Solutions manual

to accompany

Accounting information systems

5th edition

by

Parkes, Olesen and Blount

Prepared by
Alison Parkes

WILEY

Chapter 2: Business processes

Discussion questions

2.1 Porter suggests that there are two main strategies businesses can adopt. Why is it not possible to adopt both at the same time? (LO1)

Porter's argument that it is not possible to adopt more than one strategic position could be interpreted in a number of ways. Firstly, the organisation that tries to be all things to all people may end up confusing customers as to what they actually stand for or what they actually do best.

In the context of the material in this chapter, the argument can also be related to business process design. The link between business process and strategy is such that each strategy requires a differently configured set of activities in the business process. For example, the food preparation process for a fast food restaurant is going to be very different to that of a gourmet restaurant. An organisation that tries to adopt multiple strategies using the same business processes (i.e. choice of activities that they perform) runs the risk of having activities that are incompatible with their strategic position. Imagine a gourmet restaurant trying to adopt the processes followed by a fast food restaurant – they are clearly not compatible. Accordingly, Porter's argument is such that strategy drives the choice of activities and process design and different strategies require different activities. Attempting to be everything to everyone is a dangerous position since the process design will not allow this.

2.2 What is meant by the term 'operational effectiveness'? (LO1)

Operational effectiveness is, mentioned in the chapter, the ability to do things better than your competitors. In the context of the discussion about choices of activities within a process, it would seem he is talking about performing the chain of activities better than competitors. More generally, effectiveness refers to how well something is able to meet its purpose. For example, an automated mail system may be designed to place a stamp on the top right corner of an envelope, this being its purpose. If it malfunctions and places stamps in the lower left corner of the envelope it is not achieving its purpose – this makes it ineffective. In this sense, operational effectiveness could be seen as working towards the activities in the business achieving their intended purpose and doing this better than competitors.

2.3 What are the main components of an organisational strategy?
(LO1)

Organisational strategy consists of (see chapter):

- Operational effectiveness – being able to do things better than your competitors and having activities in place that achieve the goals they are intended to achieve – i.e. they are effective.
- Uniqueness – A way of distinguishing an organisation from its competitors is to choose a unique set of activities that place the organisation apart from competitors.
- Trade-offs – A business cannot be everything to everyone – trade-offs will occur in the choice of products, delivery mode (i.e. physical or electronic), target market (youth, adult, senior).
- Fit – For the activities that are chosen for a business process, they need to be working towards the same end goal and complementing each other in achieving that goal.
- Sustainability – An organisation's strategy and competitive advantage are seen as more sustainable if there are a larger number of unique activities that combine, since the larger number of activities makes it more difficult for competitors to duplicate in their entirety.

2.4 Describe the relationship between the mission statement, strategy and business processes.
(LO1)

The relationship between the mission statement, business strategy and business processes is a cascading one. The mission statement sets out the overall purpose or objective that the organisation aims to achieve. From these overall objectives decisions needs to made about how the mission is to be enacted. This general decision about the enactment of mission comes through the selection of a strategy. The choice of strategy will then inform the decisions about the type of activities that get performed in the organisation – this being the decision about the design and operation of the business process.

2.5 Explain what it means for a business if it is considered an aggregator. What is unique about such a business's operations?
(LO1)

An aggregator is a business that operates by sourcing data from a range of sources and compiling it in a way that adds value for the end customer. The unique aspect about such businesses is that they are able to operate without offering a physical product or service – their business is information, driven by the data from business processes of other organisations.

2.6 Explain the difference between a strategy of cost leadership and differentiation. (LO1)

Cost leadership is a strategy that involves an organisation selecting activities with its process that minimise costs in the provision of the goods or services. Typically such strategies will see little choice or flexibility – for example standardised goods or services with little options for customisation, since customisation and flexibility add to the cost of production.

A *differentiation strategy* sees an organisation distinguish itself through greater attention to customer needs and individual customer requirements. It allows higher prices to be charged since such a strategy is stereotypically seen as being of higher quality.

A comparison of the two strategies brings out differences in:

- Flexibility in the resultant business processes.
- Focus of the strategy (cost management vs specialisation/customer attention).
- End price (cost leadership generally seen as cheaper).

2.7 Describe the differences between the functionally based and process-based organisation. How do these differences affect how the organisation operates? (LO2)

The functionally based organisation is designed around the concepts of a clear division of tasks, specialisation of labour and tight vertical control and coordination. The functional based organisation tends to focus more on what gets done – for example each functional division doing their specific task and specialising on that task. Such an organisational structure is hierarchically based. The process based organisation focuses more on how things are done. As a result it looks at how value is delivered to the end customer, emphasising the interaction between the different business functions, or a horizontal view of the organisation.

2.8 What are the organisational advantages and disadvantages of the functionally based and process-based organisational designs? (LO2)

The organisational benefits and disadvantages of the functional and process based organisational designs are summarised in the table below.

	BENEFITS	**DISADVANTAGES**
FUNCTIONAL	Clear division of labour Vertical control Specificity of tasks	Can be bureaucratic and cumbersome Communication problems / delays Information flows can be delayed Focuses on the wrong things Slow to react to change
PROCESS	Customer driven More efficient resource use possible Flexibility	Less vertical control Change to process emphasis can create resistance

2.9 What is the relationship between business processes and business strategy? (LO5)

Business strategy is implemented via the business processes. Choices made during the design and execution of business processes determines how closely they are aligned with the business strategy.

2.10 How can ERP systems enable a process-based organisation? (LO5)

ERP systems enable process based-organisations by supporting the sharing of corporate data and permitting the establishment and monitoring of computerised process workflows.

2.11 Describe briefly two of the methods of making changes to a business process, namely TQM and BPR. (LO7)

Business Process Reengineering is the process of making radical and drastic changes to an existing business process, with the intention of achieving large improvements in process performance. Continuous improvement or Total Quality Management is a less drastic approach to organisational improvement. TQM is more of a continual process of improvement, involving many small improvements or gradual changes to a process rather than one large set of changes, as is advocated by BPR enthusiasts.

2.12 What are some of the advantages and disadvantages of TQM? (LO7)

Some advantages and disadvantages of TQM are summarised in the table below.

ADVANTAGES	**DISADVANTAGES**
Gradual change is less risky than radical change	Can take a long time before visible change is achieved
Can improve the morale of employees through increased empowerment	Risk of losing sight of big issues while focusing on small improvements
If successful can bring about improvement / benefits for the organisation	

2.13 Explain what is meant by the term 'clean slate approach' in the discussion of BPR.
(LO7)

The clean slate approach is viewed by many as one of the key features behind any attempt at Business Process Reengineering. As the name suggests, it involves starting from a clean slate, or blank piece of paper, when re-engineering the organisation. This start from scratch point of view is critical to BPR's unassuming nature and its emphasis on challenging key assumptions behind existing business processes. However it is not without fault, many see the clean slate approach as too extreme for most organisational change requirements. The argument for the clean slate approach is that it avoids the mistake of simply automating existing processes, which may be poorly designed or fundamentally flawed to begin with, forcing the design new processes within the organisation.

2.14 List and describe, through the use of examples, the principles of BPR.
(LO7)

PRINCIPLE	**DESCRIPTION**
Combine jobs and let workers make decisions	The role of the employee is now across the process, rather than just one particular task. Potentially they can be involved from start to finish within the process.
Create a single reference point for customers	This helps customer satisfaction, giving the customer a single reference point regardless of the nature of their enquiry. Some Australian banks are tending towards this approach, with client managers allocated customers, in preference to the traditional functional approach, for example loans manager, accounts manager and so on.
Perform steps in a natural order and at their logical location	If activities can be performed simultaneously then allow that to happen, and avoid the passing of work around to different locations if possible.
Allow processes to vary	Not all cases are homogenous. As a result allow variation in the execution of processes to cater for different circumstances.
Reduce the impediment of controls and reconciliations	Controls, while an important part of an organisation, can slow down processes. BPR questions the value of controls – for example hierarchies and reconciliations – and calls for non-value adding controls to be removed.

2.15 Identify some of the management issues that may emerge from process redesign. Discuss their cause, likely consequences and how the organisation may manage these issues effectively.
(LO7, LO8)

Some of the management issues that may emerge from process redesign include:

- *Employee resistance* – process redesign necessarily involves change, with this change usually of epic proportions. For employees this can create uncertainty about their position and general attitudes of wariness towards any suggestion of change. The use of process redesign as a metaphor for downsizing does not help in this regard. For process redesign to work the employees must be onside.

- *Damage to organisational culture / atmosphere* – This can occur as a result of perceptions about the change and how it fits with the culture of the organisation. Particularly, the loss of jobs or forced redundancies / reskilling programs can affect employee attitudes, which carry forward to the overall morale of the organisation.

- *Risk of failure* – process redesign does not guarantee success. The risks of failure are present and need to be recognised by management and appropriately handled.

