



Business process re-engineering pays after enterprise resource planning

Business process
re-engineering

Ian Martin and Yen Cheung

School of Business Systems, Monash University, Clayton, Australia

185

Abstract

Purpose – The purpose of the paper is to demonstrate that significant improvements through business process re-engineering can still be achieved after the implementation of enterprise resource planning systems. While the business process re-engineering benefits of enterprise resource planning systems have been widely published, the opportunities for process improvement after the installation of integrated systems have not been extensively explored.

Design/methodology/approach – This paper results from a case study of the highly successful intervention in the purchasing and accounts payable functions of Mobil Oil Australia Limited undertaken well after the implementation one of the widely used off-the-shelf enterprise resource planning systems, SAP (Systems, Applications and Products in Data Processing).

Findings – Significant benefits were achieved in the purchasing and accounts payable functions of Mobil Oil Australia Limited, via a focus on best practice and radical process improvement. Invoices and invoice processing were largely eliminated. Cheque usage was reduced by 87 per cent and the staff paying accounts cut by almost 75 per cent.

Originality/value – The case study demonstrates clearly to companies and practitioners that business process re-engineering can achieve “dramatic improvements in cost, quality, service and speed” even after an enterprise resource planning solution has been implemented via a focus on best practice benchmarking and using best practice to provide a target for the change team. Companies can leverage existing, often substantial, investments in installed systems to further improve their processes and increase the return on those investments.

Keywords Business process re-engineering, Manufacturing resource planning, Australia

Paper type Research paper

1. Introduction

During the 1990s, an increasingly competitive world drove the use of business process re-engineering (Hammer and Champy, 2001) and business restructuring to improve profitability and return on capital employed. Restructuring and downsizing took place in many organisations to reduce costs and management layers. The challenge was to structure a leaner, more customer-focused and flexible organisation to meet the competitive challenges in the global economy. In the same timeframe the need for information technology business solutions enabled integrated business packages to dominate the information systems industry. Many businesses found installing integrated packages was traumatic and, following long, painful and expensive implementations, some companies had difficulty identifying any measurable benefits. In hindsight it seems that much of the value of these large systems was in the infrastructure foundation they created for future growth based on information technology. For companies that now have integrated systems in place, the key problem is translating this infrastructure into bottom line value (James and Wolf, 2000).



Business Process Management
Journal

Vol. 11 No. 2, 2005
pp. 185-197

© Emerald Group Publishing Limited
1463-7154

DOI 10.1108/14637150510591174

"Less than half of all large-scale enterprise software projects achieve even half of their business benefits they aimed for", according to a report by consulting house Accenture. The study, "The future of enterprise solutions", paints a grim picture for companies planning a major enterprise software project. The process will be long and expensive, and even then stands a good chance of falling well short of expectations. It is critical that companies look for continual improvement from their systems, customising the software and tailoring business processes. For many organisations that have done the hard yards in enterprise software projects, it means there is still business value to come (Riley, 2003). In this paper a worldwide intervention which was undertaken to restructure staff support, reduce management layers and lower staff (as distinct from line management) costs is examined. The case study ultimately focuses on a business process re-engineering project, which achieved its objectives by effectively using the functionality of the enterprise resource planning system previously installed.

SAP[1] (Systems, Applications and Products in Data Processing) had been previously installed as the core system in Mobil Oil Australia Limited. Originally developed and marketed in Germany, SAP is an integrated international software package providing core business applications. In the 1990s the software became better known internationally and captured a large share of the integrated package market in medium and large companies throughout the world. With extensive functionality and a high level of integration, the software covers the full range of business requirements, including financial accounting and control, sales and distribution, materials and inventory management, production planning and human resources management.

The paper first outlines the multinational organisation structure of the company and provides the background and driving forces behind the "Staff Redesign Project" initiated by corporate headquarters. It describes the way in which the project was disseminated to various parts of the Mobil world and the formation of teams to address process improvement in staff support areas. One particular business process re-engineering project undertaken in the accounting department of Mobil Oil Australia is then examined in detail. The impact of the changes and significant benefits resulting from the project are canvassed. Completing the paper are the lessons which can be drawn from this case study for other organisations that have installed enterprise resource planning systems and wish to extract more bottom line value from their investment.

