Gesamtübersicht hinzubekommen, dass du nicht nur in deinem</p> | <p>I: You just mentioned that he had status meetings every fortnight? How important were team meetings in order to achieve cohesion? #00:37:31#</p> <p>#P16: Yes, very important. So of course there are different structures, but one example was these 120-man meetings. First of all, many were allowed to present themselves who might otherwise be kind of really in the basement. And they all managed to get the overall picture, that you didn't just work in your sub-area here somehow, routing or</p> |

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| <p>Teilbereich hier irgendwie, Routing oder was auch immer, gearbeitet hast. Sondern du hast immer den Gesamtkontext gesehen: "Okay, die anderen haben auch Probleme, (...)." Also ich glaube, das war extrem wichtig, um auch dann die Kommunikation zu fördern. Weil dann sehen die: "Ach klar, das Problem, was ich hier habe, ist in den drei Teilbereichen auch das Thema. Da muss ich jetzt mal hingehen." Also erstens hat es auch eine Gruppe (...) gebunden, die sich dann alle zwei Wochen – öfter, aber diese große Gruppe hat sich alle zwei Wochen – jeder durfte mal vorstellen und sich präsentieren, was so ist, was Ideen sind, wo sie stehen. Und es hat natürlich die Kommunikation zwischen den Teams, was meistens eine große Herausforderung ist in der Software-Entwicklung, auch gefördert, dass man (...) "Okay, die haben auch das Thema." (...) Ich glaube, das offen, transparent zu machen, war gut. Ist auch gut angekommen anscheinend.</p> | <p>whatever. But you always saw the overall context: "Okay, the others also have problems, (...)". So I think that was extremely important to promote communication. Because then they see: "Oh sure, the problem I have here is also the topic in the three sub-areas. I have to go there now." First of all, there was also a group (...) that met every fortnight - more often, but this large group met every fortnight - everyone was allowed to introduce themselves and present their ideas, where they stood. And of course it also promoted communication between the teams, which is usually a big challenge in software development, that you (...) "Okay, they also have the topic." (...) I think it was good to make it open and transparent. It also seems to have gone down well.</p> |
| <p>I: Kannst du noch sagen, wie er vielleicht Ziele formuliert hat, dass alle an einem Strang arbeiten? Oder wie er eine Bedeutung herausgestellt hat?</p> <p>#P16: Das war klar. Also wenn wir den X nicht hinbekommen, dann hat die Firma X ein ganz klares Problem, weil das das größte Projekt für die Firma grundsätzlich ist. Und dann ist auch vielleicht irgendwie, weiß ich nicht, indirekt, aber das schöne Leben, was die da haben – die arbeiten da am X, können X machen und machen irgendwie Softwareentwicklung, was sie irgendwie cool finden und können ihre Zeit sich frei einteilen. Also das Ziel war klar. Wenn das Ziel nicht erreicht wird, haben die da alle ein Problem. Und das ist dann auch im Klartext kommuniziert worden. Also jetzt nicht, dass die X dann irgendwie pleite geht oder so, aber das Ziel war immer klar: 31.12.2019. Und da muss irgendwas funktionieren, was die X da in die Lage versetzt, dass die im Wesentlichen weiter ihren Job machen können. (...) Also da konnte man nicht irgendwas schön- oder</p> | <p>I: Can you still say how he perhaps formulated goals, that everyone works together? Or how he emphasised a meaning?</p> <p>#P16: That was clear. So if we don't get X done, then company X has a very clear problem, because this is basically the biggest project for the company. And then maybe somehow, I don't know, indirectly, but the nice life they have there - they work on X, can do X and somehow do software development, which they think is kind of cool and can organise their time freely. So the goal was clear. If the goal is not achieved, they all have a problem. And that was also communicated in plain language. Not that X would go bankrupt or anything, but the goal was always clear: 31.12.2019. And something has to work that puts X in a position where they can essentially continue to do their job. (...) So you couldn't talk something up or down, it was always clear.</p> |

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| <p>schlechtreden, sondern das war immer klar.</p> | |
| <p>I: Ja. Und kannst du noch was von zu Werten sagen, die er hat, also die er vielleicht auch verkörpert hat oder mit anderen geteilt hat?</p> <p>#P16: Ja, klar. Also Ehrlichkeit, Offenheit, auch keine Spielchen treiben. Also das sind, glaube ich, Charaktereigenschaften. Auch (...) dann, wie gesagt, auch Treue zu zeigen, auch dann Richtung Kunden und nicht dann mit dem Ergebnis wiederkommen: "Ich habe es versucht, dem Kunden zu erzählen, dass das irgendwie doof ist. Aber ist nicht." Und er ist auch mit Erfolgen dann wiedergekommen. Also extreme Authentizität, treu, loyal. Dieses Vorleben, das hat er auch von anderen erwartet. Das ist gut angekommen und hat dazu geführt, dass die erfolgreich sein konnten.</p> | <p>I: Yes. And can you say something about the values that he has, that he perhaps embodied or shared with others?</p> <p>#P16: Yes, of course. Honesty, openness, not playing games. I think these are character traits. Also (...) then, as I said, also showing loyalty, also then towards the customer and not then coming back with the result: "I tried to tell the customer that this is somehow stupid. But it's not." And he also came back with successes. So extreme authenticity, faithful, loyal. He also expected this example from others. That went down well and led to their success.</p> |
| <p>I: Und wie hat er einzelne Teammitglieder individuell angesprochen um den Teamzusammenhalt zu fördern?</p> <p>#P16: Die hat er sich abends beim Bierchen noch mal genommen oder beim Wandern noch mal irgendwie rausgenommen, dass man da Einzelgespräche geführt hat. Also da hat er schon versucht, irgendwie da auch Einzelansprachen zu machen. Und sonst auch im normalen Projektalltag, klar, hat er da auch sein Büro gehabt. Und da hat er sich auch den ein oder anderen noch mal gekrallt. Was auch transparent war. Also die haben diese Open-Office-Geschichte. Da gibt es da auch so Räume, aber im Wesentlichen ist da alles offen. Da kann jeder sehen, was der X am Tag telefoniert oder wo er da im Raum sitzt und mit wem er spricht. Das ist so offen transparent. Da kannst du jetzt nicht einen in den Raum nehmen, irgendwie abwatschen oder irgendwie Goodies verteilen oder wie auch immer. Das war eine relativ transparente, offene Arbeitskultur da, wo er dann auch diese Sache gemacht hat.</p> | <p>I: And how did he approach individual team members to promote team cohesion?</p> <p>#P16: He took them out again in the evening when having a beer or when hiking, so that they had individual conversations. So he tried to somehow make individual approaches. And otherwise, of course, he also had his office in the normal course of the project. And he also grabbed one or two of the others. Which was also transparent. They have this open office thing. There are rooms, but basically everything is open. Everyone can see what X is doing on the phone during the day or where he is sitting in the room and who he is talking to. It's so openly transparent. You can't take someone into the room, give them a bad telling off or hand out goodies or whatever. It was a relatively transparent, open working culture where he did this thing.</p> |

