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Information Systems Management

Group Assignment

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Declaration

Hereby we, Group 3, declare that this group work is our own original work and that all sources have been accurately reported and acknowledged, and that this document has not previously in its entirety or in part been submitted at any university in order to obtain an academic qualification.

Bellville, 2002-09-08

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Executive Summary

Enterprise resource planning (ERP) allows a business to establish a digital nervous system within a company, whereby data is shared electronically, allowing the managers to unify key businesses processes.

ERP systems have been in use for almost 30 years. However, there is still a big number of companies not employing any ERP system or failing to reap any benefits from the installed system.

Many different ERP systems are available in the market and utilised by different companies, depending mainly on the size of the business. The five major ERP systems used by large enterprises (SAP, Oracle, PeopleSoft, Baan and J.D. Edwards) are analysed in terms of background, strengths and limitations. Technical comparisons are tabulated.

All the different systems appear to be very similar in functionality and applications. It is however interesting to note that companies spend more money on marketing and sales than research and development. This seems to be done to differentiate themselves in the market place.

Pioneer Foods was analysed as a South-African example of a company employing an ERP system. Through interviewing and questionnaires, the details of the ERP implementation, functionality, successes and failures were discussed. From this information, specific conclusions could be drawn and recommendations were subsequently made to the CEO.

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1 Introduction

1.1 Setting the Scene

In many large organizations, information involved numerous computer systems for different organizational units. This has resulted in “silo effect” and “empire building” with enterprise-wide performance hampered by a lack of integrated information systems. Hence, the urgent need for multiple sources of information within the enterprise resulted in the emergence of ERP (Enterprise resource planning) software. Back-office enterprise software has its origins in the 1960’s and 70’s, as computing systems gained affordability.

ERP systems offer advantages including non-repetitive data entry, consistency, visibility across the organization, accessibility to reliable information, elimination of redundant data and process rationalization. These advantages all aim at achieving substantial cost savings for the firms.

Integration of business functions facilitates communication and information sharing. It is no wonder that by 1998, over 20000 firms around the world had spend \$ 17 Billion on ERP software (Source: AMR, ERP Software report).

1.2 Objectives

Performing a study on ERP systems that are currently available in South Africa is necessary to provide the necessary background. From this, the strenghts and limitations of each system as well as a comparison of the five major ones will be drawn.

Targeting a South African company in order to determine how successful the ERP system in in supporting the strategic, tactical and operational objectives, as well as the business processes.

Finally, this management report will end in conclusions and recommendations regarding the future of the ERP system.

1.3 Roadmap / Groundwork

Five ERP systems that are currently available in South Africa (SAP, Oracle, PeopleSoft, Baan and J.D. Edwards) are evaluated in terms of background, strengths and limitations as well as technical aspects.

Pioneer Foods is a South African company, utilising SAP as an ERP system. This SAP installation was evaluated through interviews and questionnaires.

The document ends with specific conclusions and recommendations on the findings of the interview and questionnaire.

2 ERP Comparison

2.1 What is ERP

Enterprise resource planning (ERP) allows a business to establish a digital nervous system within a company, whereby data is shared electronically, allowing the managers to unify key businesses processes.

ERP systems consist of different modules, thus the client can decide which modules will satisfy the business needs, and only purchase the specific modules.

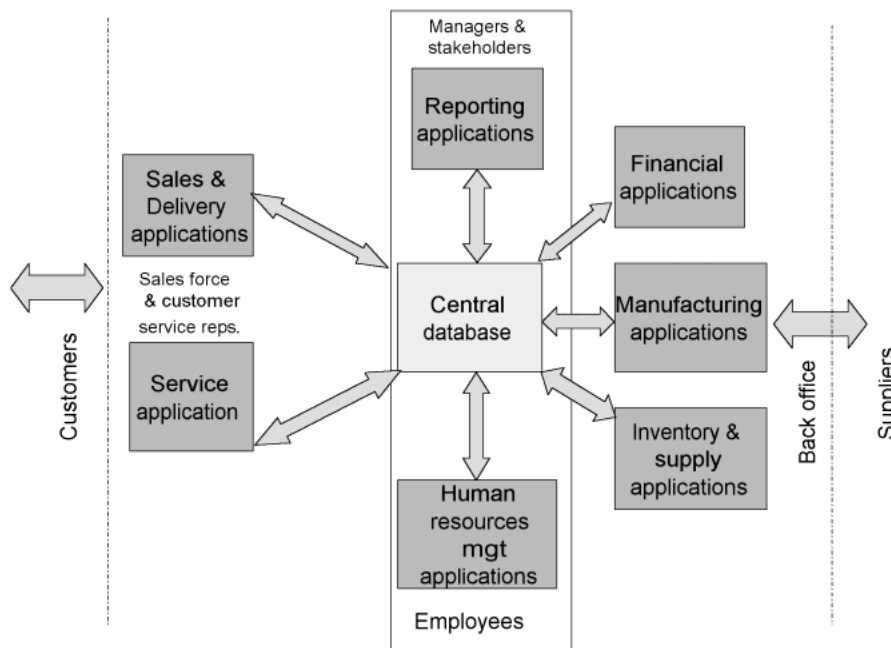


Figure 2.1: The ERP system

Source: Davenport (1998)

ERP software was designed to eliminate the barriers to sharing data and processes that occur when companies design and implement information systems for a single function or activ-

ity. ERP software coordinates the entire business process, and stores all the captured data in a common database, accessible to all the integrated applications of the ERP suite. Companies can achieve many cost savings and relative benefits from the use of ERP for transaction processing and management reporting. On the other hand a survey by Harvard Business School (1999) reveals that 65% of executives believe that ERP systems have a moderate chance of hurting their business because of implementation problems.

