

# About : Service Design

By Bill Hollins

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A guide to service design, introducing current thinking applied to public and private sectors, highlighting future trends and challenges and including facts, examples and a glossary.

## In brief

*Also known as innovation in the service sector.*

The service sector is growing, both in terms of numbers employed and in its importance to the British economy as the manufacturing sector declines. However, as with manufactured products, services must be designed and this design must be managed.

Service design can be both tangible and intangible. It can involve artefacts and other things including communication, environment and behaviours. Whichever form it takes it must be consistent, easy to use and be strategically applied.

Only recently have managers in organisations involved in the service sector realised that a conscious effort in applying 'design' techniques to services can result in greater customer satisfaction, greater control over their offerings and greater profits. Unfortunately, there are few resources available that can assist these managers in the application of design to their service products.

Furthermore, many senior managers involved in the service sector are still unaware of the benefits that design can bring to their offerings and, as a result, many organisations are operating at a sub-optimum level.

Service design and its management are often poorly planned, so it is quite easy for a company to gain a competitive advantage through the application of some quite simple design techniques.

Since production and consumption occur at the same time in a service, customers cannot fail to notice if the service has been poorly designed. Of course, this relates to the physical surroundings (which are not covered here) but, increasingly, users are looking to the 'totality' of the service. That which is offered must, at least, meet their expectations.

These customer expectations are continuing to rise. Service that was acceptable in a shop, hospital outpatients or railway station just a few years ago is now considered unacceptable. Many necessary and ongoing improvements can be brought into the service through the application of design.

Generally, in the design of services, there are more 'customers' (stakeholders) to be considered than in manufacturing. This makes the design of successful services more difficult as it is necessary to understand and provide the needs and the relative importance of each of these stakeholders to succeed.

Generally, innovation, being an important subset of the design process, is poorly applied in the service sector. Innovation can occur in all stages of the whole life of a product, especially (and increasingly) at the service end when customers are more likely to be directly involved with the delivery of the service.

Innovation is generally easier with services as there is less of an existing infrastructure to be replaced than with manufacturing. So customers more readily accept changes brought about through innovation.

Services cannot be patented and therefore intellectual property in services is more difficult to protect and

copying of competing services is easier.

In industrialised countries worldwide, there is an increase in the contribution to the GDP and to the level of employment derived from non-manufacturers, or more especially, the service sector. The importance of 'services' to the economy of the country will almost certainly continue to grow in the foreseeable future.

Business and management courses are fast-growing areas in education. Increasingly, these courses are including modules that show how to manage products and services and the design of services is a natural component of such courses.

The main theme here is the need to educate service providers as to the importance of total design in a growing area of importance. To show that it needs process and leadership, and to show that innovation can occur throughout all stages of the product usage. Also, the aim is to show the similarities and differences between service design and the design of manufactured products.

## Why it matters to business

Services are a growth area and thus well-designed services can be very profitable. The opportunities for innovation in the use of technology, marketing and throughout the life of a service are currently changing the whole way that customers are contacted, served and retained. Service design can be applied at all these stages where customers interface with the organisation to improve their satisfaction and, thus enhance company profitability.

Charities represent a variation on this theme. Most charities are both raisers and spenders of finance - but from and to quite distinctive groups. The needs of both of these are likely to be very different. When designing how charities operate, it is necessary to balance the funds raised from one group with the commitment (spending) to the other.

In practice this requires a service design process for raising the finance and a design process for spending the finance. These two processes run in parallel (concurrency) and are highly iterative and dependent on each other.

## Why it matters to public services

Often, public services are serving large numbers of people and must operate within tight financial constraints and budgets. Although it may not be possible to increase the amount of finance available, through service design, it is often possible to make the finance available stretch further.

If new and improved services are designed and planned with a 'front-end' focus, poor ideas can be easily eliminated and better ideas should be more fully thought out while still 'on paper'. This avoids changes later in the process - at the high-cost end of design. This should result in a more efficient use of the resources available within tight constraints.