2. Corporate structure

Mobil Corporation (until its merger with Exxon) was a large multinational oil company, headquartered in the USA, and operating in more than one hundred countries throughout the world. Organisationally it was divided into four or five lines of business divisions, each of which was the equivalent of a multinational corporation in its own right (see Figure 1). The lines of business divisions were in effect separate organisations under a corporate umbrella. Each division and country based business had a full range of staff support services, including information technology, legal, tax, accounting, insurance, treasury, purchasing, engineering, environment, health and safety (EH&S), etc. The top or corporate level of Mobil also had a large range of staff support services, many of which overlapped or duplicated the services in the divisions.

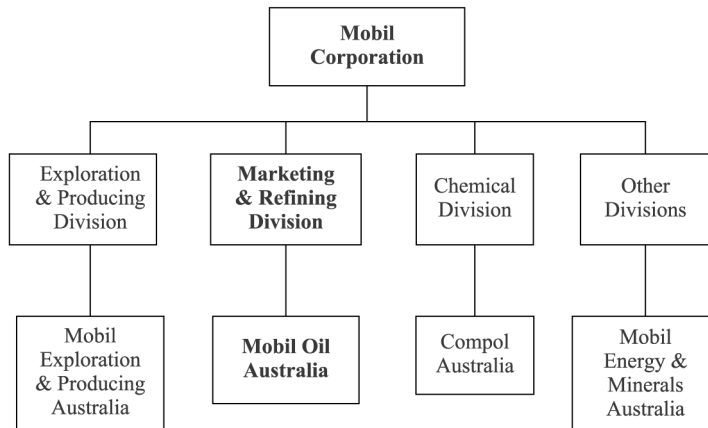


Figure 1.
Corporate structure

Mobil Oil Australia Limited was a significant asset of Mobil Corporation, employing 2,000 people, with its head office in Melbourne, two refineries, and various manufacturing facilities, plants and offices throughout the country. It was responsible for the Mobil marketing and refining interests in all states and territories of Australia, with a market share of about 20 per cent. Product was distributed to consumers by road, ship and pipeline to bulk terminals, coastal bulk plants, inland bulk plants and a network of 550 company-owned or leased service stations Australia-wide. Separate Mobil organisations were responsible for exploration and production, chemicals and other businesses in Australia. See Figure 1 for an outline of the corporate structure.

3. Initiation of the change

According to Porter and Miller's value chain model (Porter and Miller, 1985), the internal operations in a company can be analysed to increase its efficiency, effectiveness and competitiveness. In view of the replication of staff support services in the divisions and at the corporate level, the president of Mobil Corporation felt there was room for rationalisation and process improvement of staff support services across the company. The concept was to share staff support services between divisions and corporate, i.e. shared services, and significantly improve the processes underlying those services. Shared services organisations usually operate as a business within a business. Each line business unit is charged for using the services provided, with each of the functions within shared services operating on a full cost recovery basis.

A senior line executive, who for the purposes of the review reported to the president of the corporation, led the venture. Natural work teams, drawn from many areas of the company and supported by consultants, were set up in all staff disciplines to review their particular constituency. The leader of each team reported to the venture manager. These teams had a worldwide charter and were supplemented by international employees. All the teams were accommodated in contiguous workspace to facilitate communication between the teams, in particular to discuss and resolve areas of overlap. To understand best practice fully Mobil conducted a study of its worldwide organisation. Consultants helped cost out and compare company business processes, internally and externally, against best practice or benchmarks.

Functional leaders from the various Mobil businesses around the world were invited in groups to headquarters in the USA to be briefed on the venture and to make plans for the review of the staff support services in their countries. As a subset of these activities a regional Asia Pacific meeting was held in Singapore with accounting representatives of all the Mobil companies in the region. Team leaders from the USA, with the help of consultants, outlined the project to accounting personnel from the region including Australia, New Zealand, Japan, Hong Kong, Singapore, Malaysia, Taiwan, Thailand, etc. Data that had been collected in advance on the accounting activities in each country was compared with the data from other countries. In this way internal benchmarking took place to contrast the major processes of each accounting department in the region. Brainstorming sessions were also held among the meeting participants to bring forward ways of making improvements.