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| <p>I: Wenn man jetzt mal ganz allgemein das Thema betrachtet, was sollte deiner Meinung nach in Bezug auf Führung getan werden, um Identitäten in einer Gruppe zu erhöhen, die dann auch zu erhöhtem Arbeitsengagement führen?</p> <p>#P16: Ja, also die Entscheidungsgewalt der des Projektleiters oder der Führungskraft muss irgendwie gewährleistet sein, dass sie in ihrem Ermessen Sachen machen kann. Das fängt an bei so kleinen Sachen wie mal zum Essen einladen, aber auch dann Entscheidungen, die sie trifft dann nicht mehr vom Management hinterfragt zu bekommen vor dem Team – wenn, dann im kleinen Kreis. Das heißt, dieses Enablement der Führungskraft oder des Projektleiters ist, glaube ich, ganz kriegsentscheidend für auch von der Erfolg dieser Mannschaft. (...)</p> | <p>I: Looking at the topic in general, what do you think should be done in terms of leadership to increase identities in a group, which then also lead to increased commitment to work?</p> <p>#P16: Yes, the decision-making power of the project leader or the manager must somehow be guaranteed, so that they can do things at their discretion. It starts with small things like inviting people to dinner, but also not having the management question the decisions they make in front of the team - if they do, then in a small circle. This means that the enablement of the manager or the project leader is, I believe, decisive for the success of this team. (...)</p> |
| <p>I: Okay. Wenn wir zum Thema Governance kommen: Wie beeinflussen denn Unternehmensregeln oder Unternehmensprozesse die Führungseffektivität des Projektleiter beispielsweise?</p> <p>#P16: Ja, ich glaube, (...) wie gesagt, ich glaub desto mehr Ebenen Du über dem Projektleiter hast und umso mehr die Ebenen von Menschen, die andere Interessen als den Projekterfolg haben, schadest du dem Projekt und auch dem Projektleiter. Weil Du siehst das ja bei Firmen, die wir selber gut kennen: Dann ist nicht mehr Umsatz und Projektmarge irgendwie kriegsentscheidend, sondern fünf andere KPIs, die aber vielleicht die anderen zwei KPIs, die du als Kern deiner Profit and Loss als Projektleiter irgendwie torpedierst. Also da muss Klarheit in den Zielen sein durch die Hierarchien. Da muss eine Vertrauenskultur da sein ab einer gewissen Ebene, wo man dann sagt: "Okay, der meldet, ob was schief läuft oder nicht schief läuft." (...) Und nicht die vier Ebenen den ganzen Kram noch mal anhören. Und dann brauchst du natürlich auch auf der Projektebene</p> | <p>I: Okay. When we come to the topic of governance: How do company rules or company processes influence the leadership effectiveness of the project manager, for example?</p> <p>#P16: Yes, I think (...) as I said, I think the more levels you have above the project manager and the more the levels of people who have other interests than the success of the project, you damage the project and also the project manager. Because you can see that in companies that we know well ourselves: Then it's no longer turnover and project margin that are somehow decisive in the war, but five other KPIs, which perhaps torpedo the other two KPIs that are at the core of your profit and loss as a project manager. So there has to be clarity in the goals through the hierarchies. There has to be a culture of trust from a certain level onwards, where people say: "OK, he'll report if something goes wrong or not. (...) And not have the four levels listen to all the stuff again. And then, of course, at the project level you also need the thing about how you put teams together. If you (...) have teams that come from, let's say, one</p> |

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| <p>die Sache, wie du Teams zusammensetzt. Wenn du (...) Teams hast, die aus, sagen wir mal, einem großen Team kommen oder aus zwei benachbarten, dann kann man natürlich nicht immer so sagen, aber dann hast du einen anderen Korpsgeist oder ein anderes Zusammengehörigkeitsgefühl, weil die schon zusammengearbeitet haben, als wenn du Projekte hast, wo du aus zehn, fünfzehn Einheiten Leute hast, die sich überhaupt nicht kennen und da auf einmal zusammenarbeiten müssen. (...)</p> | <p>big team or from two neighbouring teams, then of course you can't always say that, but then you have a different esprit de corps or a different feeling of togetherness, because they have already worked together, than if you have projects where you have people from ten, fifteen units who don't know each other at all and suddenly have to work together. (...)</p> |
| <p>I: Und wenn man sich das Projekt selbst anschaut, welche Rollen spielen Projektregeln, Projektprozesse oder die Projektorganisation in Bezug auf Einflussnahme in die Führungseffektivität (...) oder in der Ausprägung von Identitäten?</p> <p>#P16: Schwer zu sagen. Also ich glaub, du brauchst eine klare, im gesamten Team kommunizierte Organisations- oder Team-Aufstellung. Da müssen alle wissen, wie die Sachen sind, und alle auch wissen, wie die Prozesse da drin sind, dass auch Richtung Kunden klar ist, was kommuniziert wird, auf welcher Ebene und so weiter und so fort. Du hast viele Projekte, wo Projektleiter beschädigt werden, weil irgendwelche Teilprojektleiter oder Mitarbeiter einfach (...) nicht nachgedacht haben bei irgendwelchen Kommentaren, bei Kunden äußern, wie auch immer. Also es muss eine klare Governance geben und da muss auch klar sein, welche Probleme auf welcher Ebene besprochen werden, wer welchen Hut auf hat. Also diese Governance muss ganz klar sein. Wenn du immer Mitarbeiter oder Teilprojektleiter hast, die irgendwie beim Kunden schon Sachen erzählen, was eigentlich der Job des Projektleiters ist, weil es Probleme gibt oder Sachen gut laufen, oder dann Eskalationsebene ist, dann schadet das dem Projekt. Also das muss ganz klar sein und da müssen sich die Leute auch dran halten. Das muss man auch mit klarem Konsequenzenmanagement, glaub ich, durchsetzen, dass diese Governance im Großen und Ganzen – kann man jetzt nicht in</p> | <p>I: And if you look at the project itself, what roles do project rules, project processes or the project organisation play in terms of influencing leadership effectiveness (...) or in shaping identities?</p> <p>#P16: Hard to say. Well, I think you need a clear organisational or team set-up that is communicated throughout the team. Everyone has to know how things are, and everyone also has to know how the processes are, that it is also clear to the customer what is being communicated, at what level, and so on and so forth. You have many projects where project managers are damaged because some sub-project managers or staff members simply (...) didn't think about any comments made to customers, whatever. So there must be clear governance and it must also be clear which problems are discussed at which level, who wears which hat. So this governance must be very clear. If you always have employees or sub-project managers who somehow tell the customer things that are actually the job of the project manager, because there are problems or things are going well, or are then at the escalation level, then that damages the project. So that has to be very clear and people have to stick to it. I think you also have to enforce this with clear consequence management, that this governance is by and large - you can't do it to 100 per cent in every case - but that it is by and large adhered to.</p> |

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| <p>jedem Fall bis auf 100 Prozent – aber dass die im Großen und Ganzen eingehalten wird.</p> | |
| <p>I: Und das schafft auch zur Identität oder trägt zur Identität bei, dass ich diese Governance hab?</p> <p>#P16: Klar, wenn jeder weiß, was er tun soll, was die Erwartungshaltung ist, ist das klarer, als wenn das irgendwie unklar ist. Manchmal erwarten die, dass du alle Probleme löst. Dann sollst Du aber dich nicht drum kümmern, weil irgendwie das deren Job ist. Es muss klar im Erwartungsmanagement und der Kultur verankert sein, damit jeder sich orientieren kann: „Also okay. Das muss ich machen oder das ist mein Job. Und das muss ich hoch geben.“ Aber da hast du manchmal Situationen, du hast (...) Projektleiter, die sagen "das müssen eigentlich meine Teilprojektleiter klären". Dann gibt es auch die, die sagen "das muss eigentlich die Projektleitung klären". Und wenn die miteinander nicht kommunizieren können. (...) Also was ist die Aufgabe von dem Gesamtprojektleiter und was von den Teilprojektleitern und was von den Architekten, was wird da erwartet? Das muss man abbilden und auch in einer Governance mit Jour fixen und Regelterminen so abbilden, dass da die richtigen Leute miteinander kommunizieren, geführt werden.</p> | <p>I: And that also creates the identity or contributes to the identity that I have this governance?</p> <p>#P16: Sure, if everybody knows what they are supposed to do, what the expectation is, it's clearer than if it's kind of unclear. Sometimes they expect you to solve all the problems. But then you're not supposed to take care of it, because somehow that's their job. It has to be clearly anchored in the expectation management and the culture so that everyone can orient themselves: "So okay. This is what I have to do or this is my job. And I have to give that up." But sometimes you have situations, you have (...) project leaders who say "this actually has to be clarified by my sub-project leaders". Then there are also those who say "the project management really has to sort this out". And if they can't communicate with each other. (...) So what is the task of the overall project manager and what of the sub-project managers and what of the architects, what is expected? You have to map this and also map it in governance with fixed meetings and regular appointments so that the right people communicate with each other and are managed.</p> |
| <p>I: Wie trägt denn die Governance des Senior Managements dazu bei oder wie hat sie beigetragen jetzt in dem Projektbeispiel auf die Wirksamkeit der Führung des Projektleiters?</p> <p>#P16: Also indem sie offiziell komplettes Backing hatten und gegeben haben dem Gesamtprojektleiter, der von Extern kommt. Das, glaube ich, das war kriegsentscheidend, dass die das gemacht haben. Dass kriegen natürlich die Leute auch mit – dass die sich da nicht immer wohlgeföhlt haben, dass sie bisher die Herrscher in ihrem Reich waren, jetzt kommt da einer rein, der Klartext redet und irgendwie so ein</p> | <p>I: How does the governance of the senior management contribute to this or how has it contributed to the effectiveness of the leadership of the project manager in the project example?</p> <p>#P16: Well, by officially having complete backing and giving it to the overall project manager, who comes from outside. That, I think, was decisive for the war, that they did that. Of course, the people also noticed that they didn't always feel comfortable there, that they had been the rulers in their realm until now, and now someone is coming in who has to speak plainly and somehow regulate a project, which they hadn't been able to do before.</p> |