2.2 SAP

When it comes to ERP vendors, the German company SAP AG dominates the market with a 30% market share. They entered the ERP market first and gained early market share, which is one of the reasons for their success. Their early sales of R/2 and R/3 generated high profit margins and client loyalty, establishing SAP as the definitive ERP vendor. The company concentrates on ERP systems for large International companies with revenues of at least \$ 300 million , and it operates on the Unix, NT and OS/400 platform. They have a client base of more than 44,500 installations at over 17,500 customers all over the world, accounting for more than 12 mio users.

2.2.1 Strengths

- Many global companies choose R/3 because of its advance ability to handle multiple companies and currencies.
- SAP can use most of the established databases.
- SAP is far ahead of competitors in terms of revenues, profit, earnings per share, research and development spending and market share.
- SAP's commitment to product development is unrivalled, in 1997 SAP spent 14% of revenues on R & D, which is more than the total revenue of most of its competitors.
- Robust product, i.e. product has no major problems.
- Scalable product, i.e. product can grow as company grows

- The core of the product is international

2.2.2 Limitations

- The slow down of the growth in SAP's primary market.
- Complexity of Release 4.0 will raise the question with customers, as to whether it is worth upgrading.
- Some analyst's say that SAP R/3 is too big and complex for smaller clients.
- The complexity of the R/3 implementation, which can take from eighteen months to five years.
- Some customers feel that the product is not as flexible as competitors.
- Although SAP suggests its product is aimed at companies of all sizes the cost may be prohibitive to smaller companies.

2.3 Baan

Baan was founded in 1978 in the Netherlands as a provider of financial and administrative consulting services. They remained a medium size European company till 1995, when they signed a large deal with Boeing, which boosted it revenues and assisted the company in becoming one of the five largest ERP vendors. The Baan's strategy is to concentrate on manufacturing and logistic systems, and the system operates on Unix and NT.

To minimize time in the market Baan went on an acquisition spree acquiring fifteen companies in eighteen months. With the acquisitions came development, which was integrated in Baan IV. The acquisition proved to be costly, as reflected in the weak results of the last two quarters of 1998 and the lay off of 1200 staff members.

In August 2000 Invensys acquired Baan. with its product range featuring iBaan for Product Lifecycle Management, iBaan for Supply Chain Management, and iBaan for Customer Relationship Management. Baan continues to grow its enterprise software business in North and Latin Americas after coming under the Invensys banner.

2.3.1 Strengths

- The industrial and made to order origins of the product remain one of its key strengths.
- The software is very adaptable to other products.
- The software also provides the ability to maintain good traceability for components in the end product.
- The Dynamic Enterprise modeling concept, where users can study business processes and flows.
- The Baan enterprise software products and solutions enable companies to streamline manufacturing processes, and improve their reporting, planning and customer relationship management.
- Large client base, with more than 7000 customers at over 15000 sites worldwide.

2.3.2 Limitations

- With fifteen extremely developed products to be integrated with the homegrown core; Baan is more exposed than most ERP systems to unforeseen problems.
- The customization of its products is a lengthy process.
- The lack of a human resources management.
- There is no link between purchase requisition and the budget, checking for availability for the budget heading concern.

2.4 PeopleSoft

PeopleSoft, the third largest ERP system has a history of innovation. It is the youngest of the five largest ERP vendors and started in the mid-1980s when company founders Dave Duffield and Ken Morris, built the first human resources application on a client-server platform instead of the traditional mainframe. This was done to add in the necessary flexibility and to put

more power in the hands of users. Peoplesoft's roots are in the Human Resources area, which still remains one of the company's core strengths.

In 1998, PeopleSoft recognized a trend of corporate strategic plans focusing on the Internet to increase profitability by making customer and vendor transactions faster and better. As a result, they retrenched their internal strategy, stopping development of anything that wasn't a pure Internet application. The bulk of their resources – \$500 million and 2,000 developers over two years – were directed towards developing a new pure-internet platform for the real-time enterprise. The result was PeopleSoft 8, with more than 150 pure-internet applications. All applications had no client software to maintain. It was designed to build loyal customer relationships, enable better supplier communication, and make employee recruiting and retention more efficient.

PeopleSoft 8 made better interactions possible by delivering both the relationship and business analytic data when it was needed. Relationship data includes details of past transactions, from the size and status of a vendor's latest shipment to which sport customer's kids play. Business analytic data indicates which customers are the most important, based on the amount of products they are likely to buy and the cost of serving them, or which vendors deliver the highest quality products, on time and at the best price. The sales force or customer service teams have the data available from any browser when the customer calls or when the vendor is ready to negotiate a price.

