

Essential Operations Management Lecturer resources

Guideline answers to short case study questions

This document contains answers to the short case study questions contained within each chapter. For extended teaching notes relating to the long case studies at the end of each chapter please refer to the lecturer zone of the companion website.

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Managing Operations

1

Teaching resources for case studies

For each case, an outline of key themes and learning points is provided, as well as suggestions for how cases can be used in class, some ideas for discussion and sample answers to the case questions. Please note, comments and guidelines to a small selection of the cases have been included on the student's website, to allow students to study the issues discussed in these cases in more detail.

CASE 1.1 OPERATIONS TASKS IN DIFFERENT ORGANISATIONS.

Please note that discussion of this case has been provided in the students' website, for self study: <http://www.palgrave.com/business/hillessential/students/Hillessential-answers-to-short-case-questions.pdf>

CASE 1.2 OPERATIONS MANAGEMENT TASKS AT PORTIOLI'S SANDWICH BAR COFFEE BAR

Guideline answers to case questions

Review Portioli's sandwich and coffee bar and identify, using the contents list at the beginning of this chapter:

- 1 How the operations function works.**
- 2 Which chapter topics in the book are reflected in the details provided.**

1 How the operations function works

As with all case studies, it is helpful to begin a discussion of this case with an overview of the market. This sets the scene and establishes the business context against which the operations function is managed and can be reviewed.

The Market

You may or may not wish to talk through which of the following factors given in the case are order- winners or qualifiers. Either way, it is useful to identify which are provided by

operations and also to highlight that price is a qualifier in this market. It is helpful to illustrate and reinforce this throughout the class discussion.

Criteria	Order Winner (OW)/Qualifier (Q)/order-losing-sensitive qualifier (QQ)	Provided by operations?
Food quality and freshness	OW	✓
Beverages-quality	OW	✓
Range of products on sale	OW	✓
Short lead times	QQ	✓
Price	Q	✓

Managing capacity

In the case of Portioli's, the key is to manage capacity, as too few staff results in longer lead times (order-losing sensitive qualifier, see above) and too many results in increased costs.

Sales profiles by hour (or even half-hour), day and week are key sets of data to use when determining staff requirements.

Managing the supply chain

The key to ensuring food and beverage quality lies with identifying suppliers who can constantly provide products to specification and deliver on time.

Managing inventory

Holding items in store (for example, coffee, tea, butter, eggs, ham, bacon and flour) enables Portioli's to negotiate better prices and facilitates the day-to-day running of the restaurant. Deliveries of more perishable items would be in line with anticipated demand.

Scheduling

Ensuring the correct number of staff are scheduled, and that these staff are appropriately skilled, is a key task for operations. This ensures that queue lengths and costs are balanced (see the section “Managing capacity” above).

Delivery systems

Typical service delivery systems involve customers at the points where they order and pay for their food and beverages. Those eating inside will then select a table and have their order brought to them. The take-away service further uses customers as a form of capacity as they undertake the whole service themselves from selection to delivery. Using customers in this way reduces costs and the task of scheduling staff.

Managing quality

Ensuring that supplies of food and beverages meet the business’s specification is the first part of managing quality conformance. Here the appropriate equipment (for example, coffee machine and toaster) and staff skills then ensure that the food and beverage processing task is completed consistently to specification (quality conformance).

2 Which chapter topics in the book are reflected in the details provided?

Completing a table similar to the one below reinforces the core nature of the operations task:

Aspects	Relevant chapter
The market	2 Operations strategy
Managing capacity	7 Managing capacity
Managing the supply chain	11 Managing the supply chain
Managing inventory	9 Managing inventory
Scheduling	8 Scheduling and executing operations
Delivery system	4 Delivering services
Managing quality	10 Managing quality

CASE 1.3 OPERATIONS – A KEY ROLE IN THE RETAIL CHAIN

Guideline answers to case questions

1 What makes the store manager of a retail company a classic example of an operations manager?

An effective way of handling this question is to get students to list the classic characteristics of the role of operations as they relate to a large retail store manager. Some characteristics include:

Managing a large cost centre

This can be subdivided into:

- Assets – including buildings, inventory, fixtures, fittings and vehicles
- Costs – including salaries (there are 700 staff) and power and maintenance costs.

Managing people

Details which affect the role of the operations manager in a large retail store include:

- The large number of staff (around 700).
- The mix of full and part-time employees.
- The fact the store is open 7 days a week.
- The long opening hours - from early morning to late evening.
-

These figures represent a huge task in terms of numbers, different sets of personal and family needs, and issues ranging from staff development through to absenteeism and disciplinary procedures.

Managing the short and long term activities of the business

Day-to-day management involves:

- Large costs to keep within budgets
- Staff-related issues including absenteeism, holidays, training and development
- Managing the store over long working days when open to the public and night-working on tasks such as receiving deliveries, filling shelves, cleaning and maintenance
- Staff rotas.
- Filling shelves during the day.
- Completing customers' online shopping orders.
- Handling problems from customer complaints through to staff grievances.
- Keeping queues to an acceptable length.

Long-term and strategic aims include:

- Meeting sales revenue and profit targets.
- Achieving cost-reduction targets.
- Maintaining skills mix to provide the required day-to-day flexibility of staff.
- Working to increase the number of regular customers.

Managing technology

This includes:

- Managing the introduction of technical developments aimed at reducing costs, speeding up processes and improving the data available to help manage the store.
- Staff retraining due to technical developments and changes.
- Ensuring the appropriate technical support staff are available.

Managing complexity

The large number of staff, long hours of opening, number of customers (200,000) entering the store each week and the sales revenues involved all point to a complex task.

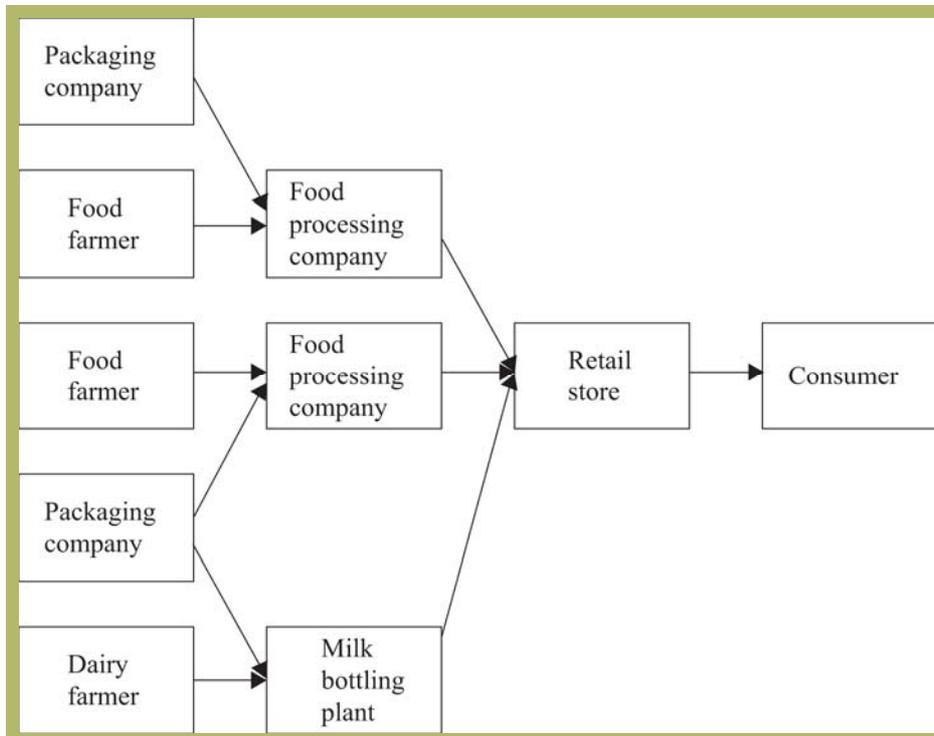
2 From the facts given here assess the size of the operations task and its impact on corporate financial performance.

The key facts given in the case that would have an effect on Sainsbury's corporate financial performance include:

- *Sales revenue* – at about £1 million sales per week, maintaining this level of sales would be an integral part of the company's performance.
- *Costs* – 700 part and full-time staff would represent the bulk of the variable costs of the store. Other costs such as power and maintenance would be of a more non-variable nature and because of this there would be less opportunity to increase or decrease these types of costs in line with higher or lower sales figures.
- *Profits* – maintaining sales revenue targets and keeping costs within budget would contribute to meeting corporate profit predictions.

3 How is the store manager a key link in the supply chain?

A good way to discuss this question would be to get students to come up with a sample supply chain similar to that below. Note that this is just for illustrative purposes and only covers a few of the wide range of products sold, however it really helps to demonstrate the key role of the store in the supply chain:



The flow chart illustrates how a retail store draws together all the various activities in the supply chain, making it easier for consumers to purchase a wide range of goods.

CASE 1.4 A CUP OF COFFEE – PRODUCT OR SERVICE?

Case outline

The purpose of this case study is to reinforce the points made in Figure 1.8, which illustrates the mix of services and products involved in a range of purchases.

Guideline answers to case questions

1 What operational factors might contribute to the fact that the hotel coffee is more expensive?

Factors that contribute to the price of hotel coffee are

- Higher specification coffee – the coffee beans will be of a higher specification than the vending machine alternative
- More choice – typically more than one type of coffee is on offer
- Coffee, milk and sugar are served separately, allowing customers to tailor the mix of these to meet their own preferences
- Coffee is served in china cups, which require cleaning and replacement after wear and tear
- Volume - there would typically be more than one cup available in a pot of coffee
- Decor and surroundings are part of the service
- In the hotel, a customer can sit at leisure and enjoy the coffee in a more unhurried environment.

2 Now think about the last cup of tea or coffee you drank. How did it compare with two scenarios outlined in Case 1.4?

This question helps students to reflect on what they've learned from the case and apply the elements discussed to their own experiences. Asking for their thoughts and either listing or recalling them is a good way to round off the case discussion.

Operations Strategy

2

Teaching resources for case studies

CASE 2.1 MARKET POSITIONING OF BOTTLED WATER

Case outline

Case 2.1 provides a simple illustration of some of the key issues that are discussed throughout Chapter 2. The case could be used during an initial class on operations strategy to introduce students to the process of understanding markets and get them thinking about how strategy must be developed and implemented across all functions. You could use an actual bottle of water as a prop during the discussion to help bring the session to life.

Guideline answers to case questions

1 Why would marketing place this customer in a 'beverage' or 'soft drinks' market segment?

From a marketing point of view, placing this customer in the soft drinks or beverage segment makes sense in that it is a recognized sector for which data is collected and information is provided. As a result, marketing can easily gather information on competitor products and locate potential customers. In essence:

- 'Soft drinks' reflects the essential nature of the product in terms of what customers purchase and consume
- It is easy to gather customer data
- It is easy to gather competitor data

In addition, you might encourage students to think about other ways in which the marketing function could target this sector, including:

- a. Attendance at trade shows.
- b. Technical developments within the sector will be reported and monitored.
- c. Advertising in trade journals and trade literature.
- d. Provision of in-house expertise to monitor technical developments and engage with their counterparts in their customers' businesses.

