HP BULMER INFORMATION TECHNOLOGY STRATEGY

MAIN BUSINESS APPLICATIONS

Discussion Paper

Martin Wynn

1. Introduction

This paper sets out the current position regarding the suppliers and technologies of our mainstream packaged software, and the technology strategy that we currently employ when choosing new software. It also explains "how we got to where we are", and shows how our current position is the product of strategies that have changed with technology evolution and commercial developments in the software supplier market over the past decade (this is pertinent as some of our systems date from the last decade!).

Throughout this period the main business drivers for systems projects have been functional requirements, and only now are we moving towards a broader framework based on corporate information requirements and corporate process modelling. One result is that the implementation of our systems has tended to be very functionally based, which is now hampering our operation as we move towards a process aligned organisation.

There is a good deal of talk about Oracle in the company. Oracle is the second largest software supplier in the World (after SAP), but uniquely provides both business applications (like Oracle Financials) and mainstream technologies and tools (databases and programming languages). These Oracle technologies are used not only by Oracle themselves but also by the majority of other business application vendors. The paper also clarifies which of our systems *use* the Oracle technologies, which business applications packages are *from* Oracle, and when and why they were selected.

2. Current Strategy

Our current technology guidelines for main business applications are:

2.1 Use packages rather than bespoke wherever possible.

2.2. Packages must use an Oracle database and run on UNIX/NT platforms (95% of all main business applications meet these requirements- e.g. SAP, Baan, JD Edwards, Peterborough etc.).

2.3 Business applications available from Oracle as part of their Consumer-Packaged Goods (CPG) integrated suite will be given due consideration, but we shall not slavishly adhere to this. Their CPG suite includes packages made by Oracle themselves (e.g. Oracle Financials) and also those from other software houses with which Oracle has close alliances - i.e. Manugistics Demand Planning, IMI ESS Customer Order Management, TSW/Indus Plant Maintenance.

2.4 Bespoke systems, where necessary, will be written using Oracle tools and use an Oracle database.

3. Key Events in Systems Strategy Development and the Applications Market Place

3.1 In 1988, Coppers Lybrand were commissioned to produce a 5-year IT Projects Plan and a 5-Year Technical Implementation Plan. The underlying strategy was:

- Replace all current systems, because they ran on proprietary hardware and software which had no future and constituted a major business risk.
- Move to packages where possible, running on VAX/VMS hardware.
- Introduce PC systems and office automation.

Outcome:
- Telesales/Distribution Management System (DMS) implemented 1989-1991
    - Technology: Cobol/Powerhouse running on VAX cluster
- Acumen Sales Forecasting system implemented 1990
    - Technology: Proprietary coding language running on VAX cluster
- Peterborough Software Payroll/Personnel system implemented 1990- 1991
    - Technology: Revelation programming language and file structure running under MS-DOS on PC Server.

3.2 1991- Oracle chosen as strategic relational database for all bespoke systems. All future package purchases should also use the Oracle database. (Alternatives were Ingres, Informix, Progress and Sybase - all of which are now back runners).

- UNIX chosen as the operating system for all future system developments.

Outcome:
- Order and Sales Invoicing System (OASIS) - Invoicing, Pricing, Promotions, Product and Customer systems - bespoked 1991- 1995 (written in Oracle running under UNIX).
- KIMS Keg Information and Scheduling system implemented 1993 (Oracle/UNIX).
- Sales Analysis systems (Weekly Sales by Major Customers) implemented 1995/6.

3.3 1993 - Integrated Manufacturing and Financials packages were required to support the new process development investment, replace legacy systems in manufacturing areas and replace the Ledgers, which still ran on the old proprietary hardware. A Supply Chain Steering Group was set up under the Operations Director's chairmanship to usher in business change in Manufacturing (PA were chosen as support consultants), and to choose an integrated package solution.

The technical guidelines were as stated above: The packages must write to an Oracle database and run under UNIX. It is worth noting that the Enterprise Resource Planning (ERP) solutions, such as SAP, JD Edwards, Peoplesoft and Baan were just becoming available, but were very much in their infancy. SAP still ran only on proprietary IBM hardware. The short-listed packages were from the following companies:

Baan (Just available, but no support in the UK)
Oracle (Oracle Manufacturing and Oracle Financials)

O/S Logistics (small Nottingham-based company)
WIS (who made the Answer product, subsequently sold to Kalamazoo)
AT&T (who were prototyping a new integrated product called SALTUS).