PeopleSoft 8 aims to Optimise interactions, manage real-time business processes, analyse businesses to anticipate opportunities, increase revenue and reduce costs in order to produce more profitable relationships.

2.4.1 Strengths

- Flexible and functionally rich system
- Comprehensive knowledge base for tracking, understanding and deploying the organizations employee skills base.
- Customizing function-using PeopleTools.
- Advanced built in analytical and reporting tools

- Query tool and general interfaces are very appealing and the system also offers integrated workflow tools and web self service features
- Well designed solution
- Most complete HR functionality on the market.

2.4.2 Limitations

- High implementation costs
- Complex process of implementation

2.5 Oracle

Oracle Corporation is the world's second largest enterprise software company after SAP, providing ERP software to the world's largest and most successful businesses. Oracle applications are grouped into five different categories namely: Oracle Manufacturing, Oracle Supply Chain, Oracle Human Resources, Oracle Financials and Oracle CRM.

Annual revenues amount to more than \$ 10.8 billion and the company offers its database, tools and application products, along with related consulting, education, and support services. Headquartered in Redwood Shores, California, Oracle is the first software company to develop and deploy 100 % Internet-enabled enterprise software across its entire product line: database, server, enterprise business applications, and application development, and decision support tools.

Oracle was founded by Larry Ellison, Bob Milner and Ed Oates, 25 years ago. The founders realized a tremendous business potential in the relational database model. Oracle was initially established as a database vendor before they moved into the ERP market in 1989. Today Oracle technology can be found in nearly every industry around the world and in the offices of 98 of the Fortune 100 companies. Oracle is one of the world's leading supplier of software for information management, and the world's second largest independent software company after Microsoft. Oracle was one of the first companies to make its business applications available

through the Internet. Currently, Oracle is following the suite approach - making sure that all of its software is designed to work together.

2.5.1 Strengths

Customer-centric system: Customer Intelligence supports every aspect of customer relationships and customer behavior

Business Performance Measurement and Monitoring: Rich structures with many attributes - range of notification techniques that implement business performance monitoring

Well developed Data model: Customer Intelligence data model includes accounting data, profitability data, accounting data, transaction and interaction data and data generated by operational applications.

Seamless linking across channels: The Oracle system links together all departments into one seamless and transparent business flow. Oracle Service solutions provide a thorough customer service line that spans multiple customer channels: e-mail, the phone, the Web, and field service agents. All these channels integrate seamlessly to provide up-to-date information across the organization, ensuring consistent service delivery.

Integration capabilities: Oracle Service modules are completely integrated, allowing for greater customer transaction consistency and synchronizations across all facets of the service operation.

Strong knowledge base: Oracle's Solution Management System (SMS) problem and solution database (which progressively "learns" as support issues are resolved) and a document management system are linked together. Together, the systems allow users to search for and among sets of information including FAQ lists, installation instructions, product documents, technical bulletins, and white papers.

Upgrade assistance: In December 2001, Oracle introduced three new services that are designed to help with the E-Business Suite 11i upgrade situation. These services are as follows: the 11i Simplification Service and Workshop, 11i Upgrade Solution Value Assessment, and 11i upgrade for Financials and ERP.

2.5.2 Limitations

Segmentation: Oracle Business Intelligence model assumes segmentation. None of the analytical reports can create new segments

'Light' analytics: No algorithmic analytics, prediction capabilities are limited Internationalisation/Localisation - implemented in single language and single, configurable currency

Limited chat capabilities: Oracle's chat product is very basic. Its capabilities do not include the ability to suggest content to the operator or transferring and shifting chat sessions to another operator; however, chat sessions can be stored and retrieved later, and chat can be installed as a stand-alone feature.

Self-service searching: Searching while in self-service includes only keyword and relationship matching; the system lacks the ability to do natural language searches. Its cognitive engine does not automatically learn from past interactions, instead relying on end-user feedback. In its favor, however, it can also be installed as a stand-alone feature.

2.6 J.D. Edwards

US based JD Edwards (JDE) was founded in 1977 and is the fifth largest ERP vendor in the world today with a current international client base of 6500. Its mission is to enable customers to implement new ideas and innovations quickly across their organizations in order to maximize control of their businesses. JDE started as a custom software developer, and then moved to off-the-shelf (finance and logistics) packages. The company expanded into new markets with manufacturing modules. It targets mid sized corporations internationally and big corporations in the South African context.

JDE divides its market into AS/400 and other platforms, in particular Unix and NT. In addition e-commerce has boosted sales of their OneWorld software and WorldSoftware. J.D. Edwards ERP applications are designed to improve a company's internal operations and provide the groundwork for collaborative commerce. The ERP applications assist you with managing finance, assets (including inventory, fixed assets and real estate), people, projects,

suppliers and the fulfillment and manufacturing processes. Client satisfaction is a determinant of JDE's success, with market research by Merrill (1998) showing that clients would recommend the company to interested parties. However, many JDE clients purchase only one component of the complete portfolio-typically accounting.