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| <p>Projekt regeln muss, was sie bisher nicht hinbekommen haben. Dass manchmal auch irgendwie sie versucht haben, trotz dieser dieses offiziellen Backings hintenrum irgendwie Sachen vielleicht noch mal anders zu entscheiden oder noch mal Prioritäten für Ressourceneinsatz anders zu drehen, (...) war nicht hilfreich. Aber das hat in gewisser Weise auch geholfen, weil er dann auch ein Feindbild – oder nicht ein Feindbild, aber auch ein gemeinsames Bild – schaffen konnte: "Hey, vertraut mir. Und ich mach das den X klar." Das heißt, dieses offizielle Backing war extrem wichtig. Und dann wenn da dieses offizielle Backing mal gebröselte oder gebröckelt hat, da dann auch noch mal (...) dann gemeinsam klarzumachen, offen kommunizieren, dass die das geht so nicht, wir brauchen die Ressourcen und so. Glaub, das hat extrem geholfen, ja.</p> | <p>The fact that sometimes they have somehow tried, despite this official backing, to somehow decide things differently again or to change priorities for the use of resources (...) was not helpful. But that also helped in a way, because he could then create an enemy image - or not an enemy image, but also a common image: "Hey, trust me. And I'll make this clear to X." That is, this official backing was extremely important. And then, when this official backing crumbled or crumbled, to make it clear again (...) to communicate openly that it doesn't work like that, we need the resources and so on. I think that helped a lot, yes.</p> |
| <p>I: Welche Rolle hatte denn in dem Kontext der Projektsponsor? Und was würdest du von dem Rolleninhaber erwarten?</p> <p>#P16: Der Projektsponsor muss inhaltlich auch verstehen und den Projektleiter challengen und den Gesamtplan, glaub ich, verstehen und gemeinsam umsetzen. Und im Wesentlichen ist der Projektsponsor ein Vehikel für den Projektleiter, auch gewisse Sachen, die er vielleicht auf seiner Ebene nicht besprechen kann, mit dem Kunden zu besprechen. Und das müssen nicht immer nur Eskalation sein, das müssen auch Ideen für gewisse Sachen sein, wo man schon mal vortestet, ob der Kunde auch reagieren kann. Das heißt, es ist aus meiner Sicht nicht ein Reviewer, sondern – also er muss auch reviewen und gucken, was passiert und gucken, ob der Projektleiter seinen Job macht – aber für mich ist das auch eine Positivrolle, die der Projektleiter da nutzen muss auf einer gewissen Ebene, um Sachen zu machen. Und das wird aus meiner Sicht meistens zu wenig gemacht. Und (...) ja, so würde ich die Rolle vom Sponsor da mal einschätzen.</p> | <p>I: What was the role of the project sponsor in this context? And what would you expect from the role holder?</p> <p>#P16: The project sponsor must also understand the content and challenge the project manager and understand the overall plan, I think, and implement it together. And essentially the project sponsor is a vehicle for the project manager to also discuss certain things with the client that they may not be able to discuss at their level. And it doesn't always have to be escalation, it also has to be ideas for certain things, where you pre-test whether the client can react. That means, from my point of view, it's not a reviewer, but - well, he also has to review and see what's happening and see if the project manager is doing his job - but for me it's also a positive role that the project manager has to use on a certain level to do things. And from my point of view, that is usually not done enough. And (...) yes, that's how I would assess the role of the sponsor.</p> |

I: Jetzt hast du ja schon unheimlich viel Projekterfahrung gesammelt im Berufsleben. Wie kann man denn deiner Meinung nach einem Unternehmen helfen, zu lernen, dass Gruppenidentitätsprozesse besser gelebt werden? (...) Hast du da einen Vorschlag?

#P16: Also erst mal musst du deine Führungskräfte dir angucken und anschauen, was da für eine Führungskultur ist. Also ich glaub, da fängt es an. Und dann musst du das natürlich, glaub ich, so flach wie möglich schneiden heutzutage, dass da nicht viele Ebenen dazwischen gibt. Weil du wirst nicht viele Führungskräfte finden, die so führen können oder so authentisch führen können. (...) Aber da muss man gucken, in welcher Art von Geschäft man unterwegs ist und wie man da erfolgreich ist. Das kann dann von Branche, von Branche, von Thema zu Thema unterschiedlich sein. In der IT-Branche würde ich sagen, dass das ein kriegsentscheidender Faktor ist – flache Hierarchien und eine Führungskultur, die angemessen der Branche und der Zeit ist und sich die auch wandeln kann und die man auch vorlebt. Und das ist für Großunternehmen, glaub ich, das Thema, Hierarchien abzubauen und zu gucken, was ist der Kern und das der Kern meines Tuns und wo ist das Vertrauen da. Klar kannst du nicht blind vertrauen, aber heutzutage (...) gibt es auch Fälle, ja, da muss man jungen Leuten irgendwie auf die Finger schauen. Aber du kannst nicht mehr patriarchalisch hierarchisch agieren heutzutage. Das hat das Projektbeispiel, glaub ich, relativ gut gezeigt, da ist jetzt kein 50-Jähriger irgendwie ins Projekt gekommen, sondern ein 32-Jähriger, der zwar auch schon einige Erfahrung hat, aber irgendwie mit 32 den meist älteren, aber auch auf Teilprojektleiterebene waren die meisten älter als er und Entwicklung vielleicht gleich alt oder jünger, zeigt das aus meiner Sicht, dass Fachlichkeit, Authentizität und vernünftige Vorschläge besser sind, (lacht) ob du dann der Gesamtprojektleiter bist oder nicht. Also ich glaube, Führung wird nicht

I: You have already gained a lot of project experience in your professional life. How do you think you can help a company to learn that group identity processes are better lived? (...) Do you have any suggestions?

#P16: First of all, you have to look at your managers and see what kind of leadership culture they have. I think that's where it starts. And then, of course, I think you have to cut it as flat as possible nowadays, so that there are not many levels in between. Because you won't find many leaders who can lead like that or who can lead so authentically. (...) But you have to look at what kind of business you are in and how you are successful. That can vary from sector to sector, from topic to topic. In the IT sector, I would say that this is a decisive factor in the war - flat hierarchies and a leadership culture that is appropriate to the sector and the time and that can also change and that you also exemplify. And that is the issue for large companies, I think, to dismantle hierarchies and to look at what is the core and the core of what I do and where is the trust. Of course you can't trust blindly, but nowadays (...) there are also cases where you have to keep an eye on young people. But you can no longer act in a patriarchal hierarchical way nowadays. I think the project example showed that relatively well, there was no 50-year-old who somehow got into the project, but a 32-year-old who already had some experience, but somehow with 32 the mostly older, but also on the sub-project manager level most of the people were older than him and development maybe the same age or younger, it shows from my point of view that professionalism, authenticity and reasonable suggestions are better, (laughs) whether you are then the overall project manager or not. So I think leadership is not radiated through a role, but through understanding, professionalism and (...) this acceptance of other people of this leadership role. Of course, this also plays into the fact that the role defines it in the first place. But you can see now with X, he was