After the standard package selection process, two suppliers - Oracle and AT&T- were involved in detailed commercial negotiations. Oracle was chosen by the Steering Group, subject to a successful trial period of circa 6 months. The Manugistics 'Finite Capacity Scheduling' module was also purchased to complement the Oracle Manufacturing planning and scheduling functions.

3.4 1993 'In Touch' from Wonderware chosen for SCADA systems in the process area. SCADA systems are not encompassed in the software offered by the main ERP vendors. This is a 'niche' area, dominated by a few main vendors. After evaluation of options with the Site Development team, 'In Touch' was chosen. It is not based on Oracle at all, but it does receive recipe information posted through from Oracle Manufacturing.

3.5 1994 - The requirements for Brand and Account profitability required a different type of solution - large drill down ('OLAP') databases were becoming available that combined the flexibility of spreadsheets with the power of mainstream database technology. After discussion with several major software vendors, the Profit Management Steering Group, chaired by the Commercial Director, chose the Financial Management System (FMS) from IRI. It did not use the Oracle database, nor did it then run under UNIX. It was thus a departure from our technical strategy for business reasons. The system was piloted with 12 National Account Managers (NAMs) in 1995 and rolled out to all NAMS in 1995/6.

3.6 From 1994 onwards, the business applications market became increasingly dominated by a few vendors who attempted to provide as much functionality as possible in one integrated enterprise wide solution. These packages (known as Enterprise Resource Planning - ERP - solutions) found favour with large companies – with typically £500m turnover plus - who normally operated internationally and who found themselves (possibly because of acquisitions) with a mix of technologies with all the associated problems of integration and data consistency.

None of these packages do everything, but most cover the core transactional systems of sales order processing, invoicing, ledgers, sales reporting and HR/payroll. SAP led the way, gaining many blue-chip accounts in food and drink, notably Nestle, Guinness, Tate and Lyle, Unilever and Courage. Bann and JD Edwards followed as main ERP vendors. By now, all these ERP packages, many of which had originally only been available on IBM hardware, were now available under UNIX which had emerged as the mainstream operating system. And all favoured the use of the Oracle relational database, which had also emerged as market leader in the database field.

3.7 In 1995, Oracle announced their integrated Consumer Packaged Goods (CPG) software suite, which adopted a somewhat different approach. Recognising that they could not provide everything, Oracle set up close alliances with other software companies which allowed Oracle to sell other companies' software under licence, which, combined with their own packages, would provide an integrated suite for the CPG (or Fast-Moving Consumer Goods - FMCG) sector. The other companies with which they developed these links were:

Manugistics (for demand, production and transportation scheduling and planning)
IMI - the system ESS (for sales order processing/customer order management)

> Datalogix - the GEMMS system (for manufacturing and process control)
> IRI - the FMS system (for profitability analysis)
> TSW - the EMPAC system (for plant maintenance).

Oracle gained three major CPG/FMCG clients in Kellogg's, Frito Lay/Walkers and Anchor/New Zealand Dairies. Discussions took place between Oracle and Bulmer on whether we should migrate *en bloc* to the CPG suite, but these foundered on timescales and costs.

3.8 Later in 1995, Oracle bought out Datalogix, and purchased the FMS system and associated technologies from IRI. This was good in that it meant our FMS system was now supported by Oracle and would be more closely integrated with Oracle Financials (it was renamed 'Oracle Financial Analyser'), but bad in that Oracle were now supporting their new manufacturing package - GEMMS - as the one recommended for process industries. They positioned their Oracle Manufacturing package - which we had purchased in 1993 - more as a solution for discrete manufacturing - automobile, computers, electronics etc. Nevertheless, Oracle Manufacturing remains tightly integrated with Oracle Financials, and some modules in both packages - Inventory and Purchasing - are being standardised. It is used at Bulmer for secondary manufacturing – i.e. the packaging operation - and not for the primary process - cidermaking, where the Paradigm/PIMMS package is used (see below).

3.9 In 1996, following the standard package evaluation process, the company Investment Appraisal Group (IAG) approved the purchase of new software for the juice inventory management and financial reporting - what is often termed manufacturing execution system - a system that sits above the SCADA process systems and below the Ledgers, to which it sources financial information. The Oracle/UNIX technical guideline, which had become a guideline adopted by most companies bigger than a £50m turnover - where Microsoft were gaining ground - was again observed. The GEMMS package was looked at, but discarded as not having the required functionality, and the Steering Group was left to choose between Marex and Paradigm. Marex was initially selected, but after early contractual disagreement, Paradigm was chosen for the system that is now known as PIMMS - Production Information Management and Monitoring System.