Sector data from government and other sources (such as national food and drink organizations like the Food and Drink Federation) would also be available, giving insights into trends in growth and other developments in this sector.

2 Why is operations' view of customers focused on qualifiers and order-winners such as price sensitivity, length of delivery lead-times and size of demand peaks?

Operations' strategic task is to meet those competitive criteria for which it is solely or jointly responsible. In this way it helps a business gain the first sale and also secure repeat orders. For operations, the relevant strategic insights into customers requirements, therefore, concerns understanding the order winners and qualifiers that win and keep a customer's business and for which it is solely or jointly responsible. These criteria (order-winners and qualifiers) will differ in terms of mix and emphasis depending on the service/product and/or customer, and so it is essential for the business as a whole to identify what these are and for functions such as operations to decide what action is required in order to compete on relevant criteria, such as delivery speed (length of delivery lead times), quality conformance (making to specification) and delivery reliability (delivering to promised dates).

As a result, dimensions beyond relevant order-winners and qualifiers are of little concern to operations. For example, in Case 2.1, the product to which the label will be attached is not relevant to operations' strategic task. Even where a label has to withstand unusual conditions (for example, frozen products), the required properties of the paper/board, inks and adhesive coatings will have been built into the design specification of the label.

3 How would you use both perspectives to arrive at an overall strategy?

The inputs from all functions are required when determining the order-winners and qualifiers and characteristics of particular service/product's customers and markets. A discussion of these characteristics (in which all functions participate) is the key step in determining the strategic tasks of the functions of a business. The simple illustration in Case 2.1 is provided to highlight the different views of two main functions that each contribute to this eventual understanding.

This question intends to get students thinking about how different functions' insights might be incorporated into an overall strategy. Students should think about what information the marketing function might gather on market requirements (some sources for their research are outlined in question 1 above) and how this research might contribute to a strategy – for example how labels look in that particular sector. This information then needs to be integrated with operations' insights – for example the current margins (which reflect the level of price sensitivity) and any opportunities to reduce cost; likely demand peaks and the impact that meeting these periods of high

sales might have on operations; the length of customer lead times; and the need to deliver on time. Both marketing and operations' perspectives need to be taken on board so that informed decisions can be made about which customers a company should keep (and grow), which it should discourage (and shed).

CASE 2.2 CUSTOMER SEGMENTATION IN THE ELECTRICITY INDUSTRY

Case outline

This case is designed to show how critical it is for a business to look at its markets from as many perspectives as possible. It is the combination of these different views that provides the total picture and on which business strategy decisions need to be based.

Guideline answers to case questions

1 List side by side the market dimensions used above by marketing and operations

This is often best handled by developing a matrix similar to that below:

Function	View of markets	Preferred segments to target (in order of priority)
Marketing	Size of sales revenue	<ul style="list-style-type: none"> • Large businesses • Small and medium sized enterprises (SMEs) • Residential customers
Operations	Size of profit margin	<ul style="list-style-type: none"> • Small and medium sized enterprises (SMEs) • Residential customers • Large businesses

2 How would you use both perspectives to arrive at an operations strategy?

Sales revenue and project margins represent two important dimensions in growing a sound business. Identifying which segments to grow to meet sales revenue and profit growth targets can only be agreed once the essential data on revenue and margins is available from the marketing and operations functions. Students should think about how the different perspectives of marketing and operations would need to be integrated in a final strategy, and how to proceed if and when there is a conflict of interests between functions. For example, looking at the matrix above, from a sales perspective the most

effect way to increase sales revenue is to grow the large business sector. However, from an operations perspective, the least effective way to increase profit is to grow the large business sector.

CASE 2.3 INTEGRATING MARKETING AND OPERATIONS AT ALDI

Case outline

This case complements Cases 2.1 and 2.2 by providing an illustration of how marketing and operations have co-operated to provide low costs in support of Aldi's 'price leadership strategy.'

Guideline answers to case questions

You could suggest that students conduct a review similar to the one below in order to demonstrate this cooperative effort, or orientate a class discussion around the themes outlined in the table. It may also be helpful for students to refer back to Figure 2.5 'Operations and marketing perspectives on key issues' during the discussion to show the movement by marketing from its classic stance, particularly on product range to one that helps enable operations to deliver low costs.

Function	Aspect	Approach
Marketing	Product range	<p>Limited range:</p> <ul style="list-style-type: none"> • enhances volumes • reduces purchasing costs <p>Predominance of own-label products.</p>
Operations	Layout	<ul style="list-style-type: none"> • Inexpensive lighting. • Basic display units reduce the cost of fixtures and fittings. • Using manufacturers' original packaging reduces staff costs (less time required to load shelves).
	Support staff	<ul style="list-style-type: none"> • Few support staff and less help/advice around – lower staffing costs.

CASE 2.4 OPERATIONS DEVELOPMENTS AT BENETTON

Case outline

This case provides a detailed outline of several aspects of Benetton’s business strategy, and would be a good case to use to get students thinking about strategy in more detail as a follow on from earlier discussion. A good way to open a class discussion on this case would be to encourage students to establish that the company is competing in a fashion market and get students to outline the dimensions that would characterise a market of this type. At this point it is not necessary for students to review this case in writing. Instead, the purpose of initial discussion should be to get students to start thinking about what a fashion market entails.

After students have established Benetton’s market, the next step is to get them to identify the order-winners and qualifiers that are relevant to this market. When undertaking this task it is sometimes much easier to postpone the debate about which factors are order-winners and which, qualifiers. This typically becomes clearer as the discussion progresses.

Guideline answers to case questions

1 What do you see as the order-winners and qualifiers in Benetton’s markets?

From the text students should be able to identify the following competitive factors as key to Benetton’s success (6,300 shops in over 120 countries with a sales revenue of €2,050 million in 2009). Factors can be grouped into five categories:

Category	Benetton’s market requirements
Design	Modern designs reflecting current trends
Product range	Five collections per year Range of bright, unconventional colours
Price	A qualifier resulting in high margins
Time to market	Fast to market with new styles
Delivery speed	Quick delivery in response to high sales of a product

2 Identify the key ways in which operations supports these market requirements.

Category	How operations supports these requirements
Design	<ul style="list-style-type: none"> • Materials (including new materials such as ‘very light cashmere’) • Fast adaption to changes in fashion trends • Now five design collections per year
Product range	<p>Originally only two collections per year – operations now handles five collections per year</p> <p>Continuous introduction of new designs</p>
Price	<p>Lower costs by outsourcing labour-intensive tasks to low-cost countries</p> <p>Process investment - e.g. the logisitics centre at Castrette, Italy, which handles 120,000 incoming and outgoing boxes a day, operated by only 28 staff</p>
Time to market	<p>Fast adaptation to changing market trends</p> <ul style="list-style-type: none"> • One sequential chain from design to R&D to operations to sales
Delivery speed	<p>Four hubs, two for Asian and two for American markets</p> <p>Integrated chain that maximizes the speed of coordinated interconnections between the basic stages of the production and distribution process</p> <p>More control and feedback on sales trends with the introduction of ‘directly operated stores’</p> <ul style="list-style-type: none"> • Lead-time related tasks (e.g. cutting, weaving and dyeing) kept in-house using own local factories (with 10 factories in Italy)

Designing Services and Products

3

Teaching resources for case studies

CASE 3.1 SERVICE AND PRODUCT DESIGN AT ASAHI BREWERIES

Case outline

This case provides an example of the role of design as an order winner; it also illustrates the process Asahi undertook in developing its Super Dry beer specification, in terms of taste, strength and colour.

When using this case to open a class discussion, it is useful to get students to list the order-winners and qualifiers of the beer, of which design (the beer's 'Super Dry' specification) is one:

Criteria	Order-winner or qualifier?
Design	OW
Price	Q
Product range (size of containers)	Q*

* Initially, the 3-litre container would have been an order-winner (see below).

It is worth noting that, while the 3-litre container would initially have been an order-winner, undoubtedly competitors would have responded by launching their own 3-litre version (there is not patent available for providing a 3-litre container), thereby changing this factor from an order-winner into a qualifier.

CASE 3.2 PRODUCT RESEARCH AND DEVELOPMENT AT MICROSOFT

Please note that discussion of this case has been provided in the students' website, for self study: <http://www.palgrave.com/business/hillessential/students/Hillessential-answers-to-short-case-questions.pdf>

CASE 3.3 DESIGN AND DEVELOPMENT AT GLAXOSMITHKLINE

Case outline

When pharmaceutical companies develop new products they go through an extensive testing and approval process before being given the go-ahead to make and sell items. At an early stage companies patent their research findings in order to protect them.

The impact on overall corporate profits of successful drugs is very significant but, once the patent period is over, a product can then be manufactured and sold by any company. Such products are then classed as 'generics' and the profits generated fall significantly for two reasons:

- Alternatives are available and so market share falls.
- Prices fall due to market competition leading to smaller profit margins.

Guideline answers to case questions

Describe the fundamental changes in approach adopted by GSK. What are the advantages?

The key for pharmaceutical companies is to keep a continuous flow of new products through ongoing research. By investing in a high volume process at the initial research stage (generating new molecules and roboticized screening) GSK is able to reduce the time spent in the early stage of product development. The key advantages here are:

- A marked increase in the opportunity to identify possible compounds to combat disease.
- Companies typically patent a compound as soon as there is the possibility it could be developed into a commercially viable product. While this protects the research findings it also starts the patent protection clock ticking and therefore eats into the period when a company can benefit from the high profits associated

with the patent. Therefore, any time gained by speeding up the early stages of the research process brings significant benefits.

CASE 3.4 MODULAR DESIGN AT SONOCO

Guideline answers to case questions

1 How is modular design used by Sonoco and others?

This case provides a simple but effective illustration of modular design and how it can be used to tailor the service to each customer. This increases fit between customer requirements and what is provided helps to keep prices low, as customers only buy what they need. A table similar to that below is a useful way of showing the outcome. Here, the basic module and various options would be priced separately and, as shown, each customer would put together an appropriate programme:

Customer Design A	Module										
	Basic	Options									
		1	2	3	4	5	6	7	8	9	10
A	✓	✓		✓	✓			✓			
B	✓	✓	✓	✓	✓			✓			
C	✓	✓			✓				✓	✓	
D	✓			✓	✓	✓			✓	✓	
E	✓	✓	✓			✓			✓	✓	
F	✓			✓	✓	✓			✓	✓	✓
G	✓	✓	✓			✓			✓	✓	
H	✓										
I (and so on...)	✓	✓					✓	✓	✓	✓	

CASE 3.5 CAPITALIZING THROUGH VOLUME AT ASSA ABLOY

Case outline

This case offers a useful illustration of the knock-on effect of design on the opportunity to consider variety reduction and standardization alternatives. However, this example also illustrates how the potential contribution of these techniques can be limited by earlier business

decisions. In the case of Assa Abloy, the company's growth has primarily come from taking over other lock companies, and in these circumstances it is more difficult to reduce variety and to introduce standard parts into the product design, as the answer to Questions 1 and 2 explain.