## Examples

Project: **Trouble-free motoring scheme**

Client: **Daewoo**

Year: **1999 to present**

Daewoo was able to make a serious impression on the British car market, despite having an undistinguished product range, through innovative service design. Initiated in the UK marketing department in Watford, Scheme provides a 'no pressure' sales service and three years of free servicing for the car. When the service is due the car is collected and a service car loaned while the owner's car is off the road. On completion of the service the owner's car is returned.

In effect, this scheme gave three years' trouble-free motoring.

Project: **Doorstep delivery**

Client: **Domino Pizza**

Year: **mid-1980s to present**

Domino Pizza in the USA first identified the potential for doorstep deliveries of pizza in the mid-1980s in New York. Though arriving somewhat later in the pizza market than some of the competition, through this innovation the company grew quickly. It was an idea copied by many (as services cannot be patented).

This shows that service extensions, especially at the marketing stage, can be the most profitable innovations.

Project: **Outpatients department improvement**

Client: **Exeter Wonford Hospital outpatients**

Designer: **Lyn Randall, Bournemouth University**

Year: **1992**

Lyn Randall, improved the design of Exeter Wonford

outpatients department through a service blueprint exercise completed in 1992. Through making the service far more efficient, the customer experience improved and the throughput of patients increased.

There was an additional, unexpected spin-off. The hospital was about to purchase more land to increase the size of its overcrowded car park. When the improvements to the outpatients department were implemented it was found that the car park was significantly less crowded and the purchase of land to enlarge it was (at that time) unnecessary, saving 1million.

This shows how the effective use of service blueprinting can enhance customer satisfaction.

Project: **BAA customer experience**

Client: **BAA**

Designer: **Raymond Turner, Group Design Director**

Year: **1999 to present**

BAA, under the guidance of Raymond Turner (Group Design Director), planned the rail link between Heathrow Airport and central London. The journey would only take 15 minutes and sounded like a typical commuter trip. Market research showed overwhelmingly that customers wanted a luxury experience and were prepared to pay the correspondingly high price. The service was introduced in 1999 and is now used by almost 20,000 people each day.

This shows that market research and understanding customer requirements can be key drivers for service design.

Project: **BA sleeper seats**

Client: **BA**

Designer: **Design Acumen**

Year: **1996**

BA identified the potential to capture the top end of the business travel market. Looking at customer experience and needs resulted in the design of its first-class sleeping accommodation providing each passenger with their own 'accommodation space', with enough room to lie down and sleep or to carry on with their work. The concept was a risk as it reduced the number of paying passengers.

However, the sleeper accommodation principle proved to be popular and profitable and has since been copied by other airlines, with BA itself launching its club card Business Class Seat in 2000.

Project: **Virtual CD retailing**

Client: **CDnow**

Designer: **Jason Olim**

Year: **1994**

CDnow was the first company to retail CDs and tapes over the internet. Started by Jason Olim in the USA, it supplies a choice of 165,000 CDs and 35,000 films. The system is designed so that the wholesaler supplies direct to customers worldwide.

This shows that the innovative use of new technology in service design can radically change retailing

Project: **Expansion through consistency of service delivery**

Client: **Wetherspoon Pubs**

Designer: **In-house**

Currently the fastest-growing company in the UK and the ninth fastest in Europe by job creation (according to a report by research organisation GrowthPlus), Wetherspoon has achieved this spectacular growth through set procedures for designing and developing the services in each new pub. It also has quality standards that are checked and maintained through a group of 800

'mystery shoppers'.

Project: **Security and fraud protection**

Client: **Barings Bank & Allfirst (Allied Irish Bank)**

A key part of service design is the development of processes for security and the avoidance of fraud. The design of the processes used in these two banks were insufficient, both to avoid the entire failure of the business (due to an £850 million loss through Nick Leeson in 1995) and to withstand the damage to both profit and confidence sustained by a £500million loss through the activities of John Rusnack in 2002).

This shows that, in certain circumstances, poor design of the processes can destroy an organisation.

Project: **Secure internet banking**

Client: **Security First National Bank**

Designer: **In-house team**

Year: **1995**

This was the first internet bank and opened in Pineville, Kentucky. It is now based in Atlanta, Georgia. The bank was started by Michael McChesney (Chairman). The secure software used took two years and \$20 million to design and develop. These systems are now sold to 35 other banks.