J.D. Edwards, like other traditional ERP vendors, has broadened its interests in recent years. It will spend 14% of its turnover in 2000 on R&D and has written new software, and made acquisitions, to grow its business into the supply chain management (SCM), customer relationship management (CRM), supplier relationship management, business intelligence and integration markets. The CEO of JDE predicts that the ERP market will grow 10% per year on average over the next five years, and the CRM and SCM markets by 20% per year. Still, up to 70% of J.D. Edwards' business is from vanilla ERP sales, and that's also where the battle is likely to be the fiercest with their competitors (the likes of Microsoft after its shift towards the mid market).

So far, J.D. Edwards is outperforming its rivals. It has beaten analysts' expectations for three straight quarters and, as the Nasdaq tanks to levels last seen in September 2001, its share price is trading at twice its 52-week low. It is also introducing new products at the fastest rate in its history.

2.6.1 Strengths

User friendliness: What most distinguishes J.D. Edwards from others in its industry is its customer-centric Idea to ActionTM value proposition, an industry-redefining approach to business software solutions.

Functionality: The flexibility of the software enables users/consultants to integrate JDE with other ERP software solutions from competitors.

Market share: Internationally they control a large part of the mid market for ERP vendor, have 6500 clients and \$944 million business.

Technology: JDE utilizes open architecture on AS/400, Unix and NT platforms. It also utilizes client/server systems.

Software: The company has a good international network and support facilities.

2.6.2 Weaknesses

Cost: Since JDE targets the middle corporation internationally and big firms in SA they are not affordable to the majority who fall in other categories.

Technology: The technology is older and has less specialised functionality as well as less enhanced reporting tools.

2.7 Findings on the ERP systems

When evaluating ERP systems the scope of functionality (as shown in table A.1 on page 21) will give a largely similar look and feel and is not seen as an area of differentiation in the market place. Customers will pursue value for money over functionality. Value for money will obviously include the analytical aspects of ROI and other business indices. In practice real value is often searched for in the qualitative differentiators. This explains the huge sums spent on marketing. It is interesting to establish exactly the % the market players spend on marketing as opposed to the % spent on R&D.

	SAP	Baan	PeopleSoft	Oracle	J.D. Edwards
Revenue in \$	6.5bn	619m ¹	2bn	10.8bn	894m
Sales & Marketing as % of Revenue	1.6bn 25	172m 28	514m 26	2.7bn 25	293m 33
R & D as % of Revenue	800m 12	135m 22	299m 15	1.1bn 10	100m 11
Net Income (loss)	517m	(310m)	190m	2.5bn	20m

Table 2.1: Figures from the 2001 Annual Reports

The figures in table 2.1 state clearly the intention of the companies to differentiate themselves in the eyes of the customer by marketing their – very similar – products.

¹Baan figures are for 1999

3 Pioneer Foods

3.1 Company Background

Pioneer Foods is a major force in Southern Africa’s food manufacturing industry and is committed to providing its customers with wholesome, appetising foods. The group has a diversified portfolio of quality foods.

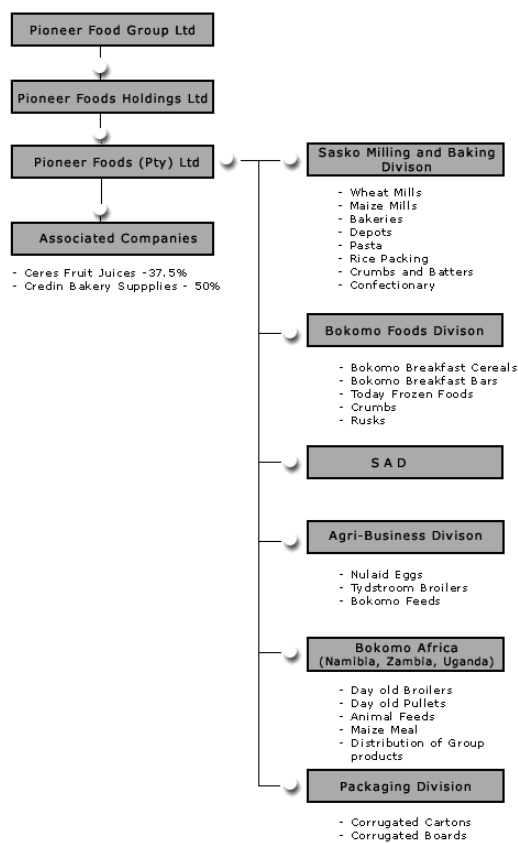


Figure 3.1: Pioneer Foods Company Structure

Source: Pioneer Foods (Pty) Ltd. (2002)

Pioneer Foods was created in 1997 through the merger of Sasko and Bokomo, two established South African food manufacturers and has a diversified portfolio of quality staple foods and value-added products. The Group's highly sophisticated research and development laboratory and its wide distribution network, enable it to pass cost benefits on to the consumer, achieved through efficiently managed economies of scale. It employs approximately 10 000 permanent employees in more than 100 units throughout Southern Africa.