Guideline answers to case questions

1 Why are some product ranges less open to variety reduction than others?

As explained in the text, the variety reduction “process questions whether or not retaining all the services and products currently on offer is best for the business as a whole.” This process can only be applied to Assa Abloy in a restricted way because:

- Growth has been world-wide (it has bought out more than 20 lock companies in many different companies) with each domestic market being based on its own range of products with which local consumers associate.
- Local product range designs reflect (and/or influence) the characteristics of local building designs and security requirements.

As a result it will take time (probably several years) to change these perceptions and expectations and so increases the opportunity to introduce more standards/alternatives.

2 Why is the company less able to introduce standardization into its product range even though sales are growing?

The sales revenue growth enjoyed by Assa Abloy has been predominantly achieved by buying out other companies. These companies' sales, in turn, are based on their own products which have, understandably, been designed independently of each other. The use of standard parts has, therefore, been restricted. As a result, it is not surprising that the one exception referred to in the case is the manufacture of exit bars for fire and emergency doors, as these are simple parts where the length and diameter of the bar

would be the only factors that change and would have a high level of commonality in most, if not all countries.

CASE 3.6 INCREASING THE FRESHNESS OF BREAD IN SUPERMARKET BAKERIES

Case outline

Please note that discussion of this case has been provided in the students' website, for self study: <http://www.palgrave.com/business/hillessential/students/Hillessential-answers-to-short-case-questions.pdf>

Delivering Services

4

CASE 4.1 TIPPING AS A MEASURE OF CUSTOMER SERVICE

Case outline

This case provides an opportunity to review several aspects of services and their delivery systems, these include:

- The mix of services/products involved in many offerings (see Figure 1.8).
- The intangible nature of services (you cannot touch them) and the fact that they are consumed at the time of provision.
- The concept of front office and back office within a service delivery system.
- The fact that a service is made up of:
 - Explicit benefits.
 - Implicit benefits.
 - Supporting facilities.

Guideline answers to case questions

1 What makes up the total service offering for a customer during an evening meal at a restaurant?

The service/product mix

The visit to a restaurant is made up of a mix of services and products, made up of the meal itself and the service delivery system involved.

Services are intangible items which are consumed at the time of provision

Once the evening is over then the service comes to an end. However, selecting the restaurant again (a repeat sale) is key to the success of the business, and a consumer's

experience of the service forms the basis for repeat visits as well as recommendation to others – see Figures 1.3 and 2.15.

Front office and back office

While the back office is made up of the kitchen, the front office is made up of the reception and dining areas where the restaurant staff serve customers.

The service package is made up of a mix of explicit and implicit benefits

A service is made up of a mix of:

- Explicit benefits – such as the meal and drink: choice, food specification and preparation.
- Implicit benefits, for example:
 - How customers are received when entering the restaurant.
 - The pace of service – to fit a customer's mood/preference (a leisurely evening or the need to complete the meal in a given time).
- Supporting facilities, for example:
 - Décor.
 - Location and parking.
 - Table position, layout and space.
 - China, cutlery, glasses and napkins.

2 How would the examples here translate into customer management in a boutique clothes shop or hairdressing salon?

There are many comparisons that can be made between the restaurant and a boutique clothes shop or hairdressing salon including:

The service/product mix

A boutique has a higher proportion of product while a hairdresser has a higher proportion of service in the mix.

Services are intangible items

In both the boutique and hairdresser the 'product element' is tangible, while (as is always the case) the 'service element' is intangible.

Front office and back office

Both the boutique and hairdresser are predominantly front office delivery systems

The service package

See the table below.

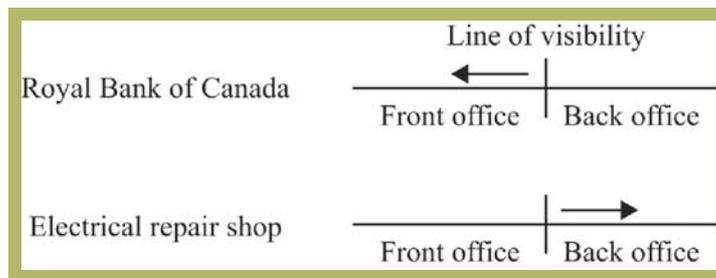
Aspect		Boutique	Hairdresser
Explicit	benefits	<ul style="list-style-type: none"> • Range of clothes • Technical advice 	<ul style="list-style-type: none"> • Style • Cut
Implicit		<ul style="list-style-type: none"> • Recognition (by name) • Attentiveness • Pace/extent of personal service and advice 	<ul style="list-style-type: none"> • Provision of tea or coffee • Discussion of options and outcomes • Range of Magazines
Supporting facilities		<ul style="list-style-type: none"> • Decor • Location and parking • Changing facilities 	<ul style="list-style-type: none"> • Location and parking • Modern and efficient support equipment (e.g. hairdryers)

CASE 4.2 IMPROVING SERVICE DELIVERY THROUGH USE OF THE FRONT AND BACK OFFICE

Case outline

1 How do these two examples differ?

The Royal Bank of Canada and the electrical repair shop have changed the position of the 'line of visibility' thus altering the front office/back office mix as follows:



Royal Bank of Canada moved the line of visibility so that more tasks are now completed in the back office. In this way (as explained in the case narrative) queuing customers would not be able to see staff who, while working in the bank, had not been allocated to directly serving customers. In this way the bank hoped to reduce criticism (silent or otherwise) by customers of the bank's decision not to allocate more staff to reducing queue lengths.

However, while this may help to reduce criticism, longer-than-expected queues would still exist and customers would still be critical (silent or otherwise). The key here would be to rethink the service delivery systems so that staff numbers in the front office are more flexibly arranged to reflect the number of customers waiting.

The electrical repair shop moved the line of visibility the other way. This brought benefits to delivering the service (fewer errors, reduced fault diagnosis time) and to customers (the fault was addressed in full by reducing the times when part of the problem had not been brought to the repair person's attention). There are few downsides to this change, although a better alternative would be to have technically trained staff in the front office, which would ensure a comprehensive analysis of the problem was made and so allowing the skilled repair staff to maximise the use of their time on repair work.

CASE 4.3 MOSCOW SCIENTIFIC INSTITUTE FOR EYE MICROSURGERY

Case outline

This case helps students to discuss and recognise some differences between types of service/product delivery/manufacturing systems that are key to understanding the operations task:

- A special service or product is one that will not be repeated or where the gap between one provision and the next is of such a length that investing in simplifying the process - in order to reduce costs (amongst other benefits) - is not warranted.

- A customised service or product can either be a standard or a special. 'Customised' means that it is made for a customer. For example, a Coca-Cola bottle is customised (the bottle is distinctively shaped for this brand), but to the bottle maker, it is a standard product because of its repeat and high volume nature. In the case example of eye microsurgery, while the eye surgery is performed for an individual patient (that is, it is customised) it is a standard operation and hence can be provided using standard procedures thereby simplifying the process and reducing the time taken to complete the service.

Guideline answers to case questions

What advantages and disadvantages does this approach bring compared to alternative approaches?

The approach developed by the eye microsurgery clinic reflects the high volume nature of this operation. The clinic devised a standardised procedure in order to reduce the time taken, provide the best approach and reduce costs. In that way they could lower the price of the operation and make it more affordable/available to those in need, while making sufficient profit to re-invest in equipment, staff and so on.

CASE 4.4 SERVICE DELIVERY AT A LOCAL HIGH STREET BANK

Case outline

A good way to handle discussion on this case is to set students the task of visiting and observing service delivery in both a bank and post office branch during the week before the discussion. Some issues that could be discussed in relation to the varying choices of service delivery system for a bank and post office include:

- In a bank branch, a limited number of services are provided by staff specialising in particular service provisions (for example, the cashier who handles cash and cheque deposits or withdrawals would redirect a customer to another delivery system if the customer wished to discuss direct debit or overdraft facilities). In this way, customers are dealt with more quickly and there is more certainty over the length of time in a queue.
- In a post office, the whole range of services offered is dispensed by each cashier. This design makes the job more interesting for the staff and also means that customers wait in just one queue and then are served no matter how many individual services they require. However, such a service delivery system design will

typically result in long queues as all customers join the one queue and the time taken to process each customer will typically be longer.

CASE 4.5 PROVIDING PERSONAL SERVICE ONLINE AT GARDEN ESCAPE

Please note that discussion of this case has been provided in the students' website, for self study: <http://www.palgrave.com/business/hillesessential/students/Hillesessential-answers-to-short-case-questions.pdf>

CASE 4.6 SELF SCANNING IN SUPERMARKETS

1 Why are supermarkets introducing self-checkout systems?

As Figure 4.9 shows, supermarket shopping has many benefits for the customer. However, the last factor in Figure 4.9, 'More customer control within the delivery system' applies only to the point of checking out. It's here that lengthy queues can often form and customers effectively 'lose control'. However, introducing self-checking systems has largely returned this element of the service delivery system to a customer's ownership.

2 Consumers recently ranked self-checkout technology as second only to cash machines in terms of the self-service they were most likely to use. Why?

For most, having to queue at the end of either a short or lengthy shopping trip is tiresome, just as you can imagine waiting in a queue for cash inside a bank compared to using an automatic teller machine (ATM) would also be tiresome. Both are frequent events in most people's day-to-day activities, and as a result have high customer ratings.

Making Products

5

CASE 5.1 OLD AND NEW CAR PLANTS

Case outline

This case provides a useful way to discuss a range of processes, as well as the issue of process flexibility. Although the case concerns a line process it is useful to widen the discussion to reinforce the differences between processes, and particularly between jobbing, batch and line.

Guideline answers to case questions

1 The process type used at Ford's assembly plant at Rouge is line. Why?

Before a discussion begins it is beneficial to remind students of the defining characteristics of a line process (referring back to Figure 5.6 is a good place to start).

- Products – standard, repeat, high volume products.
- Process – a line process is a series of sequential steps through which all items in a selected range pass.

To the process, all products are the same and, therefore, the line does not have to be stopped and reset between one product type and the next. Thus, the Rouge Plant has been designed so that any change (be it colour, engine size or vehicle type) does not require the line to be stopped and reset.

As the case explains (and also as highlighted in Figure 5.6) to justify the sizeable investment in a car/automobile plant, a company needs to ensure that there will be sufficient volumes. The cumulative volumes for the range of vehicles built (light trucks and sport utility vehicles using 3 basic platforms) meet these financial conditions.

Part of the investment in such an assembling plant would be in the IT system to schedule parts and ensure that the appropriate parts (such as coloured body shells, engine sizes, and the range of options) to meet a customer's specification are on hand at the appropriate part of the assembly process. At Rouge, Ford has built an assembly line that can accommodate a range of vehicles on one of three basic platforms together with any customer's choice of options without the process having to be stopped to accommodate these changes.