Designed to be secure yet easy to use and convenient as customers can either use it at home or anywhere around the world.

Project: **Web tracking of packages**

Client: **Federal Express**

Designer: **In-house team**

Year: **1994 to present**

FedEx added information systems to their express transportation in December 1994. Its 900,000 packages



are tracked each month via the internet. Customers are automatically emailed to inform them of a package in transit. The tracking number supplied enables the package to be tracked via the web if required. This system saves \$4million per year in answering telephone queries.

This shows that an extension of a service through innovative design can both save money and improve the customer experience.

## Facts and quotes

### Facts

The service sector now accounts for almost 80% of employment in the UK and 67% of GNP, while manufacturing employment has dropped to 13% in 2001 compared with 23% in 1981.

The percentage of those employed in the service sector is rising throughout the EU and the USA, as might be expected, but it is also rising in developing countries.

As with manufacturing, in service design 85% of management decisions and 85% of financial commitment is made in the first 15% of the design process.

The main differences in the management of the design of services and manufactured products tend to be in the later stages of the process. The similarities at the important front end of design mean that those currently applying their skills in manufacturing can apply their knowledge in this much larger sector.

Unlike manufacturing organisations, in the service design field, specifications (or controlling documents) tend not to be written. As a result, such companies are not in control of their design function.

The majority of people involved in developing new services within organisations have never seen a written design specification. Those who have done so tend to describe an inadequate set of documents.

Also, unlike manufacturing organisations, service companies tend to start the process at the concept stage thus missing out altogether the vital first 15% of the design process.

In manufacturing, the most costly part of the process is tooling up for manufacture, which typically takes 47% of the total design cost. With service design there are no

figures available for the cost of the various stages of the process. This is because (as said) most people in the service sector do not consider that they are designing. As such, they do not identify the cost of the various stages of the process.

Although no figures exist, and although there is great variation between types of services, it can be estimated that the later stages of the process are the most expensive. Rather than 'tooling up for manufacture', in services this can be considered as 'implementation'.

With most manufactured products the purchaser tends to be the user (there are exceptions, eg toys). In services the purchaser is less likely to be the user (eg education, health provision). There are more stakeholders to be considered in service design.

'Bundling' services, parcelling two or more products together and marketing them as a single product can increase their attractiveness to potential customers. By including service aspects, such as whole-life customer support or 'total solutions' with the product, benefits through increased sales could be obtained.

Source: I Ng and J Lee, 'The Strategic Role of Unused Service Capacity', *International Journal of Service Industry Management*, Vol 10, No 2, 1998, pp 211-238

### **Quotes**

'Marketing innovation is a greater growth stimulant than technical innovation,'

NEDO, *Stimulating Innovation in Industry*, 1992

'Friendliness from the staff and sincere apologies do not compensate for unreliable service.'

L L Berry, A Parasuraman and V Zeithml, 'A Service Quality Refresher', *Training*, Vol 39, Issue 7, July, 2002, p46

'Reliable service is a customer expectation and means that the service is accomplished on time, in the same manner, and without errors every time.'

J Fitzsimmons and M Fitzsimmons, *Service Management*, p45, McGraw-Hill, 2001

'The concept of dematerialisation is one which will grow, in particular, the shift from products to services.'

T Jackson, *Material Concerns: Pollution, profit and quality of life*, Routledge, 1996

'As the United States moves to a service economy, companies that gain control of the design and management process will be the companies that survive and prosper.'

G L Shostack, 'Designing Services That Deliver', *Harvard Business Review*, Jan-Feb 1984, pp 133-139

'A service blueprint allows a company to explore all the issues in creating or managing a service... A service blueprint allows a company to test its assumptions on paper and thoroughly work out the bugs.'

G L Shostack, 'Designing Services That Deliver', *Harvard Business Review*, Jan-Feb 1984, pp 133-139

'The analysis of successful and unsuccessful new services indicates that a formal and planned approach to NSD (new service development) leads to better performance.... Aside from using a detailed NSD process, the success in new service development depends on getting the necessary commitment and interaction from management and from the different functional specialities within the firm.'

