



eCommerce for Small Enterprise Development: a Handbook for Enterprise Support Agencies in Developing Countries

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Institute for
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and Management
The University of Manchester

eCommerce for Small Enterprise Development

A Handbook for
*Enterprise Support
Agencies*
in Developing Countries

2006

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This handbook can be used together with '**eCommerce for Small Enterprise Development – A Handbook for Entrepreneurs in Developing Countries**', which has been designed specifically for use by small business owners and employees.

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 agencies that are supporting entrepreneurs running micro and small-scale enterprises (MSEs) in developing countries. It is designed for agencies that have little current involvement in eCommerce support and have little knowledge of what is involved, as well as for more experienced agencies that are already using information and communication technologies (ICTs) – computers, email, the Internet, mobile phones, etc – or supporting their use in small enterprise. If your agency wishes to raise its level of support and involvement in eCommerce, then this handbook will be of use to you.

The objectives of the handbook are as follows:

- To outline some basic information about eCommerce including the benefits and risks for agencies and clients (Section A).
- To explain the different ways in which small enterprises use eCommerce (Section B).
- To review current practice in eCommerce support for small enterprises, and outline an approach to enterprise needs analysis for eCommerce (Section C).
- To encourage a strategic approach to eCommerce support by your agency (Section D).
- To provide practical information about different aspects of eCommerce (Section E).
- To direct you towards further information and support for eCommerce (Section F).

The first thing you should do is read through **Section A** to learn more about eCommerce, then look at **Section B** to gauge how far your clients have climbed the 'eCommerce ladder'. Next look at **Section C** that focuses on client support. **Section C1** outlines different approaches to eCommerce support for small enterprises and presents agency case study examples. **Section C2** outlines a client-centred approach for improving your agency's analysis of eCommerce needs for small enterprises, concentrating on three areas – information needs, value chain analysis, and resources.

Then move on to **Section D**. **Sections D1-D4** provide guidelines for developing an agency strategy towards eCommerce support for small enterprises – focusing on business integration, sustainability, user involvement, a step-by-step approach to scaling up activities, and how best to choose eCommerce facilitators. Additionally, **Section D5** suggests areas where agencies can actively lobby government to further assist with the development of eCommerce for small enterprises.

Finally, look at **Section E** that provides information on various aspects of 'best practice' for small enterprises implementing eCommerce, and **Section F** 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.

Enterprise support agencies can play a key role in helping small enterprises attain the benefits that eCommerce has to offer. Agencies can also look beyond the technology, and understand how real commercial benefits can flow to individual enterprises and sectors from adopting the new business methods that are required to use eCommerce effectively.

This handbook will help your agency understand more about eCommerce and what eCommerce has to offer your entrepreneur clients. It will help you to decide whether to expand support for eCommerce in your agency, what type of eCommerce support to provide, and how to go about providing that support.

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. What Is Driving eCommerce For Small Enterprises?

The need for micro- and small enterprises to consider adopting eCommerce is driven by global, national and regional business trends. These relate to markets, costs, new technologies and political factors as follows:

- Adaptation to rapid market changes that are impacting on export-led and domestic markets.
- Cost competition and the need to compete more effectively in both local and export-led sectors.
- Globalisation of the production and supply of goods and services – and the need to integrate small enterprises more effectively into the supply chains of larger businesses.
- Increased customer expectations and consumer power – buyers expecting to be able to access web-based information about products and services, for example.
- Adaptation to new technologies – an overall need for technological upgrading.
- Greater role for information in business and the need to access, process and communicate it efficiently and effectively.
- Government deregulation and liberalisation – lowering costs of access.
- Bilateral and multilateral trade agreements – opening up markets to developing country producers.
- Adaptation to higher quality standards such as ISO9000 – ICTs are acting as an enabler in this area.
- The 'me too' attitude – the lure of the latest technological gizmo or gadget.

It is important that enterprises – and agencies like yours that support them – understand the specific driving forces for eCommerce in their particular sector. For example, eCommerce in some sectors – such as automotive and agricultural or horticultural products – is driven by emergence of B2B eMarketplaces that use not the open web as their medium but private networks or restricted-access auction sites. In order for enterprises to participate in these marketplaces it is necessary to gain market entry to these supply chains, and to understand how they operate.

Other sectors driven by global growth – such as financial and business services or travel and tourism – will be reacting more to global developments. In all cases, then, it is important to understand what is driving eCommerce on a sector-by-sector basis.