2 Why would you classify the Rouge Plant as inflexible?

Although the Rouge Plant can accommodate a range of vehicles (multiplying the range of vehicle types × colours × engine size × options will result in a 6-figure number) it can only accommodate the range for which it has been designed to handle. In that way it is inflexible as it could not assemble a different type of vehicle or a colour, engine size or any other feature not in Ford's list of options. For example, if customers wish to have their vehicle a colour different to those offered then this would have to be completed after the sale by a specialist paint spray company.

Location and Layout

6

CASE 6.1 GROWTH AT SOFTWARE TECHNOLOGY PARKS OF INDIA

Guideline answers to case questions

1 What are the reasons for the rapid growth in Noida's IT-based services?

There are several reasons for the rapid growth:

- IT services are inherently easy to source from other countries.
- STPI facilitates the transfer by processing licensing applications within a month.
- Plentiful supply of well-educated, English-speaking nationals seeking work.
- Lower costs of provision.

2 Now analyse the case and relate the detail to each of the factors in the section of this chapter entitled 'Factors affecting the choice of continent/region, country and area/city'.

A class discussion of this case might cover the following points:

- 1 **Well-developed infrastructure** – STPI has 'pushed hard on developing the necessary IT infrastructure including setting up broadband networks across the country'.
- 2 **Proximity to markets** – for IT-based services this is not an important factor.
- 3 **Proximity to suppliers** – for IT based services this is not an important factor. However, the concentration of IT-based service provision in Noida does create a pool of technical support staff on which customers can draw.
- 4 **Hospitable business climate** – having STPI as the licensing authority has been central to the rapid growth (India's IT exports now exceed US \$10 billion) and its hospitable manner is clearly shown in turning around application paperwork within a month.
- 5 **Availability of staff** – the number of well-educated, English-speakers meets current needs and future, anticipated levels of growth.

6 Quality of life for employees – most employees are locals. There may be a few staff from customers' parent organisations in the locality but these would be well catered for in what is recognised as a safe environment.

7 Variable cost structures

- Lower direct staff, IT support and maintenance staff costs is a significant advantage of relocating here from a country with a more developed economy.
- Energy costs would also be lower.
- Transportation costs – not a significant cost factor here.

8 Fixed costs and investments

- Investment factors – the case does not specifically address this factor but, at the very worst, there would not be any cost penalties imposed by central and local government.
- Fixed costs – no doubt there would be low rates and low rents involved.

9 Favourable government policies – STPI demonstrates the clearly favourable nature of the Indian Government's policy towards the growth of IT-based services.

10 Being nearer to the customer – not really a factor in IT-based services.

CASE 6.2 GROWTH AT PLASTIC OMNIUM

Guideline answers to case questions

How is plant location central to Plastic Omnium's rapid growth in the last 25 years?

The growth from 4 factories (mainly in France) to 94 plants in 25 countries by 2009 is impressive. Underpinning this growth is the company's decision to build a plant near to BMW's Munich plant in 1991, and so gain a foothold (albeit second supplier status) with this customer. Its adoption of the same location strategy since then has been the source of its rapid growth, with 2009 sales in the automotive sector of £2.5 bn.

CASE 6.3 HSBC RELOCATES CALL CENTRE OPERATIONS

Guideline answers to case questions

1 HSBC's chief executive is quoted as saying that such moves are essential to the bank's continued success and to help ensure job security for the bank's staff worldwide. Why?

As banks (like many other parts of the service sector) move from a sheltered to a traded market status, competition increases. Also, given the high volume nature of these tasks there is an inherent need for such businesses to identify and implement opportunities to reduce costs. Moving IT-based services offshore is one such opportunity to reduce costs. The outcomes so far are:

- A reduction in costs (4000 jobs transferred to a lower cost provision).
- An improved chance of remaining profitable and hence more able to invest, which helps to maintain and grow sales in the future.

2 Why does HSBC relocate work to its existing hubs in India and Malaysia?

The reasons include:

- The success of the initial transfer of work (why take a risk by transferring other work to a different location?).
- The start-up costs involved when moving to a new location.
- The large number of well-educated, English-speaking young people in India and Malaysia means that the available capacity in chosen sites to accommodate future work transfers is adequate.

CASE 6.4 CREATING SPACE ON PASSENGER JETS

Guideline answers to case questions

1 Why is elbow room on passenger airlines an increasingly important factor in the new millennium?

For many people, comfort (even on short-duration flights) is a significant factor in making a journey more enjoyable. As we all spend much of our time sitting down during a journey, the factors affecting our comfort are:

- Leg room
- Elbow room
- Seat cushioning

Of these, elbows space is the only one shared with or by other passengers and hence its shared status is often “under pressure” from the passengers on either side. For this reason, the least desirable seat is the centre of a row of three.

2 Why is legroom easier to provide than elbow room in passengers jet design?

The answer to this question relates to volume. In cabin design, giving extra leg room which (say) results in the loss of 2 seats will only decrease the total number of seats by two rows of seats. So, in a design which has a bank of 3 seats on each side of a gangway, the loss would total 12 seats (6×2). However, increasing the width of seats so that one seat was lost in a row would decrease the total number of seats by the number of rows in the passenger plane.

CASE 6.5 FUNCTIONS AT A TELECOMMUNICATIONS COMPANY CALL CENTRE

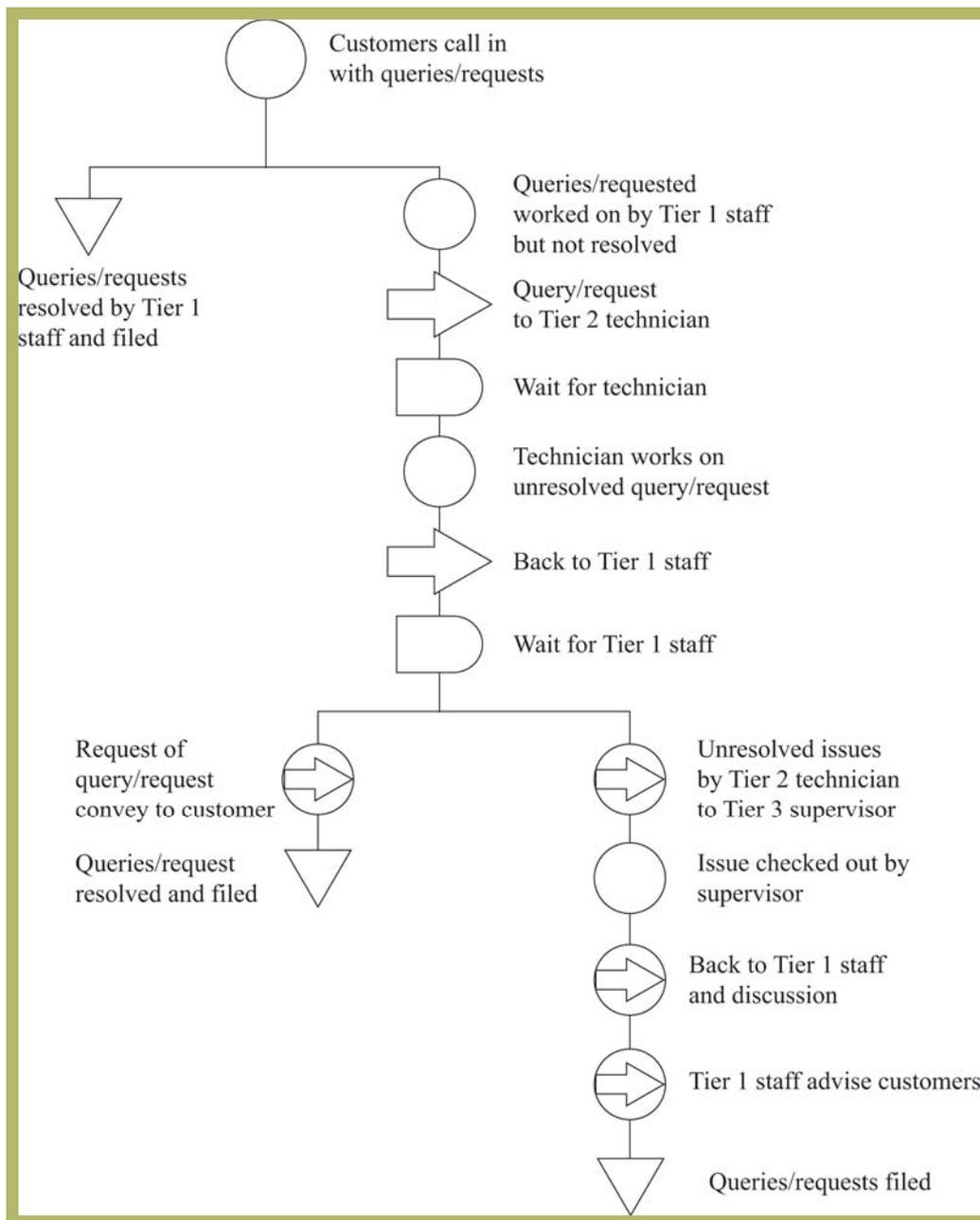
Guideline answers to case questions

1 How did the original call centre structure result in delays?

The original call centre was structured with the following 3 tiers of staff working in different functional areas:

- Tier 1 telephone-based staff - incoming calls from customers and all their requirements/queries were handled by these staff.
- Tier 2 technicians – providing general technical support and advice to Tier 1 staff on customer queries.
- Tier 3 supervisors - to whom Tier 1 staff report. These also include Tier 3 supervisors to whom Tier 2 technicians report.

Queries/requests come in from customers. Those that can be resolved by Tier 1 staff are handled there and then. However, any queries/requests that cannot be resolved lead to long delays. The reason for such delays is due to handing over of queries from Tier 1 staff to Tier 2 staff, then back to Tier 1 staff (with possibly a 2nd or 3rd iteration of these hand-offs), then to Tier 3 supervisors, then back to Tier 1 staff who then advise customers – see below.



2 How did the cell-based redesign reduce delays?

- Within each cell there would be an appropriate mix of Tier 1 staff and Tier 2 technicians working as a team and headed by a Tier 3 cell team leader.
- Each cell would be responsible for handling the queries/requests of a specified group of customers.
- Working as a team would reduce/eliminate the passing back and forth between the 3 tiers of staff and the delays inherent between these movements would be reduced. Staff would orientate their way of working and work priorities to the needs of their team rather than being functionally orientated. Thus, team goals and targets rather than functional goals and targets would now be the orientation.

3 What other advantages or opportunities would a cell-based structure offer this company?

Additional benefits include:

- Makes it easier to balance capacity and demand over time, as any backlogs in a cell would be highlighted.
- Allows friendly league tables to be established.
- Common goals and targets for cells.
- Promotes learning and improvements to be passed between cells.
- Ideas and improvements from Tier 1 and 2 staff can be tested and implemented within a cell.

