



# eCommerce for Small Enterprise Development: a Handbook for Entrepreneurs in Developing Countries

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Institute for  
Development Policy  
and Management  
The University of Manchester

# eCommerce for Small Enterprise Development

A Handbook for  
*Entrepreneurs*  
in Developing Countries

2006

**Richard Duncombe & Richard Heeks**  
IDPM, University of Manchester

**Robert Kintu & Barbara Nakangu**  
FIT (Uganda)

**Sunil Abraham**  
Mahiti

Written by: **Richard Duncombe and Richard Heeks**  
**Institute for Development Policy and Management (IDPM)**  
University of Manchester, Precinct Centre, Manchester,  
M13 9QH, UK  
Tel: +44-161-275-2800  
Fax: +44-161-273-8829  
Email: [richard.duncombe@manchester.ac.uk](mailto:richard.duncombe@manchester.ac.uk)  
Email: [richard.heeks@manchester.ac.uk](mailto:richard.heeks@manchester.ac.uk)

**Robert Kintu and Barbara Nakangu**  
**FIT (Uganda)**  
Kampala, Uganda  
Email: [robert@fituganda.com](mailto:robert@fituganda.com)

**Sunil Abraham**  
**Mahiti**  
Bangalore, India  
Email: [sunil@mahiti.org](mailto:sunil@mahiti.org)

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Developed from a project supported by: Building Digital Opportunities (BDO) Programme  
**Department for International Development**  
1 Palace Street, London, SW1E 5HE, UK  
Email: [enquiry@dfid.gov.uk](mailto:enquiry@dfid.gov.uk)  
Web: <http://www.dfid.gov.uk/>

**Commonwealth Telecommunications Organisation (CTO)**  
Clareville House, 26-27 Oxendon Street, London, SW1Y 4EL,  
UK  
Email: [info@cto.int](mailto:info@cto.int)  
Web: <http://www.cto.int>

This handbook can be used together with '**eCommerce for Small Enterprise Development – A Handbook for Enterprise Support Agencies in Developing Countries**', which has been designed specifically for use by agencies that are assisting micro and small-scale enterprises with eCommerce.

**View/download both handbooks from:**  
<http://www.ecomm4dev.org/>

**View/download additional handbooks concerning ICTs and enterprise development at:**  
<http://www.sed.manchester.ac.uk/idpm/research/is/ictsme/index.htm>

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## How To Use This Handbook

This handbook is designed for entrepreneurs running small enterprises in developing countries; including micro-enterprises. The handbook will also be useful for entrepreneurs in medium-size enterprises. The handbook is designed for those who are new to eCommerce and have little knowledge of what is involved as well as for those in enterprises that are already using information and communication technologies (ICTs) in their businesses – including computers, email and mobile phones.

The objectives of the handbook are to:

- Outline some basic information about eCommerce for enterprises including the benefits and the pitfalls (Section A).
- Present some case studies showing how eCommerce has been used in practice by small enterprises (Section B).
- Help you make decisions about eCommerce (Section C).
- Provide information about different aspects of eCommerce (Section D).
- Direct you toward further information on eCommerce (Section E).

First, read through **Section A** to learn more about eCommerce. Then look at **Section B** and decide where you are on the 'eCommerce ladder'. You can then look through case studies of enterprises using eCommerce.

**Section C** will help you to find out if your enterprise is ready for eCommerce. **Section C1** asks you to think about your business goals and carry out an analysis of your own enterprise. The analysis focuses on your potential for 'web-based eCommerce' and examines your markets, your customers, your products and services, your location, your skills, technology and finances.

You will then need to decide what level and type of eCommerce will suit you. **Section C2** will help you do this by suggesting some of the costs and benefits for each 'step to eCommerce' and the overall likely impact of eCommerce on your business.

A final decision you will have to make concerns whether you should develop eCommerce yourself or whether you should work through an 'eCommerce facilitator'. **Section C3** outlines some strengths and weaknesses of a range of eCommerce facilitators you may wish to trade with or consider for support.

Finally, look at **Section D**, which provides information on various aspects of 'best practice' in eCommerce, and **Section E** which provides sources of further information about eCommerce.

## A. Introduction

There are tens of millions of small enterprises, including micro-enterprises, in developing countries (DCs). More than 90% of all firms in DCs are micro- and small enterprises (MSEs), and these typically contribute 80-90% of all employment. They are also significant in wealth creation, making up perhaps around a quarter of gross domestic product and often contributing to exports as well.

In an increasingly competitive and globalised world, MSEs need to compete more effectively in order to further boost domestic economic activity and contribute toward increasing export earnings. MSEs will also continue to play an important role in increasing employment and incomes and thus contribute to poverty reduction on a sustainable basis.

**eCommerce** is emerging as a new way of helping business enterprises to compete in the market and thus contributing to economic success. eCommerce can help deliver economic growth, increased business opportunities, enhanced competitiveness and better access to markets. At present, though most small enterprises lack the knowledge of how investment in eCommerce could benefit their businesses and help them develop that competitive edge. This is at a time when the opportunities for small enterprises to adopt eCommerce are growing due to improved access to the technical and communication infrastructure.

This handbook will help you to understand more about eCommerce and what eCommerce has to offer your business. It will help you to decide if you need eCommerce in your business, and the type of eCommerce that can benefit your business.

### A1. What Is eCommerce?

**eCommerce** involves the sale or purchase of goods and services over computer networks by businesses, individuals, governments or other organisations. eCommerce builds on traditional commerce by adding the flexibility and speed offered by electronic communications. This can facilitate improvement in operations leading to substantial cost savings as well as increased competitiveness and efficiency through the redesign of traditional business methods.

**eCommerce** is the application of current and emerging information and communication technologies (ICTs) to conduct business. These include existing technologies like landline telephone and fax, but the ICTs offering most scope for small businesses are mobile phones, electronic mail and other Internet-based services.

However, **eCommerce** is not just about using new technologies. eCommerce can also help support profitable business relationships and assist you to more effectively manage and run your business enterprise. This will involve creating more effective external interactions with customers, clients, collaborators and suppliers, but it can also mean improving internal business efficiency and even the emergence of new products and services.

eCommerce may involve selling directly from businesses-to-consumers (**B2C eCommerce**). For example, a number of craft producers and tourism enterprises have already found some success dealing directly with customers.

eCommerce can also be conducted directly between businesses (**B2B eCommerce**). This is by far the most common type of eCommerce at present. B2B activity includes portals that operate as electronic marketplaces or as auction sites. Benefits of eMarketplaces can include reduced costs, better research and quicker transactions for buyers. Rewards for sellers include improved customer service levels and cheaper exposure to customers.

There is also business-to-government activity (**B2G eCommerce**) that refers to the growth in supply of goods and services for online government procurement – potentially a large growth area in developing countries.

## **A2. How Can eCommerce Help Improve Your Business?**

eCommerce can provide substantial benefits for your business via improved efficiencies and raised revenues. It can enable new ways of working to emerge as your business faces the future and embraces the new economy. eCommerce enables you to gain access to better quality information, and thus empowers you to take informed decisions about your business.

Most importantly, eCommerce can give your enterprise a competitive advantage. It can help strengthen your market position and open up new business opportunities with the potential to improve profits. Benefits of eCommerce can arise in the following ways:

### **Cost Reduction Benefits**

- *Reduced travel costs*: by using a mobile phone, email and other ICTs to substitute for journeys.
- *Reduced cost of materials*: more information means better choice of suppliers and more competitive prices.
- *Reduced marketing and distribution costs*: for example, publishing a brochure online can reach an unlimited number of potential export customers and allow regular update.
- *Reduced sales costs*: the Internet provides unprecedented opportunities for businesses to reduce the costs of trade locally and, even more, across borders.
- *More efficient supply chain management*: can eliminate the need for middlemen leading to lower transaction costs (including marketing, sales, transaction processing), reduced overhead, and reduced inventory and labour costs.
- *Improved internal functions*: cutting down on meetings, improving the exchange of critical knowledge, eliminating red tape, and streamlining communications.

### **Market Benefits**

- *Greater reach:* a web presence can allow you to reach out to customers far beyond your immediate location.
- *More brand awareness:* offering new avenues of promotion for products and services.
- *Improved customer service:* providing more responsive order taking and after-sales service to customers; this, in turn, can lead to *increased customer loyalty*.
- *Increased market awareness:* you can become more aware of competition within your market and more aware of market changes, which can lead to *product/service innovation* or *quality improvement*.

### **Other Competitiveness Benefits**

- *Increased efficiency:* eCommerce not only reduces costs but it can also increase the speed of transactions; both buying and selling.
- *Continuous trading:* suppliers and customers, if they wish, can access a 24-hour/7-day sales service – particularly important when trading through time zones.
- *Specialisation:* eCommerce can help you to focus your activities – making it easier to build relationships with other enterprises and communicate your needs to support agencies.