Pioneer Foods strives to be South Africa's best food company by supplying the best quality foods. The core values on which this vision rests are:

- Customer driven
- Respect for people
- Transparency
- Excellence in all we do
- Integrity and honesty
- Group interest takes precedence
- Development of people

By doing so, Pioneer Foods is actively adding value to the South African socio-economic development.

3.2 ERP History

The first company to implement SAP in Pioneer Foods was Bokomo. At that point of time, SAP was (and may still be) the most advanced ERP system. Besides being the most expensive system, it also provided the best fit for the company. Started in 1994/1995, this process took until 1996 and ended as a successful implementation within Bokomo.

The ERP system was implemented with a cut-over method, while the modules (FI, CO and PP first while PM, HR and MM followed later on) were implemented through different phases in the different departments. In order to do so, they sent key personnel to the SAP

academy for training. With this huge amount of knowledge it was possible to do the in-house implementation.

After Bokomo and Sasko merged and formed Pioneer Foods, they implemented SAP in Sasko as well. Due to the well-trained staff, the in-house implementation process was undertaken in a very short time. Top management decided to select SAP as a Company-wide ERP system of choice. As a result, every firm Pioneer Foods acquired or had major stakes in had to adopt SAP (e.g. Credin and Ceres).

Due to this, the SAP-Project took longer than expected, and Pioneer Foods is still busy implementing SAP in the sixth and newest division, SAD. The company plans to finish the SAP implementation within all divisions by October 2002.

Even though Pioneer Foods considers the SAP implementation to be a success, they did not spend much time on improving processes and the system itself. This is to be done in the project “Super SAP”, which will take place from middle 2002 until middle of 2003. In this project, a large amount of SAP knowledge will be used in order to streamline processes, repair quick-fixes in the system and make Pioneer Foods ready for the next decades.

Currently, Pioneer Foods is running SAP R/3 with the 4.5 front-end system. This was done together with the last major update of the system in 2000. Since upgrading SAP – due to continuous small changes – is even more costly than upgrading the Windows operating system, Pioneer Foods decided to do major updates every three years. The upgrade to front-end 4.6 will therefore be in 2003.

3.3 Interview and Questionnaire

Through the personal interview with Mr. Ryan Jacobs (2002), various discussions were conducted to clarify the SAP implementation, problems and successes within the Pioneer food group. See appendix B on page 23 for details.

A SAP end-user questionnaire was circulated to the various departments and users within Pioneer Food to establish success and failure of the SAP system. The result can be viewed in table C.2 on page 30.

4 Conclusion (Pioneer Foods)

4.1 ERP implementation

The implementation process of the SAP system at Pioneer Foods was done very successfully in-house. However, there are a few criteria to keep in mind when doing an ERP installation. Following are some of the pro's and con's on in-house implementations. The advantages of doing in-house ERP implementations include:

1. The implementation team knows the company culture and processes.
2. The implementation team are known faces within the firm.
3. Less resistance to change from colleagues.
4. Post implementation knowledge to aid in system problem solving.
5. Ownership of the project by the implementation team.
6. The various supervisors in the SAP implementation team acts as change agents.
7. Much cheaper than outsourcing the implementation.

The disadvantages of in-house ERP implementations include:

1. Loss of supervisor's daily duties due to implementation duties (man power shortages).
2. Limitations on SAP in-depth knowledge to customise the system to specific company needs.
3. Limited implementation experience and long term views on what will be required from the system after the implementation.

4. A high number of the trained SAP personnel leave the company after the installation to seek greener pastures (higher paid jobs as SAP specialists) with overseas firms in the UK, USA etc.

4.2 SAP end-user questionnaire

The SAP end-user questionnaires (see table C.1 and table C.2 on page 30 for more detail) was circulated to different departments and employees to ensure all the different modules of SAP were targeted during the questions. The response-rate was almost 90%, so that certain conclusions can be drawn from this:

- Finance, Reporting, and Production had no problems/complaints with the SAP system.
- HR experienced some problems with the system.
- Technical and Distribution departments felt it had inadequate training.

It is also known that management requires a more user-friendly method of retrieving, viewing and using the data (generated through SAP) for reporting and presentation purposes.

5 Recommendations (Pioneer Foods)

5.1 ERP implementation

It will be recommended to perform future ERP installations through a hybrid of in-house and outsourced project teams. An internal team of “change agents” within the firm should work in conjunction with an external team of well experienced SAP consultants. This joint effort will be more costly than implementing ERP systems in-house only, but it will be a blend of all the advantages of implementing through in-house and outsourced teams. A project team which consists of an internal- and external team will ensure

- professional implementation methods,
- previous knowledge of previous successes/failures,
- low level of resistance to change,
- company culture- and process knowledge/experience,
- buy-in from top management as well as
- proper project management.

The in-house SAP team will then still be responsible for the ongoing maintenance, fault-finding and updating of the software. Specialist help can be outsourced during emergencies or major new implementations.