Managing Capacity

7

CASE 7.1 INCREASING RESTAURANT CAPACITY

Case outline

This case offers an opportunity to clarify/reinforce students' understanding of how order-winner and qualifier analysis provide insights into a market. Analysis helps to:

- Clarify the market.
- Identify which factors need to be maintained (qualifier) and which factors need to be improved (order-winner).
- Ensure a business understands how it is competing.
- Show how all aspects of operations involve strategic planning as well as a day-to-day tasks.

Guideline answers to case questions

1 What were the order-winners and qualifiers for this business?

Before the changes made by the restaurant, the mix of order-winners and qualifiers were:

Criteria		Order-winner or qualifier?
Price		Q
Leisurely/appropriate pace of service		Q
Food and wine	specification	OW
	quality conformance	OW
Surroundings (including particularly table spacing, and level of intimacy)		Q

In fact, as it turned out, the factors classified under ‘Leisurely/appropriate pace of service’ and ‘Surroundings’ may even be order-losing sensitive qualifiers (QQ).

2 Based on your answer to Question 1, assess the company’s decision.

By adding tables and increasing the speed of service, the restaurant actually failed (as far as its existing customers were concerned) to meet/maintain the two qualifiers:

- Leisurely/appropriate pace of service
- Surroundings (table spacing)

In taking these decisions, the restaurant either misunderstood the role or did not appreciate the importance of maintaining the two qualifiers listed in the last question and the potential impact on repeat business. As a consequence, for several customers the restaurant was now no longer on their short list of places to eat.

3 What alternative decisions could it have made about its short range of capacity?

Possible ways include:

- Increasing prices slightly thereby increasing profits from the existing capacity.
- Redesigning the existing interior to increase space.
- Extending the existing premises.
- Introducing an ‘early bird’ menu thereby encouraging customer to come early thus creating a feasible time-sitting use in the evenings.
- Moving premises.

CASE 7.2 WAL-MART USES SCALE TO COMPETE IN THE US FOOD MARKET

Guideline answers to case questions

1 How is Wal-Mart using scale to compete in the US food market?

Wal-Mart’s core strategy (and one that resulted in its becoming number 1 in US food retailing) has been to drive down costs and hence prices for its customers. The company has achieved this through making use of its large-scale buying power and supply chain efficiency.

2 Why is Wal-Mart pursuing its Neighbourhood Market store strategy?

As explained in the case, the volume-driver strategy that has been (and continues to be) so successful uses large stores (up to 200,000 square feet). However, the disadvantage of these stores is that they are too big to be built anywhere other than on the edge of town. While this strategy has been central to Wal-Mart's successful high-volume, low-price strategy, the edge-of-town locations meant that it was less able to compete with inner-city shops for food sales to customers living in the centre of cities on the basis of distance. Many inner-city customers understandably prefer to shop close to home, even though the range of goods on offer may be more limited and the price of goods tend to be higher. Hence the business switched to a combined strategy - with the Neighbourhood Market stores now challenging for the inner-city market whilst maintaining the cost advantage of Wal-Mart's large scale, core business.

CASE 7.3 FLEXIBLE WORKING AT BMW

Guideline answers to case questions

1 Explain how these arrangements helped BMW become more competitive.

While the level of demand can vary from one period to another, operations capacity is far more fixed in nature. Traditionally, companies' approaches to resolving this have involved a combination of the following:

- a. Making finished goods in periods of lower demand and selling this inventory in times of higher demand.
- b. Moving to a make-to-order business, with customer orders queuing (known as order backlog or forward load). In these cases, the length of the queue varies depending on the rate of sales orders received and the level of capacity.
- c. Increasing the number of temporary full and/or part-time staff at peak demand times.
- d. A combination of a., b. and c.

All these options have disadvantages. For example:

- a. and c. increase costs.
- b. may result in lost orders as operations lead times become unacceptably long.

BMW's approach has been to agree changes in capacity (the number of staff hours available) with its own workforce without increasing costs. The outcome has been that BMW plants work more of the time and so utilization increases and total costs are reduced. This is because overhead costs (such as building maintenance and indirect salaries) are spread over more units of products.

2 Given an example of when a company would use flexible working and the time accounting model.

The characteristics of a business that would best lend itself to using flexible working and a time accounting model are:

- Varying but somewhat predictable sales levels (for example, seasonality of demand).
- A higher volume business that makes standard products for which processes rather than skilled staff are used to make products/deliver services.
- One examples include might be a plant making white goods (such as refrigerators and dishwashers).

Scheduling and Executing Operations

8

CASE 8.1 IT SYSTEM CHANGES AT DELL

Guideline answers to case questions

1 What appeared to be the principal reasons why the SAP R/3 application failed at Dell?

Adopting a single ERP system to help manage a business has advantages and disadvantages, as discussed below.

The advantages include:

- It is a tried and tested system installed by experienced, specialist staff.
- It is less costly than either a tailor-made system or using 2 or more systems by different providers.
- Once installed, the interaction between the various parts of the ERP system should be seamless.
- Although installing the system is a lengthy process, this will be a one-off event.

The disadvantages include:

- It is a “one size fits all” approach that brings with it potential concerns over the level of fit to the various needs of a business.
- The system might impose potential constraints on the type of organizational style currently adopted by the business and any proposed style changes in the future.
- A business may have to change/fall in-line with the system requirements and prerequisites to ensure that it works effectively and efficiently.
- It is a large-scale application and will bring with it difficulties relating to the stepped nature of the change involved. In particular, it may well put great strain on an organization given that it will still need to run its day-to-day business at the same time as managing this large, fundamental system installation.
- As with the example of Dell, the system may be too monolithic or too rigid to be easily adjusted/modified to an organization’s style or business model as it changes/may wish to change over time.

It is this last disadvantage (the ERP system's inflexibility to change) which was principal reason why the SAP R/3 application was no longer seen to be suitable for Dell when its business model changed from a worldwide to a regional focus.

2 Why is the IT system approach that Dell installed later working?

There appears to be several reasons why the new system at Dell is working, including:

- Each of the 3 major systems listed in the case would have been selected to best fit the requirements of each application.
- The new system would have been introduced and installed a piece at a time, breaking down the whole task into more manageable pieces.
- Modifying each application to meet Dell's requirements would again be easier due to the reduced size of the task.
- ERP is a centralized system designed to run a business as a single entity. This, in turn, imposes the same set of rules and procedures throughout an organization. While this brings with it the advantages of similarity while securing the economies of scale that go hand-in-hand with size, it forces any different sets of requirements into the same approaches and procedures - as such, this would have better-suited Dell's earlier business model based on a worldwide focus. Dell's move to a regional focus would have been in recognition of and an attempt to fashion its approach to better fit the needs and requirements of the different regions that Dell serves around the world.
- In Dell's case, the task of linking the three different systems has quite clearly not been an obstacle and, no doubt, with each application the need to link/fit one system with the other two would have been part of the brief and part of the system specification.

CASE 8.2 JIT SYSTEM DEVELOPMENTS AT NISSAN

Guideline answers to case questions

1 Why is a car assembly plant particularly well suited to JIT scheduling systems?

As the chapter narrative explains, the idea behind a JIT system is 'to produce and deliver goods and services just-in-time to be sold, sub-assemblies just-in-time to be assembled into finished goods, parts just-in-time to go into sub-assemblies and purchased materials just-in-time to be transformed in the parts.'

In addition, the chapter outlines the prerequisites that need to be in place for JIT to work:

- It is most suited to high volume, low variety and repetitive operations situations.
- The introduction and development of JIT throughout the supply chain must be end-user driven (in this instance, Nissan is the end user).
- Operations schedules must be firm. Decisions on what to make or provide need to be confirmed and then fixed to allow sufficient time for the supplier to deliver materials and/or parts to the next stage.
- Suppliers must ideally be geographically close to customers, as in the case of Sommer-Allibert. At this point you could also suggest that students refer back Chapter 6 'Location and Layout' where Case 6.2 'Growth at Plastic Omnium' provides another example of the importance of this factor.

As you can see from the above, a car assembly plant is particularly well-suited to a JIT scheduling system for the following reasons:

- It is high volume and repetitive.
- The variety is known and fixed and the assembling process has been developed to cope with the known variety. To these processes, therefore, the variety is manageable and is easy to handle.
- Car assembly plants, such as Nissan and Toyota, drive the JIT development changes throughout their supply chains.
- Once a car assembly plant schedule has been determined, it is fixed and will not be changed.
- The Sommer-Allibert plant is close to the Nissan car plant (it is only 3 km away).

2 What developments in the example have been important in making the system work?

The developments that have been important in making the system work include:

- Building a factory 3 kilometres away from the car assembly plant.
- The reusable carriers that facilitate transportation of parts to the assembly line.
- The combination of variations and selected options for each particular car is pre-determined. Therefore, once the car details are sent, Sommer-Allibert knows exactly the specification to make and has sufficient time to complete the task.

3 What advantages and disadvantages would be inherent in these arrangements?

The advantages include:

- Low inventory for Nissan.
- Low inventory for Sommer-Allibert – it will only hold material inventory as there will be little work-in-progress or finished goods inventory.
- Carpet and trim delivered in reusable carriers straight to the line and stacked in sequence reduces handling costs for both companies.

- As a result of Nissan firming its schedule well ahead of time, Sommer-Allibert will have a stable delivery system (see Figure 8.1) so avoiding additional costs due to uncertainty and change.

The disadvantages include:

- Multiple deliveries (up to 120 times each day) increases transportation costs.
- Multiple deliveries using carbon-based fuel and the impact on the environment.
- Sommer-Allibert serves a single customer (Nissan) from this satellite plant and is not really able to diversify if demand from Nissan changed in the future.

Managing Inventory

9

CASE 9.1 APPROACHES TO MANAGING INVENTORY

Guideline answers to case questions

What is the role of inventory in these two illustrations?

Holding inventory in retail outlets

Inventory in retail outlets can be used to:

- a. Meet the immediate requirements of customers.
- b. Display the range of items available where the purpose of those items held in the store is to illustrate what they look like (such as fabric types and finish and the size, weight and style of wine glasses). Customers may then order specific items and be advised of delivery dates.

Items falling into category a. would be day-to-day purchases often not of a high value. Examples include newspapers, stationery, postage stamps, clothes, food, wine and garden plants, shrubs and accessories. On the other hand, items falling into the category b. would be irregular purchases often of high value. Examples include those in the case study (china dinner services and cut-glass wine glasses), cars/automobiles, golf clubs, television sets and computers.

Balancing inventory approaches

This case illustrates a business that uses a combination of make-to-stock (making products ahead of demand and meeting sales from inventory) and make-to-order (only making products on receipt of a customer order). Here, the company is weighing up the cost of holding inventory with the potential loss of sales and has decided to strike a balance between the two basic approaches as explained in the case. Using this combined approach would be appropriate where:

- The items were expensive and, therefore, any inventory would be costly to hold in stock.
- The demand for an item is not sufficiently high to justify using a make-to-stock only approach. In this case, the volume of products required to make production economical would result in creating inventory that would be the equivalent of many

weeks/months of sales, whilst using a make-to-order approach would result in long delivery times. This is because the length of time taken to build up an order backlog that is large enough for economical production costs would be too long for many customers to accept.