Many of these benefits can be gained through relatively modest investments in new technology and systems. Greater benefits may accrue as the enterprise moves up the eCommerce adoption ladder (see Section B1). It is important to realise, however, that the benefits outlined are not exclusively tied to eCommerce. For example, market benefits may be achieved more effectively through better business networking and the building of personal business relationships, rather than through use of the Internet. This emphasises the importance of adopting an approach towards eCommerce that puts business objectives first, rather than believing that technology alone can deliver the benefits described above.

### **A3. eCommerce Pitfalls**

There are great potential benefits but there are also pitfalls of going into eCommerce. They are the financial costs, the business 'opportunity costs' and the dangers of failure. These are detailed below:

- eCommerce will bring extra costs as well as potential cost savings. The start-up costs (initial investment in a computer/network connection, etc) will be high and there will be additional running costs (see Advice Sheet 9).
- eCommerce activity will need to run in parallel with existing business methods. For example, you will need to continue to produce paper-based marketing material (brochures, stationery, leaflets, etc) as well as building up your web presence. This will duplicate some activities adding to overall costs.
- eCommerce may divert attention away from more important offline activities. It is important that online and offline efforts are not in competition with each



other within a business. In fact, for most MSEs, offline activities (such as face-to-face meetings and personal networking) will remain far more important than online communication.

- An eCommerce venture may well fail completely like any new business venture. This highlights the importance for small businesses of not throwing all their eggs into the eCommerce basket.

**However, there are also risks of ignoring eCommerce!** Technology and innovation can bring positive changes to your business – which can improve the way you do business in the future. The risks of not effectively embracing technology may be felt throughout your business in years to come. For example:

- Having no website, or a badly designed or marketed website, may put your business at a disadvantage as compared with your competitors, particularly if you are an exporter or a tourism business.
- Unsuitable or inadequate technology can mean that your enterprise is without the communications systems that it needs to compete efficiently.
- Increasingly, enterprises that lack a customer and sales database may find it difficult to carry out the regular and effective direct marketing and communication that competitors conduct, and which customers expect.

#### A4. What You Need To Do For eCommerce

The basic requirements to get started are as follows:

- *A computer.*
- *A landline telephone.*
- *A modem.* This device converts digital information from computers into electronic signals that can be transmitted over telephone lines.
- *Internet browser software.* This usually comes installed already but make sure when purchasing your computer you ask if it has this software.
- *The services of an Internet Service Provider (ISP).* These provide you with access to the Internet.
- *An email address* in order that local, regional, and especially, international customers can communicate with you.

See the Advice Sheets later in this handbook for more details of all these requirements. Remember that you do not have to own all of these yourself – you could access them via a telecentre or Internet café, or you could share ownership with other entrepreneurs. You can also make a start on eCommerce just using a mobile phone.

**But don't forget** – personal face-to-face contact is still the most important method of business communication – particularly with your customers. There are still many effective ways to build your business communications that don't involve modern technology, such as:

- **Building a good reputation** for your business. This will help to spread information about your business through word-of-mouth.
- **A professional image** will help to promote your business. The use of a printed business card, a letterhead and a logo, or signboard outside your business premises will help in this respect.
- **Advertising** your business. The use of printed leaflets, posters, cards in shops or adverts in local/national papers will reach a wide customer base.

The use of eCommerce technologies will help you build on these good business practices: for example, using the Internet (or a mobile phone) to promote your business; to take or give orders; or to communicate with your customers at a cheap rate via email.

## B. Small Enterprise On The Road To eCommerce

This section outlines the 'steps to eCommerce' describing the differing stages of eCommerce development that you may find in a small enterprise. It does this through a model and then presentation of six real-life case studies of small enterprises using eCommerce. The case studies show how enterprises are benefiting from eCommerce, as well as some of the pitfalls. Which step of the eCommerce ladder are you on? Read through the case studies. You may identify an enterprise that is at a similar stage to your own.

### B1. Moving Up The eCommerce Ladder

The 'steps' model can help you understand the different types of eCommerce business applications you may encounter. It may also help you to identify the type of assistance you may require.



#### Step 1. Starting Out: Simple messaging using mobile communications

Currently 'wireless' communications – including short messaging services (SMS) – provide a cheap and widely available option for enterprises. Mobile phones offer a number of key advantages over fixed line communications for small businesses – such as instant communications with customers and suppliers, even when on the move. They also provide greater connectivity and network coverage than landlines – users can be instantly connected by text messages and mobile chat – a powerful marketing and advertising tool.

#### Step 2. Getting Online: Email messaging

You can send or receive emails from a computer terminal either located on your business premises or via a facilitator (such as an Internet café or telecentre). Email is a cheap, quick and reliable way to exchange business information with customers,

suppliers, and business contacts who are also connected to email. A variety of information can be sent – not just messages, but documents, photographs, drawings, or any other computer data file (see Advice Sheet 2 for more information on email).

### **Step 3. Web Publishing**

Web publishing can be used to make enterprise information available – by using an online brochure, for example. Its simplest form may consist of a 3-4 page website giving a basic business profile, some information about products and services, and contact information – physical and postal address, telephone and fax, and email contact. In a more advanced form it may include an online catalogue – an online version of a conventional catalogue that can be easily updated. Even a simple web presence offers the ability to access a wide – potentially global – market with 24/7 accessibility. (See Advice Sheet 4 for more information on creating websites.)

### **Step 4. Web Interacting**

Web interaction will allow customers (for example) more scope to browse through images, descriptions and specifications relating to your products and services. It may allow them to submit email enquiry forms, to order online, to use online services or to use a shopping cart facility and order confirmation – that could be paid for and fulfilled (delivered) offline. Interaction over the web can improve customer service and response to customer queries.

### **Step 5. Web Transacting**

This can be termed as having a full eCommerce capability that covers the whole transaction process from the placing of an order to online payment for goods and services via secure networks. For B2C eCommerce this will involve making use of secure credit card payment systems, and for B2B eCommerce will involve payment through secure banking systems.

### **Step 6. Web Integration**

eCommerce may also take on a wider role within a business through web integration. Web integration provides an electronic platform that links customer-facing processes such as sales and marketing (the "front office") with internal processes such as accounts, inventory control and purchasing (the "back office"). This is often called eBusiness or the business may be described as becoming fully "e-enabled". eBusiness links internal systems with external networks (customers, suppliers and collaborators) via the Internet. Integrating systems can make it easier and cheaper to do business, and it can encourage customer loyalty and repeat business.

## Case Study 1: Sedu Welding and Fabrication – eCommerce Step 1

**Overview:** A micro-enterprise run by a single entrepreneur producing fabricated metal products – windows, doorframes and beds – with two employees, and a turnover of about US\$300-600 per year. The enterprise sells to local markets and serves many sectors including the construction sector, supplying windows and doorframes, and rural schools and hospitals supplying beds. The enterprise mainly sells to individual consumers and schools.

**ICT Resources:** The enterprise has a mobile phone which cost the owner US\$80 and requires a monthly fee of at least US\$4 of airtime to operate on the network. This enterprise has no financial support and depends solely on income generated and savings.

### **eCommerce Benefits:**

- The use of a mobile phone has greatly improved business by enabling constant access to customers, even when the entrepreneur is away from his business site.
- Both customers and suppliers can be contacted giving an immediate response and direct communication that has tremendously cut down transport costs and given access to a wider market.
- The phone has helped him forge a personal relationship with clients for repeat orders.
- Suppliers can also be readily contacted.
- The enterprise has built use of the phone into its marketing strategy by distributing the phone number whenever possible via business cards and displaying it on finished products.

**eCommerce Challenges:** The phone itself does not bring challenges. As to further eCommerce steps, the business owner regards other ICTs (such as computers) as too expensive to use. Besides he does not know how to use them. He prefers to spend his resources on a cell phone as he could not risk being without one in his business.

**eCommerce Support:** The enterprise has not received any support except in the sense that the mobile network provider delivers the infrastructure required for the phone.

**Lessons Learned:** The phone should be available for use at all times of the day. Hence, it is advisable to join networks that do not charge a service fee. It is important, therefore, to compare the packages that phone companies are offering in order to minimise costs and select a service that will meet your needs. Unfortunately he lost most of the numbers of his customers and contacts when his mobile phone was stolen – this reinforces the importance of keeping back-up records also.

## Case Study 2: Mukono Women's AIDS Task Force – eCommerce Step 2

**Overview:** MWATF is a self-help enterprise producing tree seedlings, vegetables and metallic stoves, employing sixty women, with a turnover of US\$3,600. It serves the home market only. The vegetables are perishable so they only harvest when they can be sure of the market.

**ICT Resources:** The enterprise has no direct access to ICTs but uses a community telecentre that is located 2km away from their premises. They regularly use the telecentre landline phone that charges them US\$0.25 per minute. They also use the email service to correspond and communicate with agencies in at home and abroad. They usually use the email services twice a week (costing US\$0.025 per minute). Since the connections are slow it can take up to twenty minutes to complete their communication.