- *Adopting IT for the sake of adopting IT* – While IT is seen as an organisational enabler, it should be remembered that IT must still fit with the organisation's requirements and overall strategy. Adopting IT just for the sake of it will not help the organisation and can lead to an inbuilt conflict between IT and strategy which is damaging for the organisation.

- *Leadership* – Management leadership is critical for process redesign to have any chance of success. This includes leadership from the top of the organisation, with a key top management representative championing for the project and pushing for its progress. This also requires demonstration of the project's worth to the entire organisation, keeping the project on track through progress milestones, and ensuring that the organisation does not slip back in to the old way of doing things after the change.

Problems

2.1 Compare and contrast the functional perspective and the business process perspective of the organisation. In particular, comment on the different abilities of the structures to (1) minimise timing delays, (2) respond to change and (3) provide high-quality customer service.
(LO1, LO2)

The functional perspective of the organisation sees the organisation as a series of discrete functions that are not tightly integrated. They are effectively silos within the organisation. As a result the emphasis is on tasks – they become task driven, with the accounting function focusing on accounting, sales on the sales function and so on, with little regard to how the individual departments contribute to the overall business process and delivery of value to the end customer. Executing a process under a functional perspective necessarily involves many handovers between differing departments so process execution can be very slow. The ability of such a system to respond to change is limited by its cumbersome hierarchical structure, which inhibits rapid responses to the changing environment. Additionally, the limited integration that can become inherent in such an organisational design means that customer service can deteriorate. Additionally, rivalries or tension between functions can impede the overall aim of the business to meet it organisational goals, thus also limiting the ability to meet customers' needs.

In contrast, the process driven organisation is built around meeting the needs of the end customer. Anything that occurs within a process should add value to what the customer receives. Thus a horizontal view of the organisation is adopted, looking at how the different functional divisions interact in providing a service of value to the customer. Handovers between departments are minimal in a process driven organisation so process execution becomes much faster. As an example, in an insurance firm a claims clerk may handle the claim from when it first arrives at the organisation to its final settlement. This allows greater customer service, through one constant contact for the customer, as well as the elimination of non-value adding activities like sending and receiving documents throughout the organisation. Such organisations are typically able to respond quicker to changing customer needs and business environments.

2.2 James McFarlane is the manager of a medium-sized manufacturing company. His company is looking at improving the design of its purchasing process and one employee has suggested that it consider adopting an ERP system. The employee said something about the benefit of best practice in ERP systems. James is not sure which way to go. He believes that the organisation's current ordering and inventory management processes are basically sound, unique in the industry and that, 80 Part 2 Systems characteristics and considerations with a little modification, they could be even more of a differentiating factor for the business. He has reservations about ERP systems and was contemplating using a TQM approach to redesign the process instead of investing in new software.

Advise James on the risks and benefits an organisation faces in adopting the processes in an ERP system. Should his company go ahead with the ERP system?

Do you think, based on the few facts available, that James should be considering TQM? If so, which do you think is appropriate for his business? Explain your reasoning.
(LO7, LO8, LO9)

When considering an ERP system's suitability for an organisation several factors should be considered. The predominant theme in ERP adoption is that the organisation should adjust its business processes to meet the best practice that is programmed into the ERP system. From an organisation's perspective this can have both advantages and disadvantages. The risk in this 'vanilla' adoption is that the organisation, in changing its business processes to correspond with the ERP system, loses its uniqueness and competitive advantage. Therefore, James needs to be clear on what it is that makes his company unique. If they do have truly unique processes that offer them a source of competitive advantage in the marketplace then he is probably not wise to throw these out for the generic best practice that is captured in the ERP system. If he wants to keep the existing practices and still go ahead with the ERP system then the alternative is to customise the ERP system. While this is possible, it does increase greatly the cost and risk of ERP adoption – something his medium sized firm may not be willing to take on.

TQM is an approach to organisational change being considered by James. TQM methods, which focus more on small incremental change, would appear appropriate in this case, allowing the uniqueness of the existing processes to be further enhanced. In answering this question students should pick up on the main traits mentioned in the question as a trigger to lean them towards TQM.

2.3 Table 2.12 compares TQM and BPR as ways of improving business processes.

TABLE 2.12 Comparing TQM and BPR

Primary criteria	TQM (process improvement)	BPR (process innovation)
Level of change	Incremental	Radical
Starting point	Existing process	Clean slate
Frequency of change	One-time/continuous	One-time
Time required	Short	Long
Participation	Bottom-up	Top-down
Typical scope	Narrow, within functions	Broad, cross-functional
Risk	Moderate	High
Primary enabler	Statistical control	IT
Type of change	Cultural	Cultural/structural

Describe the differences between the two approaches and explain the potential risks of each approach.
(LO7)

Level of Change – This criterion recognises the different magnitudes of BPR and TQM. For large scale change BPR is appropriate. As the definition of BPR mentions, such changes are typically radical and essentially starting again from a clean slate. TQM on the other hand takes an incremental approach, refining existing processes in small progressive steps.

Starting Point – BPR uses the notion of a clean slate as its starting point. Any reengineering starts from nothing – there are no ties to existing processes or procedures. TQM is less extreme, taking the existing process as sound and looking to make small refinements to its operations. Its starting point is thus the existing process.

Frequency of Change – Because of the differences in scope, BPR is a once off / infrequent approach to organisational change and process redesign. One would not reengineer a process every six months. TQM, due to its smaller scope, can be repeated. Indeed, TQM can be viewed as a continual process of improvement and is thus ongoing within the organisation.

Time Required – BPR requires more time than TQM. Again this is a factor of the differences in the scope of change under BPR and TQM, with the clean slate starting point meaning that everything must be rebuilt, which takes more time than small improvements to existing processes.

Participation – The difference here is where the initiative for the change originates from. TQM uses a bottom-up approach, with those involved in the actual performance of the process providing the suggestions for where improvements can be made. Alternatively, BPR originates from the top levels of the organisation and can, to a certain extent, be seen as imposed on those in the lower levels.

Typical Scope – As the name suggests, business process reengineering takes a very strong process perspective. The consequence of this is that there is an emphasis on the interaction between functions and a horizontal perspective of the organisation. The scope of changes can relate across all areas involved in a process. TQM can be more specific in its scope, with changes potentially just relating to one function or a part of one function's operations.

Risk – The difference in scope and level of change under both approaches means that BPR is traditionally viewed as a more risky approach than TQM.

Primary Enabler – A key message in the literature on BPR is that technology should be viewed as an enabler to business change and process reengineering, hence the emergence of the term 'IT as an enabler' in the seminal literature on the topic. TQM, on the other hand, sees statistical control of quality as its enabler, with frequent analysis of process performance as a key to its success.

Type of Change – BPR is large scale change. IT makes obvious structural changes to the organisation – for example flattening the hierarchy – and can also have a large impact on the prevailing organisational culture and philosophy. TQM is more about a cultural emphasis, getting employees committed to organisational culture and striving for it in their daily activities and being committed to improvements to quality.

Risks – TQM. There may be insufficient changes made to make a real difference to the organisation. The time taken to achieve results may increase risk of project failure. Changing small parts of processes may reduce process efficiency and/or effectiveness.

Risks – BPR. Radical change is difficult to execute well, can create resistance and refusal to adopt new processes. High costs create a need for high benefits creating a risk that BPR may not be cost effective.

2.4 Review the before and after re-engineering process descriptions for IBM Credit in the chapter.

(a) Explain how this case demonstrates the four elements of re-engineering that were described in the chapter (fundamental, radical, dramatic, process).

(b) Draw a diagram of the operation of the re-engineered IBM loan application process. Compare this diagram with that of the original process in figure 2.6. What are the major differences in the way the process is performed?

(c) One of the solutions for IBM's process design that was tried was to establish a central desk and integrate that into the original process. As each person completed their individual task, he or she would return the loan application to the central desk where it would await collection by the next person in the process. What do you think would be some of the possible disadvantages of such an approach?

(d) Do you think that there could be any advantages to implementing the central desk approach described in part (c)? Explain why.

(e) Why do you think IBM did not pursue this option, instead opting for the re-engineered approach described in the case contained in the chapter?

(f) What could be some of the issues (ethical, technical, legal or otherwise) that IBM would have to address in implementing the loan application computer support program in the re-engineered organisation?

(LO3, LO6, LO7)

(a) Four elements of re-engineering:

(1) Fundamental – This aspect requires the organisation to question the activities within the current process design and critically assess their value. It is fundamental in the sense that it challenges assumptions that may have previously been the foundation of the system. Fundamental change in this case came through the idea that specialists were not needed in all applications. In some cases generalist staff could be trained to perform the tasks, allowing applications to proceed quicker through the process and freeing up specialists for specialist cases. This challenged the assumed organisational design built around specialisation of staff and skills.