CASE 9.2 USING CAUSAL ANALYSIS TO REDUCE INVENTORY LEVELS

Guideline answers to case questions

1 How did causal analysis help the companies in the two examples?

Causal analysis involves reviewing inventory levels and then valuing each pocket of inventory and asking the question, “why is it there?” In this way, the cause of the inventory can be established and the rule or custom and practice, procedure or agreement causing the inventory can be assessed and, if required, changed.

Examples of the outcomes of the approach are illustrated in the two cases as follows:

Reducing the level of ‘customer support’ inventory

The outcome of this causal analysis check revealed a higher inventory holding than the 3 weeks of current sales levels. Typically, holding inventory for a customer would help to guard against going out of stock during periods when sales levels were above average (note, the decision to hold 3 weeks of inventory would be based on average weekly sales of the item in question). As sales of the product reviewed had fallen to a lower level, the company was able to agree with the customer to reduce the level held on two counts:

- To match current average weekly sales
- To reflect the fact that at current sales levels, fluctuations around the average would not now expose the customer to going out of stock.

Reducing the level of operations inventory

In this example, causal analysis revealed the high level of work-in-progress (WIP) inventory waiting to go into the next stage in the process. This provides an example of decoupling inventory (where WIP inventory decouples one process from another) caused by a lack of capacity (a bottleneck) at that next process. The analysis alerted operations to the sizeable inventory holding and allowed it to review and select from alternative solutions.

Managing Quality

10

CASE 10.1 THE IMPORTANCE OF MANAGING QUALITY – ANSTRUTHER’S

Guideline answers to case questions

1 How do the changes in the specification of the fish batter throughout the year affect customer sales?

A portion of fish and chips is just that. For many (if not most) customers, the fish (the principal and most expensive part of the purchase) is the more significant factor in selecting where to buy a meal. Control of the potato and oil quality for the chips is more easily achieved than the quality of fish itself, and the batter and oil in which it is fried. Ian Whyte’s changes to the batter mix clearly ensure the high specification of fish served to his customers.

2 What do you think are the order-winners and qualifiers in this example? Give reasons for your choice.

The mix of order-winners and qualifiers is show in the table below:

Criteria	Order-winner or qualifier?
Fish (taste and texture)	OW
Chips (taste)	OW
Price	Q
Operations lead time resulting in queue lengths	Q

The dominant reasons why customers go to the Anstruther Fish Bar are the quality of the fish and chips (a combination of the ingredients and the frying process). As long as price is not increased (compared to direct competitors and takeaway meal alternatives) to a point where it matters then customers will not be deterred by prices, as they’ll be

prepared to pay more for quality produce. This tactic has obviously been successful for Anstruther's, resulting in margins that justify pricing the business at £1.6 million.

CASE 10.2 CHANGING THE QUALITY OFFERING

Guideline answers to case questions

1 Review these two cases and identify the element of the quality offering that the companies changed or improved

Hampton Inns

Two factors were changed:

- No quibble customer refunds.
- Provision of additional facilities (in the instance, an iron and ironing board) in its premium 'Embassy Suite' rooms.

United Parcel Services (UPS)

Based on feedback from its customers, UPS added an additional element (that of including time in a driver's delivery schedule to address customers' questions and queries) to the service specification it provided.

2 What benefits did these companies gain and their customers receive and what disadvantages or costs were involved?

Hampton Inns

Empowering all staff to decide whether or not to give a refund to a customer contributed to:

- Greater job satisfaction and a decrease in staff turnover from 117 to 50 per cent.
- An increase in sales revenue some 11 times greater than the refunds paid out.

Changing the offering also helped identify which aspects of its service provision most annoyed its guests. This allowed Hampton Inns to identify the lack of some elements of service (for example, the provision of an iron and ironing board) in premium rooms. In this instance, the investment to redress this was \$ 0.5 million, but the savings in staff time alone (to move irons and ironing boards from one room to another) saved more than this initial outlay.

United Parcel Services (UPS)

The allocation of 30 minutes each day to cover the time spent with customers to build relationships and bring in new sales cost UPS over \$ 4 million in drivers' time but the additional sales are many times higher. At this point it is good to ask students why they think this might be.

CASE 10.3 REGAINING CUSTOMER CONFIDENCE AT COCA-COLA AND PERRIER

Guideline answers to case questions

1 Describe the reaction of these companies to the quality conformance problems they faced

In both instances the companies were initially in denial of the problem and were reluctant to openly acknowledge that a problem existed. When each company eventually admitted that a problem existed, consumers' altered views of the company (and, therefore, its products) had already had an effect on sales. This is particularly in the case of Perrier, whose market share was damaged in the long-term perhaps partly because it was not selling a distinctive product from others in the market, unlike Coca-Cola, whose product can be distinguished from competitors by its unique taste.

2 Was quality conformance an order-winner or qualifier for these companies' and how did it affect their markets?

Quality conformance would be an order-losing sensitive qualifier (QQ) and these examples illustrate the dramatic nature that failure to provide a QQ brings.

CASE 10.4 ON-TIME PASSENGER FLIGHTS: IMPROVING QUALITY

Guideline answers to case questions

1 Why is this level of detail collected by the Bureau of Transportation Statistics?

On-time flights are one of the few factors that can differentiate between air-travel services. The other factors are price and, to a lesser extent, in-flight meal services. While price and the provision of in-flight meals are largely at the discretion of an airline, several external factors can cause flight delays.

The Bureau collects these statistics primarily to keep track of the performance of airlines and to make these findings available to the public. As a result, passengers are made aware of the overall performance of competing airlines regarding on-time flights while bringing indirect pressure to bear on airlines to improve their services.

Secondary reasons for collecting these data include monitoring the causes behind delays, checking on trends and to put pressure on other parts of the system (for example, airports) to improve.

CASE 10.5 NASHUA: HAVING THE RIGHT TOOLS TO DO THE JOB

Please note that discussion of this case has been provided in the students' website, for self study: <http://www.palgrave.com/business/hillessential/students/Hillessential-answers-to-short-case-questions.pdf>

CASE 10.6 GENERAL ELECTRIC: SIX-SIGMA QUALITY GOAL

Guideline answers to case questions

1 What were the key tasks for General Electric to reach its goal?

The challenge facing General Electric (GE) of going from 35,000 defects to fewer than 4 defects per million in five years was huge and equated, as the case explains, to an 84 per cent reduction for 5 consecutive years. Clearly this would require a mind set change across the organization and a huge investment including training and process/system improvements.

The key to its success has been that it was driven by the company's CEO and especially one with the charisma and track-record of Jack Welch.

2 How did this change the competitive factors in GE's markets and what strategic advantages resulted?

GE's intent was to increase the level of quality conformance through the organization such that this competitive factor changed from a qualifier (matching the criteria provided by its competitors in the various markets in which GE competed) to an order-winner. In that way it would achieve the goal of making its level of quality conformance "so special and valuable to its customer that they would never even consider going elsewhere for their services and products."

CASE 10.7 3M: COMMITTING TO QUALITY IMPROVEMENT

Case outline

This case reinforces an earlier example (Case 10.4 Nashua: having the right tools to do the job) and it has been found that asking students to first read the note for Case 10.4 that is on their website and then review this case works well.

Guideline answers to case questions

1 What does this example say about how firms should introduce TQM?

Introducing TQM demands a change in the style of management throughout an organization - constantly striving to improve becomes central to the way a company is managed and the expectations and targets that it sets itself.

But, as the case underlines, such improvements need to be implemented on a long-term basis: Joseph Juran suggests that a 6 year - or more often a 10 year - commitment is required for a organization to become a quality leader in its own industry; Professor Mike Beer's view is that it takes time to get real buy-in from an organization for improvements; and Jim McNerney sees the journey "to change the DNA of the 3M organization as one that will take 10 to 15 years".

2 What do you think of Jim McNerney's approach to introducing TQM at 3M?

Jim McNerney's approach to introducing TQM at 3M was implement the corporate-wide programme - with a week's training for all 28,000 staff - and appoint 500 up-and-coming managers to work full-time on quality programmes over the first two years.

His intent, without doubt, was to make a statement by allocating such a large commitment in terms of the investment in time:

- 500 managers for two years = 1000 man years
- $\frac{28,000 \text{ staff} \times 1 \text{ week}}{52 \text{ weeks}}$ = over 500 man years

For 3M, change was on the way!!

Managing the Supply Chain

11

CASE 11.1 CAPITAL ONE AND DELTA: STRATEGIC OUTSOURCING DECISIONS

Guideline answers to case questions

1 Why are most companies subcontracting call centre facilities?

Deciding to serve its customers by using a telephone enables a company to handle a front office task (interfacing with customers) while capitalizing on the volume of calls it cumulates when using a call centre. As it transfer customer's queries from across a large geographical area to one centre, it can invest in a telephone-based delivery system and thereby reduces costs.

The queries and questions handled by such arrangements tend to be straightforward, with the system designed so that call centre staff have easy access to the data and information required to provide the necessary answers.

The next step for many organizations is to select a range of "easily answered/straightforward" questions and queries and subcontract these to specialist call centre providers, often located in low cost countries such as India. In this way the organization can drive down costs even further.

2 What reasons would make a company elect to set up and manage its own call centre?

The reasons why a company would decide to set up and manage its own call centre include:

- Retaining customers is too important a task to leave to others.
- The management of customers is at the very core of a business (see Capital One).
- The first contact between a customer and an organization is critical.
- It ensures that the appropriate style and attitude of staff is adopted when handling customers.
- As employees of the company, call centre staff have to represent the ethos and values of the organization.
- If call centre staff are directly employed, they are more likely to be longer-term employees, looking for career progression. This will encourage them to maintain an organization's values while developing their own personal skills and attitudes.
- Staff will be more alert and responsive to customer complaints and the aspect(s) of the service that need to be improved.

- Links between the call centre and the rest of the organization will be better understood, more easily managed, more readily created and more responsive as both sets of staff are from the one organization.

CASE 11.2 FENDER INTERNATIONAL: CREATING A POSITIVE RETAIL EXPERIENCE

Guideline answers to case questions

1 What is the significance for Fender International of the guitar tuning service offered by UPS?

Fender's aim to achieve a 'positive retail experience' was a central factor in its drive to double sales in Europe, Middle East and Africa (which, up until then it had not been able to achieve). Having made the decision to purchase a top-of-the-range guitar from Fender, customers would, no doubt, await its eventual arrival with eager anticipation. Having waited so long for their guitar to be made they'd probably want to play this high quality (in terms of design specification and quality conformance) instrument as soon as possible. Up until Fender's arrangement with UPS, a guitar would be delivered which at best would need to be strung and tuned and at worst might be damaged. The UPS arrangement delivers a pristine guitar that is ready to play, thereby reinforcing the decision to buy and creating a positive event.