### **eCommerce Benefits:**

- The telephone service is used to ascertain the market for their produce before they harvest or take their produce to market.
- The phone has saved both time and money, giving rise to better prices.
- Via email, they have been able to establish contacts with a number of new organisations and individuals who have subsequently offered assistance.

**eCommerce Challenges:** The computer currently provided at the telecentre are too few – just two for the whole local community – and also too slow. Slow transmission speeds also mean high costs for access.

**eCommerce Support:** MWATF has received support from the telecentre which has offered computer training to the staff and some members at a subsidised rate. They have also assisted with training of the staff, and demonstrated how the Internet can be used to search for information. The telecentre also passes on messages to MWATF. Hence the telecentre is an important point of contact for the organization.

**Lessons Learned:** When using the telecentre users are encouraged to have letters typed beforehand and then just copied to send. This costs less compared with composing a letter online. It is also important to use the telephone effectively to find out about the market or the prices before setting off to market – this is especially valuable if the market is far from the locality. The enterprise intends to install a phone at their premises that can be used by its members at a cheaper rate.

### Case Study 3: Adam Sons – eCommerce Step 3

**Overview:** The business makes machinery used in plantations such as machinery for processing coffee. They have nine employees, and recent annual turnover was US\$126,000. Their main market is the home district but 5% of turnover comes from exports – they have been exporting machinery for five years.

**ICT Resources:** They have five landline phones and three mobile phones. In addition, there is a single personal computer (PC) operating in the business for email, Web and other purposes. The PC has a UPS back-up system. Adam Sons also has created its own website.

#### **eCommerce Benefits:**

- They have attracted prospective clientele and enthusiastic persons who have browsed through their website to get information regarding their coffee machinery units.
- They have received a number of visitors by ensuring that the site is listed on some main Web search engines.
- They have also found benefits as users of the Web; for example in finding information they needed about gasoline-powered generators.
- Email has been useful in saving costs when contacting external clients or suppliers; some orders are also received via email.

#### **eCommerce Challenges:**

- Climatic conditions in their location can cause problems, including some unreliability of telecommunications.
- The high charges for airtime when using mobile phones.
- Problems upgrading website to obtain details of interested/prospective customers.

**eCommerce Support:** They have received no direct support, but the entrepreneur was motivated to make a website by a friend based in the US who said that this would help enhance the scope of the business.

#### **Lessons Learned:**

The entrepreneur states *"Advertising in newspapers turns out to be expensive but if we have a website, we can just put the URL of the website in the newspaper – which saves a lot of space/money. Interested parties can log on to the net and find information about our business. Thus it should be on the agenda of every entrepreneur to have a website"*. He also stated that customers are more enthusiastic about reputable companies and having a website gives weight to a company's reputation. They plan to upgrade the website in order to add more transactional functionality to it, like a chat facility to allow one-to-one interaction with clients. They recommend seeking out a good network connection that offers attractive and less expensive packages. The entrepreneur would like to see government agencies supporting a website specifically for/about small enterprises, including a product catalogue displaying images with easy ways to order the products.

## Case Study 4: Star Café – eCommerce Step 4

**Overview:** This enterprise roasts, blends and packages coffee products and has 15 employees. The customer base is large since coffee is widely sold locally, including in rural areas. The enterprise supplies businesses, traders, supermarkets, restaurants, shops, and offices, with the local market making up 99% of turnover. The enterprise is planning to target the export market, and sees its eCommerce base as an important foundation for this.

**ICT Resources:** The enterprise has access to two computers with Internet access that were acquired in 2001/2002. It also has a fax and phones (both landline and mobile). The company has set up its own website that provides details of the products it offers.

### **eCommerce Benefits:**

- 70% of the supermarkets and hotels that the enterprise supplies have email (though most other local customers tend to use the telephone to place orders). Email is a key tool to create or strengthen personalised relationships with major clients through faster communication links.
- Star Café has become better known and many new business contacts have been made through its website and email.
- The website has already demonstrated that it is a cost effective way to reach out to the export market. They estimate the costs for a network connection and designing and hosting the website to be about US\$2500 per year.
- The enterprise also uses email for most business correspondence – this has proved to be a more efficient and cost-effective way of communication than non-ICT-based means.

### **eCommerce Challenges:**

- Service breakdowns and slow dial-up Internet connections.
- High investment costs for the ICTs.
- Lack of sufficient know-how related to use of ICTs and their future development.
- Logistical requirements for the delivery of physical goods in order to fulfil electronic orders.

**eCommerce Support:** The enterprise has not received any support in the area of eCommerce. The company had its own in-house strategies to finance these ideas. The general manager indicated that once the benefits seem to justify the costs then an idea is considered.

**Lessons Learned:** Enterprises should apply cost/benefit analysis and determine if they really need the technology. Requirements need to be specified carefully and enterprises should shop around for different ways of solving problems in a cost effective manner.



## Case Study 5: Kamal Bells – Elements of eCommerce Step 5

**Overview:** The business has 40 employees and was established in 1983. They manufacture machine and pressed metal components. Their customers are 100% home market but some export products containing their components are used in the motor industry. Their main customers are large motor engineering companies, and recent annual turnover was almost US\$400,000.

**ICT Resources:** The company has four phones (two landline and two mobile) and three personal computers, one with an Internet connection. They make use of standard accounting software and a customised system for billing and invoicing. They use email but have no company website. However, they are able to transact online by make use of websites owned by suppliers or customers.

### eCommerce Benefits:

- Access to a mobile phone is very useful to the CEO who is always on the move.
- Email has made communication much faster and easier
- They have registered with an export portal website through which they have received a lot of information from various similar units and clients from all over the world.
- They have saved time and money by completing transactions online. For example, from one major customer they received order details via email. They then used the customer website to fill in all necessary details about the order, enabling it to be processed electronically. All further correspondence was conducted via email so that the entire transaction was completed online.

### eCommerce Challenges:

- Slow access speeds due to limited ICT infrastructure
- Lack of training in ICTs.
- Need to integrate basic business processes such as inventory and product lists with web-based tools.

**eCommerce Support:** The business has received support in the use of email and other aspects of eCommerce from one of their main clients, who are already experienced in using eCommerce.

**Lessons Learned:** There is a need for a continuous upgrading of technology. However, along with technology it is important the human element is retained in the unit; like the business owner says *"each employee in my unit is treated like a family member, and we discuss various problems together"*. Hence, too, the human element must also remain in dealings with suppliers and customers. Location is also important: they have benefited from being located alongside heavy ICT-using enterprises.

## Case Study 6: Project ToeHold – Getting to eCommerce Step 6

**Overview:** ToeHold manufactures and markets traditional leather slippers and sandals. These are manufactured by artisans of a local marginalised community. Established in 1999, it is run on a cooperative basis with eight full-time employees. ToeHold's customers are mainly shoe shops and boutiques in Australia, Japan, Italy and other countries.

**ICT Resources:** The company has three computers at its head office and one in the manufacturing centre. ToeHold communicates with its customers and its own manufacturing unit via email. Its website contains a catalogue of its products and customers are able to browse and purchase its products via the integrated shopping cart application.

### **eCommerce Benefits:**

- Workers in the villages are able to speak to their head offices via mobile telephony. Decisions get taken faster and more cheaply, removing the need for travel. Decisions also get communicated down the line more quickly and cheaply.
- Requests are received via email and company representatives follow up with a quotation. Clients also use email to send in suggestions, alterations and photographic evidence of damage/faults in products that might need replacement. This helps ToeHold improve the quality of their product design.
- Orders are received via the website that would otherwise be very unlikely to come: ToeHold's export ambitions would have been very difficult to fulfil without eCommerce.
- A management information system keeps track of customers and predicts their buying patterns. This helps the enterprise to optimise their leather and accessories purchases and keep inventory levels low.

**eCommerce Challenges:** Power supply remains erratic in the villages, which can sometimes undermine use of email. Internet connectivity is also limited in rural areas and finding trained staff is difficult. ToeHold is also concerned about retaining the intellectual property rights of its original designs – showcasing these designs on the web means they could be copied by others.

**eCommerce Support:** A local ISP offered a free template-based shopping cart application. Donor agencies have also provided ToeHold with computers and software at subsidised costs.

**Lessons Learned:** A digital camera is useful as images of new products or test designs can be edited and uploaded quickly onto a website, and images are an important element of web-based sales. ToeHold has trained staff members in the use of computers and they can now manage most communication via email. The artisans come from a poorer section of society and their literacy levels are low. This has so far prevented them from being part of the eCommerce process. ToeHold is trying to bring their levels to a basic standard so they may take a more substantial role in using ICTs, but this requires a concerted effort. The firm sees creation of a more sophisticated website as valuable for future sales; for example enabling buyers to create their own footwear designs or colour combinations.

