

E-Commerce

How small businesses can do business on the Internet

Expert knowledge means success

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Note: This publication has not been updated since it was last published. Some of the hyperlinks may have changed and may need updating. In addition, some of the information in this publication may be out of date.

Introduction

The term electronic commerce (or e-commerce) is the most common name for the practice of doing business over the Internet. There are other terms such as Internet- or Web-trading, Internet business, online business, e-business, Internet commerce, Web commerce, and so on - they all refer to selling products and services to customers using a Web store (or cyberstore) over the Internet.

E-commerce simplifies and speeds up all stages of the business process, from design and making to buying, selling and delivery. In its many forms, it may be defined broadly as any commercial transaction carried out, facilitated or enabled by the electronic exchange of information. It has changed the way business is done all over the world, particularly within and between companies and now between retailers and their customers.

Making it easier for business in the UK, and world-wide, to use electronic commerce is an important part of the strategy for creating the "knowledge-based economy" to which the UK Government claim to be committed by helping business and consumers to gain the benefits of using electronic commerce in three ways, through encouraging:

- a strong demand from knowledgeable users;
- a strong supply sector providing innovative solutions to customer demands; and
- the right legal, regulatory and institutional framework to allow electronic commerce to thrive.

The Internet not only enables businesses to offer customers an additional level of service, but also opens up a sales channel through which they can reach new customers. Small businesses in the UK can use the Internet to offer speciality products, from foodstuffs to clothing, to a worldwide audience of expatriates and Anglophiles. The Internet also serves as a platform for entirely new ventures; the best-known example is the Amazon bookshop, which was created purely as an Internet sales outlet and in a very short time became a world-leader in book sales.

In the mid-1990s, it would have cost the average small business thousands of ££s in software and programming services to set up an online storefront. But an influx of inexpensive solutions since the start of 1998 has made it possible to take your products or services online for as little as £10 a month. Additionally, in the UK, the clamour for faster online access has resulted in BT reducing the ADSL cost to under £18.99 per month (at the time of publication) – with free unmetered access.

Whether you're considering taking a business online or starting an Internet business, you now have the advantage that a low-entry cost means that you can spend more money on advertising and promoting the service. Simply putting up a well-designed store with attractive products isn't necessarily going to do the trick if people don't know about it. Obviously, you need to advertise your presence in the places where your customers congregate - and that's not only on the Internet. While it's important to have your store indexed in as many Internet search engines as possible, you should not neglect the traditional promotional methods.

Mail order businesses are ideal candidates for taking online because you already have a database of products in a paper catalogue that can easily be presented as web pages as well. At its most basic, a web store is simply a web-based (HTML) catalogue with an associated ordering system.

Another important benefit of already having a mail order system is that you have the experience of fulfilling orders. Calculating sales taxes and shipping charges and delivery for an international audience takes quite a bit of organisation, as do the handling of returns and multiple currencies and the thorny question of customer support.

Remember that handling customer service calls from a worldwide audience implies a 24-hour service. If you haven't previously sold through mail order, it's probably advisable to begin by restricting your service to the UK.

Advertising, product promotion and order fulfilment are fairly similar business issues for any sales operation, whether on the Internet or not. But a difference arises when it comes to the catalogue of products - an Internet catalogue can be much more dynamic than a paper equivalent. This is one area where it is important to choose your

electronic commerce software carefully.

Planning for e-commerce

To be effective, an e-commerce system should be planned in terms of initial implementation, ongoing development and maintenance at the outset.

E-commerce systems such as your website can be used to market and sell to customers, and to provide after-sales support.

E-commerce can also be an important part of strengthening relationships and improving the efficiency of your dealings with suppliers and other key trading partners.

Identifying e-commerce opportunities

There are several different ways you might use e-commerce in your business.

Direct sales

Many businesses use e-commerce for the direct selling of goods or services online. For some businesses, such as those selling software or music, the actual sale and delivery of goods can be made online. However, for most, the supply of goods will continue to require a physical delivery.

If you plan to sell online, you may need to rethink many of your business activities. This is because you will fundamentally change the way in which you interact with your customers - for example, where customers place orders online instead of talking to a salesperson. You will also need to work out how every aspect of a transaction is handled - including order confirmation, invoicing and payment, and deliveries and returns.

Pre-sales

You can use your website for pre-sales activities - exploiting the widespread use of the Internet to generate sales leads. At its most basic this can be through the use of "brochureware" - having an online version of your promotional materials on your site. Other options include e-mail campaigns or online advertising to attract visitors to your own website where you can promote your products.

Post-sales support

You can also use the Internet to automate aspects of your customer support to reduce the number of routine customer service calls.

This can be achieved by using your site to answer the most frequently asked questions, or by putting technical information online.

However, you decide to use e-commerce, it is important to define your expectations from the outset. What level of sales are you hoping to make? How many sales leads are you looking to generate? What percentage reduction in customer telephone calls are you expecting to achieve? Ensure that targets are put in place so that you can measure the success, or otherwise, of your e-commerce facility.

Making an e-commerce site easy to use

The ease with which a customer is able to use an e-commerce site is an important part of its success. It's also an important part of your online brand image.

There are three elements of the shopping process that influence how easy and enjoyable the customer finds it to shop on an e-commerce site - the shop front, shopping cart and payment software.

Shop front

The shop front is the interface presented to the customer. This often incorporates an online catalogue that enables them to browse for products and identify those they wish to purchase. Customers should be able to find the product they are looking for quickly. An eight-second guideline is frequently cited; if customers are unable to find the product within that time, they are likely to go to an alternative site.

The design of the shop front should make shopping intuitive, with the customer knowing at all times what stage of the buying process they are at.

Shopping cart

This is the software that facilitates easy selection and payment for products purchased by a customer from an e-commerce website. Once the goods have been selected, the customer should find the checkout clearly signposted, so that they can proceed to pay for the goods.

The system should process the order speedily and provide you with a summary, including any packing and shipping requirements. It should also generate a printable receipt and allow you to send a confirmation e-mail to the customer.



Payment software

Most customers will wish to pay for their purchases with credit or debit cards. There are three options for accepting such payments - you can:

- open a merchant account;
- use a payment processing company; or
- set up an online shop within a virtual shopping mall.

Trading partner relationships

As well as offering new ways of doing business with customers, e-commerce also provides new ways of building closer links and improving business relationships with key trading partners.

These Internet-based technologies and processes also allow you to improve your own business efficiency. Some of the key technologies are listed below.

Intranets

These are private internal company networks that use the same browser-based technology and network protocols as the Internet.

Intranets:

- are protected from unauthorised use by a firewall; and
- improve efficiency by enabling employees to search the business' knowledge and information store from their own desktop, regardless of location.

Extranets

This is a shared intranet that allows users to share key trading data such as inventory levels and sales trends.

Extranets can:

- be made available to selected external partners, such as vendors, contractors, suppliers and key customers;
- be used for exchanging data and applications, and sharing specific business information; and
- improve supply chain management.

Supply chain management

The concept of supply chain management revolves around having the right product in the right place, at the right time, and in the right condition.

The key aspects of supply chain management include the ability of businesses to:

- exchange information on stock levels;
- fulfil orders more quickly;

- minimise excess inventory;
- improve customer service; and
- use a networking infrastructure to ensure good response times and speed.

E-marketplaces

There are many online exchanges that enable suppliers, buyers and intermediaries to come together and offer products or services to each other, according to set criteria. Buyers and sellers work interactively with bids and offers. When a deal is made, it is a match between the buyer and seller on variables such as price, volume and delivery costs.

Reverse auctions are buyer-controlled events and are used to attract bids, with the lowest bid winning. Buyers post details of the goods they want to buy and suppliers compete to provide them.

Implementing e-commerce

The key tool for delivering e-commerce services is the business website. This must be specified, designed, hosted and maintained.

Specification

The website specification should clearly identify what the site is trying to achieve and how its various components will contribute to this. An understanding of the intended user audience is required for both technical and marketing purposes.

Domain name

Domain names are an enormous help in the branding of a business. Your domain name should be easy to remember and spell and should show what your business is all about. If not, then potential customers will surf elsewhere and possibly find your competition.

Website hosting

If you purchase your own domain name you can either host your own website or have an Internet service provider (ISP) host it on your behalf. If you choose to host the website yourself, you will require a fast Internet connection and a suitable PC. However, ISP hosting is relatively cheap and simple.

The type of Internet connectivity and the available bandwidth will be an important consideration, irrespective of which hosting solution is selected. Most businesses choose some form of broadband connection.

Why is E-commerce important?

E-commerce offers the prospect of rapid growth, especially through the expansion of Internet services and digital television. Growth in cross-border transaction volume is expected to be just under 10% annually over the decade from 1997, to a total of 4.6 billion transactions worldwide in 2007.

E-commerce is revolutionising trade in many services, as well as providing many new opportunities for trade in conventional goods. E-commerce is also an important tool for Trade Facilitation, as well as providing substantial opportunities for public procurement to be more transparent and efficient.

E-commerce is a valuable means for all companies trading internationally but it offers particular benefits to Small and Medium-sized Enterprises (SMEs) and developing countries by facilitating direct access to the global market.

Source: BIS

Software options

An important early decision to consider is whether to use a "shop" package or build the software from scratch.

Shop packages allow you to configure product information and the look and feel of the shop. However, they can provide limited opportunities for tailoring them to your back office processes.

Alternatively you can get a third party to build the software for you, or develop it yourself.

Recognising the ongoing commitment

Even in the planning stages of an e-commerce project, it is important to understand how the website will be maintained on a day-to-day basis. There are also various marketing and security issues that need to be taken into account.

Site maintenance

Changes in product details, product ranges, special offers, up-to-date advertisements and sales information will all need to be maintained throughout the life of the site. In addition, you should consider redesigning the site on a periodic basis in order to improve the features offered to customers and keep the site looking fresh.

Customer feedback

It is important that the site evolves to meet the needs of your customers. There are a number of actions you can take to encourage customer feedback, including carrying out surveys and putting feedback forms on the site.

Marketing

No matter how well designed your e-commerce site is and how competitive your products and prices are, if the customers are unaware of its existence then you will fail to exploit its potential.

Popular methods of promoting a website include:

- e-mail advertising campaigns;
- web adverts; and
- digital coupons offering discounts.

Don't forget to take full advantage of search engines by ensuring that they pick up all of the key terms that you think your customers will use to find your site.

Security considerations

Using the Internet for business purposes is fraught with risks to security. Hackers can attack systems at any time. Whatever your business, there's a real risk that your system may become the target of an attack that could affect your organisation.

You should recognise the need for effective security controls to prevent your site from falling victim to hackers or fraudsters.

Contingency planning

The more successful your e-commerce service becomes, the more reliant you will become upon it. You should consider what risks and threats your e-commerce site might be open to and have contingency plans to ensure that you can continue trading should anything go wrong.

Who is involved in an e-commerce project?

E-commerce impacts upon almost every function within a business. Externally, a variety of suppliers will also need to be involved within an e-commerce project.

The range of specialist skills required will be dependent upon the scale and complexity of the proposed e-commerce system. However, these skills are likely to include experience of:

- servers - Microsoft, Sun, Linux etc.;
- firewalls and security;
- graphic design and production;
- HTML and XML coding;
- programming languages; and
- database technologies.

The interested parties within a business include:

- board-level management;
- purchasing;
- inventory management;
- manufacturing;
- service provision;
- direct sales;
- sales channel management;
- fulfilment;
- post-sales support;
- marketing and PR;
- accounting;
- training; and
- legal.

E-Signatures are now legal in the UK

Since 25 July 2000, an electronic signature has been legally admissible as evidence in court in the same way as a hand-written signature. The UK is one of the first countries in the world to pass legislation in this sector of trade.

This legal milestone brings the UK a step closer to its aim of becoming the best place in the world for e-commerce. Electronic signatures are essential if contracts are to be concluded over the Internet.

Businesses and people using the web can now be confident that e-signatures will be admissible as evidence in a court of law should a dispute arise.

External parties with a potential involvement in an e-commerce project include:

- existing hardware and software suppliers;
- specialist Internet hardware and software suppliers;
- programmers, web designers and consultants used on an "as required" basis;
- Internet service providers;
- domain name registrar;
- telecommunication providers;
- major suppliers;
- major customers;
- advertising/marketing design agencies;
- specialist business media;
- accountants/auditors;
- solicitors; and
- training companies.

Creating an online shop

Selling products and services online can have major advantages for businesses, leading to increased profitability and lower costs.

Benefits of selling online

Selling online has a number of advantages over selling by conventional methods, including:

- making savings in set-up and operational costs. You don't need to pay shop assistants, rent high-street premises, or answer a lot of pre-sales queries;
- reducing order-processing costs - customer orders can automatically come straight into your orders database from the website;
- reaching a global audience, thereby increasing sales opportunities;
- competing with larger businesses by being able to open 24 hours a day, seven days a week;
- being able to receive payment more quickly from online transactions;
- attracting customers who would not normally have investigated your type of high-street outlet;
- improving your offerings using the data gathered by tracking customer purchases; and
- using your online shop as a catalogue for existing customers.

Online selling will work best for you if you have:

- well-defined products or services that can be sold without human intervention in the sales process;
- fixed prices for all types of potential customers; and
- products or services that can be delivered with a predictable lead time.

Many businesses can run pilot e-commerce sites without significant investment.

However, a fully automated online shop tailored to meet your precise requirements could be expensive.

Whatever form of online shop you choose, take a strategic view. If you launch a website that disappoints your customers or is overwhelmed by traffic, you risk damaging your reputation and losing sales.

A basic online shop

The requirements for building a basic online shop are fairly straightforward. A simple setup allows you to sell a small range of products, providing photos, descriptions and prices as well as accept orders online.

You will need a computer, Internet access, e-mail, a website and hosting services. Using a broadband connection as opposed to dial-up will ensure fast connection to the Internet but it may make you more susceptible to unauthorised access. Having a firewall will prevent this occurring. A firewall is sometimes included as part of your operating system.

You will also need a hosting package for your shop. There are many e-commerce web hosting specialists and it's worth shopping around for the best deal. While this service is not necessarily expensive, you tend to get what you pay for. It's important to study the service level guarantee and the type of technical support on offer. You should be looking for round-the-clock support.

Most customers shopping online will want to pay by debit or credit card. You can create electronic mail order forms, using various web authoring software available on the market.