5.2 SAP end-user questionnaire

The SAP specialists within the group should focus on resolving the problems being experienced currently by the HR department, with possibly weigh up the benefits/disadvantages of

installing People Soft as an add-on.

More, improved or focussed training should be done for the personnel working in the Technical and Distribution departments.

A solution to the in-flexibility of SAP regarding reporting and presentation abilities might be overcome by adding a business warehouse package (BW) to the current SAP system. This will make the system more flexible and also more user-friendly in retrieving data.

Appendix

A ERP Software Comparison

Table A.1: ERP systems: The big five

	SAP	Oracle	PeopleSoft	Baan	JD Edwards
BOM/CONFIGURATOR					
Supports engineering and manufacturing bills	Y	Y	Y	Y	Y
Supports engineering change control	Y	Y	Y	Y	Y
Product configurator capabilities	Y	Y	Y	Y	Y
Online customer configuration	Y	Y	Y	Y	Y
Creates standard Bills from unique configurations	Y	Y	Y	Y	Y
Can use custom items to configure	Y	Y	Y	Y	Y
FINANCIALS					
Order processing	Y	Y	Y	Y	Y
Accounts payable	Y	Y	Y	Y	Y
Accounts receivable	Y	Y	Y	Y	Y
General ledger	Y	Y	Y	Y	Y
Fixed assets accounting	Y	Y	Y	Y	Y
Support multinational transactions	Y	Y	Y	Y	Y
Integrates with corporate system	Y	Y	Y	Y	Y
PURCHASING					
Supports contract purchases	Y	Y	Y	Y	Y
Supports blanket purchases	Y	Y	Y	Y	Y
RFQ capability	Y	Y	Y	Y	Y
Allows suppliers to update orders via internet or EDI	Y	Y	P	Y	Y
Offers e-payment capability	Y	Y	P	P	Y
Supports vendor release/control	Y	Y	Y	P	Y
SCHEDULING					
Supports advanced planning and scheduling	Y	Y	Y	Y	Y
Supports CPFR	Y	Y	Y	Y	
Continued on next page ...					

	SAP	Oracle	PeopleSoft	Baan	JD Edwards
Allows user defined attributes	Y	Y	Y	Y	Y
REPORTING					
Allows adhoc reports	Y	Y	Y	3	Y
Operations results can be reported in financial terms	Y	Y	Y	3	Y
Flags problematic situations	Y	Y	Y	Y	Y ¹
MODULES					
MRP/MRP II	Y	Y	Y	Y	Y
Warehouse Management	Y	Y	3	Y	Y
Human Resources Management	Y	Y	Y	3	Y
Forecasting	Y	Y	Y	Y	Y
Purchasing	Y	Y	Y	Y	Y
Manufacturing Execution (MES)	Y	Y	3	Y	Y
CRM	Y	Y	Y	Y	Y
Financial	Y	Y	Y	Y	Y
INDUSTRY					
Discrete	Y	Y	Y	Y	Y
Repetitive	Y	Y	Y	Y	Y
Complex	Y	Y	P	Y	Y
Flow Manufacturing	Y	Y	Y	Y	Y
Automotive	Y	Y	Y		Y
Remanufacturing	Y	Y	Y	Y	Y
Process	Y	Y	Y	Y	Y
Pharmaceutical	Y	Y	Y	P	Y
Food & Beverages	Y	Y	Y	Y	Y
Retail	Y	Y	Y	P	Y
Y=supported, N=not supported, P=partial 3=3 rd party, Blank=left blank					

Sources: Moutoux (1997), Gamielien (2002)

¹In means of exception reporting

B Interview

We did an Interview with Mr. Ryan Jacobs (2002) and asked him specific questions regarding the SAP implementation.

B.1 Pre-installation of SAP

Q :When was SAP installed at Pioneer Foods?

As early as 1995, SAP was introduced to the Bokomo business unit of Pioneer Foods. In fact the first pilot site was set up in Epping in that year and focussed on the “breakfast cereal” division.

As can thus be seen, the groundwork was done with Bokomo prior to 1997, a full two years earlier than the official full implementation of SAP at Pioneer Foods, which was 01st October 1997.

The implementation period was four months long, in this instance.

Q: Why was SAP chosen as the ERP package of choice when there were other vendors, namely J.D. Edwards, Peoplesoft, Oracle and Baan to name a few?

The choice and final decision was made at top management level and the consensus was that despite the huge cost of the full ERP package, it still remained a good strategic fit for Pioneer Foods.

Q: How was the implementation of SAP done within the organisation?

The strategy adopted within Pioneer Foods, was that of getting change agents and project team members for the implementation of SAP from within. Typically, people from a wide variety of disciplines were needed and chosen. It was felt that the time was ripe to develop the skills and knowledge base from within the company itself.

Another reason attributed to the choice of using of using in-house skills to fire up the process, was that in 1997, SAP knowledge was scarce and expensive, within the South African context.

Prior to the merger of both Sasko and Bokomo, both company's at that time, went about the same way in manner in which the workforce was skilled, in order to drive the implementation process.

Q: What modules of the SAP ERP system were implemented into the company?