To survive into the next decade, organisations need to re-think their structures, products, processes and markets by continuously benchmarking their performance with the world's best, adapting new best practice, and innovating to become world class. This type of copying, adapting, and learning from other's best practice is not only becoming legal and ethical, but is virtually mandatory for future success (Jarrar, 2001). One of the areas identified for improvement was the accounts payable process. A representative from the region was nominated by Mobil Oil Australia to join the global team in the USA to work on external benchmarking and to help devise a plan to implement improved payables processes. After three weeks the global team presented its accounts payable recommendations to be implemented worldwide. Based on the recommendations and the key performance indicators supplied, each Mobil affiliate was expected to deliver nominated headcount savings in accounts payable. The level of savings was considered tough but achievable, although disagreement was voiced about the non-recognition of the impact on headcount in user departments of devolving some of accounts payable work back to purchasers. Upon his return the regional representative became the leader of a team of four people formed to implement changes in the payment of accounts processes used in Australia. This team worked closely with the purchasing team and their counterparts in Mobil Oil New Zealand.

4. Analysis

Although Mobil Oil Australia had previously implemented SAP as its core business system, the payment of accounts remained heavily paper-based. A total of 15,000 paper documents were processed each month and 3,800 cheques were dispatched to suppliers. The preparation of cheques was a separate, secure activity and higher-value cheques required two signatories. In the pre-SAP environment, when a particular department required goods or services a paper-based requisition was approved and sent to a buyer in the purchasing department. The buyer prepared a purchase order and sent it to the supplier. A copy of the purchase order was filed and a copy sent to accounts payable. When the goods that were the subject of the purchase order were received, another copy of the purchase order, acknowledging receipt of the goods, was sent to accounts payable. There the goods receipt was matched with the filed copy of the purchase order. Signatures, authority levels and account coding were checked and then the documents were re-filed together to await the arrival of an invoice from the supplier. When the invoice arrived from the supplier, it was matched with the purchase order and goods receipt for quantity and price, and a cheque prepared. There were

many types of purchase orders – Field Purchase Orders for items <\$5,000, Requisition Purchase Orders and Blanket Orders (or contracts). In addition the purchase order process could be bypassed by an “Application for Payment” (with or without a vendor invoice), which provided all the necessary details to pay the vendor.

The post SAP purchasing system consisted of five steps:

- (1) create and approve requisition;
- (2) create and approve purchase order or a call-off from an outline agreement (i.e. contract);
- (3) goods receipt the purchase order;
- (4) match vendor invoice with goods receipted purchase order; and
- (5) pay vendor.

Figure 2 illustrates the five steps in the post SAP purchasing system.

The processes described still contained a lot of filing, retrieval and matching of paper documents with the SAP transactions and rekeying vendor invoice data at the accounts payable end of the process (steps 4 and 5). All this activity generated paper, paper shuffling and cost. Despite the formal purchasing mechanisms the vast majority of purchases (80 per cent in volume but only 20 per cent of the value) were processed by a field buyer (the limit was increased to <\$10,000 post SAP) in the pre- and post-SAP environment without the involvement of a professional purchasing buyer. Furthermore, most of these purchases were documented “after the event” by what was known as a confirmation order. In other words the purchaser had already received the good or services and was simply using the field buyer as a necessary step to pay the vendor. The vendor would not even receive the purchase order. As a result there were over 7,000 active vendors on the vendor master. Paying accounts was a very labour-intensive, tedious and paper-based activity with 19 staff centralised in Melbourne paying accounts for the various refineries, plants and offices around Australia.

