

BUSINESS PROCESS CHANGE

RELEVANT TO ACCA QUALIFICATION PAPER P3

This article illustrates how business processes are integral to delivering business strategy. It also examines the way organisations can analyse the performance of their existing processes, and suggests some ways in which they can look to improve that performance.

Paper P3, *Business Analysis*, explores the way that strategic action can be implemented through beneficial business process and structural change. It also encourages students to appreciate the fact that organisations can achieve significant improvements in their competitiveness by successfully redesigning their business processes. This appreciation should not come as too much of a surprise to students, however, because it simply reflects the fact that the existing processes in many organisations are less efficient than they could – or should – be.

BUSINESS PROCESSES AND STRATEGY

Business processes are fundamental to an organisation's success in producing its goods and services. For an organisation to maximise its competitiveness it needs to have processes which are both well designed and which work effectively.

The general background to any review of business processes lies in Porter's value chain model – see **Figure 1**.

The value chain model shows the way in which the various activities of an organisation work together to add value in the eyes of the customer. The ways these activities function and interrelate constitute an organisation's processes. The process perspective on management involves understanding businesses in terms of their individual processes.

Slack *et al* defines a process as 'an arrangement of resources that transforms inputs into outputs that satisfy (internal or external) customer needs'.

This definition, with its reference to satisfying customer needs, helps to highlight the common ground between processes and business strategy. Both ultimately seek to deliver value for the customer. Although business strategy is ostensibly

concerned with the allocation of resources in order to develop financial and strategic performance, the underlying logic behind this is that financial and strategic performance will be achieved by delivering value for the customer. And this value delivery will be achieved through process delivery.

The strategic value of a process perspective

Alongside the overall goal of delivering value for the customer, the process perspective contributes to the strategic impact of a business in four ways:

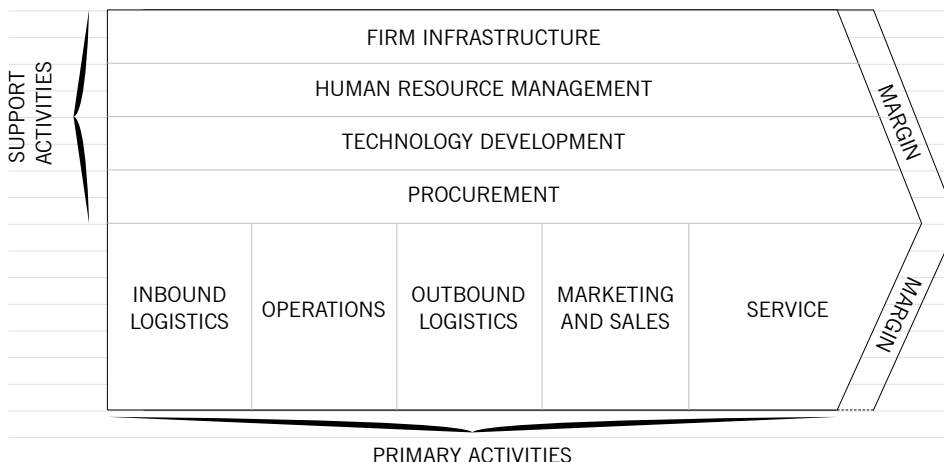
- Cost control* – keeping costs under control by ensuring process efficiency.
- Revenue* – enhancing a business's ability to generate revenue through the quality of the products and services it produces.
- Investment* – maximising the return on investments by ensuring that they operate as they are intended to.
- Capabilities* – embedding the capabilities that will form the basis of the business's ongoing future competitiveness.

Process-oriented organisations also break down the barriers of structural departments and try to avoid functional 'silos' (that is, each department concentrating only on its own function rather than understanding how it contributes to overall value creation in an organisation).

However, the strategic value of a process perspective comes from not only analysing current processes, but also identifying areas where they can be improved. Business process improvement – aligning processes in order to realise organisational goals – lies at the heart of the process perspective.

As we have already identified, business processes should be designed to add value and so should not include unnecessary activities.

FIGURE 1: PORTER'S VALUE CHAIN MODEL



The outcome of a well-designed business process is increased effectiveness (value for the customer) and increased efficiency (lower costs for the business).

Process improvement is often seen as being synonymous with automation and job losses. But this is not necessarily the case. Even if they are outcomes of process improvement, they should not ultimately be the reasons for it.