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| <p>ausgestrahlt durch eine Rolle, sondern durch Verständnis, Fachlichkeit und (...) dieses Annehmen von anderen Menschen dieser Führungsrolle. Natürlich spielt das auch zusammen, dass die Rolle das erst definiert. Aber sieht man jetzt bei X, der war immer der Leader dieses X-Teams, der war nicht die Führungskraft von denen oder so. Der war der Gesamtprojektleiter, war dann fachlich irgendwie Vorgesetzter. Aber das durfte er nie oder hat er nie ausgespielt, auch in der X-Mannschaft. Der war vielleicht der, der es am besten Kunden kommunizieren konnte, und deshalb von den X-Entwicklern der Projektleiter geworden ist. Aber (...) die anderen Faktoren, die ich eben aufgeführt habe, haben dazu geführt, dass das akzeptiert wurde und wie moderne Firmen erfolgreich sein können.</p> | <p>always the leader of this X-team, he was not the leader of them or something. He was the overall project manager and was somehow the technical superior. But he was never allowed to do that or he never acted it out, even in the X team. He was perhaps the one who could best communicate it to customers, and that's why he became the project manager among the X developers. But (...) the other factors I have just listed have led to this being accepted and how modern companies can be successful.</p> |
| <p>I: Und wie kann man aus deiner Sicht die Leistungsfähigkeit von Führung sichtbar und messbar machen in einem Unternehmen?</p> <p>#P16: Ja klar, du hast Zahlen oder finanzielle KPIs, aber da musst du einfach dran sein. Und was gut ist für dein Team, ob du Kündigungen hast oder Leute, die in dein Team reinkommen wollen – (...) all die Faktoren, die du nur durch das reale Erleben und nicht nur durch irgendwie in deinem Zimmer auf Zahlen gucken (...) das muss beides passen. Und ich glaub, da gibt es keine messbaren Themen, sondern das ist das, was ich mit Führungskultur meine, das ist eine Einschätzung von einer Führungskraft, der ich vertraue, dass sie die richtigen Entscheidungen trifft. Das heißt, eine Führungsperson wie X wäre mein Idealbild. (...) Das Top-Management fragt: "Hey, wie läuft es? Wie ist es?" (...) Dass es da einen Korpsgeist gibt auch in der Führungskultur, wo so was erkannt wird, kommuniziert wird neben finanziellen Sachen, weil strategisch total wichtig. "Wenn wir das Projekt jetzt wirklich hinkriegen, dann haben wir das Vertrauen. (...) Also das ist dann die Einschätzung der Führungskraft. Das ist total schwer</p> | <p>I: And from your point of view, how can you make the performance of leadership visible and measurable in a company?</p> <p>#P16: Yes, of course, you have numbers or financial KPIs, but you just have to be there. And what is good for your team, whether you have dismissals or people who want to come into your team - (...) all the factors that you can only determine through real experience and not just by somehow looking at numbers in your room (...) both have to fit. And I don't think there are any measurable issues, but that's what I mean by leadership culture, which is an assessment by a leader whom I trust to make the right decisions. That is, a leader like X would be my ideal. (...) Top management asks, "Hey, how's it going? How is it?" (...) That there is also an esprit de corps in the management culture, where such things are recognised and communicated in addition to financial things, because they are totally important strategically. "If we really get the project right now, then we have the trust. (...) So that is the assessment of the manager. That is totally difficult to describe from my point of view. But that's why leadership culture is so decisive for war in every company or in many</p> |

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| <p>beschreibbar aus meiner Sicht. Aber deshalb ist Führungskultur so kriegsentscheidend in jeder Firma oder in vielen Firmen, wo du siehst, wo eine Führungskultur ist, wo ein Mindset vorgelebt wird, wie die anders agieren, als wenn Führungskultur scheißegal ist und man einfach das macht, was das Zahlen vorgibt.</p> | <p>companies where you see a leadership culture, where a mindset is exemplified, how they act differently than if leadership culture doesn't give a shit and you just do what the numbers say.</p> |
| <p>I: Ja. Aber wie macht man das denn, dass man mehr von diesen X hat im Unternehmen?</p> <p>#P16: Ich glaub, X ziehen X an. (...) Also ich glaube, ein gewisser Schlag von Mensch will mit einer gewissen Schlag von Mensch um sich (...) umgeben sein und gerne mit diesen Leuten zusammenarbeiten. Gewisse Leute, die das nicht finden, die ziehen sich auch an. Das kann man auch in Firmen sehen. (...) Also es gibt gute kleine/mittelständische Firmen, die sich jetzt aufgebaut haben, wo Key-Leute mit einer gewissen klaren Führungskultur reingekommen sind, wo im Wesentlichen diese Führungskultur extrem viele Leute angezogen hat, weil die gerne einfach in diesem Umfeld arbeiten. Heutzutage – siehst du bei unseren Umfeldern – ist Arbeitsumfeld ganz kriegsentscheidend: Wie arbeite ich gerne? Was hab ich für Kollegen? Was tue ich? Und ich glaub, das ist kriegsentscheidend. Das hat alles mit Führungskultur zu tun. Das heißt, gute Leute ziehen gute Leute an. (...) Und das ist, glaube ich, immer noch eine Regel, die schon seit Ewigkeiten ist, aber vor allem heutzutage, wo du so viel Optionen, so viel Möglichkeiten hast. Früher musstest du vielleicht zu X gehen oder zu X als Informatiker. Heute kannst du, weiß nicht, (...) oder du kannst irgendwie X. Also du kannst alles machen. Ich glaube, diese Offenheit, du kriegst das nicht durch – Gehalt ist zwar auch mal ein Thema – aber coole Leute ziehen coole Leute an, was immer du auch mit "cool" definierst.</p> | <p>I: Yes. But how do you make it so that you have more of these X in the company?</p> <p>#P16: I think X attracts X. (...) So I think a certain type of person wants to be surrounded by a certain type of person (...) and likes to work with these people. Certain people who don't find that, they also attract each other. You can also see that in companies. (...) So there are good small/medium-sized companies that have now built themselves up, where key people with a certain clear leadership culture have come in, where essentially this leadership culture has attracted an extremely large number of people, because they simply like to work in this environment. Nowadays - as you can see in our environments - the working environment is decisive in the war: How do I like to work? What kind of colleagues do I have? What do I do? And I think that's war deciding. It all has to do with leadership culture. That is, good people attract good people. (...) And I think that's still a rule that's been around forever, but especially nowadays when you have so many options, so many possibilities. In the past you might have to go to X or to X as a computer scientist. Today you can, I don't know, (...) or you can kind of do X. So you can do everything. I think this openness, you can't get away with it - salary is also an issue sometimes - but cool people attract cool people, whatever you define by "cool".</p> |
| <p>I: Und wie könnte jetzt zum Beispiel X noch besser werden? Wie würde man seine Führungseffektivität noch weiter verbessern können?</p> | <p>I: And how could X, for example, become even better now? How could you improve your leadership effectiveness even more?</p> |

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| <p>#P16: Ich glaub, einfach Learning by Doing. Er hat so viel Erfahrung, der hat eine Meinung zu vielen Themen oder Sachen. Dem musst du einfach die Chance geben, diese Erfahrung umzusetzen und dann coachen. Und das machen wir aktuell auch, dass wir in Führungspositionen jetzt gehievt haben, wo er da auch die disziplinarische Führungsebene hat, wo er Sachen lernen muss, wo er bisher vielleicht das zu einfach verstanden hat, was da vielleicht die Herausforderungen sind. Und (...) von daher ist es einfach so: Menschen den nächsten Schritt zu ermöglichen und nicht auf einer Stufe fahren zu lassen. Die können dann nachher wieder runtergehen, weil sie sagen "das brauche ich alles nicht, mache wieder Gesamtprojektleiter". Aber man muss den Fortschritt zulassen. Und dann ist schon Learning by Doing aus meiner Sicht, dass da noch was passiert. Weil so Menschen lassen sich nicht die lassen sich gut führen, aber auch schwer führen, weil denen musst du nicht viel erklären. Die wissen instinktiv, was sie tun und was sie nicht tun. Man muss nur die Rahmenbedingungen erklärt bekommen und was Möglichkeiten sind und was nicht. Und dann werden die schon sich automatisch da entwickeln.</p> | <p>#P16: I think simply learning by doing. He has so much experience, he has an opinion on many topics or things. You just have to give him the chance to put this experience into practice and then coach him. And that's what we are currently doing, that we have now promoted him to management positions, where he also has the disciplinary management level, where he has to learn things, where he has perhaps understood things too easily so far, what the challenges are perhaps. And (...) that's why it's simply a matter of enabling people to take the next step and not letting them ride on one step. They can then go back down again later because they say "I don't need all that, I'll go back to being the overall project manager". But you have to allow progress. And then, from my point of view, it's learning by doing that something happens. Because people like that are not easy to lead, but they are also difficult to lead, because you don't have to explain much to them. They instinctively know what they do and what they don't do. You only have to explain the framework conditions and what is possible and what is not. And then they will develop automatically.</p> |
| <p>I: Okay. Also wir sind durch. Vielleicht noch die abschließende Frage – so berühmte letzte Worte: Gibt es noch irgendetwas, was du zu Führung in Verbindung zu Gruppenidentitäten hinzufügen möchtest?</p> <p>#P16: Ja. Ich glaube, (...) die Gruppe muss ihren Leader bestimmen und nicht (...) der Leader die Gruppe, oder das Management. Also natürlich muss man immer Führungspositionen besetzen. Aber aus meiner Sicht müssen da meistens, vor allem jetzt im IT-Bereich, Leader sein, die auch akzeptiert werden von der Gruppe. (...) Ich glaub, das ist ein Thema, wie gestaltet man diesen Prozess und identifiziert Talente, die da genau rauskommen. (...) im Geschäft müssen Leute aus dem</p> | <p>I: Okay. So we are through. Maybe the final question - so famous last words: Is there anything else you would like to add about leadership in relation to group identities?</p> <p>#P16: Yes. I think (...) the group has to determine its leader and not (...) the leader the group, or the management. So of course you always have to fill leadership positions. But from my point of view, most of the time, especially in the IT sector, there have to be leaders who are also accepted by the group. (...) I think that is a topic, how do you design this process and identify talents that come out of it exactly. (...) In business, people have to come from the business or from development who can understand what is happening, but who have the leadership opportunity</p> |