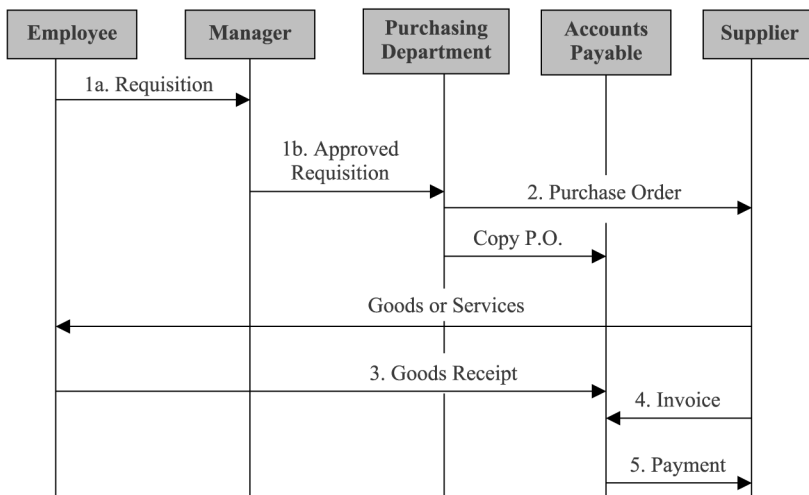


Figure 2.
Accounts payable process
model

5. Process re-engineering

The local accounts payable team evaluated the list of best practice recommendations and concentrated on those that were suitable for implementation locally. The primary focus was on addressing the inefficiencies in the five-step SAP purchasing process and the sources of the purchasing transactions that impacted on accounts payable. The emphasis was on electronic processing and removal of processing costs. There was little difference in the cost of processing a \$10 purchase from the cost of processing a \$1million purchase. The following paragraphs summarise the recommendations that were selected for implementation.

5.1 Credit cards

In recognition of the high cost of using the five-step process on low value, *ad hoc* transactions, a corporate procurement credit card was selected as a prime tool. Quotations were received from various providers and the credit card provider was selected. Departments nominated cardholders and cost centre managers to oversee the use of the cards for approved transactions. A limit of \$1,500 per transaction with a monthly limit of \$10,000 was imposed on each cardholder. Each card was linked to a nominated account code and cost centre where all purchases could be recorded.

Accounts payable was not involved in these transactions other than the necessary administration of the cards and liaison with the provider bank. Accounts payable issued the cards, guidelines for use, cancellations, amendments, etc., and initiated the monthly automatic payment to the bank via electronic upload into SAP. The payment generated the postings to the account and cost centre nominated on each card. No paper, purchase orders or vendor management was required of accounts payable. The bank produced monthly statements for cardholders to review their transactions and sent a consolidated report to the purchasing department for analysis of Australia-wide purchases by merchant. Figure 3 illustrates the process re-engineering brought about by the use of credit cards to make low-value purchases.

Initially over 300 credit cards were issued, but the number of credit cards declined over time as administrative functions were consolidated. Accounts payable and field

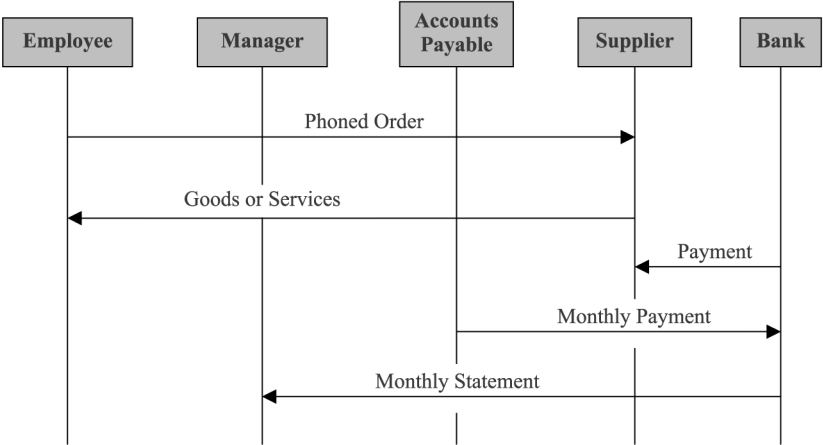


Figure 3.
Credit card process model

buyer resources were immediately reduced with some workload transferred to the cardholder, but this was more than offset by elimination of the five-step SAP purchasing process. A huge number of vendors were deactivated from the vendor master and the maintenance work associated with them avoided.