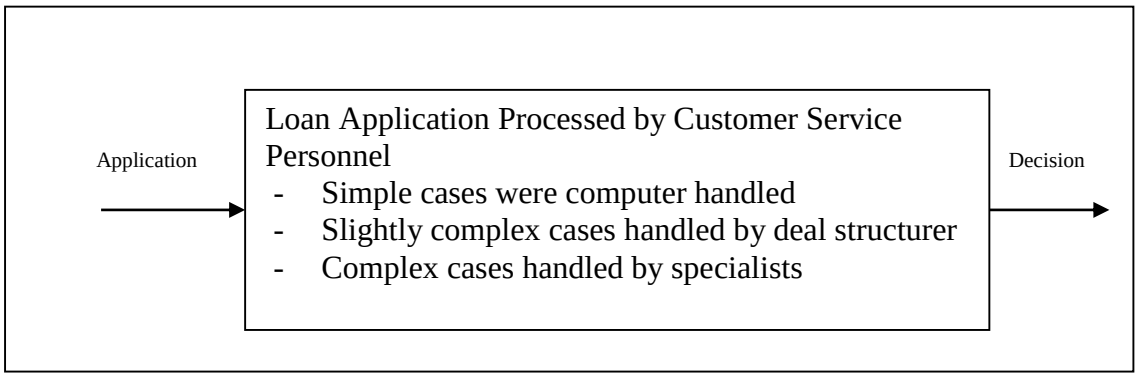
(2) Radical – This aspect pushes the organisation towards extreme changes, essentially encompassing the clean slate approach that is seen by many as central to BPR. The large change in application handler autonomy, as well as the big change in the role for specialists and the use of IT in the re-engineered process can be seen as the radical aspect of the reengineering. This was not just a small change to an existing process – it was a total redesign.

(3) Dramatic – The organisation undertaking the BPR project is looking for significant returns, which can include financial returns as well as improvements in process performance and operation. Realised returns from the change included massive increases in productivity and huge reductions in loan application handling time.

(4) Process – The concern throughout the BPR exercise is on the process as it operates from start to finish, not just one section or part of the process. There is a clear focus on the process perspective within this case, as IBM geared itself towards the whole process of loan

applications. They did not just focus on one aspect of the process, but rather examined and redesigned the activities from start to finish across the entire organisation.

(b) The big difference to note between the diagram below and that of the original process is the massive reduction in hand-ons and paper shuffling. One person now handles an application from start to finish with assistance from specialists where the circumstances of the case warrant it. The use of specialists is now the exception rather than the norm. This is a big difference when compared to the original process design, where a series of specialists dealt with every case.



(c) The disadvantage of the central desk approach is that it essentially adds another stage of paper handling for every stage of work that is performed. If a process has two activities that occur within it then the central desk approach requires the application to pass through the central desk three times – once when it first arrives and goes in to the first activity, secondly when the first activity is completed and the application returned and given to the second activity, and thirdly when the second activity is complete and the application returned, before being sent out to the customer. If we view the process in terms of value adding activities then we must question the use of the central desk. It essentially becomes an In/Out tray that is staffed by a person. It does not really add to the value of the loan processing application.

(d) The implementation of the control desk at IBM can be seen as having advantages and disadvantages for the operation of the credit process. The big advantage of this approach is that it introduces an audit trail into the loan application process. The central desk means that as each stage is completed the loan application is returned to the desk for the person responsible for the next stage to collect the application and continue on with the process. The loans desk becomes a sort of traffic cop, monitoring the progress of the applications through the different stages of the process. This can be a useful approach if the central desk is also the point of contact for customers, since enquiries will go to the one location that has details about the actual status and progress of their application. From this perspective the central desk makes a lot of sense.

(e) The final solution arrived at in IBM is described in the text. The reasons for this option, in preference to the central desk approach and the original design, can be narrowed down to customer responsiveness, use of expertise and process time. The design implemented after BPR was the most responsive from the customer's perspective. It effectively provided applicants with their own application manager – a constant reference point for customer

queries. This also eliminated the passing on of the application through the different areas of the organisation, thus improving process performance time. The design also allowed for a better use of specialists/experts that were part of the application process. Instead of experts being involved in all applications, their knowledge and skills were more effectively used on the exceptional cases. Normal cases that did not require specific expertise were handled by the regular application handlers. This provided the benefit better use of expertise and also more autonomy and control at the application handler level.

(f) Some issues to consider include:

- Controls to ensure that appropriate cases are passed on to experts/specialists and that application handlers do not act outside their skill base
- Reliance on the expert systems and other computer programs at the application handler level. Do staff understand the process and what is occurring or are they just clicking their way through an approval program? This can have implications for the approval of loans that might normally be rejected. This issue could be extended to reliance on the system by staff members.
- Controls in place within the process to monitor the performance of the generalist application handlers
- Does the use of IT match the overall business goals and objectives?

2.5 Publications by Hammer & Champy[121] and Hammer[122] advocate a clean slate approach to BPR.

(a) Why do you think they encourage this clean slate approach?

(b) Can you think of any problems that might arise if an organisation simply automates an existing process, in preference to redesigning it? Explain some of these problems.

(c) Critically evaluate the clean slate approach to BPR. Do you think it is a suitable approach for all organisations in the midst of process redesign? Why? What could be an alternative to the clean slate approach?

(LO8)

(a) The motivation for the clean slate approach is probably two-dimensional. Initially you could argue that a lot of business processes were originally designed in a time very different to the current era. As a result the built in technology, processes and hierarchies will be very different to what is conventionally accepted today. By starting with a clean slate we remove these antiquities from our process design. The clean slate approach can thus be seen as a way of ensuring that long standing assumptions about how things are done is challenged to the maximum degree. The second aspect of the clean slate motivation would appear to be the risk that comes with simply automating existing processes, instead of redesigning them first. This is discussed in part (b).

(b) The big problem that an organisation faces if they simply automate is that they are potentially automating fundamentally flawed processes. The application of technology to processes that are badly designed will not improve their performance. While it will allow them to operate faster, the errors and problems embedded in their poor design simply occur more frequently. Consequently, simply automating a process just allows the bad things to be done at a more rapid rate. This is why the authors of BPR concepts advocate the clean slate approach, thus ensuring that automation is applied to well defined business processes, not processes that contain errors or flaws in their design.

(c) The clean slate approach is open to criticism from several angles. One aspect of the criticism is that by eliminating everything we run the risk of tossing the baby out with the bathwater. While we eliminate the bad things from our processes we also run the risk of throwing out the good things about our processes as well. Additionally, some managers may be reluctant to totally obliterate a business process that is seen as a source of competitive advantage. The total obliteration that comes with the clean slate approach is seen as risky by many.

Secondly, employees within the organisation may not view the clean slate approach favourably. It sends the message that humans are just tools that can be trained and retrained as seen fit by the organisation, losing the humanistic perspective of our labour resource. It can also create a sense of unease amongst lower level employees, who typically view such approaches as ways of reducing jobs. In light of the often quoted statistics from the famous Ford reengineering case this would not seem an entirely irrational reaction.

More appropriate approaches could be the incremental techniques of continuous improvement or TQM, which will generally be less risky to the organisation and more palatable to employees subject to the change.

2.6 Describe the operation of an electronic payment system that you are currently using.
(LO9)

Many students will describe BPAY, for which a brief description follows. Other suitable choices include PayPal, the Apple store, or the Play store. For BPAY the customer will typically log in to their banking website or access the telephone banking service. After verifying their identity they will elect to pay a bill. The customer then selects the account that they want to pay the bill from. This is followed by the entry of the BPAY number and the customer ID. The BPAY number specifies the supplier who is to receive the payment and the Customer ID provides details of who is making the payment. BPAY then sends these transaction details to the supplier's bank, with the funds being taken from the customer's account and deposited in the supplier's account. Details of the payment by the customer are also electronically sent to the supplier. The customer is then provided with a unique transaction ID, to facilitate tracing or follow up on the payment.

2.7 Describe and evaluate the disadvantages of electronic payment systems for the:
(a) provider of goods and services.
(b) buyer of goods and services.
(LO9)

Some disadvantages of electronic payment systems for providers of goods and services are:

- Providers accounting systems needs to be able to interact with the electronic payment system to record transactions.
- Increased risk of hacking and electronic theft or fraud.
- Possible increased transaction cost.

Some disadvantages of electronic payment systems for buyers of goods and services are:

- Payment executed in a timely manner, so cash must be available in account at time of payment.
- Data error may mean that payment is not made as intended.
- Buyers may not trust the technology enough to use it.

2.8 Compare the operation of electronic bill payment (EBP) systems and electronic bill presentation and payment (EBPP) systems. Describe the differences between the two systems.
(LO9)

The difference between electronic bill payment and electronic bill presentation and payment is in the extent to which the technology is incorporated into the billing process. Electronic bill payment merely provides the technology for bills to be paid, whereas electronic bill presentation and payment goes one step further and provides an electronic means for bill delivery, as well as supporting electronic payment.