Levels of process

There are three levels at which a process perspective can be used to analyse a business:

- Strategic level* – looking at the business, or its supply chain, as a whole.
- Operational functions of the business* – for example, looking at purchasing, marketing, or manufacturing operations.
- Sub-operational processes* – looking at individual processes within the operation's functions; for example, placing television advertising within the marketing operation.

Most business processes can be deconstructed into several sub-processes which each have their own attributes and components, but ultimately all contribute to achieving the goal of the overall strategic process. Business process analysis typically includes the mapping of individual processes down to activity level.

However, it is important to remember that, at whatever level it is being considered, a business process begins with a customer's need and ends with that need being fulfilled. Also, bear in mind that service industries or service processes (for example, accounts payable processing) offer as much opportunity for improvement as manufacturing processes have done over the last few decades. Such processes will continue to be equally important within e-commerce.

Levels of process change

In the same way that we have identified three levels at which a process perspective can be applied, there are also three levels at which process change can be considered:

- Process re-engineering* – this is used at the strategic level, when major threats or opportunities in the business's external environment prompt a fundamental re-think of the large-scale core processes critical to the operation of the value chain.
- Process redesign* – this is an intermediate scale of change operation, appropriate for medium-sized processes that require extensive improvement or change. Redesign efforts often result in changed job descriptions and the introduction of some automation.
- Process improvement* – this is a tactical level, incremental technique that is appropriate for developing smaller, stable, existing processes. It can often be undertaken using a Six Sigma approach.

For process change to be efficient and effective, it is important that the level of process change is appropriate to the process under review. However, the level of process change required is also likely to reflect the process capability maturity of the business. If the business has mature process capabilities, *process improvement* efforts will be more or less continuous, undertaken by managers and their process teams. If a business has a low degree of process maturity then a *process redesign* effort might be required to establish the initial process capabilities.

Process redesign patterns

Having identified the context for looking at processes, and the levels of change which may be required to manage them, we will now look at how process change can be approached. One of

the most prominent authors on business process change, Paul Harmon, describes four basic process redesign patterns: re-engineering, simplification, value-added analysis, and gaps and disconnects.

Re-engineering

As one would expect, given the levels of change we looked at earlier, the re-engineering pattern relates to a fundamental rethinking of existing processes to achieve major efficiency improvements.

However, the other three can all be applied on a more modest scale, and could therefore be more relevant to the type of practical situation presented in a Paper P3 exam question.

Simplification

The simplification pattern assumes that most established processes (or sub-processes) are likely

to have developed elements of duplication or redundancy. Process efficiency can be improved by removing these.

Value-added analysis

This pattern looks at the process (or sub-process) from a customer's perspective. A process or activity is said to add value if it meets three criteria:

- 1 the customer is willing to pay for the output
- 2 it physically changes the output in some way
- 3 it is performed correctly at the first attempt.

Against value-adding activities, Harmon contrasts 'non-value-adding activities', which he classifies as:

- preparation and set-up
- control and inspection
- simply moving a product from one place to another without physically changing it
- activities that result from delays or failures of any kind.

Harmon suggests that non-value-adding activities should be eliminated as far as possible. Obviously, some of them (for example set-up activities) may be essential for the value-added activity to take place. These essential support activities are known as value-enabling activities, and cannot be eliminated altogether. However, they should be done simply and cost-effectively to allow resources to be focused as much as possible on the value-added activities.

Gaps and disconnects

Many of the problems affecting process performance (and businesses more generally) result from a failure in communication between functions or business departments. The focus of this redesign pattern is to ensure that the appropriate checks and controls are in place so that efforts are coordinated between functions and departments.

For example, if the production department builds a product and ships it to the customer, then the finance department needs to be aware of this so that they can raise an invoice to the customer.

These process redesign patterns could well form the basis of a question in a Paper P3 exam. The examiner could present the process map of a current business process, and ask students to identify any problems and how they could be overcome. The patterns should help students answer such questions.

LESSONS FROM JAPANESE MANUFACTURING

Japanese manufacturing techniques are often cited as models of efficiency as they increase quality and reduce costs, but some of the essential principles of Japanese manufacturing are actually only applications of these process redesign patterns.