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| <p>Geschäft kommen oder aus der Entwicklung kommen, die nachvollziehen können, was da passiert, die aber die Führungsmöglichkeit mitbekommen, Sachen klar anzusprechen, Sachen anders zu machen und vorzulegen. Aber Menschen, die das nie gefühlt haben, was da passiert, oder erlebt haben, können da extrem schlecht führen. (...) Wie viel muss ich machen, um ein Projekt am Leben zu halten und kontinuierlich Geschäft zu machen. Wenn du das nicht erlebt hast, kannst du das gar nicht nachvollziehen, was das alles bedeutet. Ich glaube, das ist ein Key-Faktor, wo du eine gute Mischung findest. (...)</p> | <p>to address things clearly, to do things differently and to submit them. But people who have never felt what is happening or experienced it can lead extremely badly. (...) How much do I have to do to keep a project alive and to do business continuously. If you haven't experienced that, you can't even comprehend what it all means. I think that's a key factor where you find a good mix. (...)</p> |
| <p>I: Vielen Dank. Ich stoppe die Aufnahme.</p> | <p>I: Thank you very much. I stop the recording.</p> |

Appendix 5 Member Check & Review of Findings

Information shared during member checks & review sessions (sample #P15):

Member Check & Review of Findings

Thesis Title:

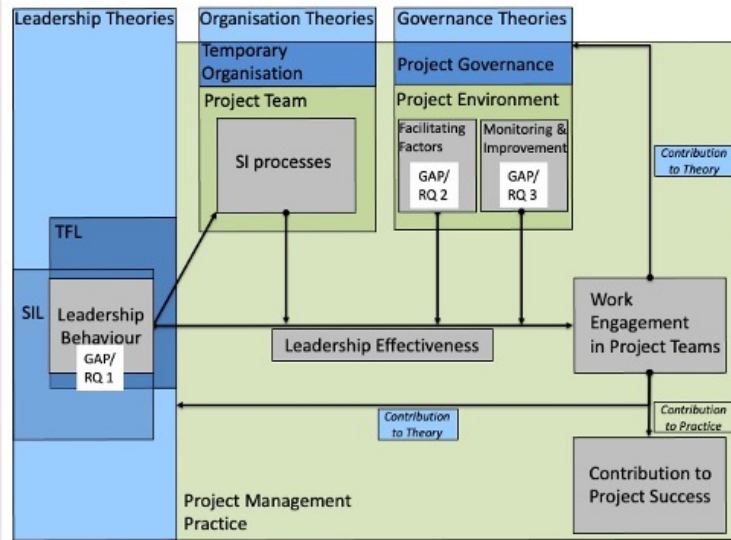
The Relation of Social Identity and Transformational Leadership in
Project Teams: An examination in the IT Industry in Germany

Goal of the Meeting

- Consensus on Understanding
- Reflection on Themes
- Reflection on Leadership Framework