These order forms let customers e-mail their orders to be processed offline. If you already have a website, software can add e-commerce functionality. Some companies offer this free, on the condition that they receive a cut of future transactions.

A basic site is low cost and easy to create for a limited product range. However, be aware that the design and functionality may be restricted and it may be less secure than other more sophisticated options.

An intermediate online shop

To create an intermediate-level online shop you will need an e-commerce package. Facilities vary, but broadly you can expect catalogue management, enhanced order processing and a broader range of design templates.

Crucially, you can also expect encryption for secure ordering. Making sure checkout procedures are secure and user friendly are essential if customers are going to feel confident about ordering your product. Many people will abandon purchases at the checkout stage if the process is not quick and easy. Using Secure Socket Layer technology to collect card details (denoted by the "golden padlock" symbol in your browser's status bar) is key to encouraging online sales.

Some e-commerce packages offer a degree of back-end systems integration, ie they connect to your product database and accounts systems, streamlining the order process and keeping the website up to date. Update your site content regularly and you will encourage customers to come back to you rather than switch to a competitor.

If you use a broadband connection, you can also receive orders in real time and update your website automatically. Be aware that some Internet service providers offer combined web hosting and software packages, so it's worth doing some research.

An intermediate-level site can provide you with a professional looking design, full e-commerce and payment functionality and value-added features, e.g. account information, customer references and customer alerts. However, you should be aware that it may not suit you if you wish to offer more complex products and services.

A sophisticated online shop

A sophisticated online shop offers a huge range of options, including cutting-edge design and functionality. It can provide your customers with a rich, interactive shopping experience, including personalised pages and product news.

However, customers should not have to navigate their way past distracting graphics and animations. If they do not find it quick and easy to buy your products and services, they will shop elsewhere. Don't ask for personal details too soon. Most customers will not be prepared to fill in forms until they are ready to buy.

Having a sophisticated online shop can also make the running of the business smoother. Software can be integrated to trigger order confirmations and automatically dispatch goods and replenish stocks.

However, you should be aware that you may need the help of a design and development company to define your technical requirements and integrate the website with your existing systems. This could take longer to create, lock you into one service provider, and be very expensive.

Planning your online shop

Before building your website, you must create the right processes and procedures to support it and put in place the resources to deal with orders.

You need to work out how to:

- deliver your products or services to fulfil customer orders;
- collect payments;
- maintain security and demonstrate this to the customer;
- let customers contact you; and
- comply with regulations.

You need to ensure that you can deliver goods or services in a reasonable time, ideally the next day. Your business should be ready to deal with calls, e-mails and queries about delivery - you may need extra staff. Test your website and processes thoroughly. Start with a soft launch - perhaps just to existing customers - before giving it stronger marketing support. Find delivery methods that keep charges low.

Customers may be wary of paying online. However, you can encourage them by providing a secure area on your website for placing orders and giving debit and credit card details. This can prevent late payment problems and helps to safeguard your cashflow.

E-commerce service providers

The following is a list of some e-commerce providers. Some provide website creation software whilst others provide shopping cart software or payment software. The list should not be viewed as a recommendation.

- Actinic Catalog
www.actinic.co.uk
- Microsoft Commerce Server
www.microsoft.com/commerceserver/en/us/default.aspx
- Intershop
www.intershop.com
- NetBanx
www.netbanx.com
- PayPal
www.paypal.com
- ShopSite
www.shopsite.com
- Site Spinner
www.virtualmechanics.com/products/spinner
- Web Easy
www.usa.webeasy.avanquest.com/
- Web Page Maker
www.webpage-maker.com
- Web Plus
www.serif.com/webplus
- Web Studio
www.webstudio.com
- WebGenie Shopping Cart
www.webgenie.com
- WorldPay
www.worldpay.com
- Payment Online
www.paymentonline.com
- Yahoo Small Business Merchant Solutions
<http://smallbusiness.yahoo.com/ecommerce/>
- ecommerce Online Merchant - Open Source online shop e-commerce solution
www.oscommerce.com

You may wish to offer more than one payment method to customers, such as invoicing, particularly if you're selling to businesses, or paying by debit or credit card over the telephone.

With the use of encryption technology, virus-scanning software and a "firewall", e-commerce transactions can be as secure as offline ones. It's important to create confidence in your shop. A professional-looking website with an explanation of your security precautions will help.

Consider how to:

- handle debit and credit card details safely;
- ensure that key information on your website cannot be defaced or altered fraudulently; and
- preserve the confidentiality of customer data such as telephone numbers, addresses etc.

Customers will want to know that they can speak to a person if something goes wrong. Your website will need a contacts page including:

- your business name, address, phone and fax numbers;
- an e-mail address for enquiries or orders; and
- the name of the person to contact in the first instance.

Regulations and selling online

If you are selling online there are a number of regulations and legislation that you need to be familiar with. These are in place to ensure that personal data customers provide is kept secure, goods and services meet quality and suitability standards, and online contracts are legally binding.

The Data Protection Act 1998 regulates how you deal with personal information held about living people, e.g. in customer records. The Act affects information that you have on computer as well as some paper-based records. In practice, it means that you need to be open about how you use information and follow the eight data protection principles. You can download information on how to comply with the Data Protection Act from the Information Commissioner's Office (ICO) website (PDF).

The Consumer Protection (Distance Selling) Regulations 2000 require you to give your customers specified information before they

place an order, e.g. your full company name and address and a description of the goods or services. You are also required to send the buyer order confirmation and give them a "cooling off period" in which they can cancel their purchase if they wish.

The Electronic Commerce Regulations 2002 specify what information about your business you must share with online customers, and how you should go about advertising and promoting your goods or services. If you set up a contract online, you must make sure that the customer can print and keep a copy of the terms and conditions. Furthermore, any commercial communications sent to customers must be clearly identifiable as such.

If your business is a limited company or limited liability partnership (LLP), under the terms of the 2006 Companies Act your website must show:

- the full name of the company or LLP;
- the registered office address of the company or LLP;
- the registered number of the company or LLP;
- the place of registration of the company or LLP;
- if the company is being wound up;
- the VAT number (if VAT registered); and
- membership details of any trade or professional association.

Helping customers find your website

For your online shop to be effective, customers must be able to find it. There are a number of things you can do to steer customers towards your website, including:

- notifying search engines - there are four major ones (Google, Ask, Yahoo and Microsoft's MSN/Windows Live);
- publicising your site through related websites - many individuals go to sites after seeing a link, an advertisement or a mention on another site;
- negotiating joint ventures with other sites;
- word of mouth;
- advertising in traditional media;
- adding your website address to all e-mails, letterheads and other stationery and to your business vehicles;
- mailing or e-mailing your customers with a newsletter
- getting into local online business directories, such as those produced by

- local Chambers of Commerce; and
- adding an "e-mail this to a friend" button on your site.

When you choose your Internet address (URL) or domain name, try to make it simple and easy to remember so that customers will be more likely to go to your site rather than those of your competitors.

If you want to build your audience it is essential that you are listed in web directories and search engines. But this can be a difficult and time-consuming process. You can get your website listed or improve your search ranking using the following steps.

- Think about how people are going to find your site - pick key words and make sure they are in your page title and repeated further down the page. Ask friends and family to get involved with this for some objective feedback.
- Get as many websites as possible to link to your site - many search engines rank sites according to how many other websites link to them.
- Write a description of your site and the services it offers and place it prominently on your home page.
- Be patient - it can take several months to get listed by search engines.
- Resubmit your site details regularly to the main search engines. Find information about raising your website's profile at the ineedhits.com website.

Avoid online pitfalls

Many e-commerce websites fail because of basic mistakes that are easily rectified.

Customers will be put off by:

- out-of-date or incorrect information;
- difficult site navigation and purchasing processes;
- poor customer fulfilment and late delivery;
- lack of customer support;
- lack of business information; and
- poor visual design.

So it is essential to:

- make sure all information on your website, especially on prices, is up-to-date;
- monitor the information you provide on a regular basis;
- make it easy to find and purchase products;
- make sure that resources and procedures are in place to support your website. This will ensure that orders

can be processed quickly, e-mails can be responded to quickly, and helplines are manned by appropriate staff at reasonable times; and

- have your website professionally designed.

Remember - when selling through an online shop, you don't normally have any personal contact with your customers, so you need to try harder to find and keep them. There are further steps you can take to increase the chances of visitors placing an order, and to make them feel more secure about buying from your site. These include:

- making your site easy to navigate and user-friendly;
- giving a 100 per cent no-quibble money-back guarantee if they don't like or want the product;
- making sure photographic images on your site are accurate and show products in their best light;
- hiring a customer service representative who can give advice on the phone to customers on more complex or expensive products;
- making ordering procedures straightforward and quick;
- confirming orders immediately by e-mail;
- being honest - telling the customer if you can't deliver on time; and
- providing a way for customers to track down the progress and availability of their order.

Accepting online payments

For many small businesses, accepting payments online provides some major benefits. Customers increasingly expect this facility and it can improve your cash flow significantly.

It's easy to accept cheques or invoices for your online sales and to process payments in the traditional way. However, because buyers often use the Internet for a speedy service, most sales are paid for with credit and debit cards. To accept cards online, you will have to make special banking arrangements.

Common website mistakes made by companies

- Assuming that website visitors have a level of technology (knowledge, hardware and software) or browser version that is beyond what visitors actually have;
- Failure to provide key contact information;
- Failure to organise the website and user-paths on the Home Page according to key audiences;
- Failure to provide global and local navigation;
- Failure to provide management information.

Source: Shelley Taylor & Associates
www.infofarm.com

Online payments using cards are "card-not-present" or CNP transactions. There are higher risks of fraud with this type of payment and banks require you to operate within a well-defined set of rules and accept a higher level of commercial risk than a conventional swiped card transaction in a shop.

Online payment jargon

Debit and credit card payments and their application online involve some key concepts and jargon.

An acquirer can be a high street bank or other financial institution that offers credit and debit card accepting/processing services. It acquires the money from the customer, processes the transaction and credits your account. You need to apply for a merchant service agreement if you want a bank to handle your electronic payments. For web-based online transactions you need an Internet merchant account.

Obtaining an Internet merchant account from an acquirer may be quicker and easier if you already have "offline" card-processing facilities set up. In this case, just ask your acquirer for an additional Internet merchant account ID for use exclusively with Internet transactions. This process is normally quick, especially if the risk to your business does not change.

To help protect merchants and cardholders from fraud, the card schemes have developed a service that allows cardholders to authenticate themselves when shopping online. MasterCard's is called "MasterCard SecureCode" and Visa's is "Verified by Visa".

A payment service provider (PSP) will provide you with a "virtual" till or terminal that collects the card details over the Internet and passes them to the acquiring bank. To take electronic payments over the web, you will need a PSP. Your choice of PSP will depend on its cost and compatibility with your chosen e-commerce software solution. A fixed monthly fee starts at around £10, but there are some cheaper options available, starting as low as 5 pence per transaction. Usually, the higher your transaction volume the cheaper the rate you will be charged.

Some acquiring banks offer PSP services as part of their product and there are other less expensive options available.

Selecting the best online payment option

You can use the following scenarios to help you choose the best option for your business.

Merchant account

Your business already accepts debit and credit card payments for face-to-face transactions. You expect a fairly high number of online transactions, most of which will be simple and low risk. You need the greatest amount of flexibility in operating your business and cash flow is very important. If this sounds like your business, then you should:

- apply directly for an Internet merchant account and discuss your requirements with the acquiring bank.

Payment-processing company

Your business will not have a large number of online transactions and you do not currently accept debit or credit card transactions so have no merchant account. You have not been trading long and you cannot provide a well-documented operations history. You value the ability to attract online sales more highly than the ability to collect sales income quickly. Your business will need some flexibility in the way in which it designs and operates its website, so you should:

- consider the facilities that a payment-processing company could offer, with the possibility of moving to a less costly option at a later date.

Online shopping mall

Your business is small, you do not currently offer debit or credit card sales and you have very limited IT skills. Your products are fairly standardised and easily understood. You do not think that your website needs any unusual features. You are prepared to pay higher transaction and fixed costs just to establish a web presence. If this applies to your business, you should:

- look at the facilities that an online shopping mall could offer.

Setting up a merchant account

To accept credit or debit card payments directly online, you'll have to set up an Internet merchant account. There are several banks and processors that currently offer Internet merchant accounts. These are referred to as merchant acquirers or acquiring banks.

Even if you already have a merchant account for face-to-face transactions, you will still need one specifically to accept online payments.

Card users will visit your internet shop to order your goods or services and make payments - the funds will usually be available after three or four working days in your bank account and in some cases may be immediate.

Beware of fraud

Online card payments are classed as "card-not-present" transactions, because you can't physically check the card or the cardholder. If a transaction proves to be fraudulent, the money will be reclaimed from your bank account - this is known as a chargeback. Even if a cardholder-not-present transaction is authorised by the cardholder's bank, this doesn't necessarily guarantee payment.

To help guard against fraud, where a cardholder claims that they did not authorise a payment, check to see if your online payment card processor can offer the card scheme's authentication service - MasterCard SecureCode and Verified by Visa.

The costs

Acquiring banks will charge for their services. There may be a sign-up fee of around £200, and day-to-day charges may be a fixed fee in the case of debit card transactions or a percentage of each transaction for credit cards.

In addition, where you are using a payment service provider, they will levy charges for their service.

If you don't meet the requirements for a merchant account, or it's not cost-effective for your business, you can consider using an online payment-processing company or an online shopping mall to handle card payments for you.

Find a bank to process your online payments

Online payments are processed by acquiring banks. Currently businesses can open a merchant account with the following acquiring banks to receive payments from credit and debit cards:

- Alliance and Leicester
- Bank of Scotland
- Barclaycard
- HSBC
- Lloyds TSB Cardnet
- NatWest/Royal Bank of Scotland Streamline
- Ulster Bank

American Express and Diners Club will only acquire their own cards.

The acquiring banks have strict requirements and it's possible that even the bank you use for your business current account may refuse you. There are also other online merchant account providers that you can investigate on the Internet.

Once the merchant account has been set up, secure socket layer (SSL) technology is used to encrypt transaction data and to send the necessary customer and card details to the acquiring bank in order for the purchase to be authorised. You should, therefore, ensure that any web hosting solution you are considering is capable of supporting the SSL protocol.

