



The Tesco.com experience: is success at hand?

When dot-coms of any type in the U.K. ask me whom they should watch, I tell them they should be worried if Tesco decides to move into their space.¹

Nick Jones, Analyst, Jupiter Communications

In spite of Tesco's apparently successful Internet-based grocery retailing business, there was still some internal debate within the company about their fulfilment ('in-store picking') approach and its possible limitations.

Company history

In 1924, Sir Jack Cohen founded the Tesco supermarket chain. Cohen invested his ex-serviceman's gratuity of £30 in a grocery stall, thus inaugurating the first store. The Tesco name was first used in 1929 for a shop in Edgware, London. The acronym presented the initials of the company's tea supplier – T.E. Stockwell – and Cohen's own name. Following the Great Depression, in 1932 Tesco was formally established as a private limited company. During the 1930s Tesco added more than 100 stores, mainly in London. After his visit to the USA to study the self-service supermarkets, Cohen developed Tesco's 'pile-it-high-and-sell-it-cheap' format, which was to become a central part of Tesco's retailing strategy in the years to come.

In 1956 the first Tesco self-service supermarket was opened in a converted cinema. During the 1950s and 1960s Tesco grew primarily through acquisitions. These included 70 Williamson's stores in 1957, 200 Harrow stores in 1959, 212 Irwin's outlets in 1960,

and 97 Charles Phillips stores in 1964. By the 1960s Tesco had become a chain of 600 stores. The Tesco that opened in Leicester in 1961 had 16 500 square feet of selling space and entered the *Guinness Book of Records* as the largest store in Europe.

As customers began looking for quality and choice in the 1970s and 1980s, Tesco started to have severe problems and the company results slipped dramatically, so that in the 1980s few people thought that Tesco could survive. The primary reason for the dismal performance was that customers had a negative image of the company. Due to the sole focus on low prices, customers were faced with poorly maintained stores and a selection of items that was perceived as inadequate and of mediocre quality.

Tesco tried to respond to these developments by improving product quality and profitability. In 1977, it had already introduced private-label brands to strive for higher quality. In addition, 500 unprofitable stores were closed while simultaneously large-surface superstores were opened. Nevertheless, the situation did not improve significantly.

Lord McMaurin, who had joined Tesco in 1959, led the company's turnaround. Upon becoming chair in 1985, he set about turning Tesco inside out. When he retired in early 1997, Tesco had become the largest, most profitable supermarket chain in the UK. His first move was to pour large amounts of money into the

¹ Quoted in 'A British e-grocer takes on Amazon', *Fortune*, 12 June 2000, pp.

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construction of new superstores in order to attract upper market segments. Simultaneously, new systems and technology were introduced in sales and distribution, which would enable Tesco to be positioned across a range of store formats and market segments.

The oldest and most established Tesco superstores offer customers a wide range of goods, a pleasant shopping environment and free car parking. These superstores have a minimum selling surface of 26 500 square feet and display 25 000–30 000 SKUs.² In the 1990s Tesco started to develop new store concepts such as Tesco Metro, a city-centre store meeting the needs of high-street shoppers and the local community. In addition, so-called compact stores (which are smaller than the superstores and have an average selling area of less than 26 500 square feet) were opened primarily on edge-of-town sites. This was followed by the launch of Tesco Express, which combines a petrol filling station with a local convenience store (Tesco is also Britain's largest independent petrol retailer). The latest store format is Tesco Extra, a hypermarket offering a wide selection of non-food items as a complement to, rather than at the expense of, the food assortment. The first Tesco Extra, which opened in 1996 in Pitsea, Essex, had a sales area of 102 000 square feet and displayed a total of 45 000 SKUs.

In 1995, Tesco introduced the first customer loyalty card, which offered benefits to regular shoppers while at the same time helping Tesco to analyze its customers' needs. Today, Tesco has ten million Clubcard member households.

Tesco's current CEO is Terry Leahy, who has worked for the company for 21 years. Much of its recent success is credited to his leadership ability. One of his former colleagues made the following comment:

Anybody today who doubts that the current success isn't down to a mixture of both [Leahy and MacLaurin] – and more recently down to Terry Leahy – really doesn't know how retail businesses work.

When asked about Leahy's leadership style, another colleague said:

When he [Leahy] took over as chief executive there were people in Tesco who missed the dash and the style of MacLaurin. But most of those people have now become fiercely loyal to Terry because he has a plan, he communicates it well and he is single-minded in going for it.

To respond to increased competition and declining prices in the food segment, Tesco has significantly expanded its range of products. The superstores now

devote 40–50% of their shelf space to non-grocery items such as clothes and products for the home. In 2000, Tesco opened up a new front in retailing of consumer electronics, selling televisions, DVD players and mobile phones, which generated sales of £45 million.

For the year 2000, Tesco reported the following financial data. Overall group profit before tax increased by 12% to £1070 million. UK sales grew by 8.5% to £19.9 billion, of which 4.8% came from existing stores and 3.7% from new stores. International sales grew by 43% to £2.9 billion and contributed £74 million to profits, which presented a 48% increase over the previous year. Tesco's market share has grown steadily since the early 1990s and is currently about one-fifth of the UK market. Tesco employs 240 000 people worldwide.