U de Brentani, 'Success Factors in Developing New Business Services', *European Journal of Marketing*, 25 (2), 1991, pp33-59

'Design acts as an interface between company and

customer, ensuring that the company delivers what the customer wants in a way that adds value to both'.

R Turner, 'Design as Interface', *Design Management Journal*, Vol 13 No 1, winter 2002

'I believe that it is important that innovation should become an attitude of mind. As such, it should permeate the whole business - research, products, production, administration, services, and marketing. It is no good being effective in one department and not in another.'

Sir Paul Girolami, Former Chairman of Glaxo

'Short termism can create a superficial impression of success through the milking of business but ultimately leads to failure. It forces some chief executives to behave in a lemming-like fashion as they rush to cut training, innovation, and product development budgets in order to prop up the half year return on sales and return on investment results and prevent the risk of youthful City analysts marking down their share price. The result is the strangulation at birth of any hope of product leadership or market penetration.'

Dr John Parnaby, IEE Former President, 1996

'The importance of the development of service products is only just being appreciated in the service sector. Many service companies do not even realise that they are involved in design when they consider new service products. They do not have the ethos that industry has, so it must be remembered that those in the service sector, in many cases being unfamiliar with the whole concept of developing new services in a structured manner, need extra and specific guidance.'

W Hollins and G Hollins, *Over the Horizon*, John Wiley & Sons 1999

'We are just at the beginning of the boom in new ideas, new ways of working, new practices, and new models for



business. And so behind every new company is a set of design specs and an assumed design protocol and, clearly, in the world of information and knowledge, we have to figure out how to design the interfaces - the way to design vocabulary, the way to design relationships. We have to design them so that people can use them simply, effectively, personally, and creatively.'

Alan Webber, former editor of *Harvard Business Review* and co-founder of *Fast Company* magazine, in *Information Outlook*, October 2001

## Challenges

- Traditionally educated designers tend not to be widely employed in service companies. As a result, there is a dearth of knowledge and understanding of design (management) techniques within most of the service sector.
- In a manufacturing company they may not do design well but they will at least know what it is. In the service sector, most people believe that design is something to do with aesthetics and not relevant to them.
- This implies two requirements: first, that the personnel in such companies need to be educated not only about the importance of design, but also how to do it, and second, that design projects have well-trained leadership and a strong product champion to encourage those involved as to the realities and benefits of using design.
- With services, to the marketing mix of product, place (distribution), price and promotion is added people, process and physical evidence (ambience).
- Due to the intangible nature of services, and as production and consumption often occur at the same time, it is difficult to ensure consistency and quality. The quality of a service is often down to the person giving it.
- According to a Rover employee interviewed by the author, 'People are 80% of any process'. It is possible to blueprint the process through which the customer passes, but blueprints rarely take into account the need for flexibility when things go wrong or occur out of the ordinary. Service suppliers must be prepared to cope with the unexpected. This is achieved through a combination of training and empowerment. Mistakes

should be used as an indication for the need of more training and not as a reason for punishment.

- The above becomes a problem in developing countries where services are provided by a large number of poorly paid operatives. These are trained to a 'menu' of activities but are not able (or allowed) to take the initiative when something goes wrong. The higher wages paid in Europe and America tend to result in fewer service providers but these service providers are better educated and trained.
- Only one in five service sector companies has a written process for developing services, according to recent research (Hollins, Blackman and Shinkins, University of Westminster, 2002 onwards). This suggests many businesses are vulnerable because of a lack of effective management procedures. These problems are accentuated by the failure of 48% of companies to do research before developing services.
- When seeking new ideas several companies involved in the above research stated that they look at the competition or the market leaders. This 'me-too' attitude has been shown to be an unsuccessful route to new product success. You cannot overtake the competition by just copying what they do. Companies need to seek 'unique selling propositions' to distinguish their designs from the offerings of the competition. Quite a few companies seek ideas only from inside, such as ideas from Directors, senior managers and even suggestion boxes. This should be backed up by some market research to show customers want the benefits that these new ideas may provide. Sadly, the results indicate that this is generally not the case.