2.9 Assess the relative benefits for a business of adopting EBP and EBPP. Which do you think would offer the greater benefits when re-engineering a business process?
Explain the reasoning behind your conclusion.
(LO9)

The essence of re-engineering is to question the fundamental beliefs that underlie a business process and its operation. This means constantly challenging the way things have been done and not blindly adopting the accepted norm as the new status quo. Given this line of thought, it would seem that, for an organisation that was serious about the reengineering of its process, EBPP would be preferred over EBP. In comparison to EBP, it can be argued that EBPP offers a greater degree of change / improvement to a process. While EBP improves the cash receipt aspect of a billing process, it persists with the lag induced by sending out paper documents and waiting on the customer to receive and process these documents. EBPP would appear to radically reduce this lag by electronically sending invoices. It is an example of a technology enabled improvement and redesign of the business process that, in comparison with EBP, would appear more consistent with the tenets of BPR.

2.10 Describe the operation of evaluated receipt payment systems. What advantages would this system present for vendors of goods and services? How would it improve the operation of a business process that is undergoing re-engineering? (LO9)

An evaluated receipt settlement system operates by removing the invoice from the purchasing-payments process. The logic behind this configuration of the payables process is that there is little value added by completing and sending out an invoice. For the vendor it removes the need to create and send an invoice for the goods or service supplied. The only requirement for such a system is that the agreed upon process is specified at the time of entering into the transaction and that all costs and taxes associated with the delivery and provision of goods or services are foreseeable at the time the transaction is initiated. The argued benefit of such a process is that it expedites payment from customers.

The advantages of this system for vendors of goods is that their payments process is no longer delayed by the lag between goods being delivered and the invoice being sent. It moves the risk of error or fraud to the purchase order process, as prices and other costs are agreed to when the purchase order is raised.

For a business undergoing reengineering it offers the opportunity to challenge the fundamental assumption that to receive money from a customer we must send an invoice or that to pay a supplier we must have a supporting invoice. It challenges the role and value added by the preparation of the invoice – something that traditional accounting systems would typically see as sacrosanct.

2.11 List some of the potential ways that a grocery retail business could apply the following technologies within its sales process:

(a) barcode scanning

(b) radio frequency identification (RFID) tags.

(LO7, LO9)

(a) Barcodes can improve the operation of a business through their ability to simplify the data collection process. The improvements come through increased accuracy of data being gathered, through less data entry and human involvement, as well as improved efficiency for gathering data through the use of electronic data gathering (for example barcode scanners).

Some examples of how these technologies can be used in a sales process include:

- The sales process in a supermarket where barcodes or RFID are used to capture item details at the checkout
- Handheld scanner devices for sales people in order to better handle customer enquiries

2.12 Read AIS Focus 2.3, which describes how Moraitis Fresh employed RFID in its business processes. Answer the following questions based on the AIS Focus material.

(a) What were the weaknesses of the original processes used by Moraitis Fresh?

(b) Why did Moraitis choose to use RFID tags rather than barcodes when they redesigned their business process?.

(c) How may the timelines of information available within the business processes at Moraitis Fresh improve as a result of the re-engineered processes that include RFID?

(d) What factors would Moraitis Fresh have considered when deciding to re-engineer its process and include RFID tags?

(e) What obstacles might have been faced as part of the re-engineering effort?

(LO2, LO9)

(a) The weaknesses of the original processes used by Moraitis Fresh include:

- the reliance on human markings on boxes to identify the packages and what was in them – this would appear to be prone to error and also time consuming
- the reliance on pieces of paper to track deliveries and products places the process at the mercy of a paper trail. If paper goes missing then there is the chance the process could be delayed

(b) Moraitis likely chose to use RFID tags as they allow individual items to be tracked. RFIDs also allow recording of individual data items such as the date packed, source of the goods etc. which improve supply chain management and the ability to monitor supplier quality.

(c) The use of RFIDs would improve timeliness of data as scanning points act to remove the need for manual data input as the items move through the supply chain. Most data would be able to become online real time.

(d) The factors that would have been considered in deciding to implement the tags would have been:

- Cost of technology – the figure of $100,000 for initial setup is quoted in the case
- The needs of the business process – would the technology address a business problem or just be technology for technology's sake? Evidently they were aware of the challenges they faced in their distribution network.
- Life cycle / life span of the investment
- Impact on competitive position / strategy
- Support available from vendors

(e) The obstacles that may have been faced as part of the reengineering effort include:

- Converting a traditional manual process to a computerised process
- Educating / training users about the operation of the new process and technology
- Getting suppliers on board – system is dependent on suppliers also using the tags

2.13 Two EBP providers in Australia include BPAY View and Australia Post. For each provider:

(a) View its website.

(b) List the services offered by each organisation.

(c) Explain who the customers are for each of these organisations

(d) How might these customers benefit from each of these services offered (bill presentation, bill payment and bill management)?

(LO4, LO9)

(a) (b) (c)

BPAY VIEW	AUSTRALIA POST
(b) EBP & EBPP Offers both bill presentation and bill payment facilities. Also offers a payment scheduling service	(b) Bill payment service through the phone, internet or in person. Not restricted to electronic transactions.
(c) Customers: BPAY bill payers. BPAY billers. Banks and financial institutions	(c) Customers: Any bill payer. Post-Bill-Pay billers. Banks and financial institutions.

(d) Benefits of each service:

- *Bill presentation*: delivers bills in electronic formats and offers the summary of bills received and scheduling of payments by the customer, as well as electronic payment.

- *Bill payment*: Offers a means of paying the bill at the customer's convenience. While the trend is for electronic payment, some avenues offer in person payment (e.g. through the newsagent, post office). This may be an attractive option for those who are not technology literate, do not trust technology or do not have access to the technology.

- *Bill Management*: Makes tracking bills easier and consolidates bills for the bill holder. This will avoid late fees, interest charges, penalty rates etc. typically associated with overdue accounts.

2.14 Strides for Strides manufactures and sells athletic wear to retail stores, who sell them on to customers. Its range of products includes warm-up tracksuits, body suits and running shoes and spikes. The business process followed by Strides for Strides to supply retail stores is as follows:

- **Retail stores order online using a secure website that sends the order through to their allocated Strides for Strides customer service representative. Orders are generated periodically by retail store managers, who typically place an order when their stocks are getting low. Retail stores, while all being long-standing and regular customers, have typically ordered at the last minute, resulting in irregular demand levels across the year. The customer service representative checks that the goods are available and notifies the retail store when their goods will be arriving. Once the order has been checked a copy goes to the accounts receivable office.**

- **The goods are packed, manually recorded on the goods release form (two copies are prepared) and sent to the shipping department for dispatch. A courier collects goods and a goods release form every morning and afternoon and delivers these to the retail store. Once delivery details are confirmed, an invoice is prepared by accounts payable, based on the details in the customer order and the goods release form. Electronic invoices are sent out at the end of each week. Retail stores currently have standard payment terms of 2/15, n/35. Payment can only be made by cheque, which is sent to the customer service representative who forwards it on to the accounts receivable office.**

  Strides for Strides has recently noticed that it is having inventory management problems due to the irregular nature of orders. This has impacted on its own ability to meet customer demands. It is also concerned that incorrect quantities of goods may be packed and shipped, and not detected until the goods reach the retail stores. This introduces extra costs of handling returns and allowances. Additionally, Strides for Strides has noticed that its accounts receivable turnover has dropped from 11.7 times per year to 9.5 times per year over the last 12 months.

  An independent consultant has suggested that by re-engineering the process these problems could be addressed.

  Required

  (a) For the business process described above, identify
  (i) the participants.
  (ii) the inputs.
  (iii) the outputs.

  (b) Identify and describe any inefficiencies that are present in the current system.

  (c) Suggest ways that the business process inefficiencies could be corrected through business process re-engineering.

  (d) Prepare a brief narrative that describes how your newly re-engineered system would operate.

  (e) Identify and describe the role that technology would play in implementing your proposed changes.

(f) Describe some of the issues that may be faced by Strides for Strides in re-engineering processes. Propose some strategies for dealing with these issues.
(LO3, LO4, LO6, LO9)

(a)

PARTICIPANTS	INPUTS	OUTPUTS
Strides for Strides Warehouse & shipping Accounts Receivable Customer Service Officer Courier Retail store	Online order Packed order details Cheque	Sales order Goods arrival notification Goods release details Invoice

(b) Inefficiencies in the process include:

- The invoice is generated and sent only after at the end of the week after the goods have been confirmed as delivered, rather than travelling with the goods– this slows down accounts receivable turnover and increases the risk that an invoice might not be created.
- Order taking – Lack of linkage to inventory data means that the goods availability has to be checked and confirmed manually by the customer service representative rather than occurring immediately online. This slows down delivery times and creates extra manual work.
- Paper shuffling – payment from store goes to the customer service representative who forwards it to accounts receivable
- Manual payments – use of cheques adds to delay in getting cash

(c) Potential avenues for improving the process include:

i. Integrate online website and inventory/sales systems to speed up process sand assist with demand forecasting and inventory management
ii. Using electronic payment methods to eliminate the cheque and encourage options like direct debit, EBP
iii. ERS – Remove invoice altogether – indications are that supplier-customer relationship is strong and established so this option could be viable

(d) Newly reengineered system:

- Students should describe the design for their improved system.
- Answers will vary, depending on the changes they identify in (c).