## C. Are You Ready For Web-Based eCommerce?

Before making a decision about what type of eCommerce to adopt – and whether you are ready for web-based eCommerce – you should ensure that:

- You have clearly defined your business goals and strategies.
- You intend to use eCommerce in creative ways to improve existing business tools and capabilities.
- You are able to successfully balance you existing offline commerce activities and new online eCommerce activities.
- You have a realistic and achievable plan for realising genuine benefits.

Planning for eCommerce involves setting achievable business goals, developing business strategies to achieve those goals, and making use of practical business tools. Table 1 can help you to identify your business goals and help you to consider potential strategies and practical tools to achieve those goals.

**Table 1. Business Goals and Strategies**

<b>Possible Business Goals</b>	<b>Business Strategies You Could Adopt</b>	<b>Business Tools You Could Use</b>
<i>Increase revenue from existing customers</i>	Build repeat orders. Develop customer loyalty.	Increased advertising and promotion. Better communication. Better customer service.
<i>Locate new customers in existing or new markets</i>	Expand domestic markets. Explore export markets.	Better market information. Attendance at trade shows. Better cross-border business networking.
<i>Diversify products and services</i>	Development of new products or services.	Market research. Use of consultants and/or technical assistance.
<i>Increase competitiveness through product/service innovation</i>	Undertake product or process improvements. Technology upgrading. New production or service technology.	Branding. Improved design and packaging. Standards compliance. Employee involvement.
<i>Increase competitiveness through cost reduction</i>	Internal/external business efficiency improvements.	Better purchasing. Workforce/resource planning. Training and skills development.

eCommerce technologies can help bring improvement to all of the business tool examples listed in Table 1 – particularly those that involve better communications – using email or mobile phones, for example.

It will also be important that you are able to prioritise your actions in order that you can use eCommerce to produce benefits in the areas that are most important to your business. For example, if your main strategy is to build repeat orders then efficient and effective communications with your existing local customers will be paramount. Here, effective use of mobile communications rather than web-based eCommerce should probably be prioritised, so that you can always be in touch with all your customers and they can also leave messages for you.

### **C1. How To Analyse Your Enterprise**

The use of web-based eCommerce is likely to affect all aspects of your business. Therefore, it is very important for you to analyse all aspects of your business before you make any decisions regarding eCommerce. Go through the following sets of questions and note down some responses that apply to your business. Then read the comments alongside the questions to gain some feedback.

#### **First, you should consider your Market**

Are your main competitors marketing or selling similar products or services over the Internet?

Do your main customers or suppliers have access to the Internet or are they seeking to use eCommerce?

**Feedback:** If you answered predominantly 'Yes' then you need to consider whether you are ahead, on a par, or behind in comparison with your competitors, customers and suppliers, in using the Internet and eCommerce. If you answered predominantly 'No' then web-based eCommerce may not be a priority for you.

#### **... and then your Proximity to the Market**

Where are your main customers and suppliers located?

Where are your business premises located?

**Feedback:** If your customers or suppliers are located overseas, and you are located in a well-connected urban area, then you have high potential for web-based eCommerce. If your customers or suppliers are located in-country and you are located in a rural area, then you may want to consider using a mobile phone or gaining access to a telecentre to use email.

**... what about the Products and Services you offer**

Do your products or services have broad or specialised (niche) market appeal?	<b>Feedback:</b> More specialised products or services are more suited to Internet marketing or selling. Conversely, if your products or services are serving saturated markets where there are large numbers of competitors then your potential for web-based eCommerce may be lower. If you are unsure about the suitability of your products then you need to do some additional market research.
Are your products or services suitable for marketing or selling over the Internet?	
Can your products or services be delivered electronically?	

**... pay special attention to your Existing Customers**

Are your customers 'other businesses' or 'final consumers'?	<b>Feedback:</b> If your customers are large or medium-scale businesses operating in high potential sectors or if they are consumers with high disposable incomes then you have high potential for eCommerce. If your customers are low-income consumers or small and medium-scale enterprises operating in low potential sectors then you may have lower potential for eCommerce. If you are unsure then you need to do some additional market research concerning your customers.
Are your business customers small or large enterprises or organisations?	
Are your customers operating in sectors that have high or low potential for eCommerce?	
If you sell to final consumers, do they tend to have high disposable incomes or low?	

**... next consider your Business**

Is your enterprise new or well established?	<b>Feedback:</b> The size and the growth-rate of your enterprise are not as important as your market, your products and the nature of your customers for determining your potential. However, if you have a larger well-established businesses then you are more likely to have greater available resources for investment in web-based eCommerce. On the other hand, if you have a greater number of employees then climbing the steps to eCommerce may present greater challenges in terms of transforming skills and attitudes across your workforce. Smaller enterprises employing two-five persons may find it easier to adapt, although it is likely that available resources will be lower.
How many employees does your enterprise have?	
Is your enterprise growing, contracting or reasonably stable?	
What was the turnover of your enterprise in the last financial year?	

<b>... your <u>Access to ICTs</u></b>	
Do you currently have access to email or the Internet on your business premises or via a third party?	<b>Feedback:</b> If you are already a computer/email or Internet user and those facilities are accessible on your business premises, you have greater potential to climb the steps to eCommerce. If you have yet to deploy ICTs within your enterprise then you need to consider carefully the issues covered in this handbook and decide what type of ICTs would be most beneficial.
Does your enterprise currently have a website?	
Are your internal IT systems networked?	
To what extent are your business processes (customer database, accounts, invoicing, purchasing, etc) computerised?	

<b>... your <u>ICT and Business Skills</u></b>	
Are you an ICT enthusiast and do you have ICT skills?	<b>Feedback:</b> Enthusiasm (commitment and leadership) is probably the most important skill you can bring to any eCommerce initiative. It will also be necessary to develop the technical and business skills to successfully implement the technology and the innovations that will lead to new ways of doing business. If you already have ICT skills and experience this will greatly increase your potential for eCommerce. However, good business skills – the ability to recognise how new technology can be used both wisely and cost effectively – are likely to be more important than your technical skills
Are your employees familiar with ICTs and what is their level of ICT skills?	
Do you have ICT support available 'in-house' or do you depend upon external maintenance and development of your ICTs?	

<b>... your <u>Business Environment</u></b>	
Are local telecommunication services provided to suit eCommerce?	<b>Feedback:</b> The ability of your enterprise to climb the steps to eCommerce will depend not only upon your own skills, but also upon the level of support, and the constraints, that exist locally. An increased level of awareness of these 'e-readiness' issues will help you understand the constraints under which your enterprise is likely to be operating.
How advanced is your nation regarding the legal, regulatory and banking requirements for eCommerce e.g., secure payments?	
To what extent can transport and delivery systems meet the needs of potential eCommerce customers?	

<b>... and finally your <u>Finances</u></b>	
How financially stable is your business?	<b>Feedback:</b> It is necessary that you have access to financial resources to make your initial investment, but you also need to be able to generate sufficient revenue to sustain your eCommerce activities in the years ahead. A lot will depend on your business continuing to thrive and grow. It is important that eCommerce can contribute to growth of revenue (and profits) whilst not imposing a heavy burden on your cash flow or threatening your financial stability. Ideally, the financial benefits will need to exceed the financial costs significantly.
What investment resources do you have available?	
Are you aware of the total likely financial cost (investment + recurrent costs) of eCommerce?	
Have you weighed the costs against the benefits?	

After analysing your own situation, you may decide not to adopt web-based eCommerce and instead concentrate on other aspects of business development or make better use of cheaper communication technologies – such as mobile phones – or you may decide to make use of facilities provided by others (Internet cafés or telecentres) rather than invest your own resources in new ICTs.

Careful analysis of the factors outlined will help you understand your own strengths and weaknesses for eCommerce. If you do consider web-based eCommerce to be an essential part of your business plan, then take a step-by-step approach that avoids the pitfalls. You can take note of the following tips.

## **C2. Ten Tips For eCommerce**

Tip 1: A sound and stable commercial proposition is a crucial first step. Getting carried away by all the eCommerce hype could cause a loss of control over the eCommerce venture.

Tip 2: Your target market should shape your business planning. Remember, your eCommerce plans cannot be separated from your business plans. As with business plans, then: a) you should ensure that staff, customers and suppliers have their say, and b) your available resources will also influence your plan – make sure the costs can be justified by the benefits.

Tip 3: Flexibility all through the venture is very important for the venture to meet with success. Which means you simply cannot keep waiting for technology to catch up. The venture has to be treated as an on-going process.

Tip 4: Often, the whole venture is controlled by an IT specialist, not sales people. Once a website goes live, the marketing team is of utmost importance. That's when the public will flood the site and no amount of software technology will come in

handy. So an excellent rapport with the marketing and sales team sets apart a successful eCommerce venture.