The Japanese have embraced the underlying philosophy of minimising non-value-adding activities in the way described previously, but we can highlight three specific principles which also reflect Japanese redesign patterns:

- Reducing wasteful activity ('muda')** – the reduction of wasteful activity is one of the most important principles in Japanese manufacturing. Waiting for someone to act; waiting while documents, information, or parts travel between locations; having to redo something to correct a mistake; having to redo something because requirements have changed: these are all examples of wasteful activity, and they will delay completion of the process. Minimising these wasteful activities will lead to processes becoming more efficient and effective.
- Reducing physical strain ('muri')** – this principle usually addresses the reduction of unnecessary motion. It seeks to identify where people have to work harder than necessary due to poor design in the production process which leads to repetitive actions. Process mapping should help identify unnecessary steps that can be eliminated, or unnecessarily convoluted routings which can be simplified to reduce the level of 'muri' in a process.
- Reducing inconsistencies ('mura')** – this third principle highlights the important link between processes and quality alluded to in the value-added redesign pattern, but in the Japanese model it is shown more explicitly. Inconsistencies in either the time taken to supply, or in the quality of, a product or service, will quickly lead to customer dissatisfaction. Japanese automobile manufacturing manages the risk of inconsistencies through a combination of rigidity and flexibility, which may sound odd but which actually serves as a valuable lesson for process control.

For example, in Japanese automobile manufacturing factories, every shift has an output target, and the entire shift works overtime until the production quotas are completed. However, if a mistake is made, the entire production line comes to a halt until the root cause of the problem is fixed, eliminating the need for reworking and corrections further down the production line. The system is therefore designed to provide inherent *quality assurance* over the quality of its outputs.

PROCESS DESIGN AND QUALITY

Given that the aim of a process is ultimately to satisfy customer needs, it should not be a surprise to find that the link between processes and quality is highlighted.

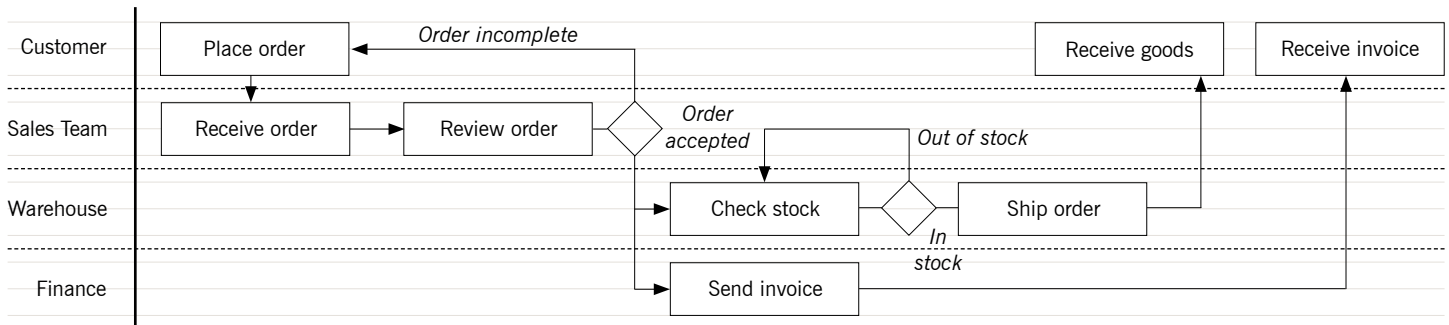
Indeed, the definition of business process re-engineering (BPR) given by the leading authors on re-engineering, Hammer and Champy, make this point explicit: 'Business process re-engineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance, such as cost, quality, service and speed.'

If the needs and expectations of every customer are consistently met or exceeded, then a process has achieved total quality. The two models which are specifically referred to in the Paper P3 syllabus – Capability Maturity Model Integration (CMMI) and Six Sigma – should be seen as part of the methodology for improving business processes.

The fundamental logic behind CMMI is that immature organisations don't perform consistently; mature organisations, by contrast, produce quality products and services effectively and consistently.

Harmon quotes Watt Humphrey, one of the leading gurus behind the CMMI effort, who makes an interesting comparison between process maturity and sports teams:

FIGURE 2: DISKUS CUSTOMER ORDER FULFILMENT PROCESS DIAGRAM



'An immature... process resembles a Little League baseball team. When the ball is hit, some players run towards the ball, while others stand and watch, perhaps not even thinking about the game. In contrast, a mature organisation is like a professional baseball team. When the ball is hit, every player reacts in a disciplined manner. Depending on the situation, the pitcher may cover home plate, infielders may set up for a double play, and outfielders prepare to back up their teammates.'