(e) Role of technology in the proposed systems:

- This answer will vary depending on the extent of technology adopted in the reengineered process. There is the potential for quite a significant switch to technology, with electronic ordering, ERS and/or EBPP being implemented. Answers should reflect some of these options. Other ideas could include the use of barcodes/RFID to keep track of inventory and so on – there is scope for student creativity in this question, as long as the technology is related to the issues and problems flagged in the case.

(f) Issues that may be faced in the reengineering process include:

Resistance to the change because of:

- fears of technology / non-familiarity with technology
- fear for own position in the organisation following the changes
- the need to push changes forward and back in the supply chain in order to realise full benefits. This may not be possible or practical, depending on the clout that strides for strides has
- the cost and extent of change
- appropriate skills in managing both the technology and the transition in the reengineering process

Strategies for dealing with these issues include:

- employee involvement in both the identification of the problems and the derivation of potential solutions
- employee training / skill development opportunities
- leadership from management / project champion
- setting targets that are realistic and achievable along the way in order to make it appear as though the end goal is attainable
- adjusting performance measurement schemes to be aligned with the operation and design of the new system rather than the old, in order to encourage conversion of employees

2.15 Describe the differences between RFID and barcodes as a means of capturing data in a process. In what situations may barcodes be preferable to RFID? (LO9)

Both RFID and barcodes offer benefits to a business in the way that data is captured within a business process. They both offer the advantages of faster, more accurate and more efficient data gathering and input. The fundamental difference between these two technologies is in the means by which the data is gathered.

Barcodes: Rely on the barcode being physically passed over the barcode reader (e.g. items at a supermarket being scanned). Barcodes are preferable where there are many identical conveniently sized objects, for example in a supermarket or stationery store. However, for large, bulky items, getting a clean read on the barcode may be problematic.

RFID: RFID tags allow for data to be gathered as the tags pass through a reader / dock equipped with RFID transponder technology. Examples include the use of e-tags on the major freeways – cars pass under a reader and the details are automatically gathered and sent to the billing department of the road company. In this environment it is impractical to have cars individually stop and present a barcode for scanning. Thus, RFID tags offer an added level of convenience in the gathering of data. This can also be useful for receiving goods – if goods are RFID tagged, the details of the incoming shipment can be gathered automatically, rather than having to go through and scan the items individually. RFID systems can be expensive to implement and maintain so the costs and benefits need to be understood and justified prior to implementation.

2.16 Damocles' Kitchenware sells cutlery and dinnerware to customers through a small retail outlet located in downtown Brisbane. All of Damocles' sales are to customers who purchase on credit. Since the existing process for receiving payments from customers is not technology based, all receipts from customers are either received through the mail or in person from the customer. Over the past few years, sales for Damocles' Kitchenware have steadily increased. So too have accounts receivable levels. A summary of the details is shown below:

Year	2007	2008	2009	2010
Sales for year ending 30 June (all on credit)	125 450	157 993	188 014	212 331
Net profit after tax for year ending 30 June	35 014	44 761	48 536	51 664
Accounts receivable at 30 June	12 500	29 746	55 484	72 467

Concerned about its liquidity, Damocles is investigating the introduction of electronic bill presentation and payment (EBPP), and EBPP combined with bill management systems (EBPP/BMS).

Required:
Prepare a memo that advises the management of Damocles about the difference in the services offered through EBPP versus EBPP/BMS. The memo should address the following:

(a) A description of what EBPP and EBPP/BMS are and how they operate.
(b) The advantages of each option for the business and for its customers.
(c) The impacts of the technology on the current operation of the process.
(d) The impact of both systems on process performance and key financial statement ratios.
(e) A conclusion as to which (if any) technology option Damocles should select.

(LO3, LO9)

(a) EBPP is electronic bill presentation and payment. It is a system whereby invoices are emailed to accounts receivable holders and the account is paid either electronically or through traditional means.

BMS goes one step further, using the data about amounts owing for a person. They manage the balances and schedule the payments in such a way that the amount paid is stable and constant for the account holder, rather than fluctuating from month to month.

(b) Advantages of EBPP are:

For sellers:

- Payment is cleared and available to the supplier quicker than in a manual / paper based system.
- Allows suppliers to streamline their cash receipts process and remove inefficiencies of the traditional cash receipts system.

The advantages of electronic payment systems for buyers of goods and services are:

- Electronic payment saves the time of having to prepare a cheque / go to a post office, bank or other outlet to pay the bill.
- Flexibility to pay bills any time, twenty four hours a day.
- Payment is executed in a timelier manner.

BMS with EBPP offers similar advantages, with the added customer benefits of management of amounts owing, which assists in managing cash flows for budgeting and cash management/control purposes.

(c) It would be expected that both systems would have an impact on the performance of Damocles. Both systems would provide for a prompt, more efficient way of billing a customer. This would theoretically extend to an improvement in accounts receivable turnover. The BMS would have the added benefit of its management tools for the customer, which could make it more attractive. For Damocle's, if they are the early adopters of technology in this industry, they could both offer advantages strategically, being seen as moving forward by their customers. The overall process would be improved since the traditional paper trail associated with:

(i) making the sale
(ii) billing the customer and
(iii) processing customer payment would be reduced.

This could flow on and make associated tasks, like following up on accounts receivable, more efficient.

(d) From the perspective of the financial statement ratios, the major one to benefit would seemingly be accounts receivable turnover, with prompt billing and easier customer payment hopefully promoting prompter payment. The improved process may also reduce costs, which could flow on and impact profitability ratios (e.g. profit margin) as well as trends in expenses over time that may be detected in an horizontal analysis of the financial results.

(e) The student conclusion will depend on the preceding argument, but should be related back to the facts of the case.

2.17 How does vendor-managed inventory work? What are the likely risks of such a system to (a) the buyer and (b) the seller.
(LO9)

Vendor-managed inventory involves the buyer transferring the responsibility for determining what, when and how much is purchased to the seller of the goods. The purchasing decision is effectively shifted from the buyer to the seller. The risks to the buyer include a vendor underestimating demand and being unable to supply goods as required which could lead to reduction in customer satisfaction. Additionally the buyer has to share their detailed customer data with the seller, which increases the risk of data leakage to competitors. The risk to the seller is that they may overestimate demand which could leave them out of pocket or cause difficulties in their ongoing relationship with the buyer. The seller may also have to alter their business process and/or systems to fit in with the needs of the buyers systems and processes, creating a risk that they may not see a return on this investment.

2.18 Describe how the use of RFID systems could improve the operation of the sales process for a high-end clothing retailer.
(LO5)

RFID tags allow tracking and data recording for individual items. For high end clothing this could mean that the clothing would carry a tag identifying who manufactured the goods and what materials they used, along with the source of those materials. This data allows the retailer to explain to potential customers exactly when, how and by whom the item was manufactured and the provenance of all the materials used. The RFID could also contain details of the person who purchased the goods and when and where they were purchased, assisting with any warranty or repair claims.

2.19 What are some of the potentially negative consequences of outsourcing part of a business process?
(LO8, LO9)

Some potentially negative consequences of outsourcing part of a business process are:

- Risks are created around loss of data and knowledge at handover points – those points in the process where the execution of an individual transaction goes from in-house to outsourced and vice versa.
- Any technology used in house and at the outsource needs to be made compatible initially and remain compatible.
- Loss of corporate knowledge of the entire process as the portions outsourced will become less visible in-house.
- Performance measurement for the process may be difficult or even impossible as it becomes highly complex to correctly attribute performance results and metrics for process activities.

2.20 Describe the usage of a serial shipping container code (SSCC). How does an SSCC help a seller and a buyer improve the operation of its business processes? Why is it important to have standards when using barcodes between different organisations?
(LO9)

Serial Shipping Container Codes are barcodes that are attached to goods that are moving through a delivery / logistics process. The advantage that this technology can offer is that details of items in a shipment are able to be electronically sent to the customer for integration into their own system, if the same barcoding standards are in use. It also allows for the tracking of goods as they progress from origin to destination, allowing the customer to monitor the delivery of their ordered goods.

2.21 List, describe and provide a potential example of each of the major benefits that businesses can enjoy from applying technology to their business processes. (LO9)

Gregor et al (2004) propose that there are four areas in which benefits can be realised from ICT within an organisation. These are:

1. Information based – improved information types and quality of information. Examples could include the availability of on-demand reporting, the ability to compile data in new ways to identify, for example, profitable customers and tailor marketing campaigns.
2. Strategy based – using technology to create or enhance a competitive advantage. The use of IT may allow a business to configure its operations to low-cost based approaches, which may be consistent with their strategy. Alternatively, the internet may allow them to provide increased product and service information to customers as a way of locking in customers and differentiating their services.
3. Transaction based – being able to perform transactions more cheaply. The use of internet technology, for example, may allow for cheaper order taking, billing of customers and cash collection from customers (e.g. EBP / EBPP).
4. Change based – The technology can be a facilitator and driver of change within the organisation. Examples can include technology that changes the way processes are performed (e.g. electronic data sharing/capturing) as well as the ability of technology to allow the business to explore new business models (e.g. a traditional business venturing to the web in a clicks and mortar based approach).