Checklist: applying for an internet merchant account

Banks that offer internet merchant accounts for accepting card payments have strict requirements. When you apply for a merchant account the bank will want to know certain details about you and your business. You need to make sure that you:

- outline your business plan - including details of your cash flow and how you'll promote your online activities;
- supply your website address;

- explain the details of your product or service;
 - give your suppliers' details;
 - describe how you will deliver your product or service;
 - set out your terms and conditions for online trading;
 - work out your expected average online transaction values, your estimated turnover from online sales and number of credit and debit card transactions;
 - provide details of the secure server you'll use;
 - make your audited business accounts available;
 - supply your bank details and authority to carry out a check with credit reference agencies;
 - detail your trading history; and
 - provide details of the directors or partners in the business - including full contact details.
- Payment-processing companies hold payments for a settlement period of 30-60 days before they reach your account;
 - Charges are generally higher than for a merchant account. However, costs are falling and the market for these services is competitive;
 - If a card is used fraudulently, the value of the transaction will be reclaimed from your business. However, you may be able to get insurance to cover this risk.

Selling through an online shopping mall

An online shopping mall can be a good alternative if:

- you're looking for an online route to customers as an optional extra to your normal sales channels; and
- you want to extend the number of online outlets your customers can use.

An online mall brings together a number of online shops on the same website, often from the same sector. It hosts your online shop and processes payments for you.

Malls will often provide software to help you set up your shop and receive card payments on your behalf. You maintain and update your own shop within the mall, but most of the administration is done for you.

Many Internet service providers (ISPs) offer online mall facilities, as do specialist companies. If you sell to a particular trade or industry, the relevant trade association may be able to put you in touch with a dedicated mall - a list of trade associations is available on the Trade Association Forum website at www.taforum.org.

Advantages

- Online shopping malls give an immediate online presence;
- Sector-specific malls can provide an effective route to your target market;
- They're easy to set up for people with moderate IT skills;
- You don't need to go through the process of setting up a merchant account;
- You often get help and support in getting your store operational.

Using a payment-processing company

Payment-processing companies obtain payment from your customers' credit and debit cards on your behalf and forward the money to you. They offer a useful alternative for businesses who have a smaller turnover from card transactions or who can't open a merchant account with an acquiring bank.

It's a competitive sector and costs vary, so it's worth shopping around – you can find details of payment-processing companies at www.electronic-payments.co.uk/product_data.jsp.

Advantages

- Payment-processing companies relieve you of the administrative burden of managing customers' card details and running a merchant account;
- They save you from having to set up secure payment systems;
- They have less strict application procedures than a merchant account requires. For example you will not usually be required to supply the same level of detailed information about your business plan, trading history and suppliers;
- Your application can be processed much more quickly than for a merchant account.

Disadvantages

- Customers can see that the payment is not going directly to you even though they may be conducting the transaction through your website;

Disadvantages

- Online shopping malls are often the most expensive way to sell online;
- Generally you'll have to pay a joining fee and a percentage of each transaction made through the mall - charges per transaction can be higher than processing payments yourself;
- You may also have to pay a monthly or annual fee - charges vary substantially;
- Your shop is often tied into a standard format.

Fulfilling customer orders

Once a customer purchases a product from your e-commerce site, you need to ensure delivery in a timely and efficient manner. For some items such as music and software, customers can download the product directly to their computer. However, as more businesses look to sell physical products via the web, there is also a need for door-to-door delivery.

The solution is an effective fulfilment service capable of handling all of the stages from processing the order to delivery.

For products requiring physical delivery, a large portion of the cost of selling online can be attributed to fulfilling the customer's order. Fulfilment can, therefore, have a major impact upon the profitability of your operation.

Order processing

The first stage of the fulfilment cycle is the way in which your business processes a customer's order.

How your business handles orders has a major impact on customer service, from encouraging initial interest to prompting repeat business. While several factors - price, quality of product or service, range of goods, stock availability - are vital to achieving sales in the first place, a responsive, fully automated order fulfilment procedure plays a key part in overall customer satisfaction.

You need to know exactly how well your business deals with order handling before you can make improvements. You should evaluate how orders are processed. You can do this by:

- identifying the links between sales, planning, purchasing, etc. There is simple software available to help you map out your processes and highlight the links;
- considering linking your systems to those of your customers if you operate in a business-to-business environment. Find out what systems they use and determine if yours are compatible;
- asking staff for their input - they may be able to help you identify problems and solutions; and
- encouraging customers to give you feedback on how their orders were handled.

Automating your internal systems can help achieve the speed and efficiency you need from order processing. It brings together all departments that handle the order, from website or sales reps to warehouse staff. You can do this by:

- considering using enterprise resource planning software which can tie in your ordering processes with other facets of your business, such as planning, manufacturing and distribution. Decide whether an off-the-shelf package will be sufficient, or whether it is worth investing in a bespoke system tailored to your particular industry and supply chain. There is also more basic order and stock management software available that is cheaper and easier to implement, which might suit some smaller businesses; and
- connecting your suppliers and customers to the system. Customer orders that arrive in your system can be transformed into orders to your suppliers, so that they can benefit from more timely, accurate order information, with invoices sent and processed automatically.

Automating your internal systems may speed up order processing but remember that some customers may still prefer personal interaction to maintain the customer service experience.

Physical delivery of goods

Ensuring that customer orders are delivered quickly and efficiently is integral to any e-commerce service. Delivering what you promised relies on seamless interaction between your business processes and the actual fulfilment service that you use.

For those products requiring a physical delivery, the issues associated with conventional logistics need to be addressed alongside the technology needed to manage the process.

Distribution channels

The distribution channels available for the delivery of these goods include sending the goods directly from:

- your own business to your customer;
- a local warehouse to your customer; and
- national distribution centres to your customers.

Linking processes and tracking goods

Linking processes and tracking orders are important in allowing you to predict delivery times earlier on, so you can keep customers updated on where their goods are and improve your service.

This can be achieved through a single, shared database as long as your staff are trained to keep it up-to-date at all stages of the process. If you outsource your delivery requirements, many companies now offer delivery tracking as part of their service, which you can use to advise customers.

More sophisticated techniques for doing this include:

- enterprise resource planning software, which integrates product planning, parts purchasing, maintaining inventories and tracking orders into one system; and
- radio frequency identification (RFID), which involves tagging objects so that they can be tracked. RFID tags can be read by equipment that is out of line of sight, at a range of up to 90 feet.

Handling customer returns

Not all customers will be happy with the quality of products purchased from e-commerce sites, and there will undoubtedly be a certain percentage of defective or damaged products, irrespective of the quality or type of product being sold.

The fulfilment process should, therefore, include the capacity for handling the returns. This should include giving the customer the option to have a replacement item supplied or their money refunded. Agreed procedures should be in place to facilitate either option. If your business runs a customer relationship management system, then an important element of this should be a record of the reasons and frequency with which individuals or companies return goods.

Outsourcing the delivery of your goods

If delivery is central to your business then you might want to consider the use of a third-party logistical and distributional service. This will enable you to focus on your core competencies, such as optimising productivity, increasing revenue, and controlling costs, while exploiting the third party's logistical expertise.

Why outsource?

The demand for order fulfilment solutions is growing with the requirement of e-commerce providers to serve the small-package, individual-oriented needs of their customers. As online sales increase, several factors combine to put new pressures on order fulfilment systems. These include:

- an expanded selection of products sold online;
- the need to move a large volume of small parcels; and
- rising customer expectation.

Outsourcers have the ability to share warehouse space and resources among other online merchants.

Choose the right outsourcing partner

Retailers find that it's relatively easy to distribute products in bulk through a wholesaler, retailer, or distribution channel. However, difficulties can emerge for smaller e-commerce providers who have many individual products that require distribution to the customer's home, while also having to deal with the associated inventory control and customer support.

If you are considering outsourcing your fulfilment services, then you should look for a partner who:

- is dedicated to ensuring that your brand name is properly represented;
- understands e-commerce market opportunities and offers reliable back-

end technology to support the fulfilment activities;

- has experience in inventory management, logistics, information systems, and customer service; and
- is able to move goods effectively and efficiently in order to meet customer needs, both now and as your business grows.

Delivering digital products

Using the Internet to buy digital goods means that your customers can have the products delivered directly to their computers.

Examples of such products include software, music, e-books, reports and training materials.

There are many approaches that can be taken for delivering digital products.

- E-mail - smaller files such as e-books can be delivered directly to the customer via e-mail, with the customer receiving their book after purchasing the product from the e-commerce site. The advantage of this method is that there is no chance of a customer sharing download links with others, and it is very simple to set up. However, it is time consuming to manually send each product via e-mail;
- Autoresponder - once a customer has confirmed their purchase you can connect the order form to an autoresponder, which will send them an automatic e-mail. This will contain a download link which they can then use to download the digital product. This is obviously a more automated option, though there is the potential for the product to be subsequently copied and distributed by the customer. This issue is addressed by digital rights management software;
- Download page - it is possible to set up a simple payment system on your site using a facility such as PayPal. Once payment has been approved, customers can be automatically directed to a download page where the file can be downloaded, possibly as a compressed zip file;
- Shopping cart software - a number of e-commerce providers offer software that delivers downloadable product files and protects against unauthorised digital product downloads. This type of software can be a fully integrated function of the shopping cart product. After payment is processed, a password and link to download product files is sent to the customer as part of the receipt.

You will also need to think about how to protect the copyright of your data and prevent illegal distribution of your digital products. In its most common form, digital rights management (DRM) protects intellectual property by either encrypting the data so that it can only be accessed by authorised users, or marking the content with a digital watermark, so that the content can't be freely distributed. Increasingly, DRM also provides tracking capabilities to identify who is using what content, where and when.

Digital rights management

Major problems associated with distributing digital products via the Internet include protecting the copyright of data and preventing illegal distribution of this data. Both of these issues are addressed by digital rights management (DRM) technologies.

In its most common form, DRM protects intellectual property by either encrypting the data so that it can only be accessed by authorised users, or marking the content with a digital watermark, so that the content can't be freely distributed. Increasingly, DRM also provides tracking capabilities to identify who is using what content, where and when. DRM can allow the release of multiple versions of a single document - each group of users is permitted to view only the version appropriate to them. In some contexts this can be used simply to restrict disclosure on a need-to-know basis. However, where the content is itself a saleable product, it can help create new business. This could be by offering the recipients of a free summary version of a research report the chance to upgrade, for a fee, to the full report.

DRM systems can protect against the following threats to your digital rights:

- Render rights - cover simple acts such as displaying content on a screen or playing it through an audio system. These are fairly easily protected by relatively simple encryption-based systems allowing only the appropriate users to render the content;
- Transport rights - relate to the ability to move or copy the data. Again, this involves simple forms of DRM. However, in this area it can be difficult to balance the rights-owner's interests with the user's legitimate expectations, e.g. to make backups;

- Derivative work rights - cover the ability of users to modify or extract the content and use it in another way. Here, there will need to be flexible ways of identifying separate parts of the content, tracking the different ways in which they are used, and where necessary collecting payment for them.

Used creatively, DRM can do much more than protect intellectual property and commercially sensitive material - it can also protect, and even enhance, revenue.

Meeting customer expectations

Successful fulfilment of a customer's order is about meeting their expectations in terms of delivering the product on time and keeping them informed of any unforeseen delays. Here are some tips to help ensure that your fulfilment process provides a satisfactory conclusion to the whole purchasing cycle:

- Process all orders at a line-item level, so that each individual item ordered is clearly identified. This is particularly important where a multi-item order is placed and one or two of these items are out of stock;
- Personalise orders so that the customer feels that full account has been taken of their individual needs;
- Track the status of the order so that any customer enquiry can be resolved promptly and efficiently. Formal tracking of progress ensures that any problems arising out of non-delivery of the order are quickly identified and remedied;
- Communicate the order status to the customer to ensure that they are kept fully informed of progress. Many carriers now use e-mail to notify a customer that an order has been dispatched. Others have implemented online tracking systems enabling the customer to log on to their website in order to check progress;
- Turn the order around quickly, preferably within 24 hours. The customer will be keen to have their order delivered as soon as possible, so any delay in actually dispatching it will have a negative impact;
- Consider your packaging not only in terms of ensuring safe delivery, but also in relation to what you can put inside the package that might increase the likelihood of additional sales, e.g. brochures and special offers;
- Be practical about delivery and ensure that you set realistic customer expectations in terms of the likely delivery date;

- Manage the differing scales of business by ensuring that you have sufficient resources to handle the peaks and troughs of demand;
- Choose the right carrier if you decide to outsource your distribution activity, especially if your product requires special handling;
- Handle returns efficiently and effectively and ensure that any customer dissatisfaction is professionally resolved.

Developing an e-marketing plan

E-marketing means using digital technologies to help sell your goods or services. These technologies are a valuable complement to traditional marketing methods whatever the size of your company or your business model.

The basics of marketing remain the same - creating a strategy to deliver the right messages to the right people. What has changed is the number of options you have. Though businesses will continue to make use of traditional marketing methods, such as advertising, direct mail and PR, e-marketing adds a whole new element to the marketing mix. Many businesses are producing great results with e-marketing and its flexible and cost-effective nature makes it particularly suitable for small businesses.