Following an aggressive expansion strategy, today Tesco operates over 900 stores in the UK, Ireland, Hungary, Poland, the Czech Republic, Slovakia, Thailand, South Korea and Taiwan.

Tesco's strategy has four key elements, as stated in the Tesco 2000 Annual Report:

- *Strong core business in the UK:* 'We have continued to outperform the industry by offering value and innovation for customers against a background of difficult trading conditions. This business will continue to grow and compete effectively.'
- *Non-food:* 'We are progressing with our aim to be as strong in non-food as we are in food. We are on track to secure a 6% share of the UK market. Non-food sales will grow faster than food as new space comes on-stream and as we extend global sourcing and global non-food capabilities. By 2002 we expect group non-food sales to be £5 billion.'
- *Retailing services:* 'We follow the customer into new areas of expenditure as shopping habits change. We have the largest Internet grocery business in the world, we have doubled our mobile phone business in the past year and we are vigorously growing our financial services business.'
- *International growth:* 'The pace of our international business is accelerating and experience is growing as we move through the development phase into profits and returns. By the year's end this business will be four times larger than it was four years ago and our lead countries, Hungary and Thailand, will be in profit. Overall, we are on track to 45% space overseas by 2002 and looking to expand into other countries in the longer term.'

2 SKU stands for 'stock-keeping unit' and is a product reference number for inventory management purposes.

Tesco.com

After spending around £40 million on getting its store-picking system right, Tesco has built up a profitable online food business with turnover of £300 million a year, making it the biggest Internet grocer [world wide].³

Tesco's online delivery service was initially launched in 1996–97. In so doing, Tesco became the first retailer in the UK to start this type of service, allowing customers to place orders by telephone, fax and via the Internet.

As of summer 2001, Tesco accounted for more than 50% of all online grocery sales in the UK and has expanded its Internet-based offerings into Ireland. Today, it has 750 000 registered customers and processes 70 000 orders a week. John Browett, formerly with the Boston Consulting Group and now Chief Executive Officer of Tesco.com, gives an overview of the financial developments at Tesco.com:

We did £237 million in the year ended February 2001, and now we're at an annualized rate of more than £300 million. We lost a total of £9.5 million last year, due to the cost of rolling out [virtual] stores and starting five different nonfood businesses – electronics, baby and toddler, fashion, entertainment and wine deals. But the grocery business is already profitable. Over the long run, there's no reason it can't be as profitable as retail stores, which now have an operating margin of 5.7%. We're not there yet.⁴

Although Tesco.com is one of the most frequently visited retailing websites in the UK (see Table 1), most of

Tesco.com's registered shoppers are not yet regular users. The company is aiming to double the sales figures within three years and to build the business to 240,000 orders per week with £2 billion of turnover. Online shoppers tend to spend more than their brick-and-mortar counterparts. While the average store basket is about £25, the average Internet-based order is £90.

Tesco.com has a number of different online offerings, which include:

- **Groceries:** including fresh fruits and vegetables, fresh bakery, prepacked fresh meat and fish, chilled food, frozen food, store-cupboard items, beer, wine, spirits and pet care.
- **Books:** more than 1.2 million titles, ranging from fiction to children's stories to reference books.
- **Entertainment:** over 160 000 CDs, in addition to a wide range of videos and DVDs.
- **Electricals:** more than 1000 electrical products, from washing machines, refrigerators, kitchen appliances to hair dryers, TVs, stereos and game consoles.
- **You and your child:** brings together content, community and commerce by building on the community experience of iVillage (see below) and

³ Quoted in *The Economist*, 30 June 2001, pp.

⁴ Quoted in 'Online extra: Q&A with Tesco.com's John Browett', *Business Week Online*, 1 October 2001.

Table 1 Most popular retailing websites in the UK

January 2001			June 2001		
	Visitors (1000s)	Reach (%)		Visitors (1000s)	Reach (%)
Amazon.co.uk	1509	11.7	X10.com	1581	10.4
Amazon.com	864	6.7	Amazon.co.uk	1496	9.8
Tesco.com	727	5.6	Amazon.com	1171	7.7
Argos.co.uk	537	4.2	Tesco.com	731	4.8
Jungle.com	432	3.4	WHSmith.co.uk	359	2.4
Shopsmart.com	430	3.3	Argos.co.uk	353	2.3
PCWorld.com	344	2.7	Jungle.com	327	2.1
Marksandspencer.com	312	2.4	Shopsmart.com	313	2.1
Etoys.co.uk	285	2.2	Streetsonline.co.uk	276	1.8
Bol.com	284	2.2	Beeb.com	272	1.8
Total retailing	6553	50.9	Total retailing	7772	50.9

Source: Webwatch, 2001

the e-commerce knowledge gained from grocery home shopping and the baby and toddler catalogue business. With over 400 pages of content, subject areas range from feeding and health to clothing and advice for dads.