5.2 Automatic approval of requisitions

SAP had previously been enhanced for online approval of requisitions. The system was set up with individual dollar limits of authority and automatic messaging to the manager that requisitions were awaiting approval. However, if the requisition line item was <\$400 it was automatically approved. This limit was increased to <\$1,500, consistent with the worldwide policy of US\$1,000 as the automatic approval limit. The objective here was to empower staff and to reduce “red tape” on low-value transactions, with the compensating control being the cost centre manager. Online approval and automatic approval of “low-value” requisitions meant accounts payable was no longer involved in checking signatures and authorities.

5.3 Automatic goods receipt

The goods receipt step was automatically generated by SAP if the line item on the purchase order was <\$1,500, consistent with the \$1,500 limit automatic approval limit. The risk that the goods or services were, in fact, not received was recognised, but as discussed earlier the majority of small value purchases were “after the event”.

5.4 Evaluated receipt settlement

This methodology eliminated the traditional accounts payable function of matching on quantity and price the vendor invoice with the goods receipted purchase order. SAP was modified to automatically generate a vendor invoice from the purchase order and goods receipt. Payment was based on the price the buyer created on the purchase order (originating from the requisition or negotiated by the buyer) and the quantity from the goods receipt, whether automatic goods receipt or not. If the vendor sent an invoice it was ignored. Buyers in the purchasing department selected the one-off type vendors suitable for evaluated receipt settlement processing, i.e. vendors not bound by outline agreements. This type of processing eliminated the need for most of the accounts payable staff, but the control weaknesses were recognised. Ultimately the cost centre managers were responsible for controls. Figure 4 illustrates the process reengineering brought about by the evaluated receipt settlement methodology.

5.5 Remittance advices

SAP was enhanced to generate a remittance advice to the vendor at the time payment was generated. This advice provided the vendor with the invoices being paid by way of reference to the purchase order numbers. The system was further enhanced to automatically fax the remittance advice to a vendor’s nominated telephone number. Accounts payable were consequently relieved of managing the printing and distribution of remittance advices.

5.6 Direct credit

Mobil Oil Australia made it known to all of its suppliers that the preferred payment method was direct credit into vendors’ nominated bank accounts, with obvious savings

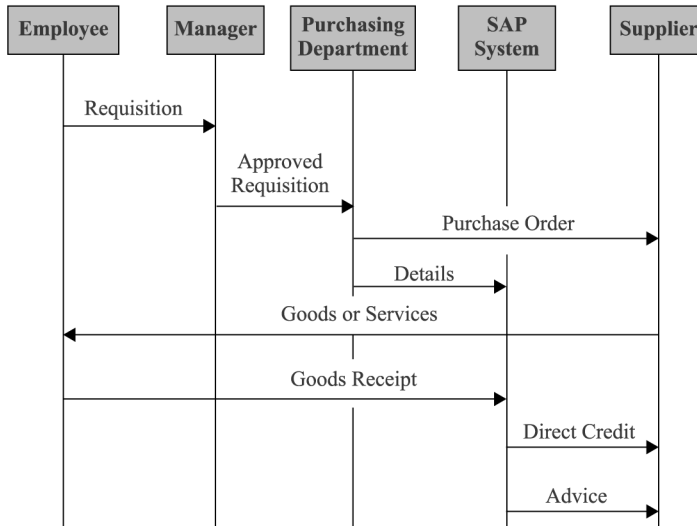


Figure 4.
Evaluated receipt
settlement process model

to both parties. No new vendor could be added to the system without direct credit information. Cheque processing by accounts payable was previously costly in terms of the required control procedures.

5.7 Application for payment

This purchasing method enabled the purchaser to initiate payment to a vendor with or without an invoice. The form contained all the necessary details to create a payment (payee, address, account coding, authorisation, etc.). Accounts payable entered all the details into SAP after performing the necessary control checks. Strict rules were put in place to reduce the number of these transactions to encourage purchasers to use a procurement card or the SAP requisition/purchase order system.