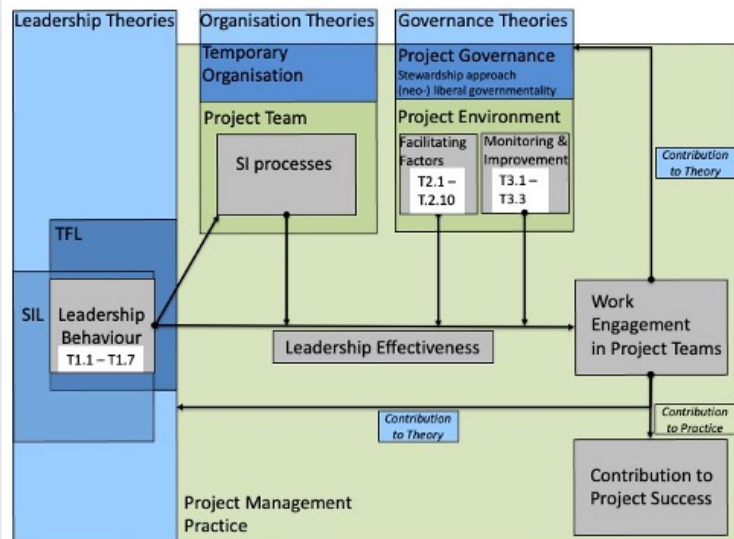
Theoretical Framework

Research gaps



Theoretical Framework

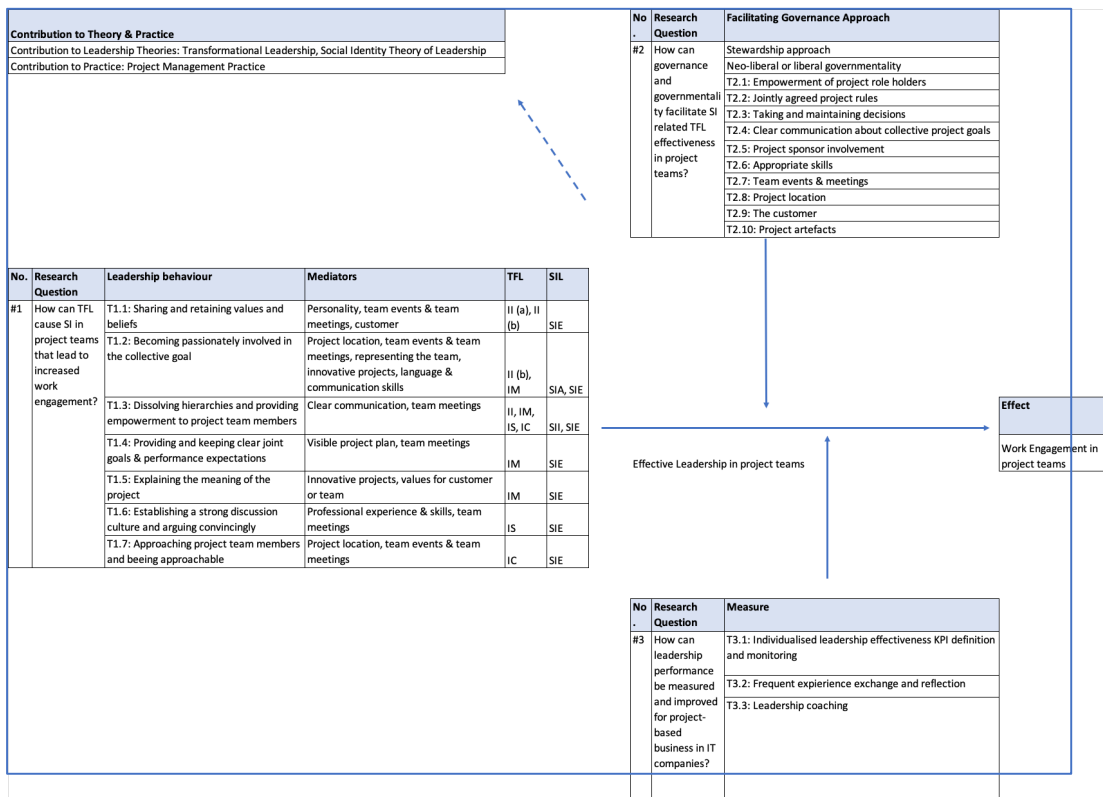
Findings



| No. | Research Question | Theme | Section | #P15 | Mediator | Identity Work |
|---------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------|
| #1 | How can TFL cause SI in project teams that lead to increased work engagement? | T1.1: Sharing and retaining values and beliefs | 4.2.1.1. | ... and finally not to say "okay, but you have to do it now and if you don't do it, I'll escalate it via your boss", but "then we'll find a solution together". So in the end, this was a very constructive cooperation and not one of those "I'm a manager, I'm a project manager here now and I'm ordering things around", but trusting and constructive and collaborative. That you looked at the issues and if you encountered hurdles, say, okay, how do we get them out of the way now... individual strengths/weaknesses are taken into account or respected. | 0 | Identity Entrepreneurship |
| | | T1.2: Getting passionately involved for the collective goal | 4.2.1.2. | ... in the last phase of this offer we really sat together with the project management in the team in one room and worked together on the offer, really face to face, and so to speak also ... phoned each other together at the weekend to put the finishing touches to the offer... | Team events & team meetings | Identity Prototypicality |
| | | | | In the course of the internal hurdles or restrictions that we have, I would say that it has pre-clarified these things with the management in order to eliminate things that could be difficult, to clear hurdles out of the way. | 0 | Identity Advancement |
| | | | | And the manager didn't say, "I'm not here for you now", but "I'll pull this through together with you"...so I think you notice a lot of that, for example, in the mood of the person, how he talks to us or how he talks to the team, how he prepares things and goes prepared, for example, into such status meetings, first gives an update. The tone of voice, the subject of motivation and then also (...) simply such a friendly, open manner. | 0 | Identity Prototypicality + Identity Entrepreneurship |
| | | T1.3: Dissolving hierarchies and providing empowerment to project team members | 4.2.1.3. | And also the possibility, the flexibility, to say here, okay, to distribute the tasks as they fit well. And ultimately not to say "OK, you have to do this now and if you don't, then I'll escalate it through your boss", but "then we'll find a solution together". So, in the end, it was a very constructive cooperation and not one of those "I'm a manager, I'm the project leader here and I give orders", but trusting and constructive and collaborative. | 0 | Identity Entrepreneurship & Identity Impresarioship |
| | | | | There was a clear division of tasks, which was distributed in the kick-off and then also in the status meetings. That is, there was a person responsible for each task and someone who supported the whole topic, in the sense of group work. And then a reviewer was defined, i.e. someone who did the quality assurance again. | clear communication + Team events & team meetings | Identity Entrepreneurship |
| | | T1.4: Providing and keeping clear joint goals & expecting performance | 4.2.1.4. | she regularly reported on the status and progress of the project...communication and also transparency really into the team. Exactly. | clear communication | Identity Entrepreneurship |
| | | T1.5: Explaining the meaning of the project | 4.2.1.5. | And with this knowledge, with this good standing that we already have with the client, she also succeeded in making it clear to the additional team members who came into the project team, who didn't know the client so well, but who had to take on a leading role in the solution design, how important and significant this client is for us and what opportunities this opens up for us. So that was clearly communicated by the kick-off. | Team Events & team meetings + customer + clear communication | Identity Entrepreneurship |
| | | T1.6: Establishing a strong discussion culture and arguing convincingly | 4.2.1.6. | "How are we going to answer the task here". And we weren't limited, but simply said: "We'll brainstorm. We'll think of possible solutions. It was a culture of discussion where everyone could really make suggestions for improvement and also criticisms in a suitable form of communication to see what we can optimise here, what we can do better. | Appropriate skills | Identity Entrepreneurship |
| T1.7: Approaching project team members and being approachable | 4.2.1.7. | I think what contributed to this is that...the project leader as such, was involved in the project, in the processing, was approachable and, in the end, was recognisably just as committed as the project members... What we sometimes did in individual meetings was to look at the results of the work ... or how someone from the group could provide additional input. | 0 | Identity Entrepr. + Identity Adv. + Identity Prototypicality | | |

| No. | Research Question | Theme | Section | #P15 | Mediator | Identity Work |
|-----|--------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------|
| #2 | How can governance and governmentality facilitate SI related TFL effectiveness in project teams? | T2.1: Empowerment of project role holders | 4.2.2.1. | So definitely more empowerment for the managers. Really using the entrepreneurship that you have as a manager to make decisions in your own area of responsibility...What we don't have in the projects...The link to disciplinary management, of course, is not available to the project manager. So (...) somehow it's a balancing act... It's fundamental that the employees who work on such a project and the project manager are trusted and not mistrusted. So for me that is a basic prerequisite... And I believe that the governance structures are kept quite lean. From a project management perspective, it would perhaps be desirable to move back in this direction - what is it called, this project manager agreement - that the project manager is really entitled to this empowerment in order to decide more... | | |
| | | T2.2: Jointly agreed project rules | 4.2.2.2. | I would attach more importance to project governance than to corporate governance, because the project is the concrete thing that the employees are working on ...From a project management perspective, it would perhaps be desirable to move back in this direction - what is it called, this project manager agreement - that the project manager is really entitled to this empowerment in order to decide more, so to speak, within the scope of decision-making that he has as project manager, and also to define the paths or also where it should go or what his framework is. | | |
| | | T2.3: Taking and maintaining decisions | 4.2.2.3. | | | |
| | | T2.4: Clear communication about collective project goals | 4.2.2.4. | communication and also transparency really into the team. | | |
| | | T2.5: Project sponsor involvement | 4.2.2.5. | So far, I have experienced little support from senior management... these projects actually need: namely, when the escalation comes, ..., that senior management then takes care to support, so to speak, this concrete need that one has in the project and to create a solution possibility. Most of the time (...) it trickles back and you are supposed to take care of it... facilitation of leadership, so what the sponsor can also do, I think, is to take over certain things, ...stakeholders, ... I would like to see the sponsor,... getting involved and making the necessary preliminary arrangements ... | | |
| | | T2.6: Appropriate skills | 4.2.2.6. | And what competences and possibilities do I give the leaders to fulfil their leadership task? | | |
| | | T2.7: Team events & meetings | 4.2.2.7. | The kick-off meeting was used in the sense of bringing the team together, getting to know each other and distributing roles, assigning roles and tasks. Exactly. And to make clear the roadmap of the project. | each other and distributing roles, assigning roles and tasks. Exactly. And to make clear the roadmap of the project. | |
| | | T2.8: Project location | 4.2.2.8. | So a very concrete example was that in the last phase of this offer we really sat together with the project management in the team in one room and worked together on the offer, really face to face. | | |
| | | T2.9: The customer | 4.2.2.9. | We want to be successful here." And she also got the information from us, that is, from me as the client manager: What has happened with this client so far? What has happened? But also from the sales department, from the account manager, who provided these insights into the customer. And with this knowledge, with this good standing that we already have with the client, she succeeded in making it clear to the additional team members who came into the project. | | |
| | | T2.10: Project artefacts | 4.2.2.10. | | | |

| No. | Research Question | Theme | Section | #P15 |
|-----|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #3 | How can leadership performance be measured and improved for project-based business in IT companies? | T3.1: Individualised leadership effectiveness KPI definition and monitoring | 4.2.3.1. | I think I can actually make it visible by looking at how employee satisfaction is... That employee surveys are to be carried out in the sense or that the topic of 360-degree feedback is then introduced again for a manager in order to simply see, okay, yes, how is it, how is it lived. |
| | | T3.2: Frequent experience exchange and reflection | 4.2.3.2. | I believe that in order to create change, we simply need the continuity of these changes and also the continuous talking about them: What do we need to do? What needs to change? How does it have to change? And also evaluation: Has what we did differently now brought the desired success? What I do with my team, for example, is that we regularly talk about it in our team meetings... I believe that our "Great Place to Work" surveys are only moderately suitable for this. I think that's more of a 360-degree feedback issue, if anything. |
| | | T3.3: Leadership coaching | 4.2.3.3. | There is a lack of, or perhaps I would wish for, some kind of coaching for the managers. Or coaching in that sense, or perhaps smaller management discussion groups where measures can be discussed to simply look at: "Yes, does this fit, does this not fit? How do you do it, how does |