## Future trends

General economic prosperity and smaller family sizes have contributed to the growth of services. Higher disposable incomes have led to an increase in financial services, entertainment, eating out, travel, personal healthcare and fitness.

There are stand-alone services but most manufactured products also contain a large service element on which the product will be judged. Even in manufacturing organisations it is estimated that 20% of employees are working in a service role.

From designing just the product, companies are moving towards designing the product, process and service interface and moving towards 'whole life design' as a method for adding value and maximising profit throughout the value chain right through to disposal. This places a greater emphasis on the post-production stage of products, distribution, marketing, customer and market support - the service end of the process - as well as corporate development. As a result, more emphasis will be applied to service design.

By putting customer convenience and satisfaction at the forefront of 'total design', designers are forced to think (and then design) the customer experience. Often this starts by blueprinting the likely customer experience then improving the proposed service through the elimination of 'blockages' to efficiency and satisfaction.

Quality assurance (BS EN ISO 9001 - 2000) is still growing in the service sector. So is the application of 'total quality management'. Many of the aims of QA and TQM can be achieved through service design.

There is a general increase in customer demand for continuously improving quality in services ('kaizen' - a Japanese concept of continuous small improvements).

Quality starts with design and quality needs to be built into the design of the service provision rather than being added later. The application of tools such as SERVQUAL\* is an attempt to match service (or exceed) provision with customer expectations.

(\*SERVQUAL is an instrument that measures the difference between customers' minimum expectations and their perceptions of those services as delivered, focusing on five customer-valued 'dimensions' of service.)

Most services still cannot be exported (or imported). The increase in the power and availability of information technology and ease of communication and other technological advances are changing this. It is now possible to operate services across borders and continents and this growing trend will continue.

For example, insurance and telephone banking can easily operate across the Atlantic. This opens up new threats and some service companies will become vulnerable to overseas competition. But also this opens up business opportunities to home-based service organisations to 'attack' overseas markets, as recently shown with the sharp rise in overseas-based call centres.

As a result, a 'worldwide' dimension needs to be considered in the specification of new service designs. This will include potential threats and opportunities.

More new technology will be used in services. This will make transactions faster and more efficient and more repeatable. The repeatability will make it easier to control and increase the quality of the service.

The standardisation brought about by the application of technology may reduce the personal interaction and thus the 'individual' nature of services. The 'service' dimension could be lost from the service transaction and that may not be to the satisfaction of all customers. The difference in the 'bespoke' nature of some services compared with

others (eg the difference between a restaurant and a 'fast food' outlet) will result in both types of service being available. The segmentation choices will be part of the service design.

On the other hand, further 'discrete' application of advanced technology (especially in communication) and IT in services can allow the benefits of apparent 'individual' service combined with the benefits that can be achieved with repeatability and 'selective' standardisation. It can also allow the service providers to spend more time with customers.

To summarise:

- There is a growing international market for services
- There will be an increasing reliance on technology and automation
- There will be a greater customer emphasis on quality
- The importance of the service sector in terms of profit and employment will continue to grow throughout the world.

Manufacturing in the UK has declined and now ranks 4th in Europe in terms of GDP. The balance of trade surplus in services is £6-7 billion per annum. Financial services continue to grow as do international tourism and related hospitality services worldwide. The inclusion of customer service is becoming a key feature in the sale of tangible products. It is the complete pre-sale, final sale and post-sale experience that determines the overall quality rating.

## Current Government policy

During the late 1980s there was a Government initiative to increase the service sector and allow manufacturing to decline. The realisation that many services rely on associated manufactured products coincided with the acknowledgement that if the home-produced product did not exist then such services would support imported goods. The resulting effect on the UK's balance of trade has caused something of a change of view more recently, towards supporting manufacturing. In the interim, the growth of services has accelerated and manufacturing has continued to decline at a faster rate than in most industrialised countries.

The situation that we are currently approaching in the UK is called 'Post-Industrialisation' or 'Post-Fordism'. This is typified by a high standard of living that manifests itself in greater demand for health expenditure, education and recreation and other services.

The Government supports this trend.