- *Home*: includes items such as cocktail shakers, dining-room furniture and computer tables.
- *Clothing*.
- *Personal finance*: the Internet activity also enables Tesco to build up its online banking service, Tesco Personal Finance. There exists a strong link between the food and financial activities: 70% of the clients who visit the Tesco Finance site also visit Tesco.com. Tesco Personal Finance has 15 products and services, two million customers, 400 000 savings accounts and 900 000 credit cards. John Gardiner, Tesco chairperson, explains: 'Our superior economics allow us to be both profitable and fast-growing. Tesco Finance is one of the fastest growing retail banks in the country.' In addition to Visa card, Tesco Finance also offers savings accounts, Clubcard Plus, loans, pensions, credit cards, mortgages, savings products and insurance policies (for travel, pets, etc.).
- *Tesco.net*: Internet service provider with unlimited access to the Internet offered free of charge (excluding the cost of local calls).

Shopping at Tesco.com

Tesco.com customers have a number of different options to access Tesco's online services. As of July 2001, shoppers at Tesco.com can buy their groceries through mobile commerce applications. Through a partnership with Microsoft, Tesco.com has launched Tesco Access, which allows users of hand-held computers and WAP-based wireless phones⁵ to shop online. John Browett explains: 'Since the launch of Tesco Access, our customers can shop any time, any place, on any device, whether through the Internet, digital TV or pocket PCs.'⁶

In addition, beginning in June 2000, Internet cafés were opened up in stores across the country, including in some economic regeneration areas. One main goal is to bring online customers who are currently without computer skills. Tesco is also looking for ways in which customers can be given training in order to improve their understanding of computers and the Internet. Browett says:

The big thing for us is educating the customer base. It is a bit like when self-service supermarkets were introduced, and people used to hand back their baskets and refused to do it. We have now passed the awareness stage and we have got to make this a habit.⁷

Terry Leahy explains the rationale behind all of these activities:

We have spent nearly £55 million putting computers in virtually every classroom – many in less well off areas. And we're now rolling out our Internet cafés in our stores to provide access for our customers.⁸

Once customers have connected to the Tesco.com website, they register by providing delivery directions and choosing a username and a password. The website offers several types of functionality to facilitate the online shopping process. They include:

- *Shopping ideas*: help to buy relevant items for a special event such as Christmas, a barbecue or a party. Customers choose a specific list and then tick the lines of products that they want to add to their shopping basket.
- *My favourites*: includes a list of all the items that a customer has purchased recently. Customers then only need to click on any items that they want to buy again.
- *Online recipe book*: contains a large number of recipes. Customers can browse the ingredients and methods and see all the products needed for that recipe. Products are split into two groups: those that the customer probably has at home and those that are special to a particular recipe.

If customers have a preference regarding a product (e.g. they like their bananas green), they can mention this to their shopper using a special note facility that appears on the website next to each product (see Exhibit 1). If the ordered product is out of stock, Tesco.com offers to either choose a suitable substitute or skip that item, depending on the customer's choice. If Tesco chooses a substitute that the customer does not like, the customer can return it to the

5 WAP stands for Wireless Access Protocol.

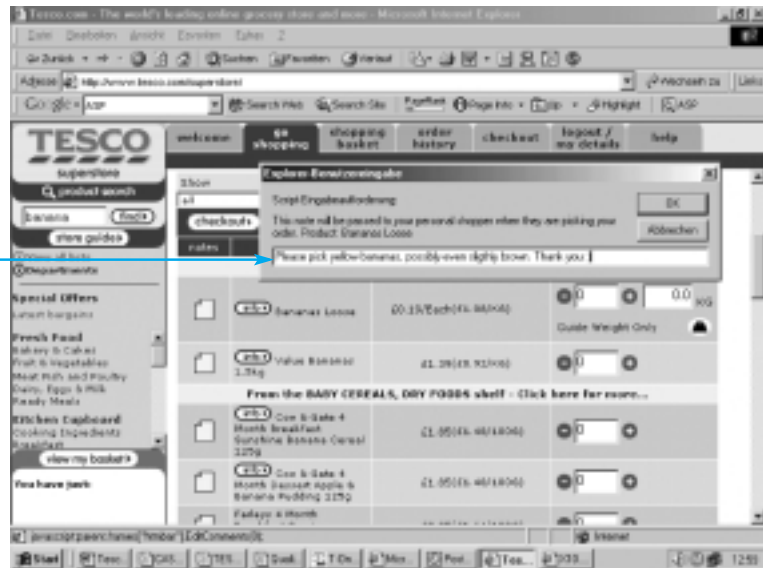
6 Quoted in 'Online shopping: Tesco.com opens for WAP/PC orders', *Financial Times*, 21 July 2001.

7 Quoted in 'White van man trains sights on US: interview with John Browett, Chief Executive, Tesco.com', *Financial Times*, 14 July 2001.

8 Quoted in Tesco press release, June 2000.

Exhibit 8.1 Ordering yellow bananas at Tesco.com

Personal specifications



driver upon delivery and the amount is re-credited. After completing the online shopping, the customer can choose a delivery slot within a time window of one hour (see Exhibit 2).