2 Why do you think distributors are now ordering products that they never ordered before?

UPS's further role in the supply chain is to handle damaged guitars needing repair and also to manage inventory for Fender's products for the whole region. The decision that UPS would manage overall inventories to serve the whole region resulted in reduced total inventory relative to sales. In the past inventory would only have been held for the guitars that were sold in higher quantities, whereas products with lower sales would have been ordered as required. For these less popular products the lead time would have been lengthy. Now that Fender supplies the whole region from its UPS-managed inventory holding, it is possible to hold more guitars in stock. This reduces lead times for many more of its products and as a result distributors are encouraged to order more of Fender's total range.

CASE 11.3 LAND ROVER: SINGLE SOURCING POLICY

Guideline answers to case questions

1 Comment on KPMG's role in this dispute with Land Rover.

On the one hand, KPMG's action was to secure the best deal it could for UPF – Thompson's creditors and shareholders. On the other hand it could be argued that their decision amounted to sharp practice and was very short-term in nature. If Land Rover had been forced to pay off UPF's debt then it might have been hard for customers to trust UPF as a supplier in the future. In fact it could be argued that the action, though overturned in court, would still have raised concern among UPF's current and potential future customers. Certainly, KPMG's approach was counter to the current trend of managing supply chains where building trust between customers and suppliers is the path to follow.

2 What would you advise Land Rover to do in general about its single sourcing policy?

A single sourcing policy brings advantages of lower costs (based on the higher volumes purchased from a single supplier rather than splitting the purchase volumes over two or more suppliers) and a clear sign that Land Rover (the customer) desires to build long-term relationships with suppliers.

However, in the light of the UPF experience then inserting safeguards into future supplier contracts is advisable.

CASE 11.4 CHIQUITA RELOCATES FROM CINCINNATI TO COSTA RICA

Please note that discussion of this case has been provided in the students' website, for self study: <http://www.palgrave.com/business/hillessential/students/Hillessential-answers-to-short-case-questions.pdf>

CASE 11.5 APPLE'S ITUNES: DIGITAL SUPPLY CHAIN

Guideline answers to case questions

1 What is Apple's business model?

Apple's business model involves selling a diverse range of technological products, with new versions of each product constantly in development. The company also sells music

from a compatible platform that can easily be uploaded onto those products. Suppliers from the music industry contribute albums to the online platform that can be searched for in Apple's ever growing music archive; these are then sold directly to the customer through the platform, with Apple taking a share of the profit of the sale.

2 How has its digital supply chain contributed to its recent success?

In the case of iTunes, the digital supply chain allows for low-profit, high-volume sales, with relatively low running costs and no physical inventory. The digital supply chain for iTunes allows customers to buy and listen to music instantly, as well as being purchasable on the go. The digital supply chain makes it easy for consumers to search and locate particular tracks or albums. Music can be sold at a cheaper price and individual tracks can be bought as standalone transactions. An additional advantage for Apple is that customers who buy iPhones or iPods are tied into using iTunes because its technology is compatible, and the ease of online purchase encourages spontaneous impulse purchasing decisions.

CASE 11.6 REINHOLD MESSNER: THE DIRECT ALPINE APPROACH TO MOUNTAIN CLIMBING

Guideline answers to case questions

1 Review the stages in the supply chain represented in Figure 11.11 with that of the conventional mountaineering approach described above. What similarities can you draw?

The conventional mountaineering approach relies on having support from hundreds of porters and tonnes of equipment. To manage such numbers, the climb would require the support staff to be split into groups who would be assigned different sets of tasks (similar to the functions shown in Figure 11.11) that would each have their own hierarchy and reporting structure. A coordinating task would then be required to get those groups to work together in support of the climb. As depicted in Figure 11.11, this approach will be similarly fragmented with vertical reporting structures and systems and would lend itself to delays due to the complexity of both the overall task (the climb) and the coordination required. The complexities and difficulties are a result of size with the task of liaison throughout made the more difficult by the number of links and the cumulative impact of delays and misunderstandings.

2 Repeat the analysis for Figure 11.14 and Messner's approach to mountaineering

Messner's approach to mountaineering uses a two-stage model:

- 1 Up to the base of a mountain.
- 2 From the base to the top.

Although the first phase has similarities with the traditional approach – getting to and setting up base camp – Phase 2 (from the base to the mountain top) is a synchronized (at most involving two but more likely involving only Messner himself), real-time climb and the simplified approach facilitates speed of execution.

CASE 11.7 JAPANESE COMPANIES' APPROACH TO SUPPLIERS

Guideline answers to case questions

1 Review the common aspects in the Japanese companies' approach to suppliers.

The common aspects in Japanese companies' approach to suppliers include:

- Once selected, suppliers are retained during the life cycle of the specific model. This means that the task of selection will need to be based on a thorough check to ensure capability, capacity and financial strength of a supplier before a commitment is made.
- Staff from the buyer will typically train a supplier's staff on their operations and quality procedures as well as other aspects of the buyer organization.
- The buyer firm will test the viability of the long-term relationships by assessing the robustness of the whole organization (also, see above).

2 How do these illustrate the 'changing attitudes to suppliers' section highlighted in the text above?

Traditional supplier relationships were characterized by:

- Not being cooperative with suppliers.
- There was no underlying aim to build a long-term relationship.
- Buyers typically ruled by threat and fear (see Figure 11.15).

To change this attitude, companies must:

- Bring suppliers on board and earlier in the design process
- Understand how to reward and collaborate with them as the prerequisite for building integrated and synchronized supply chains

- Recognize that developing supplier relations is a lengthy process typically moving through the phases of 'threat and fear', 'reward', 'collaborate' and 'integrated and synchronized'.

CASE 11.8 IT DEVELOPMENTS AT CATERPILLAR AND GAP

Guideline answers to case questions

Explain how IT developments have enabled Caterpillar and GAP to change their business models.

IT developments have enabled Caterpillar to move from a reactive (where the need for an equipment service is triggered at the point of use through the dealer to the Caterpillar Centre) to a proactive (Caterpillar identifies the need for a service and sets the wheels in motion) way of working.

Such a move enables Caterpillar to plan and manage its own service and supply system to both its own advantage (it reduces or eliminates the need to respond quickly regarding service requirements) and that of its customers (overdue services and the potential problems that might result from such oversights).

IT developments currently enable GAP to achieve 14 inventory turns a year and to change the stock holding in all its outlets 13 times per year and on the same day. In a fashion market where change characterizes the very essence of the business, reducing the incidence of unsold or discounted inventory and being able to change what is held in its outlets quickly and in a narrow time frame are key factors in boosting sales, market share and profits. GAP's IT developments have provided this operations capability.

CASE 11.9 DELL: SUPPLY CHAIN INTERGRATION

Guideline answers to case questions

1 Explain how Dell integrates its supply chain.

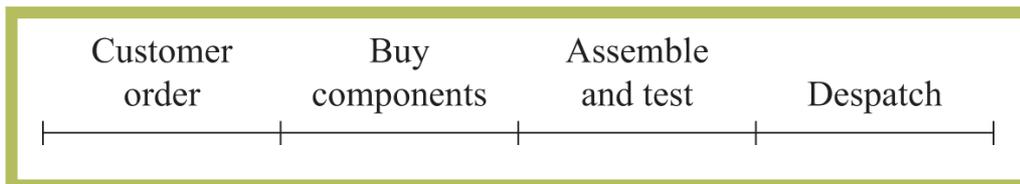
Integration in its supply chain is achieved by Dell in several ways:

- Dell only makes-to-order
- The company purchases components on a just-in-time (JIT) basis
- It can respond quickly to component developments as they become available because it holds little inventory and, therefore, can use up existing components in a short space of time and then be able to start using the latest components in its products

- Short component lead times reduce Dell’s overall material lead time and hence its operations lead time and so match the delivery speed requirements of its customers

2 How does the Dell website feature in these integrative developments?

Question 1 addressed the post-sale activities of Dell’s business model. The Dell website addresses the customer order end of the total supply chain. Speeding up this phase makes it easier for a customer to buy and reinforces the Dell ethos/model.



3 How is the Ford Motor Company able to save up to \$2 million annually by using Dell’s Premier Pages?

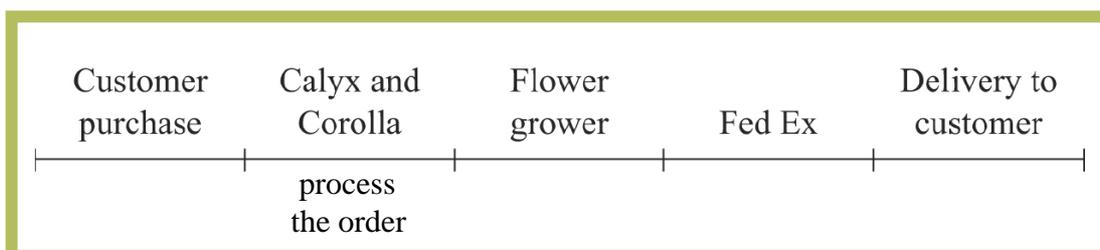
Dell’s Premier Pages enables companies buying many products from Dell to lay down its own parameters for products regarding configurations, specifications and prices on the Dell system. In that way large purchasers such as Ford can allow individual staff to buy Dell products knowing that it will be in an acceptable (specification and price) format.

CASE 11.10 CALYX AND COROLLA: SYNCHRONISING THE SUPPLY CHAIN

Guideline answers to case questions

1 How has Calyx and Corolla synchronized its supply chain?

The supply chain from order to delivery is represented below:



The key elements in the above supply chain with regard to delivering flowers as fresh as possible are the flowers themselves (the grower) and their delivery (Fed Ex). The remaining stages in the supply chain involve processing information. Calyx and Corolla, therefore, has synchronized the 2 key stages (grower and Fed Ex) by ensuring that the appropriate flowers (regarding product availability and growers' known work schedules) are correctly packed (trained staff) to ensure that the flowers delivered are pristine and fresh. Knowing the availability of flowers that meet these key requirements and then reducing the delivery lead time between grower and customer has given Calyx and Corolla the edge.

2 What advantages has the company gained from these developments?

The main advantages for Calyx and Corolla are

- No inventory.
- Fresh long-lasting flowers are the order-winner while price is a qualifier (60 per cent price premium is made) and so profits are enhanced
- Sales revenue growth.

Improving Operations

12

CASE 12.1 IMPROVING PROCESSES: STEINWAY & SONS AND MASSACHUSETTS GENERAL HOSPITAL

Case outline

The examples in this case develop upon the insights highlighted in Chapters 4 and 5, including the differences between standard and special services and products.

Guideline answers to case questions

1 Should processes always be standardized?

Steinways

Although there'll always be some stages/steps in producing a piano that are similar from one job to the next, at Steinways pianos are made using a jobbing process, where a small group of skilled people complete the whole job. In that way, pianos are built by craftsmen whose job it is to reflect the individual characteristics of the materials in the finished products.