2.22 Refer to figures 2.1 and 2.2. For each mission statement, provide a breakdown of how it addresses the four components of a mission statement mentioned in the chapter.
(LO1)

The mission statements are:

- **Wiley:** 'Wiley's mission is to be a global information and education company providing content and services to professionals, researchers, educators, students, lifelong learners, and consumers worldwide. Wiley is dedicated to serving our customers' needs while generating attractive intellectual and financial rewards for all of our stakeholders — authors, customers, clients, colleagues, and shareholders.'

- **Google:** "Google's mission is to organize the world's information and make it universally accessible and useful."

COMPANY	COMPONENT	EXAMPLE
Wiley	***Vision***	To be a global provider of information for academic and professional environments and offering rewarding stakeholder relationships.
	Domain	Publishing / Knowledge distribution.
	Competencies	Stakeholder relationships and customer focus / needs based.
	Values	Up to date material, Relationship development, global presence.
Google	***Vision***	To organize the world's information and make it universally accessible and useful.
	Domain	Internet content.
	Competencies	Online information management.
	Values	To make information universally accessible and useful.

2.23 Use Porter's five forces model to analyse the Australian airline industry. (Hint: You may need to consult airline websites and newspapers to complete this.)
(a) How many airlines are there in Australia?
(b) How does each of the five forces apply to airlines?
(c) Do you think all airlines are affected equally by the same forces? Why? (LO1, LO2)

The five components of Porter's 5 forces model are:

- Rivalry among existing competitors.
- Threat of substitute products or services.
- Bargaining power of suppliers.
- Bargaining power of consumers.
- Threat of new entrants.

(a) There are 39 airlines in Australia according to https://en.wikipedia.org/wiki/List_of_airlines_of_Australia (accessed 2 November 2015).

Most students will probably be familiar with only 4 of these, Jetstar, Qantas, Virgin and Tiger.

Airline	Hub Airport(s)
Air Link	Dubbo Airport
Airnorth	Kununurra Airport, Darwin International Airport
Alliance Airlines	Brisbane Airport
Cobham Aviation Services Australia	Adelaide International Airport
Corporate Air	Canberra International Airport
Eastern Australia Airlines	Sydney Airport
Express Freighters Australia	Sydney Airport
FlyPelican	Newcastle Airport
Fly Tiwi Airlines	Darwin International Airport
Free Spirit Airlines	Essendon Airport
Hardy Aviation	Darwin International Airport
Heavylift Cargo Airlines	Brisbane Airport
Hinterland Aviation	Cairns International Airport
Inland Pacific Air	Townsville Airport
JetEx	Adelaide International Airport
JetGo Australia	Sydney Airport
Jetstar Airways	Melbourne Airport
King Island Airlines	Moorabbin Airport
Maroomba Airlines	Perth Airport
Network Aviation	Perth Airport
Par Avion Airlines	Cambridge Aerodrome
Pel-Air	Sydney Airport
Qantas	Sydney Airport, Melbourne Airport
Qantas Freight	Sydney Airport, Melbourne Airport
Regional Express Airlines	Sydney Airport
SEAIR Pacific	Gold Coast Airport
Sharp Airlines	Hamilton Airport

Skyforce Aviation	Bankstown Airport
Skippers Aviation	Perth Airport
Skytraders	Hobart International Airport
Sydney Seaplanes	Rose Bay seaplane base
Sunstate Airlines	Brisbane Airport
Tasman Cargo Airlines[2]	Sydney Airport
Tigerair Australia	Melbourne Airport
Toll Aviation	Brisbane Airport
Virgin Australia	Brisbane Airport, Melbourne Airport, Sydney Airport
Virgin Australia International Airlines	Sydney Airport
Virgin Australia Regional Airlines	Perth Airport
West Wing Aviation	Mount Isa Airport

(b) In applying the five forces the following comments could be made:

Rivalry among existing competitors – Would seem to be high – there is a large number of airlines given the population of Australia however many of them are serving quite a small or niche market, for example rural flights, or airline charters. The different strategies for differentiation suggest competition is high as airlines compete for domestic and international passengers and freight.

Threat of substitute products or services – could be argued to be low. Given the geographic features of Australia international travel by boat is not viable due to distance, and domestic travel by train and bus is constrained by relatively high ticket prices and lengthy travel times.

Bargaining power of suppliers –Suppliers to the industry include a wide range of business from jet fuel sellers to airports and cleaning and baggage crews. Airlines are constrained to established airports, they cannot choose to land elsewhere. So Airport 'suppliers' have a great deal of bargaining power, in terms of pricing for their services and which timeslots and terminals they are prepared to allocate to various airlines. Similar jet fuel and maintenance suppliers are highly specialised and regulated so airlines do not have many alternatives. In the airline industry supplier bargaining power is quite high.

Bargaining power of consumers – Would seem to be moderately high. Customers can choose to buy a ticket or not, that is the extent of their power. In cases where a customer wishes to fly from A to B on a given date they have no choice but to pay the asking price. Customer with travel timing flexibility have slightly more power however they are still constrained by who flies to which destination so may not have much choice between different airlines. As competition on domestic and international routes has increased airlines need to keep their volume of sales high as fare prices decrease 'per seat revenue' is less however this is not reflected in greater customer bargaining power.

Threat of new entrants – The threat of new entrants could be seen as minimal given the immensely high start-up costs and the amount of regulation applicable to the airline sector. The major threat here comes from established overseas airlines being granted permission to fly Australian domestic routes.

(c) It would be fair to say that not all forces apply equally to all airlines. The discussion above tended to be at the overall industry level. However, as airlines are differentiated in the market place the different factors could have differing levels of significance. For example, rivalry amongst competitors is a real threat to Jetstar and Tiger, however it is not a threat to Airlink or Sydney Seaplanes which both offer niche domestic products.

2.24 The strategy discussion in the chapter mentions the need to have activities that are interconnected and built towards the target goal. Select a business that you know and describe the following:

(a) The target of the business's strategy (i.e. customers, product, delivery).

(b) The activities the business engages in to deliver its product or service.

(c) The extent to which you think there is a fit between the chosen strategy and the activities in their sales process.

(LO1)

A sample case study is provided in the chapter, with the case looking at Aldi supermarkets. This could be used as the focus if student selection of a business is impractical. The answers here will use the Aldi case as the base for reference.

(a) Target of the business: The target of Aldi's business seems to be the customer – and the philosophy that customers should have access to high quality food products at low prices.

(b) Activities: The activities that Aldi engage in are typical of any supermarket – i.e. acquire and manage premises, hire staff, select suppliers, purchase inventory, sell goods to customers. However in Aldi we see these activities tailored away from the model of the larger chains. For example, there is a smaller number of suppliers and products, physical premises are smaller, staff are able to act across a range of areas, rather than being checkout or storeroom specialists. Even the customer performs tasks at Aldi (e.g. packing bags after purchase) that they would not perform elsewhere.

(c) Fit between strategy and processes: The strategy of providing items at a low cost meant that Aldi had to have in place the activities to support this strategy. Accordingly, it could not afford to have large premises or a large number of suppliers, since these add to overheads which must then be factored in to product pricing. Also, having staff who are generalists rather than specialist means there is staff flexibility. The choice of activities chosen by Aldo would appear to be consistent with and fit well with their chosen strategy.

2.25 Explain, using examples, how businesses can operate on data alone, without providing a physical product.
(LO9)

Businesses can operate on data alone, without providing a physical product, by finding a way to add value to the data and offer an information product that is useful to consumers. An example of this is the range of accommodation websites that are available, with each of these sourcing data about room availability and room rates from the various accommodation providers and making this available in one place for the customer to search and compare across different accommodation options. The value for the customer in this situation is that it saves them time and effort – instead of having to search for each motel individually, get price details and compile it manually, they can go to a website that collates the data for them, significantly reducing the data acquisition and compilation costs for the customer.

For the motels this is a useful service because it potentially increases the number of people who will see the room availability for a particular venue. For example, you may do a manual search and compare hotels A, B, C and D but not bother with E, F and G because it takes too long or you do not know about them. The website compiles all of the hotels - A to G – helping hotels increase their exposure to customers making a booking. For hotels, whose empty rooms cannot be inventoried, this increased chance of a customer finding their premises through the website is a useful benefit.

The business operating the data compilation service gains its revenues through advertising on the website and through the commissions from motels for accommodation bookings made through their site.

2.26 Describe ways in which you think the purchasing processes of a manufacturing organisation would be different to those of an aggregator.
(LO2, LO5)

Manufacturers are different to aggregators in one important aspect – where the manufacturer deals in a physical good that can be inventoried and requires physical premises for its storage, the aggregator provides information based products. These are intangible. Consequently, where the manufacturer's business processes will focus on issues of supplier selection, raw materials acquisition and the design of conversion processes to convert the physical inputs into outputs, the aggregator will have a different structure. While the aggregator still, in a sense relies on suppliers (i.e. the source of the data that their business is based on), their product does not have the physical presence or requirements like that of the manufacturer's. Accordingly, the aggregator's purchasing process will be more concerned with access to data which is compiled and used to provide value to the customer.