The website stores the virtual shopping cart each time the customer leaves the virtual store, thereby making it easy for multiple family members to con-

tribute to the shopping trip. Tesco is also trying to integrate the online and offline shopping experience. For instance, Tesco card members can enter their card numbers through the website and view recent purchases from offline stores.

Tesco.com's prices are the same as in the stores. In addition, discounts, promotions and special offers

Exhibit 2 Choosing a delivery slot at Tesco.com



are made available to online customers. Service charge for delivery is £5, regardless of order size. Payment is made by credit card or debit card such as Visa, Mastercard, Switch, American Express and the Tesco Clubcard Plus. The account is debited when the packing is completed.

Improving the customer's online shopping experience is an ongoing effort at Tesco.com. In order to attract shoppers who have little or no Internet experience, Tesco relies on help and advice from external sources. For instance, Lynne Pullam, an Internet consultant for Tesco determines what appears on the Tesco.com website. She explains: 'To me, a megabyte is a very large mouthful of food, and a hard drive is any journey on the M25 at rush hour, although I'm told that some people also use these terms to describe computers.'⁹ She got the job after writing to Tesco about how the website could be improved. Now she is consulted on new features and every time the site is updated. For her services she is paid an hourly rate. Pullam explains her expertise: 'I may not be technically minded, but with almost 30 years of experience buying food for a hungry family, I can certainly tell Tesco whether shopping on the Internet is easy or not.' John Browett explains why Pullam was hired:

Her experience as a busy mother of three is as valuable to us as an Oxbridge degree in computer science. If Lynne says 'No' Tesco won't go. She represents the voice of our customers, so if Lynne doesn't like the feature on our site, then we won't do it. The majority of customers using our online shopping know little about computer technology. For them, it's just a different, more convenient way of doing the shopping. A lot of these customers will be housewives and older people who have not experienced the Internet. If their first experience is too difficult, it could put them off for life.¹⁰

While growing its online business, Tesco is meanwhile benefiting from the Tesco Club Card, which, with around 13 million registered consumers, represents an extraordinary database. For Karen Marshall, a spokesperson for Tesco, the card not only enhances customer satisfaction but also provides a valuable source of customer data for marketing efforts.

Shoppers' names and addresses and the category of products purchased are recorded and used for direct-mail campaigns and other promotions. For instance, when Tesco launched its pet insurance product, it was able to pitch to customers who had recently bought dog food and cat litter at its online store.

Club Card evenings – complimentary in-store gatherings for certain Club Card holders – are organized to promote products. Shoppers who have visited the wine or cheese departments at Tesco might be invited to a wine-tasting evening; those who purchased shampoo or cosmetics might be invited to a hair-care evening. 'It's a small "thank-you" to customers for shopping with us,' claimed Ms Marshall. 'The main idea is to help serve our customers better.' The popular evenings also provide an opportunity for personal contact with shoppers – something difficult to achieve in the mass-marketing age.

Tesco also sends Club Card members a monthly magazine with recipe ideas, details of new product launches and other information tailored to particular demographic groups. Each separate edition of the magazine reflects the interests and lifestyle of a target market group such as young families, students or senior citizens.

It is impossible to register at Tesco.com without a Tesco Club Card number. If a first-time online shopper already has one, the system will recognize that. In this way, Tesco is able to track how many online shoppers are its own customers and how many it is drawing from other chains. Tesco uses the extensive data it gathers on its customers' shopping habits to customize products and services – not, Browett insists, on a micro one-to-one level but on a broad demographic scale.

Tesco's fulfilment approach

Think of the store as a warehouse. It is close to where people live, it is simple to pick from because the layout is designed for customers to navigate, infrastructure is there and it is already part of a supply chain.

Andrew Higginson, Finance Director, Tesco¹¹

When Tesco first started its delivery service, it was possible for customers to place orders through multiple devices: by telephone, fax and also via the Internet. However, the ordering system turned out to be too slow and inaccurate, as each order was captured manually. This led to frequent errors, which created frustration for customers. Delivery costs were also high, since the picking system was manual and

⁹ Quoted in 'What's a hard drive?', the *Mirror*, 27 July 2001.

¹⁰ Quoted in 'What's a hard drive?', the *Mirror*, 27 July 2001

¹¹ Quoted in *The Economist*, 30 June 2001.

paper-based – pickers would walk around the store with their order lists and take the requested items off the shelves.

To overcome these initial difficulties, Tesco decided to automate its delivery service to a large degree and use the Internet as the sole ordering channel in order to streamline and improve order processing. When contemplating the delivery format for its online shopping, Tesco had to decide between two different approaches: either to pursue the warehouse model or to use its British stores as distribution centres. Both strategies had risks. Building huge warehouses would have cost millions of pounds, which Tesco was hesitant to spend on an unproven service. However, packing and picking groceries from stores might clog the aisles, thereby frustrating customers. So Tesco ran a series of calculations to identify the best delivery approach.

To get enough volume to justify the cost of building warehouses, Tesco determined that it would have to serve a large number of people from one location. In London, for instance, a single warehouse would have had to deliver to an area stretching from the northwest to the centre of town, a distance that would have taken hours to cover, as John Browett noted: 'The vans would have left on Friday and not returned until Saturday.'¹²

Mr. Browett explained the reasons for choosing store-based picking:

We have done the math. At current order volumes, you can't make warehouses work, because wherever you situate them, they are too far to reach your customers. What you may gain in [handling] efficiencies, you lose on delivery.