5.8 Electronic data interchange

Suppliers of large volumes of the same material at set prices under outline agreements imposed a considerable processing workload on both purchasers and accounts payable under the SAP process. The sheer volume of like transactions caused many discrepancies and reconciliation problems for both the company and the supplier. Electronic data interchange meant high set-up costs and required technical resources to implement, but had considerable data entry and paper-handling saving benefits. Only a handful of suppliers were suitable, and then only if a supplier could be convinced to make the effort to convert to electronic data interchange. Dedicated personal computers were required at either end to generate and transmit the data with various protocols for successful “handshaking” of computers and interface software to translate from and to SAP formats. Removal of purchase order creation and the invoice matching invoice process was significant for accounts payable. However, it did not remove the need for the requisition and goods receipt.

5.9 Vendors

The objective of the purchasing team was to reduce the number of active vendors from over 7,000 to less than 500. The accounts payable team had a common interest in this objective because of the work associated with maintaining the vendor master. Credit cards and the creation of more outline agreements were the major tools used to achieve this objective. Purchasing department had a more compelling incentive as it used outline agreements to generate purchase cost savings from suppliers across Australia and New Zealand.

5.10 Other processes

Petty cash floats were eliminated or reduced and data entry was decentralised to the user departments responsible.

Periodical summary invoices from certain suitable suppliers replaced individual invoices and hence eliminated multiple purchasing transactions.

Accounts payable no longer checked signatures, maintained delegation of authority records or checked account codes. SAP exception reports replaced these controls.

The treasury department introduced banking facilities via direct online terminals with its bankers and eliminated the need for accounts payable involvement in these transactions.

Reconciliation of vendor statements by accounts payable had already been abolished. The emphasis was placed upon individual transactions with the empowerment of the requisitioner and approver to resolve queries directly with the vendor (including non-payment) rather than accounts payable.

The second signature on cheques above a certain amount was abolished. All cheques were pre-signed with one signature.

Although the staff were familiar with the SAP system, training was required to ensure that they understood the new processes involved in requesting goods, ensuring the right price was entered and that correct references for vendors and suppliers were used. A help desk, established at the beginning of the changeover, helped people to adjust to the new system. If employees had a question they simply called the hotline and the issue was resolved on the spot. Follow-up training was then arranged if required. The help desk proved to be a prime tool in smoothing the path to acceptance. The help desk team ensured the frontline staff continually felt supported and could pick up any process shortfalls that occurred during implementation. Support was further provided to frontline staff by way of quick reference cards. These cards, which were developed by the implementation team, outlined all the key activities and proved to be very beneficial in the training process.

6. Improvement to Mobil Oil Australia

The tangible benefits are immediately apparent. In total invoices were largely eliminated. Only 500 cheques were written in July 1999 versus 3,800 in August 1995, an 87 per cent reduction in the use of cheques. Direct credit became the predominant form of payment. The staff employed paying accounts was reduced from 19 people in 1995 to less than five people in 1999, an improvement of almost 75 per cent. The consequent recurring savings in salaries and overhead were substantial. Taking a wider view the project demonstrated that real savings could be quickly achieved via a focus on process improvement. For example, the success of the project led to the consideration

of similar projects for partially owned retail companies where the accounts payable processes were heavily paper-based.

The project eliminated burdensome purchasing practices, empowered employees and freed up the organisation to focus on their core activities. The tedious and time-consuming “paper shuffling” jobs in the central accounts payable department were largely eliminated while service quality was improved and processes, such as the timely payments to suppliers, made more reliable. Many cheques per month were reduced to one cheque as the bank provided one schedule for the total amount purchased on the credit cards for payment. The invoicing process for low-value purchases was effectively outsourced to the credit card supplier and thousands of invoices no longer had to be received, approved for payment, paid and filed. A purchase order was not required when using a credit card, making the purchasing process very direct, simple and quick, freeing up employees all around Australia from the paperwork hassle. The purchasing department was no longer involved in the day-to-day purchase of routine items. Evaluated receipt settlement processing harnessed the power of the previously installed enterprise resource planning system and demonstrated to the organisation that the system could be enhanced with very little additional investment to obtain significant benefits. Payment terms could be more reliably and regularly met. Payments to suppliers could be completed routinely on time improving relationships with vendors.