A3. What Are The Benefits Of eCommerce For Small Business?

eCommerce can provide substantial benefits to small enterprises via improved efficiencies and raised revenues. It enables a new way of working to emerge as businesses face the future and embrace the new economy. eCommerce enables small business entrepreneurs to gain access to better quality information, and thus empowers them to take informed decisions in their businesses.

Most importantly, eCommerce can give a competitive advantage. It can help strengthen 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 entrepreneurs to reach out to customers far beyond their 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:* entrepreneurs can become more aware of competition within their 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 entrepreneurs focus their activities – making it easier to build relationships with other enterprises and communicate their 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.

A4. What Are The Risks Of Going Into eCommerce?

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. It will be important for your agency to identify the pitfalls and help minimise the risks for clients.

eCommerce will bring extra costs as well as cost savings! Developing eCommerce for a business will almost certainly bring an increase in costs before such time that either savings due to greater efficiency or increased revenue become evident. Initial start-up costs (investment in a computer, network connection, etc) can be significant, and there are additional running costs too (see Advice Sheets 1 & 9). Even after start-up, eCommerce activity will need to run in parallel with existing business methods. For example, enterprises 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.

These costs are definite whereas the new revenue streams from eCommerce are not, particularly given the relatively lower numbers of people online and with credit cards in developing countries. Hence, many small businesses you deal with may be – perhaps rightly – sceptical about eCommerce, and should be encouraged to approach it in the step-by-step manner outlined in Section B1.

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) will remain far more important than online communication. In the long term, risks can be minimised through effective integration of online and offline activities – using eCommerce to complement existing business processes. In the short and medium term, there is a risk that a business owner could lose sight of his/her true business needs if eCommerce is oversold, as happened during the dot.com boom during the late 1990s.

An eCommerce venture may well fail completely! Any new business venture is likely to fail. As the dot.com boom and subsequent bust demonstrated, eCommerce ventures may be more likely to fail than conventional businesses. This emphasises the importance for small businesses of not throwing all their eggs into the eCommerce basket. Failure can be avoided in one of two ways. First, by deciding not to adopt eCommerce at all. Second, and probably more appropriately, by taking a step-by-step approach that minimises risk – such as suggested in this handbook.

However, there are also risks of ignoring eCommerce! Technology and innovation are often described as the catalyst for change. Ignoring new technology may have significant implications for the ways business is done in the future. For example, having no website, or a badly designed or marketed website, may put a business at a disadvantage as compared with competitors. Over the medium and long term, unsuitable or inadequate technology can mean that your client enterprises remain without the communications systems that they will need to compete effectively.

A5. What Are The Agency Benefits And Risks?

You should also consider the benefits and risks for your agency in supporting eCommerce activities and in developing your own capacities for eCommerce. The message for agencies is essentially the same as for the enterprises you support. Technology should be an enabler and not a driver for the realisation of benefits, and risks need to be assessed in terms of actual costs, opportunity costs, and the dangers of failure.

Benefits for your agency of being involved in eCommerce support may include:

- Being able to attract more clients and more donor funds due to the interest in eCommerce.
- Improving your clients' businesses if they can realise the benefits of eCommerce.
- Motivating yourself and your staff because of involvement with the new technology.
- Gaining direct experience of this growing ICT application.

Of course, there will be risks for your agency if eCommerce does not take off as anticipated, plus there are the costs involved since you will need to build capacity in the agency in various ways:

- Knowledge: improving your own and your staff's knowledge about eCommerce.
- Skills: gaining specific skills in using, advising and training on eCommerce.
- Attitudes: developing positive but realistic attitudes towards eCommerce.
- Finance: to afford the direct and ongoing costs of any investment you may need to make.

Agencies can support eCommerce in enterprises without themselves having to implement and use eCommerce. Having said that, however, one of the best ways to build up the human capacities noted above is for the agency itself to adopt eCommerce for its own operations. This has both pros and cons:

Benefits of eCommerce Implementation within Agencies:

- *Improving information/knowledge capacity* – eCommerce will support marketing, communication and branding of your agency's activities. It will help you access, process and disseminate increased amounts of information and build your knowledge base.
- *Improving technical capacity* – building your internal technical capacity will make you less reliant on external infrastructure access and technical support.
- *Improving human capacity* – eCommerce will improve business and organisational skills as well as technical skills. Additionally, the motivation and confidence of your staff can be enhanced.
- *Improving processes of activity* – both efficiency and effectiveness can be improved across a wide range of activities – particularly internal and external communications (including advocacy with donors, government, etc) and procurement.