Aspects that could be mentioned include:

- Difference between physical and information based products:
  - Activities required in purchasing process.
  - Flexibility in manufacturing / producing the product.
- Difference resource requirements within the process:
  - Manufacturing may be labour or machine intensive whereas the aggregator would rely more on computer technology in the delivery of the information product.

2.27 Table 2.8 provides data on how businesses use technology to facilitate working from home and working from other locations. In relation to these ideas:

(a) How might employees working from home impact on the design of a business process?

(b) What could be some of the benefits and risks of allowing employees to work from home?

(c) Describe a situation where an employee may be working from locations other than home. How might technology support such activities?

(LO9)

(a) When employees are able to work from home the business process can be impacted by an increased incorporation of technology. Without the use of technology (for example being able to log in to networks remotely) the execution of activities in the business process could be delayed (i.e. waiting for the communication of information to others within the process before they can carry out their assigned tasks). Thus, to the extent that those working from home are performing key activities in the process then the need for technology to facilitate communication in a timely manner would be expected.

There may also be a tendency to build in more observation controls in a process where employees are working remotely, to deal with the risk of employee slacking or not carrying out tasks in the specified manner.

(b)
Benefits:

- Signals employer trust in employees.
- Employee flexibility.
- Reduced office space/infrastructure requirements.

Risks:

- Employee slacking.
- Occupational Health and Safety control is reduced.
- Less collegiality/shared spirit among employees due to them not seeing each other.

(c) Employees who work on the road could fall into this category. An example is that of a salesperson or site inspector. The nature of their respective roles is such that they must travel between different locations and act as an intermediary between the client and the company.

For example, in the case of the salesperson, they will go to client sites and inform them of product upgrades, gain feedback on the current range of items and capture this data. Technology can play a crucial role in this scenario – it can facilitate an easier communication between salesperson and client. Examples include the use of tablets or laptops with remote connections to the salespersons office, allowing data on customers (for example purchase history, product preferences etc.) to be accessed in real time. It could also allow orders to be placed immediately and being able to advise customers when products are available (for example details on backorders, production schedules etc.). In addition, it makes the transportation of data easier – just think of the traditional scenario of having to carry around catalogues and product prospectuses, as opposed to being able to log on remotely.

In the case of the sales person and technology the technology is supporting the tasks that get

performed. While the objective of the tasks may not alter (i.e. solicit feedback from customer and gather new orders) their timeframe and sequence could because of accessing real time data.

2.28 The process of ordering food for home delivery has changed with the advent of internet communication. Here is a description of the process before and after the application of technology within the takeaway restaurant XYZ Meals. XYZ also offers eat-in facilities but these are not considered in this case description. Based on the case in the chapter:

(a) Describe some of the strengths of the design of the pre-internet process.

(b) Describe some of the weaknesses of the design of the internet-based process.

(c) Identify the main activities that occur in each process. Briefly describe their aim and how they relate to each other.

(d) Identify the customer(s) of each process.

(e) Explain how the parties you have identified in (d) are customers.

(f) Suggest reasons why shifting to Find Your Food may be of benefit to XYZ.

(g) Suggest how the introduction of the internet technology could help XYZ business carry out its process.

(h) As a customer, suggest some advantages and disadvantages of each process.

(i) Explain why XYZ may be reluctant to integrate its sales through Find Your Food.

(j) Evaluate the extent to which the application of technology seems consistent with XYZ's operations.

(k) Identify three measures that XYZ could use to gauge the performance of its processes (before and after joining Find Your Food). For each measure, explain how it relates to the performance of the process and what it tells management about process performance.

(LO9)

(a) Strengths of the design of the pre-internet process:

- The customer only has to deal with one person over the phone
- Process facilitates dual customer-payment methods
- Potentially allowed for the restaurant to get to know their customers on a personal level, since they were dealing directly with the customer

(b) Weakness of the design of the internet-based process:

- The business loses control of customer data and details
- There is a potential for data inaccuracy – data is entered by the customer
- For the restaurant there is potentially an increased delay between delivery of the order and receipt of payment
- The restaurant incurs a commission fee for all online orders that are received

(c) Major activities and how they relate:

Major activities	**Original Process**	**Electronic Process**
Capture the order	The aim at this point is to get the customer's order details and confirm the means of payment Order form is prepared Payment method is determined Credit card processed (if credit)	The aim is to have the order details entered by the customer Customer selects restaurant Customer enters menu selections and payment details Customer confirms the order Order is emailed to restaurant
Meal Preparation	Based on the details in the previous stage the kitchen prepares the meal. Order details are forwarded to the kitchen Meals are prepared	Based on the orders received through email, stage the kitchen prepares the meal. Order email is printed out Kitchen prepares the meal
Meal Delivery	The aim of this stage is to get the meal to the customer and collect the payment (if cash from the customer) Meals are collected from kitchen Meals delivered to customer Customer signs to acknowledge receipt of meal Payment is collected	The aim of this stage is to get the meal to the customer and collect their signature on the order form. Meals are collected from kitchen Meals delivered to customer Customer signs to acknowledge receipt of meal
Manage Receipts	This stage aims to accumulate the takings for the day and ensure they are all accounted for. Forward documents to manager Place cash in store register Reconcile receipts	The aim of this stage is to prepare the necessary information to enable the restaurant to be paid. Order forms are summarized and a payment claim is prepared and sent Matching of details on Payment claim to orders in the system Payment transfer

(d) In the discussion in the chapter customers are viewed as those who receive outputs of a system. With this perspective in mind, the customers of the process can be identified as:

- Food purchasers – they receive the meal from the restaurant. They are the ultimate end-customer of the process.

It could be suggested that customers also exist within the organisation. For example:

- Restaurant – is a client of the online ordering system – they pay a fee to have their restaurant included in the database and incur a fee for each order made through the website. They are customers of the website provider however they are not necessarily customers of the process itself.

The distinction of areas within the restaurant would need to be made – i.e. the different departments or areas that use outputs from the ordering and preparation process. This could include:

- Kitchen – receives the order details to enable the meal preparation to occur.

Ordering and logistics within the organisation – they would receive information about orders and stock levels in order to ensure food levels are sufficient for customer demand.

(f) XYZ may benefit from shifting to Find Your Food for the following reasons:

- The move recognizes the shift towards the importance of data in managing and operating a business process.
- Making menu details online and allowing them to be promoted by Find Your Food and made known to a wider audience.
- This is akin to the way hotels make their reservation data available to online sites like WOTIF and NeedItNow, enabling them to increase their exposure to potential customers.

(g) Internet technology could help XYZ in a number of ways, with these including:

- Providing cost efficiencies in the management of their ordering services.
- Providing greater reach to potential customers through the online search facility.
- Potentially the internet could be used to integrate with suppliers, allowing better management of food stores.

(h) Advantages and disadvantages:

Old Process	
Advantages	- Direct contact with the restaurant, allowing for personal interaction and a building of relationship with the people - Easy for customer to enquire about specifics of menu items, request customisations to meals etc.
Disadvantages	Difficult to shop around / compare different restaurants
New Process	
Advantages	Facilitates easy search and compare across different restaurants Exposure to new restaurants / previously unknown restaurants
Disadvantages	Personal data gathered by an additional party (the web provider) Potentially higher prices if the commission / transaction costs are passed on to the customer by the restaurants Impersonal – interacting with a computer/online ordering interface Difficulty in querying menu items / specials / requesting customized meals

(i) XYZ may be reluctant to integrate its sales through Find Your Food for several reasons, including:

- Potential for loss of existing customers who, upon discovering the website, may shift to other restaurants as a result of the ease of search and comparison that the web site offers (note however if customers were going to leave they probably would anyway, so the extent of validity attached to this concern may be diluted).

- The use of the online system adds a cost, presumably bringing about an initial registration fee to sign up to Find Your Food and then an ongoing commission, based on meals sold through the website. Depending on the cost/benefit of these costs against the expected increase in sales and exposure, the online option may not be favourable.

- Depending on the strategic positioning of the restaurant, XYZ may see the use of the website as being in conflict with their strategy, potentially confusing their brand image. For example, fast food restaurants and take away pizza stores tend to be prolific in the online world, however your 5-star restaurants are less inclined to offer online ordering and take-out meal options.

(j) The answer to this question could be a matter of interpretation from the case materials.

From what we know about XYZ, we can deduce that they have/offer:

- a maître de (a head steward or head waiter).
- in-house and take-out meal options.
- specials and a regularly updated menu.
- a reasonably well-developed front of house and back of house.

Indicators from these facts would tend to point towards XYZ being a restaurant that competes on the basis of the quality and interpersonal experience that they can offer their customer. The existence of a maître de on its own could be seen as an indicator of this position. The process would appear to be customer-centric and personal. While this may be clouded a little by the fact that they offer both dine-in and take-out, the overall image suggests reasonable quality food and attention to the needs and wants of individual customers.