When asked about the scalability of the in-store picking approach, Browett said:

There is no reason why we can't pick from the stores at night or continuously. You would have to pay staff more but in terms of efficiency it might be worth it. We are up to 600 orders a week in our largest store but you don't have to do very much to get that to 2,000. In a typical superstore, we get 40,000 customers a week, so another 2,000 is neither here nor there, particularly as Internet sales do not have to be scanned via the check-out where the most congestion is.¹³

In order to make a warehouse work, Tesco calculated that 10 000 orders a week were needed. Tesco.com picks around 70 000 orders a week from 300 British stores and could increase this number to 1000 orders

for each store before needing to build warehouses. By delivering from local stores, no route takes longer than 25 minutes, since 94% of the population in England lives within a 25-minute radius of a Tesco store. The Boston Consulting Group assumed that the warehouse approach might make sense for the USA, with its wide catchment areas of stores, yet in Europe, where the density of supermarkets is much higher, the out-of-store approach seemed to be a better option.

The out-of-store approach also greatly facilitated the roll-out of the online service. While other competitors had to invest a lot of time and money in the construction of extensive warehouse operations, Tesco gained an important first-mover advantage by using stores as warehouses. Tesco.com thus took an early lead in Britain, rolling out services in 100 of its 639 stores on a nationwide scale in 1999, thus attracting 250 000 customers.

The actual fulfilment process at Tesco.com works as follows. Customer orders go to an office in Dundee, Scotland, where they are grouped and sent to stores on the morning of the chosen delivery day. Each store's own computer system then sends the orders to shopping carts, equipped with mini-computers that give pickers a route through the shop for the orders in order to maximize efficiency. Each supermarket is divided into six zones – groceries, produce, bakery, chilled foods, frozen foods and 'secure' products such as liquor and cigarettes. Each picker covers only one zone, retrieving products for six customers at a time. Through the use of the route-planning computer and the division of the store into zones, pickers average 30 seconds of picking time per item, so that a typical order of 64 items can be fulfilled in 32 minutes. Pickers work during normal store trading hours but tend to go around stores when they are quietest: between 6.00 a.m. and 10.00 a.m. and between 11.00 a.m. and 3.00 p.m.

The pickers use carts that take six trays and can therefore pick for up to six customers at any one time. The trays are designed to slide in and out of the cart and are identified by stickers with the order

12 Quoted in 'Early winner in online food', *The New York Times*, 20 July 2001.

13 Quoted in 'Management of online retailing', *Financial Times*, 13 September 2000.

number. Gary Sargeant, head of Tesco Direct,¹⁴ explains the reasons for the intensive use of technology:

Everyone knows that £5 charged per order will not cover the true distribution costs, so we have to develop a high-tech solution to bring the handling costs down.¹⁵

The cost of picking for one order is around \$8.50, including labour and depreciation, with an average order size of \$123.¹⁶ Tesco.com recovers its picking costs in a number of different ways. First, it saves about 3% of the order value by not using checkout clerks. Second, online orders tend to have higher gross margins – more than 30% compared with Tesco's typical 25%, as has been shown by a Schroder Salomon Smith Barney analysis.¹⁷ The reason for this is that online shoppers are more affluent and buy more profitable products, such as organic vegetables, quality meats, and private-label packaged goods. Tim Mason, Tesco's marketing director and chair of the dot.com business, admits: 'Our success is dependent on the fact that Tesco.com's margins tend to be higher.'¹⁸

In addition to cutting costs, Tesco also aims to minimize picking errors. Pickers scan the items they select and the system compares bar-code details with the item ordered on the customer's shopping list, sounding an alert if the wrong item is selected. With every item, the pickers inspect the sell-by date and check for damage. When asked about how she selects the products, Ms Sparks, a Tesco picker, said: 'Basically, it's common sense. You don't give a customer something you wouldn't buy yourself.'

In the storage area behind each store, different parts of each customer's order are grouped together. Orders are then loaded into vans, which are also designed to allow the trays to slot straight in. Tim Mason explains:

Since its introduction, the system has had at least six big overhauls and countless minor ones. And still compared with what could be achieved, it is pretty rudimentary.¹⁹

Up to 15 orders can go into each van, depending on their size, and each vehicle has a separate area for frozen food. The 600 delivery vans make two daily runs. When dropping off the order, the van drivers also interact with the customers, who frequently make requests for additional services (see Table 2).

By charging customers for delivery, Tesco.com takes about \$27 million per year in fees, which is

Table 1 Customer requests to Tesco delivery drivers

Most popular requests

- Can I borrow your van to help me move?
- Can you give men a lift?
- I need some help to change a tyre.
- Could you hold this ladder?
- Does my bum look big in this?
- Can you answer the phone and tell whoever it is that I am out?
- Could you unblock my sink?