Risks of eCommerce Implementation within Agencies:

- *Costs factors* – there is likely to be a high cost of initial investment in time, money and skills.
- *Information and communication factors* – are you able to handle increased amounts and complexity of information (information overload)? Are you able to use information effectively and ensure data reliability? Is there a danger you may neglect personal face-to-face communication channels – which may be the most relevant to your clients?
- *Sustainability factors* – initial investment may be forthcoming from donors, but is it sustainable in terms of recurrent costs, required staffing and skills, maintenance and upkeep? Additionally, what opportunity costs may arise due to time and efforts spent on eCommerce activities: is there a better way to spend these?

A6. Assessing eReadiness For Small Enterprise

Beyond understanding the pros and cons of eCommerce for both your agency and its entrepreneur clients, it can be helpful to analyse the background to eCommerce. One tool is the assessment of eReadiness – meaning finding out how ready local MSEs are to engage in eCommerce.

At a national level, there are eReadiness scales that can be accessed online which rank countries according to the degree of preparation to benefit from development in ICT generally (not just eCommerce). These rankings – such as that found at <http://www.bridges.org/ereadiness> – take into account a wide range of indicators: not just technology but also policy, legal and market factors.

While these national eReadiness indicators may be of some use, they will not give you a precise guide to the particular MSEs your agency works with. Their eReadiness for eCommerce will vary because of different factors. For example, both their geographical location and size will affect their access to technological and human resources. Similarly, their readiness will be impacted by the sector they operate in – tourism and exporting sectors tend to be much more ready than those focused on traditional domestic market goods and services.

Any detailed assessment of eReadiness for eCommerce must therefore be done on a case-by-case basis by each agency considering its specific client group. The approach taken must look beyond simply the technology and must, instead, take a business-focused approach. A typical analysis of the eReadiness of your client enterprises would therefore include:

- *Access* – to affordable access technologies, local access network infrastructure and responsive ISPs (Internet Service Providers); including a consideration of any intermediated access such as via a telecentre.
- *Awareness* – of eCommerce applications, technology and market opportunities among the entrepreneurs.
- *Knowledge* – of the online environment, the benefits of eCommerce and viable business models.
- *Skills* – access to new ICT skills and business skills.
- *Language* – availability of eCommerce applications and content in local languages.
- *Trust and confidence* – the levels of these among current and potential eCommerce links (either other businesses or end customers).
- *Business cost factors* – relating to transport, delivery, and other overheads.
- *Socio-cultural factors* – that influence the diffusion and use of eCommerce, including issues like trust.
- *Market analysis* – including value chains and market conditions, particularly looking at competing enterprises.

You can also refer to Section C1 in the companion Entrepreneurs Handbook, which provides a structured guide to eCommerce analysis of small enterprise.

Overall, for the vast majority of small enterprises and their customers in developing countries (particularly those in rural areas) multiple external factors are still impeding eCommerce adoption – i.e. levels of eReadiness are relatively low. These barriers include limited Internet access, poor telecommunications infrastructure, multiple gaps in the current legal and regulatory framework, multiple issues of trust and lack of payment gateways, uncertainty of benefits, and fear of transparency. These barriers are slowly coming down, increasing opportunities for all but the barriers are still spread very unevenly leading some MSEs to have strong eCommerce opportunities while others have none. An eReadiness analysis of your clients will help reveal more about the level of opportunity available.

A7. eCommerce And Developing Countries: SWOT Analysis

eCommerce in developing countries has a number of key qualities found in most applications of ICTs:

- The level of eCommerce adoption is much lower than in industrialised countries because of many constraints that exist, for example in relation to available infrastructure, skills and finance.
- The growth rate of eCommerce is higher in developing than in industrialised countries, partly because it is starting from such a small base and is nowhere near 'saturation' or 'plateau'.
- eCommerce is and will be very unevenly spread; concentrating in urban areas and in sectors with global links and high-income customers. There may also be gender, education, age and ethnic biases in the spread of eCommerce.
- The potential benefits in developing countries may be higher because MSEs here use eCommerce as a rapid lever to significantly improve their operations.
- The potential threat of eCommerce in developing countries may be higher because, as well as helping local firms, it can also help foreign firms enter the local market.