Massachusetts General Hospital

The hospital has identified that a surgical procedure from start to finish has both standard and special elements. The standard pre-operative and post-operative phases are the same no matter what the nature of the operation itself and, therefore, a standardized approach to the procedures is applied to the start and finish phases. This ensures these steps are completed more efficiently, with use of the appropriate skill levels. Because of this approach, the hospital has reduced the time taken to complete procedures, and reduced the hourly staff rate for these tasks, while freeing up skilled staff (i.e. surgeons) to undertake the more complex steps in the process. In this way the cost of surgery is minimized and the time of the scarce resource (the surgeons) is maximized.

CASE 12.2 BREAKTHROUGH VS INCREMENTAL IMPROVEMENT: GOLD-MINING AND METRO

Guideline answers to case questions

Would you classify these approaches to improvement as breakthrough or incremental? Explain your choice.

The South African gold mines case is an example of a breakthrough improvement. Steel cable studded with diamonds is at the centre of a very different approach to releasing rock for processing. Although it costs \$290/metre it significantly reduces labour costs and the associated costs involved in making the 900,000 blasts per day that were required by the previous approach.

The Metro example, on the other hand, is an example of incremental improvement. Although again based on investment in technology, here the computers self-locate products and evaluate the cost of purchases as a customer goes along. This approach clearly saves customers time while reducing the need for Metro staff to check out purchases. Despite the results generated by these improvements, the procedure has not actually changed, which is why it is classified as incremental improvement.

CASE 12.3 PORSCHE: CONTINUOUSLY IMPROVING OPERATIONS

Guideline answers to case questions

Please note that discussion of this case has been provided in the students' website, for self study: <http://www.palgrave.com/business/hillessential/students/Hillessential-answers-to-short-case-questions.pdf>

CASE 12.4 CONTINUOUSLY DRIVING IMPROVEMENT – VOLVO AND RICOH

Guideline answers to case questions

Use these examples to illustrate the three points guiding continuous improvement that are listed in the chapter.

The 3 principles guiding continuous improvement that are discussed in the chapter are:

- 1 *Process reviews* – the whole process, from initial design to its delivery, needs to be reviewed.
- 2 *Success comes from people* – success relies on staff knowledge and insights into the system and procedures they use and their ability to identify and make improvements.
- 3 *Constant need for change* – current process, no matter how good, must never be considered adequate.

Relating these to the examples of Volvo and Ricoh results in the following table:

Example	Principle		
	1 Process reviews	2 Success comes from people	3 Constant need for change
Design A			
Volvo	✓	✓	
Ricoh	✓	✓	✓

Volvo – Principle 1: Review of the drying process.
Principle 2: Employees competing for the Internal Environment Award.

Ricoh – Principle 1: Review of process in copier plant.
Principle 2: Suggestion scheme involved 3,500 staff contributing 13 suggestions per day (equivalent to 90 suggestions per week and 4500 suggestions per year).
Principle 3: Implementation of ideas, increased motivation, demonstrated importance of employee’s contributions and highlighted the constraint need for change.

CASE 12.5 FORD MOTORS: BENCHMARKING ITS ACCOUNTS PAYABLE DEPARTMENT AGAINST MAZDA

Guideline answers to case questions

Please note that discussion of this case has been provided in the students’ website, for self study: <http://www.palgrave.com/business/hillessential/students/Hillessential-answers-to-short-case-questions.pdf>

CASE 12.6 IDEO: RULES FOR BRAINSTORMING IMPROVEMENT IDEAS

Guideline answers to case questions

1 Is IDEO's approach different to other design consultancies?

The key differences in Ideo's approach are:

- Open source innovation.
- Disclosing secrets to all clients.
- Outcomes – encouraging clients to think creatively and faster innovation within their own organizations.
- Runs education workshops for clients on brainstorming.

2 Why are the rules they suggest so important when brainstorming new ideas?

The key outcome of brainstorming is to amass as many ideas as possible and often an 'off the map' idea can trigger a breakthrough idea from someone else or lead to a new insight itself. The key rules for generating large number of ideas are:

- Defer judgment
- Encourage odd ideas
- Build on the ideas of others
- Go for quantity

All these rules increase the total number of ideas – 'the more the better' principle.

CASE 12.7 REENGINEERING BUSINESS PROCESSES: MUTUAL BENEFIT AND JET BLUE AIRWAYS

Guideline answers to case questions

1 Identify the changes made and the benefits achieved by these two companies.

Example	Changes made	Benefits achieved
<p>Mutual Benefit</p>	<ul style="list-style-type: none"> • The company initially used a multi-step process, with each step handled by a different function and delays between each step. • Now individual case managers are responsible for processing the whole application from start to finish. 	<ul style="list-style-type: none"> • Application processing time went from 5–25 days to 2–5 days • Less staff • Reduced staff levels now handle twice as many cases as in the part.
<p>Jet Blue Airways</p>	<ul style="list-style-type: none"> • The airline now use a laptop to calculate the amount of thrust to apply on take-off 	<ul style="list-style-type: none"> • Reduced wear and tear in operating and maintenance • Reduced costs by 5 percent = millions of dollars of savings over the life of an aircraft.

Mutual Benefit used a breakthrough method of improvement, adopting major changes in their approach, while Jet Blue Airways used an incremental method of improvement which involved refining their existing approach.

CASE 12.8 CLOSED VERSUS OPEN INNOVATION: APPLE VERSUS GOOGLE

Guideline answers to case questions

1 Compare the Apple and Google approaches to innovation

A good approach to this question is to summarize the key points in a table, as below.

Aspect of approach		Apple	Google
Approach	Underlying	Closed	Open
	Detailed	<ul style="list-style-type: none"> • Create 10 options • After a few months reduce to three options • After a further period these are refined to one strong product 	<ul style="list-style-type: none"> • ‘The more options the better’
Style		<ul style="list-style-type: none"> • Small internal group responsible for developing innovation • Go it alone 	<ul style="list-style-type: none"> • Ideas can come from customers, employees or suppliers • Focus on developing partnerships
Orientation of resources		<ul style="list-style-type: none"> • Few products made exceedingly well • Identify a gap in the market 	<ul style="list-style-type: none"> • Ideas do not need to relate to current services and products • Make incremental improvements and add enhancement to existing services and products

Time allocation	<ul style="list-style-type: none"> • Teams of engineers and designers meet twice a week, 	<ul style="list-style-type: none"> • Spend at least 20 per cent of time on their own ideas.
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2 What are the advantages and disadvantages of these approaches?

The advantages and disadvantages of Apple and Dell's approach are in opposite to one another.

Apple's approach

Advantages – Focused approach which ascertains market requirements. New services/products designed to meet these identified market requirements.

Disadvantages – Leave generation of ideas to the 'experts'.
– This results in missing out on other employees, customers' and supplier ideas.

Google's approach

Advantages – Opens up ideas – own staff (20% of time encouraged), customers and suppliers.
– No boundaries when looking for ideas.
– See incremental gains as critical.

Disadvantages – Leader focused.
– Difficult to measure results against the resources allocated to idea generation.

CASE 12.9 UNIPART GROUP

Guideline answers to case questions

Please note that discussion of this case has been provided in the students' website, for self study: <http://www.palgrave.com/business/hillessential/students/Hillessential-answers-to-short-case-questions.pdf>

CASE 12.10 APPLE'S IPOD: USING SUPPLIERS TO REDUCE LEAD TIMES

Guideline answers to case questions

1 How did Apple manage to reduce the lead time for supplying a tailor-made iPod?

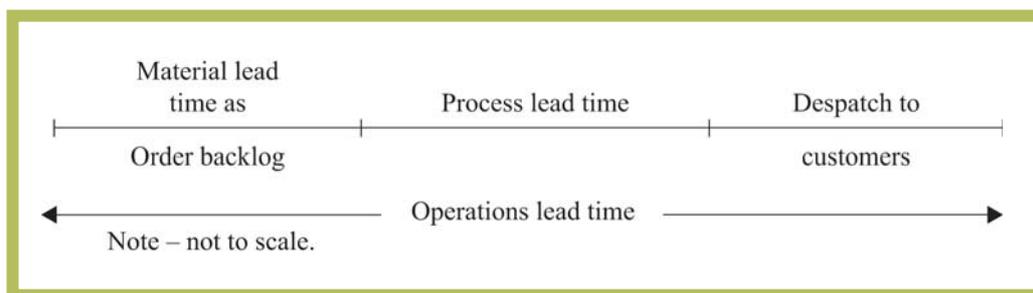
Apple can take an online order for a tailor-made iPod, have it made in China and deliver it to a US address in 90 days. This is achieved by:

- Securing JIT manufacturing agreements with its Chinese suppliers, which ensures bespoke goods can be made at short notice.
- Having the Direct Distributive agreement with Fed Ex – which ensures fast delivery of products to anywhere in the world.

The key here is to recognize that the longer element of the operations lead time would be distribution to the customer. The Fed Ex deal ensures this lead time can be kept as short as possible.

2 How can other companies learn from these developments?

In order to learn from Apple's strategy, a company would need to analyse each component of its own operations lead time and address each part in order to reduce the time involved. The chart below outlines each part of the operations lead time:



Addressing each aspect in turn will help students to understand how the overall lead time can be reduced:

- | | | |
|--------------------|---|---|
| Material lead time | – | The solution would be to hold inventory |
| | – | Use JIT agreements |
| Process | – | Invest in process |

- Improve quality – reject first time
- Zero defects
- Reduce process times

Despatch – Have agreement with carriers

CASE 12.11 USING SUPPLIERS TO DEVELOP NEW PRODUCTS AND SERVICES: TED AND APPLE'S APP STORE

Guideline answers to case questions

What do you think the advantages are of their approaches to developing new services and products?

Both TED and Apple's App Store provide a conduit for individuals to broadcast their ideas into the public domain. In both instances the companies provide a filter to ensure the material broadcast on their sites is of a high quality (TED's broadcasts are limited to their 18 minute lectures and Apple screens ideas for apps itself), but then makes them available to a very wide audience.

The success of their use of suppliers for developing new services and products is evident:

- By 2010 TED's lectures had 300 million views and had been translated into 77 languages.
- Apple had 58 billion downloads from its App store between July 2008 and April 2010.

These platforms provide a unique point of contact between the wealth of ideas generated by participants, and a world-wide audience.

CASE 12.11 USING CUSTOMERS TO IMPROVE OPERATIONS: WIKIPEDIA AND THREADLESS

Guideline answers to case questions

1 How do these two organizations develop their products?

Wikipedia publishes an encyclopedia based on an 'expert-driven' development using in-house staff as online editors for thousands of contributors across the world. Threadless

es the creative ideas of over 500,000 people to design and select the T-shirt designs
roduces.

2 What are the advantages of involving customers this way?

Wikipedia

Compared to the more traditional method of producing an encyclopedia, the company's method is advantageous because it:

- Generates more content.
- Encourages loyalty to the brand.
- Is more accessible.
- Ensures that content is continually being updated by contributors, with entries covering a wide range of topics, from the obscure to the popular.

Threadless

The advantages of the company's current approach are:

- Designs are less expensive to create – with no need to employ designers.
- The designs selected reflect the potential purchasers' preferences.
- The wide range of design ideas.