Tip 5: Vendors will only deliver the exact technology or application you want when you properly communicate it to them. A lack of understanding between the user and vendor can cause huge losses in investment and a flagging morale at the end of the day. A thorough knowledge of the technology you need and effective communication with your vendors could avoid big headaches.

Tip 6: Considering the outsourcing option is quite natural and necessary at times, so always know what you need to outsource. Gauge your in-house talent to see if you meet the requirement. There are plenty of cases of companies, without the adequate know-how, having approached consultants who vanish when they're in need of ongoing support (when the project goes live). Staying in control is absolutely necessary. Ideally, the IT people should handle the outsourcing contracts and not the business department.

Tip 7: Never underestimate the scale on which your site has to operate. The losses will be Herculean if a site that cannot support customers comes to a grinding halt. In spite of knowing the importance of a scalable system, many eCommerce ventures are not prepared for a, say, 100% traffic increase. eBusiness sites need to scale rapidly in order to respond to the changes in market and an increasing number of hits.

Tip 8: Get as much advice on technical architecture as possible before you go live. Keep a tab on your expenses as most of the times the budget seems to be exhausted much before a certain level of functionality is even reached. It should not occur that the business platforms are up and running while the IT development side has staggered into the background. Business on the Internet may seem extremely easy to begin but after that it is very difficult to continue if the necessary technology is absent.

Tip 9: More than half of all eBusiness ideas fail to break even. A thorough understanding of the key business issues is very important, as is a good relationship between those responsible for technology and those responsible for finance. IT staff need to use the language of the business as eCommerce makes links between IT and business closer than ever. The approach towards an eBusiness solution should not be like that towards a project. A good planning approach and sound methodologies should do the trick.

Tip 10: Many eBusinesses forget planning about security measures from the initial cycle. This is a grave mistake. Most companies bring in the security issue in the end, more as a panic response, after they have experienced a mishap. There are a number of things that affect security at the infrastructure level itself. So getting things to the right places at the right time from the start is important.



### C3. What Kind Of eCommerce?

For those who want to get into eCommerce, the following chart is a guide to which of the eCommerce steps would be most appropriate

**Table 2. Steps to eCommerce – What Kind of eCommerce?**

<b>Steps to eCommerce</b>	<b>Market Drivers</b>	<b>Benefits</b>	<b>Costs</b>	<b>Overall Impact</b>
<b><i>Step 6: Web Integration</i></b>	Requirements of main customers and suppliers.	Merging online and offline processes. Reductions in operating costs. Better relationships with customers and suppliers.	Financial costs of investment in technology, systems and services are very high.	Very high costs, but potential high benefits.
<b><i>Step 5: Web Transacting</i></b>	Primarily driven by requirements of customers.	Speed and convenience, but only a requirement if offline transactions not processed effectively.	High costs of investment in necessary systems and secure network requirements.	Relatively low benefits, but high costs.
<b><i>Step 4: Web Interacting</i></b>	Requirements of customers suppliers, collaborators and support agencies.	Better business communications. Better marketing. Better knowledge of market and customers.	Moderate costs of investment in web-based technologies and network access.	Relatively high benefits with relatively moderate costs.
<b><i>Step 3: Web Publishing</i></b>	Requirements of customers and the marketplace.	Better marketing. Better branding. Easily updated, well presented materials.	Moderate investment costs.	Moderate benefits and relatively moderate costs.
<b><i>Step 2: Email Messaging</i></b>	Requirements of customers, suppliers, collaborators, support agencies and employees.	Considerably improved business communications.	Moderate investment costs.	High benefits and moderate costs.
<b><i>Step 1: Simple Messaging</i></b>	Requirements of customers suppliers, collaborators support agencies and employees.	Considerably improved business communications.	Low investment costs.	Potentially high benefits and relatively low costs.

## **C4. eCommerce Facilitators**

A wide range of facilitating organisations can offer you different types of eCommerce support. This support may range from business advice to web development or market access. Different facilitators can play different roles depending on your eCommerce requirements.

When seeking out eCommerce assistance you should try to choose a facilitating organisation that is actively involved with your target market and in tune with your business requirements – as well as your technical requirements.

For MSEs in developing countries, facilitating organisations fall into several categories. As follows:

### **a) Sector-Based Agents/Brokers & Resellers**

These offer web-based marketing activities and tend to be commission-based. They are able to accept and place orders and they are skilled at information brokering, logistics and supply chain management. They may also offer Internet transactions and electronic banking.

### **b) eCommerce Trading Hubs or Portals**

These are also commission-based but offer solely web-based marketing activities. They are able to accept and place orders, and will be more likely to offer Internet transactions and electronic banking.

### **c) Industry Organisations & Business Associations**

These are usually membership-based (requiring payment of subscriptions). They probably will not have detailed expertise in eCommerce, but can often provide market coordination and information brokering services.

### **d) Fair Trade Organisations**

They provide market outlets based on fair trade principles. Most offer web-based services and marketing, and some offer a full transaction-based eCommerce service.

### **e) NGOs/Business Support Organisations (including Telecentres)**

Providers of advice, training and some marketing assistance. They are not likely to have specific expertise in eCommerce, but may be able to offer advice and assistance.

### **f) ISPs/IT Consultants**

They can offer access to networks, web development services and possibly eCommerce advice and strategy planning.

As summarised in Table 3, you should consider the strengths and weaknesses of any organisation that you consider for support – whether or not the organisation can meet your own needs – particularly for fee-paying services.

**Table 3. eCommerce Facilitators – Strengths and Weaknesses**

<b>Facilitating Organisation</b>	<b>Possible Strengths</b>	<b>Possible Weaknesses</b>
<i>Sector-Based Agents/Brokers</i>	Good market proximity, market experience and knowledge. Market access.	Tend to create dependency relationships with suppliers and tie in producers to sole purchasing agreements. Likely low returns.
<i>Resellers</i>	Quick route to market. More flexibility for producers in the market.	Less security in the market. Price sensitive. Only purchase and resell.
<i>eCommerce Trading Hubs or Portals</i>	Wider market access.	Lack of personal market relationships and contacts.
<i>Industry Organisations</i>	Able to advocate on behalf of producers.	Limited access to market. Lack of market proximity.
<i>Fair Trade Organisations</i>	Assistance with quality control and product/service development. Special assistance to women producers. Better returns.	Tend to lose market share to commercial importers or agents. Narrow market that might be seasonal (high demand at Xmas, for example).
<i>NGOs and Business Support Organisations</i>	Possible sources of finance or subsidy. Local access to resources.	May have little market access, knowledge or proximity.
<i>ISPs IT Consultants</i>	Able to offer local technical support	May have technical expertise, but probably little knowledge of the market within which you are operating.

## D. eCommerce Best Practice Guides

The guides provided in this section provide direct advice on practical issues that may arise when you implement eCommerce in your enterprise.

### Advice Sheet 1: Getting Connected And Making A Start

**Getting connected:** Connecting to the Internet is a fairly simple process. You will need a **computer**: new personal computers might range in price from around US\$300 to around US\$1500 depending upon the type of computer, the software installed, where one buys the computer and the warranty given. Some computing outlets in developing countries also sell second hand-reconditioned computers that could range in price between US\$100 and US\$300.

Computers can often be purchased using hire purchase (paying by instalments). Deferred payment and discounts for cash are available. Some charitable organisations and NGOs offer computers as gifts to schools and enterprises that cannot afford the purchase price.

You will also need a **telephone line and a modem**. A computer you buy may or may not have a modem fitted. Thus you should always ask whether this is available. You will also need Internet browser software which may well have been preloaded into your computer when you purchased it, but make sure when purchasing your computer you ask if it has this software.

Finally you will need to link your computer with a local **Internet Service Provider (ISP)** that will provide you with access to the Internet (and may also provide email, web space, etc). There are numerous ISPs in most developing countries mostly located in and around urban centres. Most ISPs provide 24-hour access through a dedicated dial-up number and will charge a monthly fee. Make sure you shop around for an ISP.

#### Starting to use the Internet:

- Take a course or make use of (recent) guides.
- Start using email to communicate and check your email every day.
- Investigate local business websites and websites of companies in your business sector
- Use web search facilities and investigate any business portals that cater for your business sector.

If you do not have your own computer and connection, make use of **Internet Cafés**. Most of these are located in cities or towns where any individual who cannot afford to own a PC, but needs to use the Internet, can have access. Typical charges will be less than US\$1 per hour. More details concerning the possible costs associated with developing web-based eCommerce are contained in Advice Sheet 9.

## Advice Sheet 2: Using Electronic Mail (Email)

**Electronic mail (email)** is the exchange of messages between computers offering considerable advantages over letter-post and, increasingly, over fax communication.

It provides the cheapest, quickest and most reliable way to exchange business information with customers, suppliers, etc. who are also connected to email.