3.10 In 1997/98, further business applications have been acquired for Plant Maintenance, Sales Forecasting, and Laboratory Information Management (LIMS). None are from Oracle, but two do use the Oracle database (as the vast majority of all business applications do these days). The exception is the new sales forecasting system (IMA), which only has three users and uses the Microsoft Access database. The mainstream integrated planning solutions (Manugistics, Logilty) were rejected on grounds of cost, poor support and over configuration.

3.11 We are now in the final selection process for new systems for HR/Payroll and Activity Planning. The same guideline of Oracle database and UNIX/NT operating system is in place. The issue on HR/Payroll is balancing the importance of secondary technology issues against perceived issues on user friendliness and functionality. The HR/Payroll system from Oracle will follow the same version release timescales and technology evolution as Oracle Financials and Oracle Manufacturing, and will also offer some integration benefits. However, Peterborough software is viewed as more user friendly and requires less configuration. The Steering Group will decide on this shortly. As regards Activity Planning, we are faced with the choice of a 'niche' product or acquiring a larger integrated demand planning suite (e.g. Manugistics), to which activity planning is one feed. Oracle themselves have a 'Create Demand' module on the drawing board, which fits very closely with our requirements, but timescales mean this cannot be seriously considered at present.

3.12 1998 – the need for a data warehouse to support the Profit Management system is now critical. This project has now been put on a new footing, with technical expertise from Arthur Andersen being used to support the 'in-house' team. Oracle database technologies lead the market, and we shall again be using both the Oracle relational database and Oracle OLAP database, both of which we already have. New tools may well be used for data extraction and on-line access.

4. Summary

A review of our current portfolio shows that:

1) Our business systems strategy has been driven by functional requirements in different parts of the company at different times over the past decade. There is currently neither a clearly defined corporate information model nor process map to drive a systems strategy.

2) The technical guidelines and resource constraints have engendered a move towards the mainstream packages, aimed at increasing integration and lowering cost of ownership. However, they have not been a key determinant where a suitable business solution has not been available (e.g. FMS Customer Profitability in 1994; SCADA in 1994; IMA Sales Forecasting in 1997).

3) 50% of our business application packages (of which there are 12) *use the Oracle database.* This is not evident to system users, other than in system performance and integration. It should ideally be 100%. If we moved to SAP, it would be closer to 100%.

4) 25% of our business application packages are *purchased from Oracle.* These three are Oracle Financials and Oracle Manufacturing, plus Oracle Financial Analyser (which, when we purchased it, was not owned by Oracle).

5) The choice of Oracle Manufacturing and Oracle Financials was made in 1993 by the Supply Chain Steering Group. Other leading contenders of the day were reviewed. Oracle was chosen from the short-list of five for reasons of functionality, implementation capability, and future technology evolution.

6) About 25% of all our main business applications are bespoke (i.e. written by the HPB IT department), the remaining 75% being packages. 90% of our bespoke systems have been written in Oracle. Most date from the early to mid-nineties (Pricing, Promotions, Invoice Resolution and Query, Product and Customer Maintenance, Invoicing, Keg Information Management system).

7) Once we have made suitable progress on our corporate information requirements and corporate process redesign, the decision we are most likely to face is whether to migrate *en bloc* to a major ERP solution; and if we do, should that be the Oracle CPG suite or another.

Martin Wynn, IT Controller.
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APPENDIX
INFORMATION TECHNOLOGY
CSFs and KPIs 1998

OVERALL GOAL: Be the lowest cost producer of appropriate quality information systems and services, in the shortest timescale from origination to delivery. Systems and services must be fully exploited to maximise the company's profit generating processes and opportunities.

CSF	KPI	REPORT FREQ	AVAILABLE NOW?	COMMENT
Deliver cost effective systems	• Benefits delivered vs. cost of ownership	Annual or on review of individual systems	No	Indicator could be worked up from existing information
Provide customer orientated services to agreed schedules and budgets	• Outstanding late Helpdesk calls	Weekly	Yes	
Efficient exploitation of IT	• Skills profiling indicator	Annual	No	Could be done via appraisal process with IT skills competency
Develop Organisational capability	• Skills profiling indicator	Annual	No	Could be done via appraisal process. Specialised skills matrix for IT required.
Integrate IT Strategy with Company Mission	• IT vs Business requirements • IT spend as % of t/o x EPS	Periodically Annual	No Partly	Questionnaire could be devised IT Spend as % of t/o (Price Waterhouse cross-industry standard)