The benefits of e-marketing

E-marketing gives businesses of any size access to the mass market at an affordable price and, unlike TV or print advertising, it allows truly personalised marketing. Specific benefits of e-marketing include:

- Global reach - a website can reach anyone in the world who has Internet access. This allows you to find new markets and compete globally for only a small investment.
- Lower cost - a properly planned and effectively targeted e-marketing campaign can reach the right customers at a much lower cost than traditional marketing methods;
- Trackable, measurable results - marketing by e-mail or banner advertising makes it easier to establish how effective your campaign has been. You can obtain detailed information about customers' responses to your advertising;

- 24-hour marketing - with a website your customers can find out about your products even if your office is closed;
 - Personalisation - if your customer database is linked to your website, then whenever someone visits the site, you can greet them with targeted offers. The more they buy from you, the more you can refine your customer profile and market effectively to them;
 - One-to-one marketing - e-marketing lets you reach people who want to know about your products and services instantly. For example, many people take mobile phones and PDAs wherever they go. Combine this with the personalised aspect of e-marketing, and you can create very powerful, targeted campaigns;
 - More interesting campaigns - e-marketing lets you create interactive campaigns using music, graphics and videos. You could send your customers a game or a quiz – whatever you think will interest them;
 - Better conversion rate - if you have a website, then your customers are only ever a few clicks away from completing a purchase. Unlike other media which require people to get up and make a phone call, post a letter or go to a shop, e-marketing is seamless.
- order-taking and fulfilment costs, or improving customer retention rates);
 - Decide upon the marketing mix - you should choose a mix of e-marketing activities that will help you achieve your objectives and fit with any existing traditional marketing activities you already have planned;
 - Agree a budget - careful budgeting allows you to prevent costs spiralling out of control. By identifying the returns you expect to make from your investment in e-marketing activities you can compare these with the costs in order to develop a cost/benefit analysis;
 - Action planning - identify the tactics for implementing the selected e-marketing activities. The plan should also cover other non-Internet marketing activities that are being undertaken;
 - Measure your success - build in feedback mechanisms and regular reviews to enable you to assess the success of your e-marketing activities, particularly as e-commerce is such a dynamic and fast-changing area.

Together, all of these aspects of e-marketing have the potential to add up to more sales.

Stages in developing your e-marketing plan

It is important to recognise that planning for e-marketing does not mean starting from scratch. Any online e-communication must be consistent with the overall marketing goals and current marketing efforts of your business.

The main components of an e-marketing plan will typically include the following stages:

- Identify your target audience - if you identify multiple targets, rank them in order of importance so that you can allocate resources accordingly. Profile each target group and understand their requirements and expectations so that you can pitch your costs and benefits at the correct level;
- Set your objectives - possible objectives could include awareness raising (of your business or disseminating information about your products or services), entering new markets, launching a new product, focusing on sales (building Internet sales of a product or increasing the frequency of sales from regular customers), or internal efficiency (decreasing marketing costs, reducing

The importance of brand and image

The brand and image of a business are vital to its success. Strong brands can generate customer trust, which is particularly important in e-commerce where there are often concerns over privacy and security.

There are several branding options. You could use an existing brand name, create a new Internet brand name or co-brand with another business. Closely linked to these decisions is the choice of domain name for your website.

Using existing brand names

Using an existing brand name can make sense if the brand is well known and has a strong reputation. However, you risk jeopardising your brand's good name if your new venture is not successful.

Creating a new brand

If you want to create a new e-commerce brand then a good name is extremely important. Some factors to consider when selecting a new brand name are that it should:

- suggest something about the product;
- be short and memorable;
- be easy to spell;
- translate well into other languages; and
- have an available domain name.

Co-branding

Co-branding occurs when two businesses put their brand name on the same product. This practice is quite common on the Internet and has proved to be a good way to build brand recognition.

Domain names

Whatever e-commerce brand name you choose, it is essential that the domain name is available to support this. A strong domain name can help customers to find your site.

If the domain name you'd like has already been taken you could offer to buy the domain name from the registered user. If this is not possible and the registration appears to be an infringement of your trademark then you should seek legal advice. Since 7 December 2005, it is possible for businesses based in the EU to register for .eu domain names.

Building relationships with your customers

A website provides an ongoing point of contact with your customers and can be a useful way of collecting information about them for e-marketing purposes and for building successful relationships with them.

Answering common queries

Answering the common queries customers ask on your website - perhaps in the form of FAQs (Frequently Asked Questions) - demonstrates you're ready to help. It may also save you time and money by reducing the number of basic phone queries.

Provide an e-mail facility for queries and customer feedback - but ensure someone checks them regularly. Respond to queries promptly and let people know their comments are appreciated. This process can be automated. Provide full contact details, particularly phone numbers, for people in need of an immediate answer or they may look elsewhere.

Asking visitors to register

Many businesses ask first-time visitors to their site to register. This can be useful for gathering statistics and e-mail addresses for direct mailings.

But asking people to register straightaway may put them off. Most people will not sign up unless there is an incentive for doing so, such as an e-newsletter, special offer or access to further information that is not available to non-subscribers. Make sure they've got far enough

into your site to want to find out more and tell them how they can benefit by registering. Ask for the minimum details possible.

If you intend to collect personal data, there are a number of legal requirements.

Customer relationship management

Many businesses invest in a customer relationship management (CRM) system to improve their customer services. The CRM system brings information like customer data, sales patterns, marketing data and future trends together with the aim of identifying new sales opportunities, delivering improved customer service, or offering personalised services and deals.

In addition to improving sales and profitability, the CRM system is very effective in handling customer complaints and can have a tremendous effect on your reputation.

Getting the technology right

There are several elements that you could include in your e-marketing mix including e-mail, online advertising (such as banner adverts and sponsored links) SMS messaging or setting up a website. The technology you will require to deliver your e-marketing messages will depend on which elements you decide to employ.

If you are planning to use e-mail as part of your e-marketing plan, make sure the technology you choose is right not only for the message but for your customers. When deciding what technology to use you should consider:

- Computer set-up and performance - this can vary widely. For example, some computers don't have soundcards, making music or video files pointless;
- Firewalls - these often limit the size of file that can be received;
- Compatibility - different programmes will display e-mails differently. An e-mail with images or an HTML component could end up looking messy on a different set-up, or even cause the programme to crash.

The solution is to profile your customers and understand what the best format for them is. Some may like e-mails with bells and whistles whilst others might just like a plain text e-mail.

If you decide to establish a web presence there are several options you can consider:

- an e-commerce website;
- online advertising - including pay-per-click, sponsored links and banner adverts;
- a brochureware website.

To establish even the simplest of websites you will need fast internet access and a server to host your website, or an Internet service provider to host the site for you. If you want your website to have an e-commerce facility you will also need an e-commerce software package. You are also likely to require the expertise of a website designer if you don't have the expertise in-house.

There are a number of techniques you can use to help potential customers find your site - known as search engine optimisation techniques. These include techniques like inserting the right keywords when you build your website and submitting them to search engines, exchanging links with websites selling related but non-competing products, and online advertising.

Data privacy

Technology gives you the opportunity to collect lots of information on your customers. This doesn't mean you should use it carelessly though. It is very important to ensure that any data you collect about your customers is handled carefully, and in line with the principles of the Data Protection Act. You must also keep it up to date and not needlessly reveal information about customers.

Implementing e-marketing

There are three stages to implementing an e-marketing campaign.

Evaluate the marketing options

- E-mail - great for building relationships and keeping your customers up to date with offers, and is less intrusive than telephone marketing. However, growing concerns about spam mean you need to make sure you adhere to government regulations;
- SMS (short messaging service) - almost everyone has a mobile, so marketing via text messaging is a viable option. However, the personal relationships people have with their phones means marketing needs to be carefully considered;

- Websites - a hugely flexible option to meet any marketing need. However, with so many other websites, you need a strategy for getting yours noticed and used.

Plan the rollout phase

- Look at training implications, especially of building and running a website and think about the costs involved;
- Decide which staff will require training and allow time for them to adjust to the new system;
- Do you need to review your customer contacts database? Before beginning a new marketing campaign it can be a good time to reorganise your data;
- If you're building a website, how are you going to promote it? Will you submit it to search engines? Is it worth paying an agency to boost your rating? It might be wise to start with a soft launch - perhaps just to existing customers to see how the website beds down before you begin to give it stronger marketing support.

Implement e-marketing

- Roll out any necessary training;
- Encourage staff involvement and feedback. This will help to smooth implementation, as staff buy-in can make or break a technology project;
- Consider setting up a cross-departmental taskforce to manage the implementation process - it will help with staff buy-in and ensure that implementation works business-wide;
- Continually review your practices against e-marketing regulations.

Monitoring the effectiveness of your e-marketing campaign

Unless you can find out why people visit your website, you won't know which marketing campaigns have been successful or where to invest more money.

Tracking and site analysis tools

A number of suppliers sell tracking tools that can tell you where visitors come from, what they do while on your site and where they go when they leave.

If you search the Internet you might come across a free trial - but bear in mind that you'll need a large amount of data for the results to be significant.

You - or whoever has access to the server hosting your website - will also be able to access a log file - a recorded history of all requests for pages on your site. It includes details of the page requested, the time and source of the request.

The problem with monitoring a log file is that it grows so quickly that you need software to glean anything useful from it. A website analysis tool is a piece of software that you can use to measure the usage patterns of your site. It does this using statistics such as the total number of visitors, the number of new and returning visitors, which search engines they are finding the site through, and which parts of the site they are making particular use of.

Some website analysis tools, such as Analog, are available free from the web. Other popular packages include Wusage and WebTrends.

User surveys

The only other way of checking how visitors reach you and whether you're providing what they want is to ask them.

Ideally, you need to know how they found the site, whether it is their first visit and why they're visiting. Pop-up surveys (new pages containing surveys that open in separate windows) are a good way of gathering this type of information - but users may simply ignore them, particularly if you ask too many questions.

Legal considerations in e-marketing

You need to be aware that there are a number of regulations that relate specifically to e-marketing. You need to keep abreast of developments in this area to ensure that you are complying with the various rules.

E-mail and SMS marketing - regulations

There are rules covering marketing e-mails and SMS messages to individuals.

The Privacy and Electronic Communications Regulations introduce an opt-in consent procedure for commercial e-mails - which means you can only target people who have agreed to be contacted.

To save having to contact all your existing customers to get consent, the rules apply only to new customers. You can continue marketing to your current customers provided they can opt-out of future messages and the messages cover similar products and services.

You must also clearly mark your e-mails with your contact details and include a valid return e-mail address.

Using cookies

Cookies are small pieces of software that websites store on users' computers. They have a very wide variety of uses, but an important one is to track the movements of visitors to websites, counting clicks, establishing how people arrived at the site and how they navigate around it. In short, cookies can be a very useful marketing tool.

Under the Privacy and Electronic Communications Regulations, businesses have to inform their customers that they use cookies, and provide an opt-out facility for those who do not wish to accept them. In practice this will mean providing the user with a "privacy" or "cookies" statement that explains how they are being used and how they can be switched off.

Generating business from an e-marketing plan

The overall objective of any marketing initiative is to help sell your goods or services. Used successfully, e-marketing can enhance customer relationships and increase your business' profitability.

Your e-marketing plan needs to consider which techniques to adopt in order to attract potential customers to your e-commerce website and keep them coming back.

There are a variety of different approaches that you can take, and your e-marketing plan will usually include a mix of different strategies that are best suited to help you meet your overall objectives. Some of these will be innovative, while others will be automated versions of traditional marketing techniques.

E-mail marketing

More and more people have an e-mail address that allows them to receive documents or other files electronically. It is a fast, flexible and effective way of getting marketing messages through - such as newsletters or special offers - without the time lag and costs associated with printing.

It's essential not to overuse e-mail marketing. What makes it so effective - the personal, time-sensitive interaction - can also irritate people if it is irrelevant or unwanted. You should also consider compatibility. Different programs will display e-mail differently. An e-mail with images or an HTML component could look messy on a different set-up, or even cause the program to crash.

The solution is to profile your customers and understand what the best format is for them. Some may like high-tech e-marketing, others might prefer a plain-text e-mail.

E-mail marketing rules

In December 2003, new rules came into force covering marketing e-mails to individuals. The Privacy and Electronic Communications Regulations introduced an opt-in consent procedure for commercial e-mails - which means you can only target people who have agreed to be contacted.

Advantages of e-mail marketing

- Flexible - you can send plain text, graphics or attach files - whichever suits your message best;
- Easy for people to forward on to others, building your reputation by word of mouth;
- People can click on links and follow your call to action immediately;
- Less intrusive than telephone marketing.

Potential problems with e-mail marketing

- Files need to be small enough to download quickly;
- Unsolicited commercial e-mail or "spam" irritates consumers. You need to make sure that your e-mail marketing complies with privacy and data protection rules, and that it is properly targeted at people who want to receive it.

SMS marketing

Text messages or short messaging service (SMS) messages are the messages that people send from their mobile phones.

Text messaging is increasing at an enormous rate. One of the primary reasons behind this growth is that text messaging has become increasingly used as a business tool.

Text messaging enables information to be sent to groups of people quickly and conveniently in much the same way as e-mail, making it an increasing popular e-marketing channel.

Advantages of SMS marketing

- The personal nature of mobile phones makes SMS marketing a very powerful tool;
- Most people take their mobile phones everywhere - meaning they can be effective for time sensitive messages;
- People tend to read virtually every text they get - unlike junk mail, spam or adverts which can be ignored.

Potential disadvantages of SMS marketing

- Your message has a maximum 160 characters - not much space to get your message across;
- People respond negatively to unwanted texts. Make sure you have their permission to send them texts and that your SMS marketing complies with privacy and data protection rules;
- People are wary of responding to SMS messages due to an increase in fraudulent messages. Under the E-commerce Regulations you are required to make it clear who the message is from and commercial communications must be clearly recognisable as such.

Costs

You will need to employ a mobile phone agency to send out the texts for you. These work out at about ten pence per text. The development of 3G (third generation) and smartphones, which have larger screens and can play music and video clips, has made multimedia messaging service (MMS) possible.

Promoting your website

There are three main ways that people arrive at websites - direct navigation, web referrals and search engines.

Direct navigation

The best way of generating web traffic is to make sure you include your web address on all printed material - business cards, letters, flyers, etc.

Choose a simple web address (URL) which avoids hyphens or other punctuation as it will be easier for people to remember. If you operate exclusively in the UK, choose a .co.uk address. If you trade abroad, consider a .com or .eu address as well.

Web referrals

Web referrals are an important means of attracting visitors to your site. There are a number of ways you can generate these.

- Own E-mail advertising -include your web address in all e-mail footers;
- E-mail marketing - targeted electronic newsletters and offers to customers can be very effective. If the offer is interesting it is easy for people to pass the e-mail on;
- Online advertising - the use of banner and pop-up adverts on other websites to drive people to yours;
- Reciprocal marketing - finding sites with complementary content and agreeing to have links or banners to each other's sites;
- Forums - you can set up your own, or monitor others, join the discussion and point people towards your website.

Search engines

While search engines are far outstripped by direct referrals, they can still prove useful for attracting customers. Competition for a high ranking on the major search engines is intense because few web users look beyond the second page of results.

If you are expecting your website to generate significant commercial returns, it will be well worth spending the time and effort to ensure you get the most out of your search engine placement.