Emailing requires a computer with Internet access. Furthermore you need some client email software such as Microsoft Outlook or Lotus Notes. The easiest way to use email is to go to a website that offers free email facilities, such as Yahoo or Hotmail. Emails arrive almost instantly via the Internet. You can send 'attachments' with your email – these may be computer files of any kind (documents, photos, sound-clips, or even video clips).

Some advantages of email for business are:

- It allows a variety of information to be sent – not just messages, but also other types of computer data file including formal business correspondence and brochures.
- Messages can easily be recorded, to keep a record of correspondence.
- Messages can easily be organised, e.g., by building up an address book.
- Messages can be protected from outside view.
- Messages can easily be sent to multiple recipients (such as all of your customers).
- Services can be accessed by the entrepreneur whilst on the move and away from the office.

The main barriers to using email at present are:

- The investment costs (the total cost of computer/modem ownership).
- The running costs (network access).
- The relatively few businesses in developing countries able to send and receive emails (although the number is growing rapidly).

In order to use email, enterprises need access to an Internet-linked computer. As described in Advice Sheet 1, owning this is somewhat costly but email services can also be accessed from shared facilities such as Internet cafés and telecentres.

If you are an exporter or you are regularly communicating with email-linked customers, suppliers and other business contacts within the region or worldwide (such as in the tourist sector), then email is by far the cheapest and quickest means of communication. It will increasingly be an essential tool for your export business.

### Advice Sheet 3: eCommerce Skills

When adopting eCommerce, basic business skills remain unchanged – what we might call the **business fundamentals**. They can be summarised as follows:

- A well-thought-out business plan and marketing plan.
- The ability to make yourself known and network effectively.
- The capacity to produce the right product/service at the right price in the right place at the right time.
- Knowledge of your customers and the ability to meet their expectations.
- The ability to pay your bills and get paid on time.
- The capacity to be flexible yet also plan for the future.

eCommerce can help to support these fundamental skills; for example, by capturing customer information and making it easier to segment your market or market directly to your customers possibly using email or web-based methods. eCommerce will also open up your business to **new skills and ideas** including the following:

- **Database management.** You can collect information on website visitors – usually customers or potential customers. Information can be used to target marketing efforts and improve customer service as well as forecast future trends in customer behaviour.
- **Improving business processes.** This is a way of analysing the different tasks within an enterprise to identify better ways of achieving greater efficiencies. Restructuring your business whilst making use of eCommerce may assist your long-term survival and growth.
- **Knowledge management.** More effective management of information and knowledge within your business can bring benefits. eCommerce will help you to improve your skills in this area.

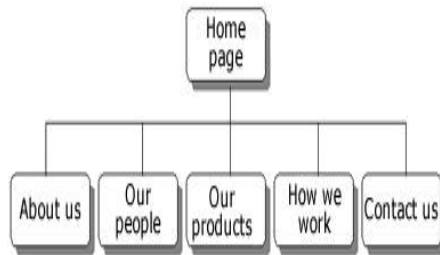
The Internet will also help you do **web-based market research**. By conducting investigation into market trends and customer requirements, enterprises can develop innovative strategies to compete. The Internet can be used to learn more about customers, industries, products and services, and market trends. As just noted, you can also collect information from the people who visit your website, helping you to plan for the future.

The Internet also has specific resources that will assist market research in relation to product development, business planning, eBusiness development and marketing. These can be accessed via a number of the websites listed in Section E2.

For those further up along the eCommerce steps, the Internet may also help you with more advanced skills such as **Enterprise Resource Planning (ERP)** and **Materials Requirements Planning (MRP)**. Both use ICTs to automate core business functions. MRP is similar to ERP but is substantially cheaper to install and is more suitable for MSEs. It requires computerisation of many aspects of the business including accounts, inventory, and purchasing. Benefits focus on reduced inventory costs, better stock control, ordering and order fulfilment.

## Advice Sheet 4: Web Development

Websites can be static or dynamic. Dynamic websites create pages in response to visitor requests. For example, the amazon.com website builds its pages according to the types of books that interest specific visitors from information stored in a database – a database-driven website. A simple static website can be designed using HTML



code instructions plus image files such as JPEGs or GIFs. It will typically link a home page to other pages containing information on the enterprise (see diagram). The website may include a shopping cart where customers can purchase products online with their credit card or where offline payment methods are outlined. To create a dynamic information-driven website, a database is integrated into the site and information can be displayed

when someone requests it. The advantage is that the database can be updated and changed regularly. The database serving the website may consist of client information, such as account details and sales history and can be stored on standard software packages such as Microsoft Access.

**Updating your website.** To update a dynamic website you have three options:

- Agree an annual fee with your web developer for a set number of changes.
- Make the required changes yourself – requiring specific skills.
- Build an update facility into your website design.

The preferred (and cheapest) option is for an employee – using a username and password – to be able to add, modify or delete information on the website using the web browser.

### Basic Web Design Tips:

- Pages must display or download quickly. If your website downloads too slowly the customer may give up and try a competitor's website.
- Images (photographs and graphics) need more time to download than text, so use a small number of images, repeat the same few illustrations or logo throughout the site, or install a button on the web page, to allow the customer to access a text-only version.
- Short paragraphs and sentences are the norm when writing for the web.
- Customers need to locate information easily. Visitors to websites tend to scan pages rather than read the entire text, so signpost the information with clear headings.
- Information on the site needs to be organised and easy to find. Links and buttons, which take the visitor to different places on the site, should be labelled. Most important items should be accessible with minimal clicking.
- Some buttons need to be on all pages, such as: Home, Sitemap, Contact Us and Search. Important information should be easily navigable.
- Websites also require tailoring for your customers. Customers want to buy products that are described in their own language, priced in their local currency, and supported by people they can communicate with.

## Advice Sheet 5: Online Promotion

The Internet provides an additional (and complementary) means of marketing your products and building your enterprise profile. You should consider use of the Internet alongside other media like telephone (such as a help line), radio, and print. A website will not provide a solution to all your marketing problems but it may become as necessary as other forms of media – particularly if your competitors also have websites.

To be effective, websites need to attract the right customers. A high proportion of people who visit a website find it through a search engine or directory. These services present important marketing opportunities. Search engines generate lists of URLs (web addresses) in response to particular queries entered by the potential customer. The sites most likely to be visited are those at the top of the list. Web pages, therefore, need to be designed so that they are located high on lists produced in response to relevant keywords. Your web presence can particularly assist in the following two ways:

**Branding:** Customers tend to stick with tried and trusted brands rather than risk buying an unknown brand. An online brand will be an extension of your offline brand. Your website needs to integrate your brand into the customer experience of visiting the site. The brand (e.g., amazon.com) should be associated with an easy to use website that offers high value in terms of information and services, has a trustworthy reputation, and is visually appealing.

**Personalisation:** Customer information (names, addresses and registration details) can be used to track preferences and tailor the contents of your website to suit individual tastes. For example, your site can suggest products that a particular customer might be interested in, based on his or her purchasing history or the pages they have already viewed.

The most useful methods of direct promotion to customers are:

**Email marketing:** Email is likely to be the most cost effective way to market your business. You should add a signature file to all emails. This is the same as using headed paper or attaching a business card. Most email software enables this to be done easily.

**Testimonials:** These are genuine comments that satisfied customers have made about your products or services. Effective use of testimonials builds credibility and makes customers feel more secure – especially for online purchasing. Effective testimonials will be unedited, genuine, freely given, used with the author's permission and accompanied by the author's name and location.

Other online marketing methods include:

- **Viral marketing** – using your email contact list to spread your details through your contacts lists – by giving an incentive to pass on the message.
- **Banner ads** – adverts that appear on web pages.
- **Reciprocal links** – links to other sites that provide an easy way for a customer to travel from a related site to your website, and vice versa.



## Advice Sheet 6: Networking And Communities On The Internet

By networking we mean connecting computers in order to share information. A network allows a small enterprise to share hardware (printer or a phone line) and software (an accounts package or email). The network may be extended internally to include local offices through an **intranet** or externally to key customers and suppliers forming an **extranet**.

Networking a small enterprise would involve linking PCs, printers, fax machine, scanners and phone connections. A common language or protocol known as TCP/IP allows computers, software and other hardware devices to communicate with each other. (SMTP and POP – commonly used for transmitting and receiving emails – are part of the TCP/IP protocol). These protocols allow different systems to share data and communicate with each other regardless of the type of operating system or computer used.

For larger networks you will need networking software such as Microsoft NT or Novell NetWare. This software will set up one of your PCs to act as the main server that will hold the enterprise database and act as the central point sending (to a printer, for example) and receiving data/information.

### Key Benefits of Networking:

- Information is shared quickly and efficiently.
- Hardware devices (e.g., printers) are better utilised by sharing with other colleagues.
- Access to information such as stock and accounts can be obtained any time of day from any location.
- Suppliers and customers can be included in the network and efficiencies achieved as a result.
- Communication within the enterprise improves overall.