Unusual requests

- Would you feed my pets while I am on holiday?
- Do you want to join me for a candlelight dinner (after customer was stood up on Valentine's day)?
- I need some marital advice.
- Could you take a family photo?
- I need someone to babysit.
- Could you give us a lift to the wedding (after the car failed to turn up)?
- Could you phone my office and tell them I am sick?
- Would you drop the kids off at school?

Source: Tesco company documents

close to the estimated \$34 million cost of making the deliveries, according to Timothy Laseter, analyst at Booz, Allen & Hamilton, a consultancy.²⁰ Charging a delivery fee also increases the likelihood that customers are actually at home during the delivery time window, since they have to pay again for redelivery. In addition, imposing a fee has contributed to an increase in order size because customers want to get their money's worth. In comparison with the average

14 Tesco Direct is a home-shopping catalogue service. The same products are available online, but for customers who do not have Internet access Tesco still provides a catalogue and a telephone ordering system. The catalogues available are 'Home and Living', 'You and Your Child', 'Gift' and 'Baby and Toddler'.

15 Quoted in 'Online grocery retailing', *Financial Times*, 6 September 2000.

16 'Tesco bets small – and wins big', *Business Week Online*, 1 October 2001.

17 'Tesco bets small – and wins big', *Business Week Online*, 1 October 2001.

18 'Tesco Bets Small – and wins big', *Business Week Online*, 1 October 2001.

19 Quoted in 'Online, in store, in profit and now in the US', *Financial Times*, 30 June 2001.

20 'Tesco bets small – and wins big', *Business Week Online*, 1 October 2001.

in-store transaction, online purchases are more than three times bigger.

As Tesco.com continues to expand its operations, a number of obstacles need to be overcome. Like many other online retailers, Tesco has run into trouble with orders for out-of-stock items. When the system was launched initially, customers were not informed as to whether products chosen were available. To remedy this problem, the Web infrastructure was integrated with the inventory system, so that customers seeking items that were out of stock were informed immediately, not after they had placed their orders.

Optimizing delivery times presents a further hurdle. Customers typically prefer evening and weekend slots, which would mean an increase in the size of van fleets to cope with peak demand or risk losing shoppers to rival services. However, the labour and capital costs of running fleets during these times are considerable.

The quality of the products they receive is another main concern many customers express. Elizabeth Wolf, one of Tesco.com's customers, says:

I am interested in it [online grocery shopping] because I work at a multimedia company and I'm quite familiar with the Web. But I'm very concerned with fresh food, and I've heard that the food being chosen and being delivered is, shall we say, not the best.²¹

In order to reduce the risk, many customers who are concerned with the quality of fresh products, choose to purchase only large and bulky items through the Internet. Heather Smith, a young mother of two who lives in West London, elaborates:

I use Tesco.com mainly for items that I can't carry home with me. Since I am usually pushing a baby carriage, my carrying capacity is limited. In addition, I have been quite disappointed with the quality of fresh items delivered by Tesco.com. Therefore, I only buy bulk items and some packaged lettuce and tomatoes through the Tesco.com website.²²

Other customers are more satisfied with Tesco's online service. Mike Smith reports on his first shopping experience:

I registered on Tuesday evening and ordered the following to be delivered by Thursday morning at 11 a.m.: 10 free range eggs, one porter cake, a pint of milk, ice cream, a tin of fruit cocktail and a jar of coffee. I would have chosen more – I tried adding meat, a fresh cream sponge and some custard slices – but the site bizarrely decided that I had enough and wouldn't allow me to add any more items. The whole thing, including a delivery

charge of £5, cost £15.59. I registered, entered credit card details and waited. The message the next day said the delivery would arrive between 11 a.m. and 1 p.m. on Thursday. At 10.45 a.m. everything arrived. The eggs weren't broken, the ice cream was frozen and things were generally OK. Maybe next time... I'll order more.²³

Other customers are also concerned about the environmental issues caused by the Tesco delivery trucks driving through town. However, Browett rejects this claim:

This is environmentally friendly. We do 12 deliveries per run on one loop, instead of every shopper going back and forth. I think this is actually saving the planet.²⁴

Finally, some customers, especially in the up-market community, dislike having Tesco white delivery vans in their driveways. In order to appease this segment, Tesco.com has bought a small fleet of green Range Rovers to deliver to their doors.

Alliances and acquisitions

Technology partnership with Interwoven

When launching its online store, Tesco's challenge was to create and edit the Web files needed to keep abreast of inventory. Several Web-design agencies were initially employed to develop the HTML²⁵ and ASP²⁶ files needed to illustrate Tesco's products and to contribute to Tesco.com's look and feel. While these agencies showed much creativity, Tesco found it difficult to incorporate new content into the existing website.

Leon Stoner, Tesco's webmaster, notes:

There was no way for the agencies to test the ASP and HTML files before they went live. They'd develop a whole pile of pages for our review, then they'd send them to us via FTP²⁷ or e-mail in a zip file. Then, we'd

21 Quoted in 'British grocer Tesco tries to succeed where others have failed', *Hoover's Online*, 3 August 2001.

22 'British grocer Tesco tries to succeed where others have failed', *Hoover's Online*, 3 August 2001.