Appendix 6 The Codebook

Preliminary Allocation Codes to Themes

| Colour | Theory/category/subcategory | Code | Theme |
|--------|-------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|
| • | IC Individual Consideration | Paying social attention on employee | Approaching project team members and being approachable |
| • | Impact | Employee follows despite personal challenges | diverse |
| • | II Idealized Influence (behaviour) | Getting involved | Becoming passionately involved for the collective goal |
| • | II Idealized Influence (attributed) | Bringing things to an end attitude | Having personality |
| • | Governmentality | Lack of leadership | Project sponsor involvement |
| • | Mediator | Team diversity | Empowerment of project role holders |
| • | Mediator | Team events | Teambuilding: Team Events & Meetings |
| • | II Idealized Influence (behaviour) | Representing the company | Becoming passionately involved for the collective goal |
| • | Mediator | Workplace same location | Project location |
| • | Mediator | Employee's individual advantage | N/A |
| • | Mediator | Employee's individual disadvantage | N/A |
| • | Governance | Department size | diverse |
| • | II Idealized Influence (attributed) | Having personality | Having personality |
| • | Leadership Framework | Monitoring | Leadership effectiveness KPI monitorin |
| • | II Idealized Influence (attributed) | Being honest | Having personality |
| • | Mediator | Leader's professional experience | Professional experience & skills |
| • | II Idealized Influence (behaviour) | Providing a vision | Providing and keeping clear joint goals & expecting performance |
| • | II Idealized Influence (attributed) | Beeing convinced | Having personality |
| • | IM Inspirational Motivation | Conscious triggering team identity | diverse |
| • | Mediator | Job security | diverse |
| • | II Idealized Influence (behaviour) | Beeing firm against management | Sharing and retaining values and beliefs |
| • | Mediator | Innovation | diverse |
| • | II Idealized Influence (behaviour) | Taking responsibility | Getting passionately involved for the collective goal |
| • | II Idealized Influence (behaviour) | Taking risks | Sharing and retaining values and beliefs |
| • | Social Identity Leadership | SIE Identity Entrepreneurship | diverse |
| • | Social Identity Leadership | SIA Identity Advancement | diverse |
| • | | Social Identity Leadership | |
| • | | Transformational Leadership | |
| • | IM Inspirational Motivation | Gaining trust | Sharing and retaining values and beliefs |
| • | Social Identity Leadership | SII Identity Impresarioship | diverse |
| • | IM Inspirational Motivation | Dissolving hierachies | Dissolving hierarchies and empowering project team members |
| • | IM Inspirational Motivation | Performing regular team meeting | diverse |
| • | IC Individual Consideration | Beeing interest in work of employees | Approaching project team members and being approachable |
| • | IM Inspirational Motivation | Expecting performance | Providing and keeping clear joint goals & performance expectations |
| • | IM Inspirational Motivation | Treating people equal | Sharing and retaining values and beliefs |
| • | Impact | Willingness to perform | diverse |
| • | Governmentality | Avoid Micro Management | Empowerment of project role holders |
| • | Mediator | Ignoring Firm DNA and Behaviours | diverse |
| • | Mediator | Difficult People | diverse |
| • | Mediator | Sharing Values | diverse |
| • | Mediator | Speech | diverse |
| • | Impact | Perceived Feasibility | diverse |
| • | Mediator | Humour | diverse |
| • | Mediator | Distributed Team | Project location |
| • | Mediator | Accepting Flows of sw developpers | diverse |
| • | IS Intellectual Stimulation | Appreciative Behaviour | diverse |
| • | Governance | Protected room for projects | Project location |
| • | Mediator | Trying to get an understanding | diverse |
| • | Impact | conflict | diverse |
| • | Governmentality | line organisation service provider for projects | Empowerment of project role holders |
| • | Leadership Framework | Talent groups | Leadership coaching |
| • | Mediator | Problem classes | diverse |
| • | Leadership Framework | Top Management Coaching by Sw Developer | Leadership coaching |
| • | Leadership Framework | Management Projects | Leadership coaching |
| • | Mediator | Attitude Center of Value creation center of appreciation | diverse |
| • | Leadership Framework | Master Student Model | Leadership coaching |
| • | Mediator | Joint Goal | Clear communication about collective project goals |
| • | Mediator | Lack of leaders technical knowledge | Professional experience & skills |
| • | Mediator | Haribo | diverse |
| • | IM Inspirational Motivation | Arouse Team Spirit | diverse |
| • | Mediator | Eye level | diverse |
| • | Impact | Leader out of group | diverse |
| • | Mediator | Leader's interest in the project | diverse |
| • | Governance | Staffing | Taking and maintaining decisions |
| • | Impact | Negative Perception | diverse |
| • | Mediator | Beeing together | Project location |
| • | Governmentality | Joint Decisions | Taking and maintaining decisions |
| • | Mediator | Story Telling | diverse |
| • | Mediator | Relationship with employee at the beginning | Approaching project team members and being approachable |
| • | Mediator | Socializing | Teambuilding: Team Events & Meetings |
| • | Mediator | Individual Recruiting | Taking and maintaining decisions |
| • | Governmentality | Steering creativity | Empowerment of project role holders |
| • | Governmentality | high level of freedom | Empowerment of project role holders |
| • | Leadership Framework | Visible Change of the situation | Frequent experience exchange and reflection |
| • | Leadership Framework | Survey | Frequent experience exchange and reflection |
| • | Mediator | Agile PM Method/Scrum | Teambuilding: Team Events & Meetings |
| • | Governmentality | Senior Mangement involvement | Project sponsor involvement |
| • | Impact | Belonging to the project team | diverse |
| • | Governance | Project processes | Jointly agreed project (communication) rules |
| • | Impact | Team cohesion | diverse |
| • | Impact | project success | diverse |
| • | Impact | Management visibility | diverse |