Getting the most out of search engines

Few web users will look past the second page of results on a search engine. This means that if your website isn't rated as one of the 20 best matches for someone's search, you are unlikely to pick up passing trade. While this can sound daunting, there are lots of things you can do to improve your rating.

- Include the right keywords or metadata (information that describes a web page, but isn't visible on the pages) when you build your website and submit it to a search engine. Use the most relevant keywords from your website and the words that people are likely to use when searching for your products or services. Your website designer can help you include the key phrases when designing and building your website. Update your keywords regularly using the search engine reports to help you identify the words that are generating the most hits and those which are not performing;
- Register with online directories, both general (eg Applegate and Kelly) and those specific to your industry and the markets you serve. This will generate links to your site from highly ranked sites which will boost your page rank. Many directories are free but it is also worth considering paying for highly relevant directories;
- Exchange reciprocal links with related trade associations, consumer forums and sites selling related (but not competing) goods or services to boost your ranking on sites that measure a site's popularity;
- Pay search engines to include your website as a sponsored link. Sponsored links appear at the top or on the right-hand side of the search results. To become a sponsored link you bid for particular keywords or phrases. Your ranking is determined by how much you pay each time your link is clicked - known as "cost-per-click" pricing. You can set your own daily budget to help you control costs and once your daily budget is spent your ad is turned off until the next day. You may have to pay an initial set-up cost and set up an account to cover the costs incurred;
- Use the web tools provided by the search engines to help you improve your website's ranking. Many of the main search engines - such as Google, Ask, Yahoo and MSN - provide tips, advice and tools to help you improve your website's usability.

In-house or agency?

You can engage the services of a professional search engine placement agency, though if you are a small business with a limited budget, and your website is just one of several channels to market, you may be better off saving resources. Most of the search engines provide advice on how you can improve your rankings if you are doing the work yourself.

If you do decide to go for an agency, ask for:

- proof of its success with previous customers;
- the cost-per-click of the extra traffic it can generate; and
- an analysis of your current website's suitability for search engines, including suggestions for improvements.

Advertising and sponsorship

There are various techniques that can be used for advertising on websites, and most involve the use of multimedia content, including graphics, sound and animation. These are all intended to grab your attention and then guide you through to the relevant website via hyperlinks.

Banner adverts

Banners and buttons occupy designated space for rent on web pages. They are similar to the print advertising model used by newspapers and magazines, except they can include video, audio and interactive capabilities in just a few square inches of space.

Most banners work on the basis of click-throughs, the user clicks on the banner and is linked through to the website that is paying for the advert.

Banners can be useful for brand awareness, but response rates tend to be very low.

Interstitials

Interstitials are Java-based adverts that appear when content is loading to a web page. A variation is the pop-up, where adverts appear in a separate window that overlays the current browser window.

A later development is known as a superstitial. Here, the advert comes in the form of a mini video that uses Flash technology and Java. Such videos load behind the scenes and do not appear on the user screen until they are fully loaded.

Done well, superstitials can create very high levels of click-through. E-Marketing, published by Prentice Hall, reports that a British Airways advert using this approach achieved a 20 per cent click-through rate.

Sponsorship

Many businesses are developing partnerships with website owners to combine useful content with advertising. This content may contain references to their own products or services. Alternatively the web page itself

can include advertising links through to their own website.

The sponsorship approach can work particularly well where the quality of the editorial content is high, or where the website is recognised as a good independent source of information. As with traditional magazines, the advertorial approach of blatantly plugging your own business can quickly put readers off.

Sales promotions

Sales promotion activities are widely used on the web. E-Marketing, published by Prentice Hall, indicates that marketers have found online promotions achieve three to five times higher response rates than direct mail.

Most online sales promotions are targeted at consumers and are used in combination with advertising.

E-coupons

E-coupons offer your online business the opportunity to increase sales in much the same way as conventional coupons do for traditional businesses. They can be used creatively in a number of different ways.

- frequent shoppers can be rewarded when they reach a certain level of value or purchases;
- shoppers can be encouraged to return with an e-coupon towards future purchases;
- incentives can be used to encourage customers to purchase immediately rather than waiting for a better deal or shopping elsewhere;
- first time customers can be offered special deals in order to help turn them from browsers into purchasers; and
- subscriber-only e-coupons can be used to encourage customers to sign up for e-newsletters, with the newsletter helping to increase sales and build your customer database.

Coupons usually include a code that the customer is required to enter before they finalise their order to receive the discount.

Sampling

Some e-commerce sites allow users to sample digital products prior to purchase. Many software companies, for example, provide free downloads of demo software that normally expire after 30 to 60 days. At that time the user can then choose to purchase the full product if they wish.

Contests and sweepstakes

Some websites hold contests and sweepstakes to attract visitors and keep them returning. Contests generally require some level of skill, while sweepstakes involve a pure chance draw for the winner. Such sales promotions can be a useful way of creating excitement about your brand and enticing customers to return to your site.

Community building

Some website owners try to build up a community of online users through the development of online chat rooms, discussion groups and online events. Such groups encourage users to feel part of the site by posting their own information and responding to other users.

From an e-marketing perspective such communities of users offer two important attractions. The communities:

- are usually built around a specific topic or interest, so if this matches an area you are seeking to promote then you have access to a highly targeted group; and
- feel part of the site and therefore users are likely to return on a frequent basis.

Marketing opportunities

There are different ways in which you can seek to utilise online communities for your own marketing purposes.

- If you operate in a specialist field, then you could consider setting up your own user forum or online community for other people with similar interests. Users generally value both the information and the social bonding they receive from such a community. The business that builds the community can present products and messages that are customised to the group's interests, forging relationships with the individual members in the process;
- If there is already a well established user community in your area of business, then you might wish to consider joining it and using it as a means of making other users aware of the products or services that you offer.

While consumer communities are the most visible, you should note that business professionals also subscribe to discussion groups that focus upon their own particular field. Communities can, therefore, be used to enhance relationships with customers and prospects in both the business-to-consumer and business-to-business marketplaces.

E-commerce and the law

E-commerce is all about selling goods and services via the Internet. The trader and customer are not face to face at any point, with business conducted remotely, regardless of location. This can pose a number of challenges to the formation and enforcement of contracts.

A number of legislative initiatives affect business conducted online - they can be complex and change regularly.

As far as e-commerce transactions are concerned, the legislation is primarily intended to ensure that online contracts are legally binding.

The ways in which electronic marketing can be undertaken to promote the services of e-commerce providers are also regulated.

E-commerce Regulations

The E-commerce Regulations came into force in August 2002. They implement the European E-Commerce Directive into UK law and one of their main aims is to ensure that electronic contracts are legally binding and enforceable throughout Europe.

The Regulations apply to businesses that:

- sell goods or services to businesses or consumers on the Internet, or by e-mail or SMS (text messages);
- advertise on the Internet, or by e-mail or SMS; and
- convey or store electronic content for customers or provide access to a communications network.

They do not cover direct marketing by phone or fax.

Information requirements

The E-commerce Regulations identify specific information about your business that you must provide to recipients of online services and set down guidelines regarding advertising and promotions.

Contracting online

If you form a contract online by electronic means, your customer should be able to print and store a copy of the terms and conditions.

Advertising

If you intend to advertise on the Internet, or by e-mail or SMS, the Regulations stipulate that "commercial communications" must be clearly recognisable as such. They must clearly identify the person on whose behalf the marketing communication is sent, together with any promotional offer.

The Regulations also cover "unsolicited commercial communications," commonly referred to as spam. They require that these communications are identifiable from the subject line of the e-mail, without the need to read the rest of the message. SMS messages are not covered for these purposes.

Tips for complying with The E-commerce Regulations

To comply with the general information requirements of the E-commerce Regulations 2002 you must give recipients of your online services:

- your business' name, geographic address and other contact details including your e-mail address;
- details of any publicly available register in which you are entered, together with your registration number or equivalent;
- the particulars of the supervisory body if the service is subject to an authorisation scheme;
- details of any professional body with which you are registered; and
- your VAT registration number.

If your website refers to prices, these must be clear and indicate whether they include tax and delivery costs.

You must also ensure your website complies with part of the Companies Act 2006. From 1 January 2007 all companies in the UK must clearly state the company registration number, place of registration, registered office address and, if the company is being wound up, that fact, on all of their websites. A common place to put this information is in the "About us" or "Legal info" page of the site - it does not have to appear on every page. This rule also applies to any electronic communications sent out by your company, such as e-mails.

How to comply when contracting online

If your business forms contracts online you must provide your customers with information about:

- all technical steps required to conclude the contract, e.g. "click this box";
- whether the concluded contract will be filed by you and whether it will be accessible;
- the languages offered for the conclusion of the contract; and
- any relevant codes of conduct to which you subscribe, and information on how these can be consulted electronically.

You must make sure that your website allows customers to go back and correct any mistakes made in their order before the order is placed. Once a customer has placed an order electronically, you must acknowledge receipt without undue delay.

Regulations applying to telephone and fax marketing

Businesses frequently promote their services via telephone and fax. There are a number of regulations that apply to this area and it is important that your business is aware of them. This will ensure that you are acting legally if you undertake a marketing campaign using these media.

The Telecommunications (Data Protection and Privacy) Regulations regulated direct marketing by telephone and fax. Both the Telephone Preference Service (TPS) and the Fax Preference Service (FPS) were established as a result of these regulations and are monitored by the Information Commissioner. These regulations were superseded by the Privacy and Electronic Communications Regulations 2003 in December 2003.

TPS and CTPS

Initially the regulations only gave individuals the right to opt out of direct marketing by registering with the TPS.

However, in June 2004 the Corporate Telephone Preference Service (CTPS) was launched. This is the central opt-out register that enables corporate subscribers to register their wishes not to receive unsolicited sales and marketing telephone calls to any of their organisation's telephone numbers.

A corporate subscriber includes corporate bodies such as a limited company in the UK, a limited liability partnership in England, Wales and Northern Ireland, or any partnership in Scotland. It also includes schools, government departments and agencies, hospitals, PLCs and other public bodies.

FPS

The FPS includes a requirement to obtain individual consent prior to direct marketing by fax. It also offers an "opt-out" for corporate bodies who register with the FPS.

So, if you are already engaged in, or planning to undertake direct marketing via phone or fax then you must make regular checks with the TPS, CTPS and FPS, or risk committing an offence.

Privacy and Electronic Communications Regulations

E-marketing activities are regulated by the Privacy and Electronic Communications Regulations that came into force in December 2003. The Privacy and Electronic Communications Regulations superseded the Telecommunications (Data Protection and Privacy) Regulations. The new regulations include additional rules which legislate against unsolicited e-mails or SMS, commonly referred to as spam. They prohibit sending direct marketing communications by e-mail where the identity of the person who sent it is disguised or concealed. They also prohibit marketing e-mails that do not provide the recipient with a valid address they can use to request such communications cease.

Addressing the problem of spam

The Privacy and Electronic Communications Regulations require that an individual's consent is obtained prior to sending them unsolicited advertising by e-mail unless they have already "opted-in" or expressly consented to the receipt of such e-mails. Existing customers can be sent unsolicited advertising, on the condition that the direct marketing relates to products and services similar to those they have already purchased. However, the recipient should also be given the option to "opt-out" of receiving such e-mails.

Under the Privacy and Electronic Communications Regulations, corporate bodies may also opt-out of receiving such e-mails, but there is no "opt-in" requirement.

It is important to remember that it is also a requirement of the Regulations that unsolicited advertising e-mails must contain both the identity and the contact details of the sender.

Cookies

The Privacy and Electronic Communications Regulations also cover the use of "cookies." These are files downloaded from a web server to the PC of a visitor to a website. They can provide the owner of the website with personal details about the visitor such as what purchases were made from the site, what files were downloaded and the information viewed.

The aim of the regulations is to allow the visitor to choose whether they want cookies on their PC. In practice this is likely to involve providing them with information about cookies, and how to disable them should they wish to do so.

Tips for complying with the Privacy and Electronic Communications Regulations

The Privacy and Electronic Communications Regulations are enforced by the Information Commissioner's Office (ICO). If the Information Commissioner finds a business to be in breach of the Regulations Information Notice requesting further information or an Enforcement Notice will be issued. A fine may be imposed for breach of an Enforcement Notice. Criminal sanctions may also be imposed.

All of these actions can damage the reputation of your business and adversely affect the goodwill of your customers. So, if you use electronic communications as a marketing tool, you should ensure that each communication is clearly identifiable as relating to the advertising or marketing of a product.

This means that any commercial communication sent by e-mail or text message should be clearly identifiable as such through its header - other required information can then be set out in the main body of the communication.

Electronic communications as a marketing tool should also:

- identify the person on whose behalf it is sent;
- clearly identify any promotional offer - including any discount, premium or gift - and any conditions that must be met to qualify for it (these must be easily accessible, clear and unambiguous); and
- provide the recipient with "opt-out" rights.

You should obtain prior individual consent from your customer through them "opting in", though there are some limited exceptions for existing customers.

Distance Selling Regulations

The Distance Selling Regulations 2000 are designed to protect customers who are not physically present with the seller at the time of purchase. They cover purchases made via e-mail and the Internet, together with telephone and mail order.

They only apply to transactions between businesses and consumers (individuals acting outside the course of their business) and do not include business-to-business contracts and auctions.

Under the Regulations, consumers have the right to:

- details in writing about the supplier and the terms of the transaction;
- written confirmation of their orders;
- further information, including a notice of cancellation rights, the complaints procedure, after-sales services and guarantees; and
- delivery within 30 days unless otherwise agreed.

Consumers have a cooling-off period of seven working days in which to cancel the contract, starting from when the goods are received, without having to give a reason. If no details of the cooling-off period have been given by the supplier to the consumer, it is extended to three months.

The right to withdraw can be exercised by the consumer even after the goods have been delivered, or the services have been provided. The consumer is entitled to receive a full refund for a cancelled contract within 30 days.

There are some exceptions to these rights of cancellation, including:

- contracts for the provision of accommodation, transport, catering or leisure services, where these services are supplied on a specific date or for a specific period;
- the sale of customised goods or perishable goods;
- sealed audio or video recordings, or software, which has been opened; and
- sales by auction.

Securing your e-commerce systems

As the use of the Internet continues to grow, websites are assuming greater importance as the public face of business. Furthermore, the revenues generated by e-commerce systems mean that organisations are becoming ever more reliant on them as core elements of their business.