If we were to invoke Porters strategic framework, this would apparently position them closer to the quality based strategic position than the cost based strategic position. This conclusion about strategic positioning would flow on to the broader conclusion that the adoption of the web-based third-party provided ordering system is inconsistent with their strategy. The fact that such a web-based environment encourages ease of comparison by customers tends to suggest that a cost-based focus could result. It is probably reasonable to assume customers using this service are seeking a meal that is quickly attainable and easy on the wallet.

(k) Three measures of performance:

Process	**Measure**	**Explanation**
Old Process	Lead time – order to delivery	This measure is an indicator of efficiency, measuring how long it takes from order point to delivery point. Given that the business is selling food, the aim would be to get the food to the customer as quickly as possible.
	Repeat business	Repeat business is a measure of customer willingness to return to the restaurant / order their food again. It could be broadly viewed as an indicator of overall satisfaction with the food and service of the restaurant.
	Complaints due to incorrect meals	While efficiency is important, it is also important that the right meals are delivered to customers (i.e. all items ordered are delivered, food matches the specifications from the customer when ordering). The number of complaints due to incorrect meals is a direct indicator of the restaurants ability to get the right food to the right customer.

Process	**Measure**	**Explanation**
New Process	Number of new customers	The online forum potentially opens the business to a new range of clients. A measure of the number of new customers could be seen as an indicator of how effective the online channel has been in penetrating the market.
	Sales revenue from online as a percentage of total sales	The website offers a new channel for marketing and selling the product of the restaurant. A proportional measure of online sales as a component of total revenue could indicate the extent to which the online option is meeting its aim. Trends in this number over time could also be a useful measure in this regard.
	Lead time – Order to Delivery	This measure is an indicator of efficiency, measuring how long it takes from order point to delivery point. Given that the business is selling food, the aim would be to get the food to the customer as quickly as possible.
	Complaints due to incorrect meals	While efficiency is important, it is also important that the right meals are delivered to customers (i.e. all items ordered are delivered, food matches the specifications from the customer when ordering). The number of complaints due to incorrect meals is a direct indicator of the restaurants ability to get the right food to the right customer.

2.29 Refer to the discussion of the use of mobile phones for payment that is contained in the chapter. Based on the discussion:

(a) What is NFC technology?

(b) Discuss whether you think the adoption of this technology could provide a sustainable competitive advantage.

(c) Describe, using examples, ways in which you think this technology could improve the way business processes operate.

(d) Evaluate the extent to which you think customers would be willing to adopt the technology. Suggest why some customers may resist the change.

(e) Evaluate the methods of payment for a business process — EFTPOS, credit card and the proposed NFC mobile phone payment technology — based on their risk to a business and a consumer. Which would you recommend and why?

(f) Do you agree with the following statement: 'If all NFC technology does is change payment from a credit card to a phone-based technique, why bother? Nothing changes!' Explain your reasoning.

(LO1, LO9)

(a) Near Field Communication 'NFC' technology is a system that allows device-to-device wireless communication. This communication facilitated by a chip which is embedded within a portable device, allowing it to communicate with chip readers and other devices equipped with NFC chips.

(b) The issue of whether the bank could gain an advantage by using the technology is an interesting one. If we refer back to Porter's five forces, a common framework for analysing competitive advantage, we see mixed results. Of the traditionally referred to 'Big' Australian banks, the Commonwealth is the only one to have gone public with the use of NFC technology. The case mentions other banks having trialled variations of the concept, but to this point the Commonwealth is the only bank to have made it available to the public.

Arguably, this could be a distinguishing factor for the bank in acquiring and keeping customers – particularly the younger market that may be more tech-savvy and keen on the use of new gadgets.

In terms of creating a barrier to entry that inhibits other banks' ability to compete, this is less conclusive – as the case describes, other banks have tried the NFC technology so the availability of the technology is not necessarily an issue. It could aid in dealing with substitute products. As a range of payment options emerge – PayPal, BPAY, online banking and so forth, the use of the NFC method for credit transactions could be a way of slowing down customer switches to alternative payment methods.

The adoption of the technology could also represent an opportunity for the bank to develop ties with technology companies. For example, it was mentioned that the NFC technology was at this point only available on Apple phones. The bank data also suggest that this represents majority of their customers. Perhaps this could allow further developments to occur.

(c) Potential improvements that could come about through NFC include:

- *Security*: the risks posed to a business process through the use of lost or stolen cards is potentially reduced, with this facilitated by the layers of verification built in to the phone and the payment application.

- *Efficiency*: the process of swiping a phone device is potentially quicker than the process of swiping a credit card and then verifying PIN or signature details. (Note, however, the value of transactions that can be executed is capped). Accordingly, there could be a reduced transaction time from the technology.

(d) The probable outcome is that the adoption of the technology by patrons will follow along the lines of diffusion of innovation theory. Naturally there will be some early adopters who are keen to try the new technology and have the technology before others.

Once it is tried and tested it would be reasonable to expect a further adoption by those keen to use the technology but also keen to wait for any potential bugs to be ironed out. The classic diffusion of innovations distribution is normally distributed.

If we were to make predictions based on the type of customer who would adopt the technology, you would expect the audience to be the younger generation, who are keen on new devices and also users of Apple products (after all the icarte case will only work on Apple mobile phones.

Some customers may be reluctant to adopt the technology for several reasons, including:
- do not have a mobile phone (for example, the older demographic), or they do not have an Apple iPhone.
- are concerned about the potential risk that embedding credit card payment details in a mobile phone may carry.
- do not have credit card accounts (at this stage the NFC facility can only be linked to a particular type of credit card.

(e)

EFTPOS:
- This is a good option for a business. EFTPOS terminals allow customers to spend up to their available bank account balance, reducing the risk of lost sales due to insufficient cash. A transaction via EFTPOS is either approved or declined at the point of sale reducing any potential for bad debts, which means the impact on cash flow and turnover on receivables and ability to pay suppliers is not impacted. EFTPOS is low risk for both the customer and the vendor.

CREDIT CARD:
- The risk for the credit card is primarily borne by the credit card provider. The vendor does not bear the risk of bad debts with commercial credit cards. However, executing transactions with credit card payments will, in some instances, lead to a fee being added on to the value of the transaction in order to cover the transaction costs imposed by the credit card vendor. In addition, credit cards can present a risk if the person in possession of the card is not the authorized bearer (for example lost or stolen cards). To the extent that cards can be inspected and signatures checked at the

point of sale this risk can be mitigated. For the customer, the risk with credit cards comes about in a couple of ways. Firstly, there is the possibility that their card could be lost or stolen and subject to unauthorized use. Secondly there is the risk that comes about from not being able to pay the necessary payments each month.

NFC:

- Conceptually the NFC technology carries the same risks as those of the credit card – for example the customer being unable to make payments or the mobile phone being lost or stolen. However, whereas with a credit card the bearer of a stolen card has access to a card number, CSV number, expiry date and sample signature, this is not so with the NFC system. Within NFC on the iPhone there are embedded controls – for example, the application can require a PIN before being able to be accessed. This is on top of any access controls that may have been setup on the phone. In addition, credit card numbers and details are not obviously stored on the phone. As a result, you could argue that vendors executing transactions using NFC can be relatively confident that the bearer of the phone is the authorized credit card holder – unless details have been shared with others.

Student recommendations for this question may vary, depending on their perceived preference for cash flow or security or risk profile. Any suggestion should draw on the characteristics of each payment method.

(f) This line of argument sees credit cards and NFC payment methods as perfectly substitutable products for consumers. While it is true that there is an element of overlap between NFC and traditional credit card payment (i.e. the use of credit accounts for pay pass credit devices in stores), there are also some differences the distinguish NFC from credit card payment alone. One of these is the ability to make transfers using email and social networks, with these able to be executed from the mobile phone in a reasonably secure manner. This functionality does not come with credit card only means of payment. Accordingly, it could be argued that the application of NFC to mobile phones is not just about credit cards. Rather, it is about adding to the suite of financial products that are available to customers.

It could also be argues that the switch to NFC also adds a layer of convenience to the customer, having to only carry around their phone with them but still being able to carry out banking functions. Given the number of credit avenues and the accumulation of cards this could lead to, having it all able to be executed through one device could be an advantage.

2.30 Referring to the discussion about the importance of innovation in outsourcing in AIS Focus 2.2:

(a) Why does innovation matter to businesses when they are planning to outsource a business process?

(b) If innovation is unlikely to occur, why would an organisation choose to outsource a business process?

(LO7)

(a) With the growth and maturation of the outsourcing of business processes nowadays there is an expectation that a BPO service provider will be able to deliver on long term innovative projects. In part this expectation is about the benefits form innovative change defraying the costs of outsourcing, and in part about being able to access additional skill sets to solve problems in an innovative manner.

(b) An organisation would chose to outsource even when innovation is unlikely to occur if they do not have existing capacity or required skills in house, or where they believe they can access economies of scale based cost reductions through an outsourcing partner.