Finally the project led to organisational improvement. It pushed accountability for purchasing and paying for purchases back to the employees and departments initiating the purchases. Account queries were no longer directed to the accounts payable clerks for follow up with other departments but to the person who raised the original request. This action encouraged employees to enter the correct information at the outset and provided a more responsive service to the supplier without hand-offs to other departments.

7. Discussion

“Even the best-designed benchmark program can founder on many shoals. Doing the benchmarking attacks only 10% of the problem. The other 90% involves changing your culture, your processes, your whole philosophy, so that you encourage your employees to learn and share ideas” (Deutsch, 1999). The driving force behind this business process re-engineering project was a venture initiated at the very top of the Mobil Corporation and then promulgated throughout the Mobil organisation around the world. Without the high-level sponsorship inherent in the venture, many of the changes implemented would not have been possible. Still, change had to be pushed through the organisation by a committed project team. The project team had to sell benefits, answer queries, address concerns and convince the various units to embrace the changes that involved some risk and changed the traditional roles in the organisation.

Credit cards are easy to use and reliable. They document each purchase transaction effectively, reduce paper warfare and provide the supplier with very quick payments. Most importantly they reduce purchasing delays and empower staff to get on with job. In the process, small purchases are outsourced to the credit card provider, who has the purpose-built computerised system to support the activity efficiently. The credit card provider processes the paper and pays the suppliers. Despite the obvious benefits of

credit cards for purchasing activities, many people in the company were reluctant to use them in some cases because of the extra responsibility involved. There was a concern that they could be used for personal rather than company expenditure. In other cases, particularly in the refineries, the cost breakdown provided by the cards was not thought to be sufficient to meet the refineries' cost control needs. To this day the refineries are minor users of credit cards for purchasing. The lack of an audit trail for taxation purposes was also a shortcoming as the system lacked a description of what goods and services were purchased on credit cards.

Using the evaluated receipt settlement processing means of purchasing and paying accounts, purchase requisitions were initiated and approved electronically. The goods when received were receipted electronically. Payments for the goods were made automatically, when they were due for payment, in accordance with the payment terms agreed with the supplier and previously entered into the system. Because the SAP system was online the status of purchases and payments could be checked at any time by anyone in the organisation with the authority to do so. No longer did queries have to be referred to the purchasing or accounts payable units. This method of paying accounts proved reliable, efficient, easily interrogated and responsive with very little associated paper. Despite very positive experiences with three major suppliers, attempts to convert other suppliers to electronic data interchange processing were not successful.

Many of the initiatives impacted upon the purchasing process. The purchasing team was not able to reduce the number of active vendors by creating more outline agreements or enforcing their use. From a purchaser's viewpoint, outline agreements required specialised knowledge and training, were inflexible, and constantly required updating. The accuracy and ease of finding materials in the material master was one of the keys to the success of using outline agreements. Purchasers did not readily accept such a sophisticated method of acquiring materials. The purchasing department had little success in changing the culture of purchasing "after the event" and under-utilisation of outline agreements.

One of the most important compensatory controls to counter the increased control risk of the initiatives implemented was the error and exception report monitored by the purchasing department. Not long after implementation the number of potential errors and control breaches became so large that the reports were simply discontinued or not acted upon. There were about 30 different control breaches or potential errors, e.g. duplicate line items, non-use of an outline agreement, splitting requisitions or purchase orders, etc. This breakdown was due to the lack of purchasing department ownership of the purchasing process. Purchasing department buyers saw their priority as being the negotiation with suppliers (the "buy" part of the transaction) and not the recording of the transaction itself, particularly if it came from a field buyer. Subsequent repeat audit findings did not adequately resolve these control issues. The purchasing department also failed to provide adequate training resources to field buyers to assist them in capturing the power of the SAP purchasing system.

The project team wanted to implement further initiatives but was blocked by lack of management will or by cost and resources. One such initiative was an online employee expense reimbursement system to eliminate manual processing and offer benefits to employees in completing their travel claims. Another initiative was to develop and

implement a direct electronic billing interface system that would automatically generate payments to utility and telephony suppliers.