The whole suite of modules offered by SAP, have been implemented in the organisation, namely Finance, Distribution, Production/Planning, Human Resources etc.

Q: Was change management part of the implementation process?

Change management we discovered, most certainly were part of the process and proved in fact to be the most difficult part of the whole process itself.

The process had a top-down approach, meaning management buy-in to the while process was critical to the success of the initiative.

To a large degree, workshops were held during the initial change management phase, and to a lesser degree later on as it progressed, in order to win the hearts and minds of the people.

The process was (as indicated earlier), not easy, in the sense that there was a tremendous amount of resistance to change.-This was largely due to the fact that the organisational structure and status-quo had appeared to be challenged. An example of just such a difficulty in the whole process was explained to our group by way of the following example.

David Wentzel (Procurement Manager) was still using a system called the "cardex system" to do the daily functions required in his job. This system was a manual, paper-driven method which amongst other things had David filling out a purchase requisition book. Initially he had resisted, but as time progressed he had a change of attitude, which had a vital positive effect on all in his division. David's experience was that the introduction of the process was initially confusing and challenging for about two months, after that it only got better and better, which ultimately served a as a good platform to promote success stories to the rest of the workforce.

There are still, however, pockets of resistance still been experienced within some isolated

sections of the organisation to embracing the new way of doing work.-This however has reduced considerably as time has gone on.

Q: Was the company culture an important factor to deal with in the change management process?

The realisation by the top management structure as to the affect that the whole process would have on the culture of the company was always there. From the beginning the strategy for successful change, bearing in mind the somewhat conservative culture which prevailed, was that of leading by example and communication of the success stories which were occurring from within the company as a whole. For Pioneer Foods management, this aspect of change management was easily the most challenging in the initial stages, but had gained momentum after about two months.

Q: Who was the Project Leader?

Felix Lombard, who is an accountant within the company, yet at that moment in time was a very experienced IT person, headed the project team.

The rest of the project team was sourced from within the organisation and they were basically all trained in SAP to increase their level of knowledge and expertise in the subject.

Q: What time span was given for the implementation of the project?

The full project cycle was estimated to take two years, yet ended up taking close on to three years. The reasons we were given, was that the additional “add-ons” and customisation of the SAP package to suit Pioneer Foods in it’s entirety, had resulted on the scope of the project widening and thus the time was increased by a year.

Q: What method/process was used for the implementation?

A direct cut-over method was used, as the general consensus was that with SAP it was easier to do it that way.

Q: Where there any major problems during the implementation of SAP?

There were in fact a number of problems, namely:

The support on the technical side of SAP was not that good during implantation, which naturally added to the already fragile organisational relationships.

Very strong resistance to change within one particular division of the company, posed a major threat to the success or failure of the implementation process. It had reached such

grave levels of resistance, that an SAP project team was actually locked out of the premises at a sign of non-compliance to the process! -Largely though, it could be attributed to the high levels of frustration experienced. Managers in some isolated cases, even resigned as they succumbed and said that they could and would not work on the SAP systems. Fortunately (as was pointed out to us), only a few of them had this negative mindset.

Q: How was the data migration from databases?

This process went off fine, although it was to a large extent more of a tedious and time-consuming process of checking and re-checking -This allowed for an element of error as it was largely a human component doing this.

The whole process, was essentially just getting what is called “master data” from the other database systems. The majority of the disparate systems, used some or other Windows based package, which in a sense made the work much easier to migrate, as the whole company used Windows as the operating system.

Q: How was the training of the end-users done?

The end-user received in-house training, as there is a dedicated SAP team (based in Paarl), who support this function.

The SAP training is done on a per module basis, where the training is done in two phases normally and overseen and administered by the SAP in-house training department.

Q: What was the cost of the implementation?

The actual cost of the full implementation of SAP within Pioneer Foods, had cost twelve million Rand (R12 000 000, 00). In our discussions we were unable to get information on what Pioneer Foods had budgeted the cost of implementation to be prior to the project getting the go-ahead.

B.2 Post Installation

Q: Can you briefly describe if ERP was successful and highlight some of the benefits and general experiences thus far?

The overwhelming response which Pioneer Foods received, was that the ERP installation is a success story and there are a host of benefits, such:

The integration between the various departments since the implementation has been significantly improved. It has proven to be a good transactional system, in that the control within every process is much better than pre-SAP.

People are saying from within the company that they cannot “..live without SAP”. The are of course the inherent cost savings which Pioneer Foods have leveraged since the implementation, most notably form the Human Resource requirement which has been significantly reduced as a result.

A dedicated task group was established and launched at the beginning of 2002, called “Super SAP”, and have the role of looking and evaluating the post 1997 implementation of the SAP system, in order to assess the gains and possible pitfalls of the implementation process.- an audit of the system, in a sense. One of the main focuses of Super SAP, is to determine whether there have been any returns since they had spent twelve million Rand (R12 million), on ERP package to date.