## Glossary

A **service** is defined as:

**a)** A set of functions offered to a user by an organisation.

**b)** Results generated by activities at the interface between the supplier and the customer and by supplier internal activities to meet the customer needs.

**Note 1)** The supplier or the customer may be represented at the interface by personnel or equipment.

**Note 2)** Customer activities at the interface with the supplier may be essential to the service delivery.

**Note 3)** Service is intangible and as such cannot be stored.

**Note 4)** Delivery or use of tangible products may form part of the service delivery.

**Note 5)** A service may be linked with the manufacture and supply of tangible products.(BS 7000 -3, BS 7000 -10, BS EN ISO 9000)

A **service** - Is any activity or benefit that one party can give to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product. (P Kotler, *Principles of Marketing*, 1986)

Most services differ from manufactured products in five ways:

**a) Customer contact** - Generally, in manufacturing the customer may be unaware of how the product came about. In services, production and consumption tend to occur at the same time.

**b) Quality** - In manufacturing, quality tends to be measured against drawings etc. The measures tend to be quantitative. The measures of quality in a service tend to be qualitative and there are few quantitative measures. As

a result, there is a wider variability in services and it is more difficult to control the quality of a service - which is often down to the individual person supplying it.

**c) Storability** - Because services tend to be intangible, it is usually impossible to store them. For example, a car in a showroom if not sold today can be sold tomorrow but an empty seat on an aeroplane loses its value once the plane has left.

**d) Tangibility** - One can physically touch a manufactured product but most services are intangible. One cannot touch legal advice or a journey, though one can often see the results.

**e) Transportability** - Most services cannot be transported and therefore, exported, (though the means of producing these services often can). It is estimated that only 11% of services are exportable although this is fast changing (see Future Trends section).

**Product champion** - This can be defined in two ways:

**a)** A person dedicated to the promotion and introduction of a new product, although not necessarily responsible for any aspect of the programme. (BS 7000 - 10)

**b)** A design leader who is a constant member of the design team, responsible for ensuring that communication is effective, that the design process is well co-ordinated, the right decisions are taken and ultimately will make the decision to abandon failed projects. (Hollins & Hollins, 1991)

**Service design brief** - Documentation that describes the primary purpose of a service and gives guidance.

**Note 1)** Guidance can relate to such matters as its style, grade, performance, appearance, conditions of use including health and safety considerations, characteristics, packaging, conformity, reliability, maintenance.

**Note 2)** The service design brief is often the result of a

feasibility study and forms the basis of the design. (BS 7000-10)

**Service specification** - Documentation that prescribes the requirements to which the service has to conform. Note) A service specification should refer to or include drawings, patterns or other relevant documents and should also indicate the means and criteria whereby conformity can be checked. (BS 7000-10)

**Total design** - A multidisciplinary iterative process that takes an idea and/or market need forward into a product and through all stages to disposal. (Hollins & Hollins, 1990)

# What do I do next : Service Design

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Bill Hollins teaches design management, marketing management and operations management at the University of Westminster. He also undertakes management consultancy for Direction Consultants.

Advice on using service design, including tips, standards and regulations, a reading list and signposts to further information.

## Top tips

**1** Consider the design as a total process from idea right through to termination and disposal (if any) of the service. There is not one single process for developing all services. The process will alter for each service design, although there will be some stages that will occur in all service designs.

**2** There are many triggers that start a service design. Consider that the design begins with an idea rather than a concept. This avoids confusion with the concept stage that occurs later in the design process. For example, a service design idea may be to deliver parcels. After the specification has been written, in the concept stage, all the different concepts for delivering the parcels are considered.

**3** Having determined the process, then identify which stages can be undertaken concurrently. This will reduce the time to market. Identify how long each stage will take and approximately how much each stage will cost. This will indicate an estimated total time and total cost for the service design project. Then identify who should be involved in the process and the priority of a particular project over other service design projects.

**4** Specifications control the design process. As a guide to writing these, use BS 7373 Part 2. The most important aspects of a service design specification are reliability, safety, ease of use, aesthetics, maintainability and price.

**5** The main reasons for a new service failing are the same as any product. Market failure - it does not meet customer requirements (and thus, it doesn't sell). Technical failure - the service does not work. Financial failure - the budget is not sufficient to complete the design.