Table 1 summarises these and other points in a SWOT analysis of eCommerce in developing countries; an analysis that you can repeat for your particular region of responsibility to see what the overall prospects for eCommerce are.

Table 1. SWOT Analysis for eCommerce in Developing Countries

<p>Strengths: these indicate areas where drivers or enablers are strong in the country and/or where constraints are being overcome:</p> <ul style="list-style-type: none"> • Growing competition plus other diffusion-friendly strategies and government policies to develop ICT infrastructure. • High ICT infrastructure investment and growth rates, including growth of mobile telephony. • High growth of intermediated access to ICTs – e.g. via Internet cafés and telecentres plus sharing of ICTs – so there can be many users per Internet-linked PC. • Falling costs of many aspects of eCommerce including hardware and telecommunications charges. • Growing pool of ICT skills and growing IT sector provide a foundation for eCommerce growth. • Active promotion of eCommerce specifically and ICT usage generally by government agencies, NGOs and large private firms. • Reasonable Western language proficiency in some countries. 	<p>Weaknesses: these indicate areas where constraints are still strong in the country and/or where drivers and enablers are weak:</p> <ul style="list-style-type: none"> • Lack of ICT infrastructure, knowledge and skills compared to industrialised countries. • Very uneven distribution of infrastructure in rural-urban terms. • Uneven distribution of ICT access capacities between various social groups. • Large proportion of mobile phones are not Internet-capable. • Poor Western language skills and/or lack of support for ICT usage in local languages. • High cost of ICT usage relative to costs in industrialised countries. • Lack of large mass of local customers using or with potential to use eCommerce. • Lack of eCommerce awareness and skills among entrepreneurs. • Lack of eCommerce awareness and skills among support agencies. • Absence of an 'eCommerce culture', e.g. dislike of operational transparency, and preference for personal contact in commerce. • Poor financial and logistics infrastructure to support secure online payment and eCommerce fulfilment. • Poor ICT reliability and security combined with relatively slow-speed. • Limited export-orientation and export-capability among MSEs. • Lack of support to MSE innovation by local financial system. • Multiple gaps in current legal and regulatory frameworks.
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<p>Opportunities: local, regional or global opportunities that are or may be available to eCommerce-enabled MSEs:</p> <ul style="list-style-type: none"> • Primary product export sectors such as agriculture, horticulture, fisheries, forestry and mining products. • Manufactured exports. • IT-based services that are readily traded over the Internet such as software, data entry, call centre operations, etc. • Tourism and travel-related sectors. • "Traditional" sectors with export market appeal such as handicrafts, textiles, art, natural medicines, etc. • Fair traded goods, which are often sold via the Web in Western markets. • Growing opportunity to leverage low labour costs. • Strengthening local supply chains, and driving down input prices. • Main export markets are OECD nations with already high levels of eCommerce. • Main opportunities in early steps of eCommerce (see Section B1) including online ordering but offline payment. • Large and young population profile, who may more-readily take to eCommerce. • Domestic use of eCommerce using mobile networks and communications ('mCommerce'). • Diffusion of new generations of Internet-capable mobile phones. • Plenty of 'virgin' markets providing opportunities for eCommerce first movers. • Improved processes and products/services through closer interaction with customers. 	<p>Threats: risks that face MSEs in the country specifically due to growth of eCommerce:</p> <ul style="list-style-type: none"> • Competition and penetration of local or existing export markets by eCommerce-capable overseas firms. • Growth of larger firms able to invest more in eCommerce at the expense of MSEs. • Increased disparities between few early adopters of eCommerce and many 'laggards'. • Increased disparities between urban and rural areas. • Wasted investments in eCommerce by early adopters. • Growing automation leading to loss of low labour cost advantages.
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Opportunity Analysis of B2B – B2C – B2G:

Beyond the general points summarised in the SWOT table, you can also analyse which of the three main types of eCommerce – B2B, B2C or B2G – offers most promise for your client group.

Now and in the future, the bulk of eCommerce for MSEs in developing countries is likely to be business-to-business – **B2B** – transactions. For larger MSEs, this may mean collaborating across a whole industry supply chain – sharing inventory information, collaborating on product designs, etc. At higher levels of eCommerce, this will also mean connecting internal information systems with external systems (see Section B1). This will particularly happen where large local firms dominate supply chains and push their MSE suppliers and MSE customers to adopt eCommerce. In some sectors in developing countries, such as consumer durables, it is estimated that almost 90% of procurement and 80% of business sales are already web-enabled – MSEs in these sectors must push on with e-commerce in order to survive. In other sectors and for smaller MSEs, though, both the current pressures and opportunities for higher-level B2B eCommerce are far fewer. In these cases, opportunities lie only with the earlier eCommerce steps.