Better communication can also be facilitated through networking over the Internet and web. For example, **online communities** can open up interaction between enterprises and customers and boost other marketing efforts. Networking avenues include:

- **eNewsletters:** They allow enterprises to send regular, targeted stories and messages to people who have invited them to do so – a form of advertising.
- **Email discussion forums:** People can subscribe and then send emails that will be automatically forwarded to all other subscribers. People seeking information can post emails to the forum, and those who are able to give advice reply. These are good for accessing technical advice and for stimulating new ideas.
- **Bulletin boards:** These allow subscribers' emails to be posted in a central location. Unlike email discussion forums, subscribers do not receive any emails; they have to visit the bulletin board to see what people are saying. These can be used in online auctions and for accessing invitations to tender.

## Advice Sheet 7: Contracting Out Web Services

The decision whether to buy external web services or to develop your website in-house will depend partly upon budgetary constraints. As well as the necessary financial resources (see Advice Sheet 9) you should also make sure that you have the experience and know-how to do the job and a clear understanding of your business goals and strategy.

When involving an outside firm or individual, it will be necessary to inform them of your requirements. This will also provide a useful checklist for future reference when the project is up and running. Also, pay attention to the back-up service on offer, together with contractual terms and conditions of your potential website developer.

The core ingredient for any website is content. The presentation and content should be worked out between you and your developer – taking into account the needs of your customers. The developer should have a clear understanding of your requirements. You could use the following checklist for to provide the necessary information for a website developer:

- A description of the business sector and a short outline concerning any important issues specific to your industry.
- Clarity on how important the Internet will be to the enterprise's future.
- The objectives for the site. These should be concise and realistic.
- The target audience for the site.
- Who is going to develop the content?
- Will a writer/content editor be required to develop and structure content?
- What will the customer be able to do on the site? Will the website facilitate online transactions, reply forms, search queries, etc?
- Will your enterprise require mailing lists and bulletin boards?
- What will be the time frame for construction of the website?
- How will web content be updated?

You will also need to consider who is going to host the site – **website hosting**. A web host provides the necessary hardware and software to store your website and allows access via telephone or other connections. All websites require hosting that typically includes: a one-off fee to a hosting company plus an annual subscription and (if required) credit card authorisation costs. These payments may be dependent on the expected number of visitors (traffic) to the site. When choosing a host, reliability is as important as speed. Downtime – time when your website is not accessible due to maintenance or some system failure of the host – can be expensive for a small enterprise.

Some website design companies offer turnkey solutions – **all-in-one packages**. These are useful for enterprises with no ICT background. They eliminate the need to find specialists supplying different Internet services. There are increasingly low cost or in some cases free packaged software solutions on offer.

## Advice Sheet 8: Order Fulfilment And Logistics

Order or service delivery tends to be an area of weakness for many eCommerce ventures – depending, as it does, on the existing transport and supply infrastructure (the 'bricks' rather than the 'clicks'). Poor delivery damages customer loyalty and the enterprise reputation if not handled well. eCommerce therefore needs good logistics: getting the correct goods to the right place at the right time, in the right condition with the minimum of cost.

Some products or services are delivered more easily than others. Books, CDs, etc are often bought online because they are easy to ship through the post or via couriers.

When a customer buys online they tend to expect a better standard of service. To try to plan a good standard for your order fulfilment, ask yourself the following questions:

- How are you going to distribute the goods or services to your customer?
- What are the delivery options and their associated costs?
- How can you improve your response and delivery times?
- How dependent are you on the ability of others in your supply chain to respond to customer needs?
- Do you have a strategy for customer dissatisfaction or returns?
- Are you aware of your own limitations and those of your supply chain?

The use of the Internet will be more important if you are conducting B2B eCommerce. As trade between businesses increasingly moves online, so the processes and services that support this trade, such as logistics and document management, also move online. Involvement in B2B eCommerce can help small enterprises maximise both internal and external efficiencies (e.g., filling excess transport capacity). Electronic networks may also open up new ways of managing the supply chain (e.g., cutting down on paperwork and speeding up communications), allowing streamlining of business operations, reducing costs and improving efficiency.

### Some Tips for Improved Order Fulfilment:

- **Keep the customer informed** – probably via email. This is vitally important and may include: confirming the sale, the expected delivery date and follow-ups to check delivery has been completed. Effective communication will help establish a relationship of trust with your customers. With eCommerce, many of these functions can be automated using off-the-shelf software.
- **Establish personal contact** by telephone or in person if local. This is especially important when customers have problems or complaints. If you have a telephone number for customers to call, this should provide human interaction rather than recorded messages.

## Advice Sheet 9: Costs Of Web-Based eCommerce

The basic cost components (outlined in Advice Sheet 1) for web-based eCommerce include a computer (PC or similar), an internal/external modem plus an Internet connection via a landline: A suitable computer should include the necessary software packages that may be off-the-shelf or free software options.

Typically, an **Internet connection** can be achieved in a number of ways:

Most popular are dial-up Internet services (recommended for light users) using normal telephone lines through an ISP via a modem. The modem is usually internally placed in the computer. Your local landline provider will charge for every minute you are connected. There is also an annual charge for dial-up Internet services – perhaps US\$ 20-30 per month. In addition a set up fee of, say, US\$25-50 may be charged, especially for those clients without internal modems.

In some areas it is also possible to connect to broadband. Broadband offers high-speed, 24-hour Internet access and does not block your telephone lines during use. This comes at a high cost, though the cost is falling quite fast. Typical costs might be US\$300 annually for the lowest bandwidth (64kbps) up to US\$2500 and more per year for the high bandwidths (1 Mbps and above). In addition an installation fee of anywhere from US\$100-200 may be charged.

### **Other Options and Additional Costs:**

For enterprises that cannot afford their own computer and dial-up connection, cost saving options include a monthly/annual membership with a local Internet café/telecentre.

Additional costs for web development may include: website domain registration (registration of the name of your website), hosting and design, and search engine subscriptions. For full eCommerce, other costs may include shopping cart facilities and databases used to store and manipulate customer or sales information. Registration of a domain (which can often be done via overseas domain registration sites) might cost US\$20-30 per year. Hosting and maintaining the website will depend on the complexity of the website. A simple website requires at least 15-50 megabytes (MB) of storage capacity, and could cost between US\$60 and US\$200 per year.

Website design costs vary enormously, but a typical price could be US\$5-10 per page for a simple website with few graphics. The cost of a full website could range from US\$50 to US\$1000 for a relatively simple website. However, the price is not fixed – it depends on the designer and complexity of the site required. Thus to have a website up and running might require an initial cost of anywhere between US\$100 and US\$1000 with hosting, maintenance and other subsequent costs likewise between US\$100 and US\$1000 per year. Updating costs should be taken into account at the design and development stage. It is possible either to train a staff member to look after the website or to sign a contract with the web development company.

## Advice Sheet 10: Some Legal/Regulatory Issues

The Internet presents new legal/regulatory challenges. The global nature of electronic communications requires a global view of the legal implications. Legal issues and risks will become more severe as you climb the eCommerce ladder. A marketing type website will offer fewer challenges than a fully interactive eCommerce portal. Of critical importance is the location and nature of the target audience and the laws that are likely to apply in the user's country.

Some of the key issues are specified below. These will need investigating further in relation to specific local requirements and concerns.

**Terms and conditions of use:** These should be legally incorporated into the relationship between the website and the user. Electronic contracts have legal validity. Acceptance of a contract should be recorded in an acceptable manner giving the time and date of each customer's acceptance (payment, of course, may be made offline in the usual manner). It is possible for users to 'click' acceptance of terms and conditions of use when they enter a website or make a purchase.

**Intellectual property rights (IPRs):** The ease with which electronic content can be copied and reproduced raises issues about who owns material on a website. You may need to clarify this – particularly when using outside developers or all-in-one packages.

**Hyperlinking:** This encourages users to move to and from other websites. In all cases the consent of a third party website owner should be obtained, or it may be possible to examine the terms and conditions of the other site you wish to link to in order to find out what their policy on hyperlinking is.

**Data protection:** A database of customers, subscribers or members constitutes a significant enterprise asset that should be protected. In the absence of a framework of law covering these issues, it is up to the enterprise to ensure that its own data is protected.

**Consumer protection:** There is a growing body of law that offers protection to consumers in their day-to-day transactions and requires the disclosure of certain information to consumers. In practical terms, website operators should ensure that the fundamental ingredients of a contract (e.g., offer and acceptance) are appropriately dealt with on their websites. Certain prior information such as the identity of the supplier, price of the goods, delivery costs, delivery arrangements and cooling-off periods should also be provided on-screen prior to the submission of an online order.

**Overseas jurisdictions:** Small enterprises are not in a position to obtain legal advice on all the jurisdictions in which their website is accessible. Insofar as it is possible therefore, website operators should seek to ensure that the laws and jurisdiction of their country of establishment apply to the website. Therefore, you should check the rules of the country where your website is hosted.