With this high level of dependency upon the services provided by e-commerce systems, it is essential that they are protected from the threats posed by hackers, viruses, fraud and denial-of-service attacks.

Every business should take steps to secure their e-commerce systems, although smaller businesses may choose to work with third party specialists to implement some of the more sophisticated security controls.

This guide looks at the security threats posed to e-commerce systems and the damage they can potentially cause to your business. It provides advice on how best to address these threats, by identifying the risks that they pose and implementing the appropriate level of security controls to counter them.

E-commerce security issues

E-commerce systems are based upon Internet use, which provides open and easy communications on a global basis. However, because the Internet is unregulated, unmanaged and uncontrolled, it poses a wide range of risks and threats to the systems operating on it.

The use of the Internet means that your internal IT and e-commerce systems are potentially accessible by anyone, irrespective of their location.

Risks

Some of the more common threats that hackers pose to e-commerce systems include:

- carrying out denial-of-service (DoS) attacks that stop access to authorised users of a website, so that the site is forced to offer a reduced level of service or, in some cases, ceases operation completely;
- gaining access to sensitive data such as price lists, catalogues and valuable intellectual property, and altering, destroying or copying it;

- altering your website, thereby damaging your image or directing your customers to another site;
- gaining access to financial information about your business or your customers, with a view to perpetrating fraud; and
- using viruses to corrupt your business data.

Impact upon the business

All of these risks can have a significant impact upon a business running an e-commerce service. The potential business implications of a security incident include the following:

- Direct financial loss as a consequence of fraud or litigation;
- Subsequent loss as a result of unwelcome publicity;
- Criminal charges if you are found to be in breach of the Data Protection or Computer Misuse Acts, or other regulation on e-commerce;
- Loss of market share if customer confidence is affected by a Denial of Service attack;
- The image presented by your business, together with the brands under which you trade, are valuable assets. It is important to recognise that the use of e-commerce creates new ways for both image and brands to be attacked.

Identifying e-commerce threats and vulnerabilities

It is important that you understand the risks facing your e-commerce system, and the potential impact of any security incident.

What are the threats?

Threats to e-commerce systems can be either malicious or accidental. The procedures and controls you put in place to protect your site should help minimise both.

Malicious threats could include:

- hackers attempting to penetrate a system to read or alter sensitive data;
- burglars stealing a server or laptop that has unprotected sensitive data on its disk;
- impostors posing as legitimate users and even creating a website similar to yours; and
- authorised users downloading a web page or receiving an e-mail with hidden active content that attacks your systems or sends sensitive information to unauthorised people.

You should consider potential threats to sensitive information from three angles:

- Where (or who) are the potential sources of threats?
- What level of expertise is the hacker likely to possess? How much effort are they likely to expend in attempting to breach your security?
- What facilities and tools are available to them?

The real threat may not be the most obvious one. Attacks from authorised users (such as a disaffected employee or partner) are far more common than attacks by hackers.

Risk assessment

A risk assessment can be carried out to provide an organisation with a clear understanding of the risks facing its e-commerce system and associated business processes, and the potential impact if a security incident arises.

A key part of a risk assessment is defining the business' information access requirements. This will cover the rules of access for different groups of users. For example, different rules may apply for employees, consultants, managed service providers, suppliers, customers, auditors, government agencies and so on.

Any analysis should also take account of how electronic transactions are verified. How do you know that an order has actually come from a known customer? Where contracts are exchanged electronically, who can sign them and how can it be proved which is the signed version?

The value of implementing a security policy

The key to effective e-commerce security is a good security policy. This states in writing how a business plans to protect its IT assets in general, including its e-commerce systems. It should be endorsed by senior management and continually updated as technology and employee requirements change.

ISO/IEC 27001

ISO/IEC 27001 provides a sound basis for the development of a security policy. This is a British standard for managing the risk to information assets. It was subsequently adopted by the International Standards Organisation as ISO 17799.

The main benefit of an organisation's adoption of ISO/IEC 27001 is the acceptance of the need to protect the business' information assets and a statement of the measures necessary to satisfy that need. If the controls specified in the standard are properly applied and followed, then the risk to your information will be greatly reduced.

Acceptable use policy

Frequently included as part of a business' security policy, an acceptable use policy is a description of how the business plans to educate its employees about protecting their assets. It also incorporates an explanation of how security measures will be carried out and enforced. The policy should be detailed enough to include practices such as "blogging" and the use of instant messaging, webmail and community sites such as Facebook. It should be regularly updated to keep pace with technological advances and with changing work practices, such as the challenges posed by an increasingly mobile or home-based workforce.

Reviewing the security policy

Factors that mean a security policy should be reviewed include:

- system changes;
- the introduction of new equipment, users and business systems;
- changes in trading partners; and
- employees leaving the company.

Equally, security controls, audit trails and alarms need to be continually monitored and regularly maintained.

The security policy should also specify the recovery plans for an e-commerce system in the event of a system attack or physical disaster. This should form part of your business' contingency plans.

Areas covered by ISO/IEC 27001

The following areas are covered by ISO/IEC 27001:

Security policy

- Establishes if a security policy exists;
- States management commitment to the policy;
- Gives a brief description of security policies, principles, standards and compliance requirements.

Security organisation

- Controls specifying allocation of individual security responsibilities;
- Deals with need for specialist security knowledge;
- Concerns information systems relationships with outside parties such as contractors, partners and outsourcing companies.

Asset classification and control

- Requires the compilation of an inventory of all information systems assets;
- Details of ownership, location and importance also to be included;
- Requires software licences for all operating system and application software to be current.

Personnel security

- Specifies the proper screening and checking of employee details at the time of hiring;
- Places importance on user training in security matters;
- Emphasises importance of reporting security incidents.

Physical and environmental security

- Seeks to establish what physical access controls are in place;
- Controls included to protect equipment from environmental hazards;
- Requires "clean desk policy" for locking away of sensitive information.

Communications and operations management

- Seeks to establish if network security controls are in place;
- Includes controls for system planning and acceptance;
- Incorporates procedures for handling of media.

Access control

- Requirement for a general-access control policy;
- Seeks to establish how access authorisation is granted;
- Reviews how systems access is monitored.

Systems development and maintenance

- Details controls that can help build security into systems developed in-house;
- Controls included on use of cryptography;
- Requirement for change control is addressed.

Business continuity management

- Describes processes for ensuring business continuity;
- Details plans to be developed to maintain or restore business operations;
- Provides a framework for the formation of these plans.

Compliance

- Comprises controls specifying the need to comply with legal standards;
- Seeks to establish if there is a security testing programme in place;
- Establishes if back-ups are carried out effectively and if they are tested.

Common e-commerce security controls

You should introduce sufficient security controls to reduce risk to e-commerce systems. However, these controls should not be so restrictive that they damage the employees' performance.

Some of the common security controls are listed below.

Authentication

There are several techniques that can identify and verify someone seeking to access an e-commerce system. These include:

- A user name and password combination, where the password can vary in length and include numbers and characters. Remember to include a system that prompts employees to change their passwords at regular intervals;
- "Two-factor" authentication requiring something the user has (eg an authentication token) and something the user knows (eg a personal identification number);
- A digital certificate that enables authentication through the use of an individual's unique signing key;

- A person's unique physical attribute, referred to as a biometric. This can range from a fingerprint or iris scan, through to retina or facial-feature recognition.

Access control

This restricts different classes of users to subsets of information and ensures that they can only access data and services for which they have been authorised. These include using:

- network restrictions to prevent access to other computer systems and networks;
- application controls to ensure individuals are limited in the data or service they can access;
- restrictions on what can be copied from the system and stored on pen drives, memory sticks or CDs/DVDs; and
- limits on the sending and receiving of certain types of e-mail attachments.

Changes to access privileges must be controlled to prevent users retaining them if they transfer between departments or leave the business.

Encryption

This technique scrambles data and is used to protect information that is being either held on a computer or transmitted over a network. It uses technologies such as virtual private networks (VPNs) and secure socket layers.

Firewall

This is a hardware or software security device that filters information passing between internal and external networks. It controls access to the Internet by internal users, preventing outside parties from gaining access to systems and information on the internal network. A firewall can be applied at the network level, to provide protection for multiple workstations or internal networks, or at the personal level where it is installed on an individual PC. Find a list of frequently asked questions on firewall technology on the Microsoft website.

Intrusion detection

These products monitor system and network activity to spot any attempt being made to gain access. If a detection system suspects an attack, it can generate an alarm, such as an e-mail alert, based upon the type of activity it has identified.

Despite the sophistication of these controls, they are only as good as the people who use them. A continual awareness programme is a vital component of any security policy.

Risks from viruses, Trojans and worms

Viruses, Trojan horses and worms are all computer programs that can infect computers.

Viruses and worms spread across computers and networks by making copies of themselves, usually without the knowledge of the computer user.

A Trojan horse is a program that appears to be legitimate but actually contains another program or block of undesired malicious, destructive code, disguised and hidden in a block of desirable code. Trojans can be used to infect a computer with a virus.

A back-door Trojan is a program that allows a remote user or hacker to bypass the normal access controls of a computer and gain unauthorised control over it. Typically a virus is used to place the back-door Trojan onto a computer, and once the computer is online, the person who sent the Trojan can run programs on the infected computer, access personal files, and modify and upload files.

Risks to e-commerce systems

While some viruses are merely irritants, others can have extremely harmful effects. Some of the threats that they pose to e-commerce systems include:

- corrupting or deleting data on the hard disk of your server;
- stealing confidential data by enabling hackers to record user keystrokes;
- enabling hackers to hijack your system and use it for their own purposes;
- using your computer for malicious purposes, such as carrying out a denial-of-service attack on another website; and
- harming customer and trading partner relationships by forwarding viruses to them from your own system.

How do viruses spread?

Viruses are able to infect computers via a number of different routes. These include:

- CDs and floppy disks containing infected documents;
- E-mails containing infected attachments; and

- Internet worms that exploit holes in your system's operating system when you are connected to the Internet.

Spyware

Spyware is software that is placed on your computer when you visit certain websites. It is used to secretly gather information about your usage and sends it back to advertisers or other interested parties. In addition to tracking your system use, it can also slow down or crash your computer.

Preventing problems from viruses, Trojans and worms

Anti-virus software should be used to protect against viruses. It can detect viruses, prevent access to infected files and quarantine any infected files.

Anti-virus software

There are different types of anti-virus software:

- Virus scanners - must be updated regularly, usually by connecting to the supplier's website, in order to recognise new viruses;
- Heuristics software - detects viruses by applying general rules about what viruses look like. While it does not require frequent updates, this software can be prone to giving false alarms.

The threat of virus infection can be minimised by:

- using a virus checker on your Internet connection to trap viruses both entering and leaving the business' IT systems;
- running virus checkers on servers to trap any viruses that have managed to evade the above check; and
- running individual virus checkers on users' PCs to ensure that they have not downloaded a virus directly, or inadvertently introduced one via a CD or floppy disk.

Other methods of preventing viruses

Other ways of preventing of viruses include:

- installing software patches provided by the supplier of your operating system to close security loopholes that could be exploited by viruses;
- using a firewall to prevent unauthorised access to your network; and
- avoiding download of unauthorised programs and documents from the Internet and ensuring your staff adhere to this policy.

Your systems may still become infected even if you follow the above guidelines. Make regular back-ups of your data and software so that you can replace infected files with clean copies.

Virus alert services

Consider subscribing to a service or supplier who will provide virus alerts for you. Some are available on a paid-for basis, while others are provided by suppliers of anti-virus software to their customers.

Spyware

There is software available that scans your systems and detects known spyware programs. Spyware can then be removed or quarantined. As with anti-virus software, it is important to keep this software up-to-date.

Intranets and Extranets

A key requirement in today's business environment is the ability to communicate more effectively, both internally with your employees and with your external trading partners and customers.

An intranet is a private - internal - business network that enables your employees to share information, collaborate, and improve communications.

An extranet enables your business to communicate and collaborate more effectively with selected business partners, suppliers and customers. An extranet can play an important role in enhancing business relationships and improving supply chain management.

What does an intranet do?

In essence, an intranet is a business' own private website. It is a private business network that uses the same underlying structure and network protocols as the Internet and is protected from unauthorised users by a firewall.

Intranets enhance existing communication between employees and provide a common knowledge base and storage area for everyone in your business.

Because intranets offer broad bandwidth, they enable users to search for, retrieve and publish information far more quickly than over the Internet. Their primary role is to

enable users to search their business' store of knowledge and information from their own desktops.

The main applications typically found on an intranet are:

- Publishing - delivering information and business news as directories and web documents;
- Document management - viewing, printing and working collaboratively on office documents such as spreadsheets;
- Training - accessing and delivering various types of e-learning to the user's desktop;
- Workflow - automating a range of administrative processes;
- Front-end to corporate systems - providing a common interface to corporate databases and business information systems;
- E-mail - integrating intranet content with e-mail services so that information can be distributed effectively.

The type of content found on an intranet includes:

- Administrative
- Corporate
- Financial
- IT
- Marketing
- Personnel
- Individual Projects
- External Information Resources

Benefits of an intranet

The main benefits of an intranet are:

- Better internal communications - corporate information can be stored centrally and accessed on an "as required" basis;
- Sharing of resources and best practice - a virtual community can be created to facilitate information sharing and collaborative working;
- improved customer service - better access to accurate and consistent information by your staff leads to enhanced levels of customer service; and
- Reduction in paperwork - forms can be accessed and completed on the desktop, and then forwarded as appropriate for approval, without ever having to be printed out, and with the benefit of an audit trail.

What is an extranet?

An extranet is an intranet that is made accessible to selected external partners such as business partners, suppliers, key customers etc, for exchanging data and applications and sharing information.

It can also provide remote access to corporate systems for staff who spend lots of time out of the office, for instance those in sales or customer support, or home workers.

Extranet users should be a well-defined group and access must be protected by rigorous identification routines and security features.

Why would you use an extranet?

Businesses of all sizes are under increasing pressure to use online ordering, electronic order tracking and inventory management.

At the same time small businesses are keen to meet the demands of larger companies in terms of working flexibly, adopting new technologies and enabling the exchange of business information and transactions.