However, the key point of CMMI as a reference model is to help businesses *understand* their current process capabilities, in order to develop a plan to get where they want to be. But it doesn't prescribe how they get there.

By contrast, Six Sigma is a methodology that can be used by project teams to actually improve a process, using the five-stage DMAIC pattern:

- **Define** customer requirements for the process
- **Measure** existing performance and compare to customer requirements
- **Analyse** existing process and assess causes for performance falling short of requirements
- **Improve** process design and implement it
- **Control** the results, and maintain new performance levels.

Business process diagrams

As the sequence of the DMAIC pattern highlights, before being able to improve a business process, an organisation needs to be able to analyse it. One of the techniques that can be used in the analysis phase is the business process or (workflow) diagram.

The diagram is divided into horizontal rows, which are called 'swimlanes', with each organisational department or function having its own swimlane. The diagram can then be used to show how all the activities and functions within a process fit together, with the processing beginning on the left of the diagram and proceeding to the right.

Once all the activities and functions have been shown on the diagram, it can be analysed to identify any duplications, non-value-adding activities, or gaps and disconnects.

EXAMPLE 1

Diskus is a company which sells CDs and DVDs by mail order. Customer orders are received by the sales team, which checks that customer details are completed properly on the order form (for example, delivery address and method of payment). If they are not, a member of the sales team contacts the customer to get the correct details. Once the correct details are confirmed, the sales team passes a copy of the order through to the warehouse team to pick and pack, and a copy to the finance team to raise an invoice. Finance raises an invoice and sends it to the customer within 48 hours of the order being received.

When a member of the warehouse team receives the order, they check the real-time inventory system to make sure the discs ordered are in stock. If they are, they are collected from the shelves, packed and sent to the customer within 48 hours of the order being received, so that the customer receives the goods at the same time as the invoice.

If the goods are not in stock, the order is held in a pending file in the warehouse until the stock is replenished, whereupon the order is fulfilled.

This process can be illustrated on a process diagram (Figure 2).

The process diagram highlights two major problems in the order fulfilment process:

- 1 There is no communication between finance and the warehouse to confirm discs are in stock so that the order can be shipped. Therefore finance could be raising invoices when the order has not been sent. This is an example of a gap or disconnect.
- 2 The discs and the invoices are sent independently of each other, meaning that Diskus will be duplicating its postage costs. Sending the invoice is not a value-added activity. The customer will not be willing to pay the invoice without the discs.

Once the diagram has been drawn in this way, the process can be redesigned so that invoices are only raised for discs that are sent to the customer, and that the invoice and the discs are both sent together.

In response, to solve the first problem, finance could set up pending invoices when they are notified of an order by the sales team, but the invoices would only be generated as 'live' when the warehouse confirms that the discs are in stock and the order can be fulfilled. And to solve the second problem, a member of the warehouse team could be assigned to collate all outgoing orders. Finance could then send the invoice to that person, who could match the invoice to the order, and then send them both out to the customer together.

Admittedly, this is a very simple example, and real-life processes are often far more complex, but it still illustrates the way a process diagram helps managers analyse business processes and thereby remove duplication, non-value-added activities, and gaps and disconnects. This not only makes the process more efficient internally, but also, more importantly, means the customer is prepared to pay for the output. And this is critical because, as we noted in the definition of processes at the start of this article, the underlying point of a process is to satisfy customer needs.

CONCLUSION

Organisations need effective and efficient business processes in order to successfully implement their business strategies. Students successfully completing Paper P3 will have the necessary skills and abilities to make an effective contribution to controlling (or improving) their own organisation's business processes. Students should, however, remember that while the 'mechanics' of any improvement will often be inward-looking (analysing the process itself), the motive for the improvements must come from satisfying customer needs. That is what delivers value to the organisation. ■

REFERENCES

- Harmon P, *Business Process Change*, Morgan Kaufmann, San Francisco, 2003.
- Slack N, Chambers S, Johnston R, Betts A, *Operations and Process Management*, FT: Prentice Hall, Harlow, 2006.

Adrian Thomas is a technical author at BPP Learning Media