**6** The main measure of the success of most services is profitability - but with services there are more exceptions than with a manufactured product (e.g. the emergency services, public transport, education) and others that are created for the good of society where the importance of the service performance often outweighs (but not excludes) financial considerations.

**7** Aim to eliminate potential failures early in the process so that more time is spent developing potential successes.

**8** People buy 'benefits', which are expressed as 'advantages' or 'USPs' (unique selling propositions) when compared to the competition. Design these into the new service and feature these in the service promotional activity.

**9** The performance of the service can be measured with a 'Service Transaction Analysis sheet' (R Johnston and G Clark, 2001 - see Reading list for details). In this, each stage of the process is marked, thus indicating where the service may need to be improved or redesigned.

**10** Draw a blueprint of the service. Enhance the blueprint by looking at the 'sensory' side of the customer experience. At each stage of the experience what does the customer see, hear, smell, touch or taste? By improving each of these the customer experience is enhanced. (Hollins & Hollins, 1999).

**11** When it is realised that 'work in progress' in a service means that often people are waiting, the application of JIT techniques, to reduce the total through-put time of work in production (lead-time reduction), work even better in a service than in manufacturing. Customers do not like to queue or wait and take up valuable space. Furthermore, the main problem, of 'finished goods' tying up capital, that happens when applying JIT to manufacturing in situations of varying demand, is avoided in services because on the completion of the service operation, customers 'go home'.

**12** The training of those who will deliver the service should be included as part of the service design. In manufacturing, staff will be trained to 'do the job'. In services, due to the coincidence of production and consumption and people being part of the service delivery, the staff must also be trained in how to effectively serve customers.

**13** Service quality can be seen as having five identifiable parameters and these can either be designed into a new service or brought about through training of the personnel (which should also be an element in the design of the service). These dimensions are:

- Tangibles - the appearance of physical facilities.
- Reliability - the ability to perform the promised service dependably and accurately.
- Responsiveness - the willingness to help customers and to provide prompt service.
- Assurance - the knowledge and courtesy of employees and their ability to convey trust and confidence.
- Empathy - the provision of caring, individualised attention to customers. (Berry, Zeithml and Parasuraman, 1990)

## Reading list

G Hollins and W Hollins, *Total Design: Managing the design process in the service sector*, Trans Atlantic Publications, 1991 (republished 2002 in its original form), ISBN 0 273 03338 7

This was a pioneering book dedicated to service design. The structure of the book follows the stages of the service design process. A worked example of the use of the process is developed around a carpet cleaning business.

W Hollins and G Hollins, *Over the Horizon: Planning products today for success tomorrow*, John Wiley & Sons, 1999, ISBN 0 471 98717-4

This book is in four sections and each relates to the design of products and services. The first looks at what should be done to improve existing products. The second discusses improvement by design and the third section looks at innovation. The fourth section is unusual in that it looks at how to develop products and services several product generations ahead - typically ten years.

Christian Gronroos, *Service Management and Marketing: A customer relationship management approach*, 2nd ed, John Wiley & Sons, 2000, ISBN 0 471 72034 8.

Christian Gronroos has been researching and writing about service management for about 15 years. His books always contain a large element of service design. In this book he describes what constitutes the three levels of service marketing, the basic strategy options and what he considers are the new rules of service. In it he shows the role services play in a company's competitive strength and profitability.

S Hart ed, *New Product Development: A reader*, Thomson, 1996, ISBN 1861524412.

Of the seven sections in this book, written by experts from

various fields, one section is on 'The Development of New Services'. This includes contributions from Lyn Shostack, Axel Johne, and Ulrike de Brentani. The ideas presented in other parts of the book can also give help in service design.

There are very few design or design management books available that are aimed at the service sector. Several that do discuss the topic tend to focus on the visual aspects of corporate identity or decor. It is advisable to read design management publications then transfer the techniques described to a service situation. The techniques proposed are often also applicable in a service context but consider the greater human involvement.