| | | |
|---------------------------------------|--------------------------------------------------|--------------------------------------------------------------------|
| ● Impact | Fun at work | diverse |
| ● Impact | Intrinsic motivation | diverse |
| ● Impact | Trust | diverse |
| ● Mediator | Reflective behaviour | Establishing a strong discussion culture and arguing convincingly |
| ● Impact | Personal development | diverse |
| ● Impact | Career promotion | diverse |
| ● II Idealized Influence (behaviour) | Being consistent | Sharing and retaining values and beliefs |
| ● Impact | Commitment | diverse |
| ● IS Intellectual Stimulation | Respecting ideas that differ from leader's ideas | Establishing a strong discussion culture and arguing convincingly |
| ● Impact | Outgroup curiosity | diverse |
| ● Mediator | Regular Joint Team meeting | Teambuilding: Team Events & Meetings |
| ● Impact | Passion | diverse |
| ● Mediator | Leaders's network | diverse |
| ● Mediator | Performance | diverse |
| ● Mediator | Lack of Leader's business understanding | Professional experience & skills |
| ● Transformational Leadership | II Idealized Influence (behaviour) | diverse |
| ● Mediator | Clear Plan | Clear communication about collective project goals |
| ● IM Inspirational Motivation | Clear goals | Providing and keeping clear joint goals & performance expectations |
| ● Impact | no fear | diverse |
| ● Impact | positive work atmosphere | diverse |
| ● II Idealized Influence (attributed) | Being trusted | Having personality |
| ● Mediator | Far away from home | Project location |
| ● Leadership Framework | Training | Leadership coaching |
| ● Governmentality | Clear communication | Clear communication about collective project goals |
| ● Leadership Framework | Communication platform / PM Community | Frequent experience exchange and reflection |
| ● Leadership Framework | Coaching | Leadership coaching |
| ● Impact | Perceive appreciation | diverse |
| ● Leadership Framework | Feedback | Frequent experience exchange and reflection |
| ● II Idealized Influence (attributed) | Being Approachable | Having personality |
| ● Governmentality | Show importance for Organisation | diverse |
| ● Mediator | Work result visible part of the solution | diverse |
| ● IC Individual Consideration | Providing support | Approaching project team members and being approachable |
| ● IC Individual Consideration | Being approachable and accessible | Approaching project team members and being approachable |
| ● Mediator | same department | diverse |
| ● Impact | Being approachable | diverse |
| ● Impact | Understanding importance | diverse |
| ● Impact | Leader admired | diverse |
| ● II Idealized Influence (attributed) | Being admired | Having personality |
| ● IS Intellectual Stimulation | reframes problems | Establishing a strong discussion culture and arguing convincingly |
| ● IS Intellectual Stimulation | question assumptions | Establishing a strong discussion culture and arguing convincingly |
| ● Transformational Leadership | Transactional | |
| ● IS Intellectual Stimulation | good argumentation | Establishing a strong discussion culture and arguing convincingly |
| ● Governmentality | Taking decisions | Taking and maintaining decisions |
| ● IS Intellectual Stimulation | Anticipating problems | diverse |
| ● Impact | Facilitate Leadership | diverse |
| ● Governmentality | Setting priorities | Taking and maintaining decisions |
| ● Governance | reliable | diverse |
| ● Governance | Empower project manager | Empowerment of project role holders |
| ● Leadership Framework | Employee satisfaction | Frequent experience exchange and reflection |
| ● Leadership Framework | PM Career | Leadership coaching |
| ● Leadership Framework | Project success (KPI) | Leadership effectiveness KPI monitorin |
| ● Leadership Framework | Turnover intention | Leadership effectiveness KPI monitorin |
| ● Leadership Framework | Exchange Peer Level (+) | Frequent experience exchange and reflection |
| ● Governmentality | Project Manager informed | Jointly agreed project (communication) rules |
| ● Impact | Self-esteem | diverse |
| ● Governance | Governance | |
| ● Governmentality | Diversity Leaders | Empowerment of project role holders |
| ● Governance | Reward only short-term success | diverse |
| ● Governmentality | Courage of the decision maker | Empowerment of project role holders |
| ● Impact | Performance | diverse |
| ● Governance | Core team | Jointly agreed project (communication) rules |
| ● II Idealized Influence (attributed) | Being authentic | Having personality |
| ● IS Intellectual Stimulation | Establishing positive error culture | Establishing a strong discussion culture and arguing convincingly |
| ● II Idealized Influence (behaviour) | Gaining respect | diverse |
| ● Impact | Pride | diverse |
| ● IS Intellectual Stimulation | Giving feedback | diverse |
| ● Governance | Target definition | Clear communication about collective project goals |
| ● Governmentality | Alignment | Clear communication about collective project goals |
| ● Governance | Sponsor | Project sponsor involvement |
| ● II Idealized Influence (behaviour) | Exemplifying team decisions | Establishing a strong discussion culture and arguing convincingly |
| ● Governance | Project policies | Jointly agreed project (communication) rules |
| ● Mediator | Employee's get the meaning | Clear communication about collective project goals |
| ● Leadership Framework | Guiding principles | Leadership effectiveness KPI monitorin |
| ● Mediator | Good people join together | Teambuilding: Team Events & Meetings |
| ● Leadership Framework | Self-assessment by project team | Frequent experience exchange and reflection |
| ● Mediator | Mediator | |
| ● Leadership Framework | Leadership Framework | |
| ● IM Inspirational Motivation | Swearing to project premises | Sharing and retaining values and beliefs |
| ● Impact | Impact | |
| ● Governance | Determine general conditions | Jointly agreed project (communication) rules |
| ● II Idealized Influence (behaviour) | Holding on determined premises | Sharing and retaining values and beliefs |
| ● IC Individual Consideration | Reporting regarding Teammembers to Sponsor | diverse |

| | | |
|---------------------------------------|----------------------------------------------------|-------------------------------------------------------------------|
| • II Idealized Influence (behaviour) | Sacrificing for the group | Becoming passionately involved for the collective goal |
| • IS Intellectual Stimulation | Imparting knowledge | diverse |
| • IM Inspirational Motivation | Drinking a beer together | diverse |
| • Governance | Structures | diverse |
| • Mediator | Leader's ambition | Becoming passionately involved for the collective goal |
| • Governance | Accountability | Empowerment of project role holders |
| • Governance | Corporate processes | Empowerment of project role holders |
| • Governmentality | Self Empowerment | Empowerment of project role holders |
| • | Governmentality | |
| • Governance | Corporate Policies | Empowerment of project role holders |
| • Leadership Framework | Focus on long-term success | diverse |
| • Mediator | Lack of Leadership | Taking and maintaining decisions |
| • Governance | Sustainability | diverse |
| • Mediator | Leader's business understanding | Professional experience & skills |
| • Governance | Roles and Responsibilities | Empowerment of project role holders |
| • IM Inspirational Motivation | Providing a meaning | Explaining the meaning of the project |
| • IM Inspirational Motivation | Being enthusiastic | Becoming passionately involved for the collective goal |
| • Mediator | Leader's interest in the topic | diverse |
| • IS Intellectual Stimulation | Encouraging activity and new approaches | diverse |
| • IC Individual Consideration | Accepting individual differences | diverse |
| • IC Individual Consideration | Praising and criticising | diverse |
| • IC Individual Consideration | Developing followers to higher levels of potential | diverse |
| • IS Intellectual Stimulation | Avoiding public criticism | Establishing a strong discussion culture and arguing convincingly |
| • Impact | Avoid negative influences | diverse |
| • IC Individual Consideration | Listening effectively | Establishing a strong discussion culture and arguing convincingly |
| • II Idealized Influence (attributed) | Being open minded | Having personality |
| • Mediator | Project brand | Project artefacts |
| • Transformational Leadership | IM Inspirational Motivation | diverse |
| • Transformational Leadership | II Idealized Influence (attributed) | diverse |
| • Transformational Leadership | IC Individual Consideration | diverse |
| • Transformational Leadership | IS Intellectual Stimulation | diverse |
| • Social Identity Leadership | SIP Identity Prototypicality | diverse |
| • II Idealized Influence (behaviour) | Gaining acceptance | diverse |
| • Mediator | Leaders Technical knowledge | Professional experience & skills |
| • Mediator | Customer | The customer |
| • Impact | Feel Comfortable | diverse |
| • Impact | Group dynamics | diverse |
| • IC Individual Consideration | Taking Care | Approaching project team members and being approachable |
| • II Idealized Influence (behaviour) | Representing the group | Becoming passionately involved for the collective goal |
| • II Idealized Influence (attributed) | Displaying management loyalty | Having personality |
| • IC Individual Consideration | Taking employees seriously | Establishing a strong discussion culture and arguing convincingly |

Appendix 7 Findings

Findings RQ1

| No. | Research Question | Leadership behaviour | Mediators | TFL | SIL |
|-----|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------|---------------|
| #1 | How can TFL cause SI in project teams that lead to increased work engagement? | T1.1: Sharing and retaining values and beliefs | M1: Personality, team events & meetings, customer | II (a), II (b) | SIE |
| | | T1.2: Becoming passionately involved in the collective goal | M2: Project location, team events & team meetings, representing the team, innovative projects, appropriate skills | II (b), IM | SIA, SIE, SIP |
| | | T1.3: Dissolving hierarchies and providing empowerment to project team members | M3: Clear communication, team events & meetings | II, IM, IS, IC | SII, SIE |
| | | T1.4: Providing and keeping clear joint goals & performance expectations | M4: Visible project plan, team events & meetings | IM | SIE |
| | | T1.5: Explaining the meaning of the project | M5: Innovative projects, values for customer or team | IM | SIE |
| | | T1.6: Establishing a strong discussion culture and arguing convincingly | M6: Professional experience, appropriate skills, team events & meetings | IS | SIE |
| | | T1.7: Approaching project team members and being approachable | M7: Project location, team events & meetings | IC | SIE |

Findings RQ2

| No. | Research Question | Governance: Facilitating factors |
|--------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| #2 | How can governance and governmentality facilitate SI related TFL effectiveness in project teams? | Stewardship approach |
| | | Neo-liberal or liberal governmentality |
| | | T2.1: Empowerment of project role holders |
| | | T2.2: Jointly agreed project rules |
| | | T2.3: Taking and maintaining decisions |
| | | T2.4: Clear communication on collective project goals |
| | | T2.5: Project sponsor involvement |
| | | T2.6: Appropriate skills |
| | | T2.7: Team events & meetings |
| | | T2.8: Project location |
| T2.9: The customer | | |
| T2.10: Project artefacts | | |

Findings RQ3

| No. | Research Question | Measures |
|-----|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| #3 | How can leadership performance be measured and improved for project-based business in IT companies? | T3.1: Individualised leadership effectiveness KPI definition and monitoring |
| | | T3.2: Frequent experience exchange and reflection |
| | | T3.3: Leadership coaching |

Appendix 8 Leadership Framework