An indication from top management as to the way that the ERP system was implemented, i.e. in-house as opposed to outsourcing, was that the in-house method was strategically a good move, in that the change agents were people who understood the business a great deal more, than perhaps and external consultant would have. They had at one stage flirted with the idea of having outsourcing, yet besides the huge cost to get a consultant on the project team, it just reinforced the notion which they had that the “new” person really did not fully understand the culture and business per say, of Pioneer Foods.

Q: How was or is success of the SAP system implementation measured?

Measurement is done through surveys, whereby managers are tasked at least trice a year to conduct surveys from their respective business units, in other words all users take part in this survey.

The results which are fed through once the responses have been analysed, are acted upon by the Super SAP Team who are focussed on a continuous improvement philosophy within the organisation.

Q: Are manual paper-driven processes still in force when dealing with your suppliers?

Pioneer Foods have not interfaced with other SAP users as yet, although most transactions

are done via EDI (electronic data interchange). The reason for this is in line with the Pioneer Groups strategy of growing Pioneer Foods business and not forcing them onto the suppliers.

After a three year time period, Pioneer Foods will only then perhaps look at the total optimisation of SAP with other customers and stakeholders.

Q: Does ERP aid in management decision-making and if so at which levels?

All managers are able to do better planning with the aid of the SAP ERP system. From the foreman level upwards are able to utilise the functionality of the ERP system for better decision making. The final decisions are ultimately made with the “human touch”, thus only using SAP as management tool in the whole process.

Q: Where there further problems where Pioneer Foods required external assistance?

There were problems with the SAP software which could not be handled internally, but these visits were covered in the initial scope of the service level agreements which were concluded with SAP.

Updates to the software are also done in regular time-intervals of three year time intervals. SAP was updated in 2000, hence another version update will be done next year. The updates to the later versions are done by the SAP in-house team, as they are not that complicated to install.

Information Systems are supported by the in-house SAP Team whereas the information technology (specifically hardware issues), are done externally by Didata. The SAP (external assistance) team, offer a helpline function, but then a full consulting fee thereafter. The maintenance of the system is done internally (SAP maintenance), by the SAP in-house team of which the staff compliment is seventy people .

There is within the SAP ERP system, a functionality for logging any form of user initiated problem, so that there can be support offered. Currently this is centralised, but the organisation is looking into decentralisation of that functionality and support (champions in every division), to enable better service quality at the end of the day.

Pioneer Food, in hindsight, perhaps identified some disadvantages of using the in-house SAP Team over the last few years, due to the following issue: It was difficult to manage the SAP talent, as many once trained, left the company for greener pastures. This had a direct

impact on the levels of frustration, because it often resulted in lack of user-support as a direct consequence of the manpower shortage. The SAP team was trained and recruited in-house at a huge financial cost, and the result of the exodus over the last two years has not been good to moral. On the bright side, management has started to retain most of the SAP staff, and it now appears that they have stemmed the tide and morale is much higher than perhaps a few years ago.

B.3 The Future

At this point Pioneer Foods is looking at adding a great deal more power and functionality to the current ERP environment, in that SAP in general (they have experienced), does not have a good reporting function and hence the package currently been used to download information from SAP into a better reporting medium, is called “Business Warehousing”. Due to the inflexibility of using SAP and also the cost associated for any SAP add-on, Pioneer Foods has been investigating a package called “Advanced Planning Optimiser”, which is not SAP specific. Pioneer Foods which is committed to the SAP ERP system, is looking for SAP compatible add-ons, due to the huge cost factor of any SAP software.

Currently Pioneer Foods estimates that it is using about 60% of the capacity of the ERP system and on the whole views the SAP implementation as been a huge success for their business now and in the longer term.

Currently there are still a host of SAP consultants “knocking at the door”, but due to the exorbitant costs, they are taking things slowly and developing the in-house expertise and knowledge to take the company into the future.

C End-user involvement

1.	Does the ERP system do what you want it to do?	yes	no
2.	Is the ERP system supportig your day to day business?	yes	no
3.	Is the technical support you experience sufficient?	yes	no
4.	Do you think you have had adequate ERP systems training?	yes	no
5.	Are there currently any problems when using the system	yes	no
6.	Do you think the screen-interfaces that you are using are user-friendly?	yes	no
7.	Is the time you take to complete a task much quicker now than before	yes	no
8.	Do you know why you are doing your work this way, than in the past?	yes	no
9.	Do you think the system has improved customer service at all?	yes	no
10.	Are you encouraged to provide feedback for any system improvements	yes	no

Table C.1: Qetionnaire for SAP end-user

Question	Distribution	Technical	Finance	Reporting	Production	HR
1	80%	80%	100%	80%	100%	80%
2	100%	80%	100%	100%	80%	100%
3	60%	100%	100%	100%	60%	80%
4	20%	40%	100%	80%	80%	80%
5	40%	20%	40%	20%	20%	60%
6	80%	100%	80%	80%	80%	100%
7	100%	20%	100%	80%	80%	80%
8	100%	80%	80%	90%	100%	80%
9	80%	80%	80%	80%	80%	100%
10	100%	80%	40%	20%	40%	60%

Table C.2: Responses grouped by department
100% = yes 0 % = no

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