## Advice Sheet 11: Web Security

Protecting information from unauthorised access is a critical Internet issue. It is also the case that the collection, storage and distribution of information via the Internet is increasingly governed by legal regulation.

The following points are an explanation of some basic security measures that can be installed in your computer or built into your website:

**Authentication:** A common security measure that requests the user to login with authorisation details before allowing access to restricted areas of a website. These details usually include a *username* and a *password*.

**Email security:** It is possible to protect your email messages from snoopers, and ensure that email conversations remain private. One method is 'public key encryption'. This technology transmits email messages in a code or cipher, and decodes them at the other end, making it possible only for the recipient to read them. An encryption facility should be available as part of your email software (e.g., on MS Outlook Express).

**Firewalls:** These are security systems that protect the information contained in your computer system from outside hackers. Firewalls are particularly useful for protecting a business network that sends and receives emails, transfers data over the Internet or connects with outside computers.

**Digital certificates:** A digital certificate is confirmation by a respected third party that the client company is legitimate and can guarantee security of a financial transaction. When a customer goes online and decides to buy something the web browser checks to see if a website has a digital certificate. If the required confirmation is detected, the vendor's site server is accepted and the visitor is able to shop with peace of mind.

**Digital signatures:** A combination of services that allows you to electronically sign a document and affords the recipient the opportunity to authenticate the signature.

Another security problem is **viruses**. Computer viruses are passed from computer to computer via Internet downloads, email attachments, shared disks, and shared files. Caution should be exercised when exchanging information between computers and downloading from the Internet. Well-known suppliers of anti-virus software include Symantec or McAfee.

More advanced security measures become necessary when transactions are conducted over the Internet such as through the use of credit cards: These include **public key infrastructure (PKI)** and **Secure Sockets Layer (SSL)**. These are methods of encryption whereby the recipient of a ciphered message unlocks the code by applying a mathematical key to it. In addition to standard authentication procedures, SSL uses encryption coding to lock in client information and is the industry standard where online credit card transactions occur.

## Advice Sheet 12: Open Source Software

Open source typically means that the software code (the underlying computing instructions) can be read, re-distributed and modified, independent of the people that created it. A key benefit of the open source system is its potential ability to reduce software costs as it is usually free to obtain and saves on licence costs. It also allows you to upgrade your business software at your own pace, rather than having to keep up-to-date with commercial software upgrades.

The boundaries between open source and proprietary software (such as Microsoft) are becoming muddled, as proprietary software adopts some open source standards and often freely publishes its own formats. The choice between open source and proprietary systems comes down to what is right for your business: you may want to look at what other businesses in your field use but there are a number of eCommerce-related open source products now available.

Potential benefits of open source include the following:

- You can get some open source software free by downloading it from the Internet.
- Even if you purchase tailored packages from third parties the initial price can be much cheaper than for proprietary software.
- There are no copyright costs – you are free to copy and distribute open source software to additional users.

Potential costs:

- For commercial use, open source software may need more skill when it comes to installation and management than proprietary products. Also if a part of an open source system lets you down, it can be hard to know where to turn for help.
- Open source may save on some initial costs but for many business costs related to eCommerce – gathering data, training staff, changing the way you work – it has no cost advantage.
- The installed base of most open source software is smaller than for dominant proprietary packages, so it can be harder (or more costly) to obtain support and training.

Other factors depend on the particular software. For example, choosing open source may mean you are not tied to a particular software producer, but it may tie you in to one particular local support firm. Open source might provide greater reliability, attention to security, and capacity for customisation to your eCommerce needs. Or it might not – it all depends on which particular open source and which particular proprietary software you are comparing.

Overall, open source is a useful option that you should consider when implementing eCommerce. But you should gather information and local opinions about it first.

## **E. Understanding More About eCommerce**

### **E1. Glossary/Jargonbuster**

#### **Browser**

A browser is software that allows your computer to access and display web pages. E.g., Microsoft Internet Explorer or Netscape Browser.

#### **Communications**

Every network requires some way to transport information from one point to the next – that connection may be physical such as 'twisted pair' or 'coaxial' cable, or wireless such as mobile, microwave, radio or satellite. The capacity of a connection to carry data is called its *bandwidth*.

#### **Domain names** (e.g., www.amazon.com)

A domain name is the address at which a website is located on the Internet. Each website has a unique domain name, which must be registered. An example is **.com**, the most globally recognised, and the most suitable if wishing to trade abroad.

#### **Digital**

Describes the way in which data is transmitted – as 1s/0s – by computers and modern phone lines and mobile phones. Contrasts with the old '*analogue*' method of transmission.

#### **Directory**

A collection of computer files stored in one place.

#### **EDI**

Electronic Data Interchange: computer-to-computer exchange of electronic documents for business.

#### **Email**

The transfer of messages between computers.

#### **File**

When work is done on a computer and then stored on a disk, the result is called a file.

#### **GSM**

Global System for Mobile communications: a digital phone network standard.

#### **Home Page**

The first page you see when you connect to a website on the Internet.

#### **HTML**

HyperText Markup Language: a computer language used to create web pages.

#### **Hyperlink**

A connection linking one web page to another web page via the Internet.



**ICT**

Information and Communication Technology: electronic means of handling digital data such as computers and the Internet.

**Internet**

World-wide communication system – a network of networks – that connects computers and allows them to exchange data.

**ISP**

Internet Service Provider: a company that provides you with access to the Internet.

**Modem**

Modulator/demodulator: a device that allows computer signals to be transmitted over traditional ('analogue') phone lines.

**Network**

Computers joined together so that they can communicate with each other. A local area network (LAN) covers a single building; a wide area network (WAN) covers a broader area, typically linking computers in different towns or countries.

**Protocol**

In a network, information is sent or passed down the connection from one device to another in 'packets' or blocks of information. This whole process of sending blocks of information in packets is controlled by network protocols (e.g., TCP/IP).

**Search Engines**

Search engines are tools that enable people to search the web's pages for specific information or websites. 'Google' is among the most popular.

**Software**

The instructions that make a computer work. A particular set of instructions that performs a function is called a program. If offered for general sale, this is *proprietary software*; if produced for a single, specific customer, this is *custom software*.

**Traffic**

The number of visitors a website receives is known as its traffic.

**Web Directories**

Directories perform a similar task to search engines in that they hunt for information on websites. Among the most well-known directories is Yahoo.

**World-Wide Web (WWW)**

A collection of linked documents (*pages*) connected via the Internet. The pages can hold words, pictures, sound and video.

**Websites**

Collections of pages created and maintained by a company, organisation, or individual. The sites are found via the Internet and so are accessible from any Internet-linked computer in the world.

## **E2. Further Information – Web-Based Sources**

A selection of online information about eCommerce for enterprise development from global sources is listed here:

<http://www.agriwatch.com/> Example of an (Indian) information portal and agriculture eMarketplace. The site offers the latest news and market updates, research reports and directory enquiries.

<http://www.catgen.org/> CatGen is free B2B and B2C eCommerce catalogue software offered by the NGO PEOPLink for MSEs. MSEs can choose to open different accounts. Services cost between US\$10 and US\$50. There is an email helpline as well as language options and examples of catalogues by MSEs in developing countries. See also:

<http://www.peoplink.org/>

<http://www.ecomlink.org/> Ecomlink is a knowledge-management gateway supporting enterprises in developing countries in the establishment of eCommerce and eBusiness.

<http://www.ecomm4dev.org/> eCommerce for Development website on which this handbook can be found.

<http://www.ecommerce-guide.com/> An eCommerce-focused source for independent, up-to-date information on eCommerce. There are daily news feeds, editorials, product descriptions, case studies, discussion forums on eCommerce, and lots more.

<http://www.g77tin.org/> The Trade Information Network portal is a South—South initiative by Chambers of Commerce in the G77 States. It provides business information on 133 countries and publishes offers for eCommerce training and services as well as serving as a database for B2B-contacts between SMEs in developing countries. You can download eCommerce training material from the site.

<http://www.it-ab.net/> Focuses on IT usage in Southern African business but reaches out to other African and Asian regions.

<http://www.line56.com/> Line 56 is a source for global information on eCommerce technology and strategy. You can find information on every part of eCommerce and eBusiness, including company profiles.

[http://www.nfib.com/page/pg\\_20040527449633.html](http://www.nfib.com/page/pg_20040527449633.html) US National Federation of Independent Business page of guides on eCommerce.

<http://www.smetoolkit.org/> The SME Toolkit from the International Finance Corporation includes a Technology section with pointers on eCommerce.

<http://r0.unctad.org/ecommerce/> UNCTAD reports and policy analysis on eCommerce.

<http://webmonkey.wired.com/webmonkey/e-business/> Web Monkey offers concrete procedure descriptions ("how-to"-listings) with practical hints for the establishment of your own eBusiness website.