23 Quoted in 'Technology online grocer fails to deliver', *Hoover's Online*, 24 July 2001.

24 Quoted in 'White van man trains sights on US: Interview John Browett, chief executive, Tesco.com', *Financial Times*, July 14, 2001.

25 Hyper Text Markup Language.

26 ASP, which stands for Active Server Pages, is an open Web application platform that combines server scripting with custom server components to create browser-independent Web solutions and publish legacy databases to the Web.

27 File Transport Protocol.

have to manually put them on a makeshift server, and give them a quick once-over ... then manually copy them from that test server to eight or more production servers. It was obviously quite time consuming, and a bit of a headache.²⁸

The need for efficient management of its Web assets became more pressing as the online operations continued to expand. Thus, Interwoven's TeamSite was selected to provide the required technology support. Two consultants from Interwoven worked with Tesco in London to customize the TeamSite technology to meet Tesco's needs. TeamSite manages content provided by about 15 Web designers and authors. Tesco maintains 20 production Web servers. When asked about the possibility of future expansion of the system, Stoner replied:

We've been trying to arrange it so there is a generic implementation. We've designed the workflows and scripting behind the scenes so they're easy to maintain and manipulate. So when we decide to take the non-food sites through TeamSite, we can just take the existing scripts, tweak them a little bit, and then we'll just kind of roll the other sites over every four to six weeks. Eventually, we'll have the TeamSite running the national store.²⁹

There are three important features that TeamSite provides for Tesco:

- *Templating*: the comprehensive templating framework allows Tesco's business managers to manage the timing and look and feel of online campaigns.
- *Smart context editing*: TeamSite offers a means for Tesco's external Web design agencies to develop and check the quality of their work before submitting it to the online grocers.
- *Flexible workflow*: TeamSite allows line-of-business managers to assign work, control approval, and manage distribution to their offline and online customer channels.

For Stoner, using TeamSite has made a significant difference:

TeamSite has allowed our agencies to test their work before they send it to us. This has been great because it cuts out a lot of our day-to-day maintenance role. Now we can develop new things, rather than just being reactive to the need for change on the current site. We have more time on our hands ... so we can take on more work.

Paul Arnold, a senior business consultant at Tesco, elaborates:

TeamSite has enabled us to scale up quickly. Tesco Direct has gone from being a test site for a few stores to being the biggest on-line grocery site in the UK. The fact that we can create and merge store-specific content for all our retail locations has greatly improved our customer relationships. Plus, we can respond quickly to changes in pricing, inventories, and the like, which helps us operate much more efficiently. Best of all, our website can be easily managed by an internal team of only 12 people – we don't need a load of extra resources to keep things running smoothly, which definitely improves our bottom line.³⁰

Partnership with iVillage UK

In July 2000, Tesco and iVillage Inc. agreed to create an international joint venture called iVillage UK to serve the women's online market in the UK and Ireland. The purpose of iVillage UK is to provide women with a community and various interactive online services such as content channels, planners, quizzes, message boards, chats and newsletters. John Browett comments on this alliance:

There is great synergy between our two companies and category-leading brands, making this joint venture an ideal investment and strategic initiative for Tesco.com. iVillage UK will be using iVillage.com's clear advantage as the best site for women online and Tesco's rich knowledge of UK customers.

As part of the deal, Tesco.com receives a central positioning on the homepage of iVillage.co.uk and Tesco's products and services are contextually integrated throughout the iVillage network. Tesco.com also has central positions in a number of vertical content areas: Tesco Direct functions as the exclusive grocery partner of the iVillage's Food channel. Tesco's Baby & Toddler Store is promoted throughout the Pregnancy & Baby Channel at iVillage. iVillage, on the other hand, receives marketing and promotional support from Tesco to drive traffic on to the iVillage website. These consist of in-store promotions, Tesco mailings, and positioning on Tesco's Internet service provider.

Acquisition of GroceryWorks

Deutsche Bank Research indicated in 2000 that it expected Tesco to roll out its online format into other markets:

²⁸ Quoted in Interwoven company material.

²⁹ Quoted in Interwoven company material.

³⁰ Quoted in Interwoven company material.

Tesco is likely to seek regional alliances via Tesco.com in Europe and some North American states. We strongly believe that this strategy is a good one, because consolidation in Europe is currently hampered by the excessively high cost of physical assets. Internet is a good means for Tesco to make regional alliances by bringing its technological and marketing expertise to local groups with strong renown in their area and access to food manufacturing groups. Involving a fairly limited capital commitment, this strategy enables Tesco to win market share in new segments without having to build stores.³¹

On 25 June 2001, Tesco did, indeed, announce a deal with Safeway, California's biggest food retailer. As part of this deal, Tesco is providing its technology and \$22 million into GroceryWorks, a loss-making online retailer that is majority-owned by Safeway. GroceryWorks, which operated previously with warehouse-based distribution systems, plans to close these facilities and replace them with Tesco's store-picking system. In return, Tesco received a 35% stake in GroceryWorks. The deal attracted a lot of attention because a system developed in England for £40 million is to become the backbone for online shopping in the state that led the dot.com revolution.