“Everyone resisted the changes, even those that were unhappy with the old ways” (Deutsch, 1999). The project team encountered pockets of stiff user resistance to change, which had its roots at the time the SAP purchasing system was implemented. Much of the resistance stemmed from lack of training, bearing in mind the system was very sophisticated and had the functionality to handle complex purchasing transactions. Employees saw the devolution of responsibilities away from accounts payable to themselves and resented involvement in traditional accounts payable functions, e.g. answering vendor queries. Evaluated receipt settlement, automatic goods receipts, credit cards and automatic requisition approval were winners as these changes restored the previous freedom from purchasing disciplines. Most of the initiatives in fact recognised that shortcuts would be made to the purchasing process but it was really cost and best practice that were the drivers of change. Credit card control issues revolved around prevention of the card being used on certain transactions, e.g. travel and entertainment, that were personally accountable.

During the implementation of the initiatives there was normal anxiety from the accounts payable staff as to who would keep their job. However, they generally realised that downsizing was inevitable along with other parts of the organisation impacted by the corporate-wide staff redesign project intervention, and the redundancy package was generous versus other industries. On the whole most of the people who could not be placed elsewhere in the organisation and were made redundant were not unduly unhappy. In accounts payable there was normally a high turnover due to the mundane and repetitive nature of the work, so the chance of an alternative job, holiday or change of direction, combined with a redundancy payment, was not unattractive.

8. Conclusion

This project was part of a much larger venture designed to implement a global staff support model throughout the corporation and re-engineer processes to improve efficiency and lower staff support costs. The project is an example of what can be achieved through business process re-engineering even after the implementation of an enterprise resource planning system with its built-in process improvement. As demonstrated in the case study, an installed enterprise resource planning system does not mean all process improvements have been achieved. What it can mean is that there is a powerful resource at hand which may be employed profitably to facilitate change. The savings can come with very little additional investment and business process re-engineering can still eliminate paper, reduce labour input and provide a faster, more reliable and more user-friendly system.

In the case study the improvements were initiated via a focus on best practice benchmarking and using that best practice to provide a target for the change team. The already installed SAP system was important in facilitating the process changes implemented. Many of the changes implemented would have been impossible with the prior investment in an enterprise resource planning system. The project had the necessary management support from the very top of the corporation, which one would expect to be more than sufficient to make implementing the recommendations fairly

straightforward, but individual organisation units and employees still had to be convinced of the need for re-engineering of current practices. Business process re-engineering

Hammer and Champy (2001) state that “re-engineering is the fundamental rethinking and radical design of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed”.

The case study demonstrates clearly that business process reengineering can achieve “dramatic improvements in cost, quality, service and speed” even after an enterprise resource planning solution has been implemented. It offers the opportunity for companies to leverage an existing investment in installed systems to improve the return on that investment. As James and Wolf (2000) advise, “companies should not bemoan the cost of their investment: the hard-won skills and capabilities they acquired during the implementation process will permit them to improve their enterprise resource planning applications incrementally, and these improvements collectively add considerable value”.

197

Note

1. “SAP” is a registered trademark of SAP Aktiengesellschaft, Walldorf, Germany.

References

- Deutsch, C. (1999), “Working wide of the mark”, *BRW*, July 30, p. 48.
- James, D. and Wolf, M. (2000), “Planning: new life from an old system”, *BRW*, Vol. 22 No. 17, pp. 88-91.
- Jarrar, Y. (2001), “Future trends in benchmarking for competitive advantage: a global survey”, *TQM Journal*, Vol. 12 Nos. 7/8.
- Hammer, M. and Champy, J. (2001), *Reengineering the Corporation: A Manifesto for Business Revolution*, revised ed., Nicholas Brealey Publishing, London.
- Porter, M.E. and Miller, V.E. (1985), “How information gives you competitive advantage”, *Harvard Business Review*, July/August.
- Riley, J. (2003), “ERP payoffs prove elusive”, *Australian IT*, February 4.