Traditionally the method of exchanging business data was via electronic data interchange. However, extranets offer a cheaper and more efficient way for businesses to connect with their trading partners.

The ability of the extranet to automate the trading tasks between you and your trading partners can lead to enhanced business relationships and help to integrate your business firmly within their supply chain.

Key issues to consider

Bear in mind that once you make parts of your business data available to trading partners, they will expect it to be available, up to date and secure at all times. Availability and security are key factors in the success of an extranet.

Is your business prepared to work collaboratively? Are you willing to share production and sales information with partners?

Significant resources may be required to keep the content of the extranet accurate and up to date. This might involve the use of content management software and training for staff to use it.

Benefits of an extranet

An extranet can offer a range of benefits to your business. Of course, these can depend to a large degree on your reasons for introducing the extranet in the first place.

However, the types of benefit that organisations using extranets typically experience include:

- help in joining up the supply chain through the use of online ordering, order tracking and inventory management;
- reducing costs by making manuals and technical documentation available online to trading partners and customers;
- enabling collaboration between business partners - perhaps members of a project team - by enabling them to work online on common documentation. This can speed up the development and approval processes and reduce the need for meetings;
- helping to improve business relationships with key trading partners because of the close collaborative working that extranets support;
- improving customer service by giving customers direct access to information and enabling them to resolve their own queries;
- providing a single user interface between you and your business partners;
- improving the security of communications between you and your business partners, since exchanges can take place under a controlled and secure environment such as a virtual private network;
- sharing news of product development exclusively with partner companies; and
- assisting in the move towards flexible working for your own staff, as an extranet allows remote and mobile staff to access core business information on an as-required basis, irrespective of location.

Planning for an extranet

If you are considering introducing an extranet into your business you should ensure that it is flexible enough to meet not only your immediate requirements, but also your needs as your business grows.

Identify your objectives

Make sure your objectives are clear. Will you restrict access to your extranet, or will you allow all of your customers to use it? Do you want to promote flexible working in your business by catering for your remote workforce? How will you measure the success of your investment?

What information will it contain?

Identify the information that will need to be made available in order to meet your objectives. Do you need to make all of your production and sales information available to your partners, or will discrete sub-sections be sufficient?

Which technical solution?

There are a number of different ways to build your extranet:

- At the simplest level you can portion off a section of your existing website and make only basic files available to your partners;
- Alternatively, you can purchase more sophisticated extranet software and a content management system and host these on your own server;
- You can commission a specialist supplier to design, build, implement and host your extranet;
- You can outsource your requirements to an Applications Service Provider which will develop and host your site for a monthly fee.

Support costs

Identify the support costs that will be required to run the extranet on a day-to-day basis. Will you require technical support - if so at what level? Consider also how the extranet content will be managed.

Security

Remember that security is paramount, since any security incident will not only directly affect you, it will also affect your key business partners.

Content management systems

Any information on an intranet or extranet must be up-to-date and accurate. This has meant a growth in the use of content management systems (CMS) for managing and updating information.

A CMS is a set of procedures for adding, managing and publishing content to an intranet, extranet or a website. Any non-technical user can edit and publish content using templates and a simple web-browser

interface. This is much more efficient than sending web content to a webmaster to be published.

The key elements of a CMS application are that:

- content creation is through templates that require no technical expertise;
- content review is supported by workflow;
- version control of the content is managed closely;
- content is tagged with metadata to help with subsequent retrieval; and
- content can be rewritten for delivery to specific audiences.

Metadata

The use of templates ensures that metadata is added correctly. Metadata provides "tags" or descriptors about content that help in the subsequent retrieval of information through lists of terms and internal search engines.

There are four broad categories of metadata:

- Structural metadata that describes the information architecture of the document, including title, sub-title, abstract, executive summary etc;
- Content metadata that provides a way of identifying documents that may contain relevant information but uses different words. For example a controlled list of terms would enable information on Europe to be identified even if it only mentions France or Germany;
- Descriptive metadata enables the type of document to be identified. In this way a search could be limited to staff policies even if the document did not have these words in the title or text of the document;
- Administrative metadata that identifies the relationship of the document to the business context, for example, the person and department owning the document and the language of the document.

E-Marketplaces, Online Auctions and Exchanges

An e-marketplace is a virtual online market where organisations register as buyers or sellers to conduct business-to-business e-commerce over the Internet.

There are many types of e-marketplace based on a range of business models. They can be operated by an independent third party or be

run by some form of industry consortium that has been set up to serve a particular sector or marketplace.

Services offered by e-marketplaces include electronic catalogues for online purchasing of goods and services, business directory listings and online auctions.

Types of e-marketplace

There are many different types of e-marketplace based on a range of business models. They can be broadly divided into categories based on the way in which they are operated.

Independent e-marketplace

An independent e-marketplace is usually a business-to-business online platform operated by a third party which is open to buyers or sellers in a particular industry. By registering on an independent e-marketplace, you can access classified ads or requests for quotations or bids in your industry sector. There will typically be some form of payment required to participate.

Buyer-oriented e-marketplace

A buyer-oriented e-marketplace is normally run by a consortium of buyers in order to establish an efficient purchasing environment. If you are looking to purchase, participating in this sort of e-marketplace can help you lower your administrative costs and achieve the best price from suppliers. As a supplier you can use a buyer-oriented e-marketplace to advertise your catalogue to a pool of relevant customers who are looking to buy.

Supplier-oriented e-marketplace

Also known as a supplier directory, this marketplace is set up and operated by a number of suppliers who are seeking to establish an efficient sales channel via the Internet to a large number of buyers. They are usually searchable by the product or service being offered.

Supplier directories benefit buyers by providing information about suppliers for markets and regions they may not be familiar with. Sellers can use these types of marketplace to be found and to get leads.

Vertical and horizontal e-marketplaces

Vertical e-marketplaces provide online access to businesses vertically up and down every segment of a particular industry sector

such as automotive, chemical, construction or textiles. Buying or selling using a vertical e-marketplace for your industry sector can increase your operating efficiency and help to decrease supply chain costs, inventories and cycle time.

A horizontal e-marketplace connects buyers and sellers across different industries or regions. You can use a horizontal e-marketplace to purchase indirect products such as office equipment or stationery.

Online auctions

Online auctions are computerised versions of traditional auctions where prices are set by buyers bidding against each other. What makes online auctions so powerful is that, with Internet technology, vast numbers of businesses or individuals can bid - allowing sellers to get the best price. Conversely, the speed, simplicity and variety of auctions mean that shrewd buyers can cut the time and cost of procurement.

The two main types of auction are:

- forward auctions - where lots are sold to the highest bidder; and
- reverse auctions - where suppliers compete on price and the lowest bid for a tender wins the business

Forward auctions

Selling using a forward auction can be a cost-effective way for your business to acquire new customers, test new products or establish pricing points. Excess inventory can be disposed of quickly, and sales costs are reduced because of the minimal amount spent on marketing. You can price your goods according to demand and stock levels.

Some businesses trade solely online using forward auctions on websites such as eBay. Forward auctions can also bring benefits when buying for your business. You may be able to source non-critical supplies, eg stationery and office furniture, or acquire specialist, second-hand equipment at a more competitive rate. By setting up automated searches and bid alerts you can reduce the time spent on procurement.

Reverse auctions

If you are a supplier to larger companies, you may be asked to compete for their business in a reverse auction. Businesses that supply their goods through reverse auctions benefit by being able to compete for business globally. They can also make savings by

gaining access to customers who are ready to buy, without having to launch a sales campaign. Reverse auctions are a good way to offload stock or build market share; however, they are normally by invitation only.

eMarket Services provides a downloadable e-markets and online directories handbook for small businesses on their website at www.emarketservices.com/clubs/ems/artic/HandbookEnglish.pdf

It is unusual for smaller businesses to make purchases using reverse auctions. However, buying for your business using a reverse auction can reduce time and administrative costs and you may attract a larger pool of suppliers. Reverse auctions can also help buyers manage more complex procurement contracts and you may see a reduction in your overall costs - some large companies have reported cost reductions of 10 per cent or more.

Best practice in auctions

If you are considering entering an online auction, make sure you check:

- accreditation - some auctions have qualifying criteria;
- fee structures - there may be a registration fee;
- how payment is managed - sometimes this is between the parties, sometimes through the auction site itself;
- supplier reputation - monitor feedback from previous bidders;
- the bidding system - how the bidding works and how to withdraw bids during the auction period.

It is worth spending some time browsing what is on offer so you can get a feel for the pricing of items you are interested in. Narrow your search down by specifying a category or using the advanced search criteria. Before bidding on an item make sure you understand exactly what is on offer by reading the description carefully. If the description is vague, contact the seller to get more information. When bidding, set yourself a maximum price you are willing to pay for an item and stick to it.

Catalogues and directory listings

Many e-marketplaces provide information about products and services offered by their supplier members. This is commonly through the use of catalogues or directories.

Catalogues

There are various different types of catalogue - some list general product information, while others contain a significant amount of detail. Some are intended to be very informative. Others are used primarily for promotional purposes.

The prices published in catalogues tend to be fixed and are often not disclosed to the customer until they register with the e-marketplace.

Some e-marketplaces provide a single electronic catalogue containing all the products that are available from all supplier members. Others offer a link to several catalogues, with the option to purchase goods from each catalogue either directly from the central site or from the suppliers' sites.

The attraction to the customer is that e-marketplace catalogues enable them to search an industry sector that has a wide range of products and suppliers from a single, central point. They can also then make their purchases from a single site in a single transaction.

Some e-marketplaces also offer both the buyers and the sellers the opportunity to integrate the order process with their own in-house enterprise resource planning systems. This has the significant advantage of streamlining the overall e-purchasing activity.

Directory listings

A simpler alternative to the catalogue is a basic directory listing service. E-marketplaces offering this facility list suppliers under the appropriate product or service category and include a link to each supplier website. The customer can follow this link in order to access further information about the individual suppliers and the products or services that they offer.

If your company website is listed on a directory, make sure it is in the most relevant industry sector so customers can find you easily. This can also help improve your website's search engine rankings.

Online exchanges and trading hubs

Online exchanges, also known as trading hubs, are websites where buyers and sellers trade goods and services online. They vary according to the size and number of companies using them and the type of commodity traded. There are already successful exchanges in markets as diverse as energy, textiles and logistics.

Like online auctions, online exchanges allow participants to trade straightforwardly with a wide variety of buyers and sellers. Two of the biggest factors driving the growth of exchanges are that large businesses can use them to reduce stock holdings while small businesses can bid collectively to earn volume discounts or to jointly deliver a large contract.

Types of online exchange

There are different types of online exchange, each catering for a specific aspect of trading:

- Request for quotation - an invitation to suppliers to provide a quote for a specific product or service;
- Request for bid - an invitation to buyers to bid for a specific product or service that you are able to provide;
- Commodity exchange - an ongoing process where the price of a standardised commodity such as energy or telecoms bandwidth continuously changes as a result of changes in supply and demand.

Online exchange considerations

If you are considering entering an online exchange, make sure you check the following issues:

- Choice - are all your major suppliers involved? Does the exchange have a comprehensive list of products and services so you can compare like with like?
- Business relationships - could using an exchange undermine your status as a favoured customer?
- Administration - do you have adequate systems in place for order fulfilment? Are your internal business processes suitable for active online trading?
- Disclosure - are you comfortable with publicising information on prices and stock levels where your competitors, as well as potential customers, can view it?
- Fees - how do these compare to any savings in sales and marketing costs?

Benefits of e-marketplaces

The potential advantages to be gained by joining an e-marketplace will vary between industries and businesses, and indeed between buyers and sellers. Some of the potential benefits are summarised below.

General business benefits

- There are greater opportunities for suppliers and buyers to establish new trading partnerships, either within their supply chain or across supply chains;

- E-marketplaces can provide greater transparency in the purchasing process since availability, prices and stock levels are all accessible in an open environment;
- Time constraints and problems with different office hours for international trade are removed as it is possible to operate on a round-the-clock basis.

Benefits for the buyer

- Updated information on price and availability makes it easier to secure the best deal;
- E-marketplaces offer a convenient way to compare prices and products from a single source rather than spending time contacting each individual supplier;
- Established e-marketplaces provide a level of trust for the buyer as they are dealing exclusively with suppliers who are members.

Benefits for the seller

- Regular requests for quotations from both new and current customers are possible;
- It provides an additional sales channel to market and sell products;
- E-marketplaces can offer reduced marketing costs when compared to other sales channels;
- The use of international e-marketplaces can provide opportunities for overseas sales that you would not otherwise be aware of.

Deciding if an e-marketplace is for you

The following issues need to be considered when assessing how appropriate it is for your business to participate in an e-marketplace.

Industry fit

What is the purpose of the e-marketplace and is it compatible with your business strategy? Ensure that you understand who buys from the e-marketplace and that your business is likely to fit the profile of the sellers and/or buyers on there.

Management of the e-marketplace

It is important to establish the ownership of the e-marketplace. Successful e-marketplaces require a sound financial backing to ensure their success and longevity. So, you need to know who shares the profits and the risks. Equally, you do not want to be involved in a marketplace if your competitor is the major owner.

Costs

What does it cost to participate in the e-marketplace? Possible charges include commissions for completed transactions, membership fees and listing fees. You should also establish if there are any costs associated with changing to another e-marketplace should your original choice not live up to expectations.

Marketing

Does the e-marketplace have a strong brand or image that will assist in marketing activities? What are the marketing plans, how aggressively will the marketplace be promoted and is it likely to attract the attention of the right types of customer for your own business?

E-marketplace design

Does the overall design and functionality of the e-marketplace make it easy for would-be purchasers to locate and buy products? Does it take account of good website design principles?

You should also establish how your presence will be displayed on the site. Will your logo and brand image be clearly displayed?

Technical issues

Is the e-marketplace adequately staffed to ensure that services are maintained on a round-the-clock basis, since any down time will impact directly upon your own business?

Also, establish if there are any costs associated with making your own IT systems compatible with the systems used by the e-marketplace.

The implications for e-purchasing

Online auctions and exchanges have played an important role in the growth of e-purchasing within businesses of all sizes and types.

E-procurement

There are two parts to the e-purchasing cycle - the more established of which is e-procurement. This has been developed in recent years to deal with the process element of electronic purchasing.

E-procurement is the use of the Internet to operate the transactional aspects of requisitioning, authorising, ordering, receipting and payment processes for the required products or services.