If Tesco can teach its new partner these skills and tricks, its 35% stake in GroceryWorks could turn out to be a goldmine, given America's avid Internet usage and Safeway's 1,700-strong network of stores, more than twice as big as its [Tesco's] own.³²

In December 1999, GroceryWorks began delivering from warehouses. Two months later, its executives realized that their business model had severe flaws. Jeffrey Cushman, Chief Financial Officer of GroceryWorks, explained: 'We knew right away that we had to get the product costs down.' But without the buying power of a larger grocery chain, it could not get a competitive deal from suppliers. Furthermore, GroceryWorks also faced problems with its warehouse system. Cushman continues: 'A fulfillment center is so big that you never get the density until you run out of money.'³³ When asked about cooperating with Tesco, a Safeway spokesperson Debra Lamgert replied: 'We liked Tesco's track record. They understand how to combine technology with bricks and mortar.'³⁴

GroceryWorks is closing its three distribution centres (built at a cost of approximately \$7 million each) and is temporarily ceasing operations. When it reopens, it will operate under the Safeway name,

using the Tesco model of store picking and packing. Tesco is expecting overall operating costs to be lower in the USA, since traffic congestion is less severe and fuel taxes are far lower.

Following the signing of the agreement, Terry Leahy commented on the deal:

Retailing services are a key part of the Tesco strategy for growth. We have developed the best online grocery home shopping system in the world which we know can be of use to other retailers. Last year we outlined our desire to take Tesco.com into different markets, including the US. We admire Safeway Inc. greatly. They represent the best of US retail. With Tesco's know-how and the Safeway Inc. brand we have the perfect combination to bring [online] grocery shopping to the world's largest market.³⁵

Future outlook: which recipe will taste best?

Picking in-store is fine if there is low demand, but it is not good when the service ramps up – it disrupts the customers. When demand gets higher, then picking centers are the only route to market. We believe that a flexible model with a combination of stores and picking centers will deliver the best return.

Angela Megson, e-Commerce Director,
Sainsbury Supermarkets³⁶

Thinking aloud about the capacity restrictions, Browett points out:

We think we can go as high as £2–3 billion in sales using store-based picking and packing. And that's assuming no new stores and no significant productivity improvement, both of which are likely and would raise the number. Maybe someday we'll have a hybrid model with warehouses for dense areas like London, but the traffic just kills you. Plus, where would we put them? In any case, smaller places like Inverness, Plymouth, or Peterborough could never be served from warehouses.³⁷

Marc van Gelder, Chief Executive Officer of Peapod.com (a USA-based Internet grocery retailer,

31 Deutsche Bank Research Report, 2000.

32 *The Economist*, 30 June 2001.

33 Quoted in 'Early winner in online food', *New York Times*, 20 July 2001.

34 Quoted in 'Tesco bets small – and wins big', *Business Week Online*, 1 October 2001.

35 Quoted press release, 25 June 2001.

36 Quoted in 'Online grocery retailing', *Financial Times*, 6 September 2000.

37 Quoted in 'Online extra: Q&A with Tesco.com's John Browett', *Business Week Online*, 1 October 2001.

now part of Ahold, a Dutch retail chain) is not convinced by Tesco's business model. He said:

We find Tesco's pure in-store model complicated from a quality perspective. Tesco has lower start-up costs but over time they have to naturally evolve to warehouses if they want efficiency.³⁸

Like its dot.com rivals, Tesco has to offset direct expenses, such as vans and pickers, against its online revenues. In contrast to pure players, which also have to consider the running costs and depreciation charges of their warehouses, Tesco books these costs against its offline sales. This practice led some analysts and investors to question whether Tesco's online operation would be profitable if it were evaluated as a separate business unit. Jeff Matthews from Ram Partners, a hedge fund in Greenwich, Connecticut, says: 'Profits can be calculated in many different ways.'³⁹

Tesco continues to build on its strong UK base through a concerted move into non-food markets and major store openings in Central Europe and Asia, in addition to its partnership in the USA with Safeway. In November 2001, Tesco expanded its online operations into South Korea, which has one of the highest penetrations of broadband Internet access. Currently, Tesco has seven bricks-and-mortar stores in South Korea and plans to open another 11 in the future. This international expansion may prove to be another opportunity for Tesco to roll out its successful Internet-based grocery retailing. It seems that for this new, scalable online business, the sky is the limit.

38 Quoted in 'e-business: British grocer Tesco thrives filling web orders from its stores' aisles', *Wall Street Journal*, 16 October 2000.

39 Quoted in 'Supply chain management: shop or warehouse', *Financial Times*, 20 June 2001.

DISCUSSION QUESTIONS

- 1 What are the main opportunities and challenges in online grocery retailing?
- 2 In what ways does Tesco.com expect to benefit from its online initiative?
- 3 What role do logistics play in online grocery retailing in general?
- 4 What are the advantages and disadvantages of the different order fulfillment approaches (i.e. in-store vs. warehouse-based)?
- 5 What recommendations would you make to Tesco.com in order to consolidate its 'emerging' success?
- 6 What lessons would you draw from the Tesco.com case and other Internet-based grocery experiences you may be aware of, and what messages would you have for e-retailers in general?