Otherwise, there are books that refer to service design techniques that are not strictly design books. Examples include:

A Parasuraman, V A Zeithaml and L L Berry, 'SERVQUAL: A multi-item scale measuring consumer perceptions of service quality', *Journal of Retailing*, Vol 64, 1988, pp 12-37

and

L L Berry, V A Zeithaml and A Parasuraman, 'Five Imperatives for Improving Service Quality', *Sloan Management Review*, 31, Summer, pp 29-38, 1990

These three authors have been researching and reporting on quality in the service sector for about 15 years. They take turns at whose name appears first if you need to source their work. They developed the SERVQUAL questionnaire to identify service quality. This was based on a 'gap' model, the five gaps were the differences between what the customer wanted or expected and what service was supplied. The aim is to close these gaps to provide the service that customers perceive they should get.

J Fitzsimmons and M Fitzsimmons, *Service Management: Operations, strategy and information technology*, 3rd ed, McGraw Hill, 2001, ISBN 0070217602

Operations management, but with a very wide view. It incorporates many techniques that can be applied in planning and implementing service design. Well received when published but considered expensive in comparison with other 'ops' books.

C H Lovelock, *Managing Services: Marketing, operations and human resources*, Prentice-Hall, Englewood Cliffs, 1992 ISBN 0135615720

This is another edited book from the field of operations management. It includes a section on service design. It is a little shallow and a little dated but does give some useful insights.

R Johnston and G Clark, *Services Operations Management*, FT Prentice-Hall, 2001, ISBN 0 273 639226

Although this book contains very little on service design, it does include a lot on how to measure and improve existing services. It is compact and easy to read.

C Haksever, B Render, R Russell and R Murdick, *Service Management and Operations*, Prentice-Hall, 2000, ISBN 0 13 081338-9

A large operations management book that includes a lot of useful information that will assist in service design, as well as one section devoted to 'Design and Development of Services and Service Delivery Systems'. The style is very 'American' and tends to focus on the quantitative aspects rather than the 'softer' qualitative side of service design.

W Hollins, C Blackman and S Shinkins, *Design and its Management in the Service Sector: Updating the standard*, Fifth European Academy of Design Conference, Barcelona, 28-30 April 2003

*Design Management Journal*, ISSN 1045 7194



This journal of the Boston-based Design Management Institute comes out four times each year. Each edition has a theme and many of these impinge on aspects of service design. The articles tend to be easy to read and are aimed at the practitioner.

The following journals occasionally have articles on design, quality and innovation in the service sector:

*Journal of Services Marketing*, ISSN 0887 6045

*Journal of Marketing*

*The International Journal of Service Industries Management*

*The Service Industries Journal*

## Further information

### **British Standards Institution**

389 Chiswick High Road, London W4 4AL

Tel: 020 8996 9000.

Fax: 020 8996 7001.

website:

[www.bsi-global.com](http://www.bsi-global.com)

### **DTI Enquiry Unit**

1 Victoria Street, London SW1H 0ET

Tel: 202 7215 5000.

website:

[www.dti.gov.uk](http://www.dti.gov.uk)

**Live/Work** , is a new company that specialises in aspects of service design, more especially on the creative side.

website:

[www.livework.co.uk](http://www.livework.co.uk)

It also has a website due to launch in 2003, that will show a collection of short papers written by experts that operate in the field of service design.

website:

[www.servicedesign.org](http://www.servicedesign.org)

## Standards and regulations

**BS 7000 Part 1 (1999)** *Design Management Systems* , guide to Managing Innovation. ISBN 0 580 33057 5

**BS 7000 Part 3 (1994)** (to be updated) *Design Management Systems* ,guide to managing service design. ISBN 0 580 23205 0

**BS 7000 Part 10 (1995)** *Design Management Systems* , glossary of terms used in design management. ISBN 0 580 23892X

**BS 7373 Part 1 (2001)** *Product Specifications* , guide to preparation.

**BS 7373 Part 2 (2001)** *Product Specifications* , guide to identifying criteria for a product specification and to declaring product conformity.

**BS 3811 (1993)** *Glossary of Terms used in Management Services*.

**BS EN ISO 9001:2000** *Quality Management Systems* , fundamentals and Vocabulary.