A number of e-marketplaces offer transaction services that automate many aspects of the procurement cycle for both the buyer and the seller.

E-procurement covers the following areas of the buying process:

- requisition against order;
- authorisation;
- order;
- receipt; and
- payment.

E-sourcing

The other element of the e-purchasing cycle is e-sourcing.

E-sourcing is the use of the Internet to make decisions and form strategies regarding how and where services or products are obtained. E-marketplaces can play an important role in this activity, since the price and availability of products from multiple suppliers can be checked from a single point.

E-sourcing covers the elements of the buying process which are at the discretion of specialist buyers, including:

- knowledge specification;
- request for quotation/e-tender/e-auction;
- evaluation and negotiation; and
- agreeing contractual terms.

One of the attractions of e-marketplaces in terms of product sourcing is that not only do they provide detailed product information from existing suppliers, they also give access to many new potential partners and suppliers. Furthermore, the use of reverse auctions and online exchanges enables procurement officers to obtain better prices as they encourage competitive bidding between suppliers.

Common e-commerce pitfalls

Despite the rapid growth in the use of e-commerce by both consumers and businesses, not all e-commerce developments are a success. The reasons for this vary and are often dependent upon a particular set of circumstances or issues. Nevertheless there is some commonality between many of the problems and pitfalls experienced by e-commerce systems.

Lack of planning

Mistakes at the planning stage of an e-commerce project can mean lower chances of success. Here are some of the key issues you need to consider from the outset when planning for the introduction of an e-commerce system.

Set realistic targets

- Set clear goals - for example, to bring in new business or cut the cost of each sale;
- Agree specific, measurable objectives for what you want to achieve, such as a percentage increase in sales or new customers;
- Ensure that any targets you set are realistic and achievable.

Have a clear business focus

- Pursue possibilities offered by e-commerce, but don't lose your focus on what your business is actually about;
- Understand how e-commerce will integrate with your overall business objectives. Will it increase sales or improve margins? Have a clear view on where it will add value;
- If you find that e-commerce is creating conflicts within your operation, re-examine your goals and rethink how e-commerce can best fit into your business.

Don't overlook the hidden costs

- Don't just add up the costs of hardware, software, and hosting services. Look at the total cost of ownership, including training, services, maintenance and support, upgrades, marketing and communications, and administration;
- Understand the effect of increased sales - how are you going to process and dispatch orders? Will you have the capacity if sales take off?
- Understand the issues around postage and shipping costs - identify the geographical locations you will ship to and where you won't. Have a clear pricing policy for shipping - "Free postage" is great, but only to certain locations;
- Be realistic about the likely costs from the start and ensure that you keep your budget under control.

Consider the site specification

- Draw up a site specification that clearly identifies what you are trying to achieve and how the various components of the site will contribute to this;

- Build reliability and scalability into the solution from the start to ensure that your site can grow in line with your business;
- Make sure your website is straight-forward to update so you can add content quickly and easily, for example to advertise new products or special offers;
- Don't view your e-commerce solution in isolation. Ensure that you take account of the need to integrate it with your main corporate systems and overall IT strategy.

Design and usability concerns

One of the key factors of the success of your e-commerce site will be how easy or difficult customers find it to use. So make sure that you consider these important issues.

Don't over-design the site

- Aim to create a common theme of colours, fonts, graphics and page layouts. This can be achieved without the need for spectacular graphics;
- Keep the screen uncluttered - make good use of space. Ensure your web designer only uses effects that will add value for the user.

Consider download speeds

- Download times are key - users expect pages to load in less than ten seconds. If your site is running slowly you may have to upgrade it;
- Remove large images, graphics or animation from key pages like the homepage, if download speeds are slow.

Support multiple browsers

- Design web pages that can be displayed by different browsers. The more common browsers include Microsoft Internet Explorer, Mozilla Firefox, Netscape Navigator, Opera and Safari;
- Test your web pages in as many browsers as possible during the development process to ensure that they will display properly.

Don't underestimate the importance of usability

- Ensure that navigation buttons are clearly presented and the words or images behind these links are clear, concise and relevant to the information they are leading to;
- Include a site map and a search facility to help the user locate the required information;

- Take account of the "three-click rule" that enables users starting at your home page to get to the information they require in three mouse clicks.

Get feedback on usability

- Many e-commerce operators don't get usability feedback from anyone beyond those on their development team, who are often too close to the process and biased toward the chosen design and infrastructure. Consider getting some sort of outside perspective - employees not involved in the design, a focus group, or your spouses or friends. This can be crucial to the site's development and performance;
- Ensure that you get feedback before the full launch of the site. Once it is launched any problems will be highly visible to both your customers and competitors.

Content problems

First impressions are important. The quality of the content on your site can help create an immediate impression and also ensure that customers keep returning.

Ensure information is accurate

- Your customers will be put off by out-of-date or incorrect information;
- Make sure you provide accurate information, especially when it comes to prices, and monitor the information you provide on a regular basis;
- Make sure that all images on your site are accurate and show products in their best light;
- Your contact details, including phone numbers, e-mail and postal addresses, or a prominent link to them, should be on the home page of the site.

Make the content easy to read

- Ensure text is easy to read - web users rarely read whole pages, so write more simply than you would in printed publications;
- Break text up with headings and bullet points. Remember also that English is a second language for millions of potential customers;
- Provide users with a clear description of the product. Ensure they have enough information to make an informed decision.

Keep content fresh and interesting

- People expect sites on the web to be constantly changing. If the content of your website remains static, there is little incentive for users to revisit it and any opportunity to promote new products or services may be lost;
- Keep the content as up to date as possible. If you have a news section or announcements about new products then they should reflect the current situation;
- Remember to change the notice on your website stating when the site was last updated;
- Ask your web designer to incorporate a tool that will recognise newly added products and most popular products, and display them automatically on your homepage.

Check the links on your site

- Regularly check internal links on your site. If they don't work, or a page has been removed, it reflects very poorly on your site;
- Users like links to other sites, so you should consider providing them. However, if there are too many links, or they appear too soon, you risk sending customers away from your website.

Marketing considerations

Marketing is all about promoting your goods and services and trying to sell them. You need to draw the attention of potential customers to your products and services in order to convince them to purchase and to turn first-time purchasers into repeat purchasers.

No matter how good your site is, if people don't know about it they will not visit it. So, you need to consider various marketing strategies.

Develop a marketing plan

- Whether it is advertising on the web, direct mail or other forms of offline promotion, if you want to attract new and existing customers to your site you must have a solid marketing plan;
- Give people a reason to return to your site, such as news, product launches or promotions;
- Your marketing plan should identify the target markets you plan to address and profile each target group so that you can pitch your costs and benefits at the correct level;

- Make sure that your marketing budget is realistic and is capable of funding all of the activities you plan to undertake;
- Equally, the cost of your plan should be justified by the levels of sales you expect to generate.

Use the most appropriate marketing techniques

- There are various online and offline marketing techniques you can use - select the most appropriate ones for your particular needs;
- Ensure that the marketing approach you use does not annoy or antagonise the customer - excessive spam following on from a purchase is a common complaint amongst e-commerce shoppers.

Measure the effectiveness of your marketing efforts

- You must measure the success, or otherwise, of any marketing initiative you undertake. This can help show what works well and where resources have been wasted;
- Use tracking and site analysis tools that can help to tell you more about your site visitors - where they came from, what they did while they were on your site, for example whether they purchased anything and what keywords they used to locate products, and where they went when they left.

Shopping cart problems

Your checkout procedure must be as quick and simple as possible, since industry research shows that 60 to 75 per cent of shopping carts are actually abandoned because of slow or unclear checkout processes. Here are some of the techniques that you can employ.

Ensure there are no surprises

- Provide details of delivery costs early in the process, so customers are not surprised during final checkout;
- Show stock availability on the product page, so that customers do not have to wait until checkout to find out that a product is actually out of stock;
- Include some text about the buying process, explaining how long it will take and how many stages there are.

Make it easy to select and amend orders

- When an item is placed in the shopping cart, include a link back to the product page, so customers can easily jump back to make sure they have selected the right item;
- Make it straightforward to change quantities or delete an item from the shopping cart;
- If a product comes in multiple sizes or colours, make it easy for the customer to select or change values in the shopping cart.

Indicate customer progress

- Ensure that the customer always knows at exactly what stage they are in the checkout process by including an indicator, for example "You are in step 3 of 4";
- Make sure that customers don't get lost by including a prominent "Next Step" or "Continue with Checkout" navigation button on each checkout page.

Show clear information

- Keep all information on a single screen on each checkout page, so customers do not have to frequently scroll down;
- If the billing information is the same as the shipping information, include a box that customers can tick to automatically fill in the same information;
- If information is missing or filled out incorrectly during checkout, make sure that a meaningful error message is displayed that clearly describes what needs to be corrected.

Order fulfilment issues

Recent research indicates that a large proportion of the complaints made by e-commerce customers relate to fulfilment issues. In order to tackle such problems you need to address various issues.

Product delivery problems

- Late delivery of products is a frequently cited complaint, so e-commerce providers must be realistic about the delivery promises they make to customers, especially when demand is high;
- Increasingly, the delivery of products purchased via e-commerce sites is contracted out to third-party distribution services. The importance attached to on-time delivery by customers means that you must select your outsourced service very carefully;

- Some e-commerce providers believe that they can lure customers by offering a product at low cost, whilst charging a relatively high delivery rate. This practice rarely works and is more likely to cause problems in customer relations;
- Depending upon the nature of the product you are supplying, you need to ensure that your packaging is robust enough to ensure safe delivery.

Failing to keep the customer updated on progress

- Successful e-commerce sites make a point of confirming orders immediately by e-mail. Customers are entitled to written confirmation of their order under the Distance Selling Regulations 2000. They can be generated automatically via e-mail and are expected by most customers;
- The customer should be provided with a way to track down the progress and availability of their order. Many carriers now use e-mail to notify a customer that an order has been dispatched, whilst others have implemented online tracking systems that enable the customer to log on to their website in order to check on progress.

Having an acceptable returns policy

- You should aim to put in place an acceptable means of handling customer returns and ensuring that any customer dissatisfaction is professionally resolved;
- This is commonly achieved by giving a 100 per cent no-quibble money-back guarantee if they don't like or want the product.

Security weaknesses

Regardless of the size of your business, you should protect against people stealing or hacking into your data. There are a variety of ways in which misuse of information and hacker attacks could jeopardise your business, so security must be at the forefront of your e-commerce plans.

The threats posed by the lack of adequate security measures range from losing the confidence of your customers to the non-availability of your e-commerce site.

If you already have a merchant account set up with your bank, secure socket layer (SSL) technology is used to encrypt transaction data and to send the necessary customer and card details to the acquiring bank in order for purchases to be authorised. You should, therefore, ensure that any web hosting solution you are considering is capable of supporting the SSL protocol.

Hackers gaining access to privileged information

- Inadequate security controls can enable hackers to gain access to your sensitive business data such as price lists, catalogues and valuable intellectual property. The motives may be malicious or to gain competitive knowledge;
- Hackers may also gain access to the financial information of your business or your customers, with a view to committing fraud.

Loss of customer confidence

- Security breaches can damage the confidence that your customers have in the e-commerce service you provide.
- A lack of customer confidence is potentially fatal to the success of your online venture.

Denial-of-service attacks

- Denial-of-service attacks deny access to authorised users of a website, so that the site is forced to offer a reduced level of service or cease operation completely. Some businesses never recover from such attacks.

No contingency measures in place

- There are many possible threats to the operation of your e-commerce system, both malicious and natural. Consider the most likely risks and take steps to minimise them, such as virus software, password protection and firewalls;
- Contingency planning is intended to put measures in place to enable your systems to continue operating, perhaps through locating to a back-up site;
- Some e-commerce providers have no such contingency plans in place - you need to consider how your own systems would continue to operate in such circumstances and the likely effect that this would have on your business.

Recommended Reading

[Bizezia online business library](#)

See the following publications from our library for more information:

- IP91: Viruses, Trojans and Worms – Tips for safer computing
- IP118: is your data legal? – Practical advice about the Data Protection Act
- IP366: Building a winning Internet plan
- IP402: Glossary of E-Commerce and Web Terms
- IP443: The E-Commerce Directive
- IP477: Is your Website breaking the law?

Books

- E-Commerce: Business, Technology, Society, by Kenneth Laudon and Carol Traver Published by Prentice Hall, ISBN-10: 0131735160, ISBN-13: 978-0131735163
- The Complete E-Commerce Book: Design, Build and Maintain a Successful Web-based Business, by Janice Reynolds, published by CMP, ISBN-10: 1578203120, ISBN-13: 978-1578203123
- Business Information Systems: Technology, Development and Management for the E-Business, by Paul Bocij, Dave Chaffey, Andrew Greasley and Simon Hickie, published by Financial Times/ Prentice Hall, ISBN-10: 0273688146, ISBN-13: 978-0273688143



- E-Business and E-Commerce Management, by Dave Chaffey, published by Financial Times/ Prentice Hall, ISBN-10: 1405847069, ISBN-13: 978-1405847063
- Internet Marketing, by Dave Chaffey, published by Financial Times/ Prentice Hall, ISBN-10: 0273694057, ISBN-13: 978-0273694052
- E-commerce Get It Right! Essential Step-by-Step Guide for Selling & Marketing Products Online. Insider Secrets, Key Strategies & Practical Tips - Simplified for Start-Ups & Small Businesses, by Ian Daniel, published by NeuroDigital, ISBN-10: 0956526209, ISBN-13: 978-0956526205
- Starting an Online Business All-in-One For Dummies, by Shannon Belew and Joel Elad, published by For Dummies, ISBN-10: 1118123190, ISBN-13: 978-1118123195
- Get Rich Click!: The Ultimate Guide to Making Money on the Internet, by Marc Ostrofsky, published by The Razor Media Group, ISBN-10: 0982769601, ISBN-13: 978-0982769607

Further Information

This guide is for general interest - it is always essential to take advice on specific issues.

We believe that the facts are correct as at the date of publication, but there may be certain errors and omissions for which we cannot be responsible.

Acknowledgement:

¹ This publication is based on information provided by Business Link, the Government website that provides practical advice for business.
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Publication issued or updated on:
2 February 2012

Ref: 293