B2C (business-to-consumer) eCommerce offers greater opportunities for developing country MSEs at the lower level (e.g. use of simple messaging via mobile phone), but fewer opportunities at the higher level (e.g. selling goods and services online). Although transaction volumes for B2C are growing fast, the Internet is unlikely to become a key sales channel in any industry and the overall penetration is expected to remain below 1% of retail sales. Cultural factors and the current convenience of offline retailing are among the factors that will limit online sales.

Balanced against this message, though, are two aspects to B2C opportunity. First, the opportunities are far greater in some sectors than in others – telecom services, consumer electronics, travel, automotive products and financial services have all been identified as good prospects for B2C growth. Second, if evidence in other countries can be followed, early movers can accrue a large share of the benefits that are realised through eCommerce. Early movers in eCommerce adoption are better positioned to keep the major share of cost savings and to build market share. Latecomers, on the other hand, can suffer significant erosion of their competitive positions.

Finally, MSEs should not ignore the **B2G** (business-to-government) market. Traditional means of procurement in the public sector are slowly changing in developing countries, with pilots and then projects for 'eProcurement' starting to roll out. Some of these have an explicit intention to reduce barriers and enable more local MSEs to compete for government business. Entrepreneurs should therefore at least be alert to B2G's potential.

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.

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 types of assistance you may provide to small enterprises.



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.

Enterprise Case 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.

Enterprise Case 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.

Enterprise Case 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 clientèle 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.

Enterprise Case 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.

Enterprise Case 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.

Enterprise Case 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. eCommerce Support

For enterprises seeking to climb the steps to eCommerce it will be as important to understand their business strengths and weaknesses, as it will be to understand the opportunities presented by new technologies. Your agency will need to have a clear understanding of the business environment in order to assess the type of eCommerce support that will be most appropriate for your client enterprises.

This section provides a model of the different types of support that are being provided to small enterprises, and presents five case study examples of support. It then suggests how your agency might go about improving the analysis of enterprise support needs for eCommerce.

C1. Different Types of eCommerce-Related Support

This model describes five different types of eCommerce-related support that agencies can provide to enterprises:

1. No Support

There may be a case for offering no eCommerce support to clients or members. It may be for any of the following reasons: a) The enterprise may not fulfil your particular criteria for offering support. b) The enterprise may already be operating eCommerce successfully. c) You may want to refer the enterprise to a different agency or facilitator. d) The enterprise may not yet be ready for eCommerce.

2. Awareness Raising

Most small enterprises in developing countries are at the stage of eCommerce development where awareness raising is likely to be of greatest benefit. Awareness raising should seek to develop a business-led approach that examines the potential costs and benefits of eCommerce in relation to overall business goals and strategies, and in the full knowledge of the commercial realities of the market.

Awareness raising for eCommerce should not, in the first instance, seek to stimulate the use of ICTs but should examine the actual information and communication needs of the enterprise. Awareness can be created through the use of case studies and with reference to current best practice for enterprise development more generally.

Awareness raising methods may include handbooks such as this one, workshops, award schemes or possibly web-based material – although the ability of your target audience to access web-based material must be gauged.

3. Training

It is unlikely that your agency will provide dedicated training courses for eCommerce. It is preferable that training for eCommerce is integrated with existing training courses and programmes in order that eCommerce strategies can be seen in the context of the wider solutions to business problems – for example, integrating eCommerce aspects into a course on marketing. For specific eCommerce skills (such as use of email or free software, for example) it would be preferable to work through private sector training agencies. Awareness raising strategies should also be fully

integrated into 'training of trainers' for small enterprise development programmes. This handbook could provide a useful conduit for that purpose.

4. Business Support Package

Agencies that already run business support packages – dealing with training, finance and advice – will need to integrate eCommerce support into these wider programmes. In fact, this integrated approach is a preferable option. Customised support for eCommerce, however, may be preferable when focused on individual enterprises or sectors where specific eCommerce needs have been carefully identified.

5. Trading Portal

The most direct form of eCommerce intervention for an agency would be through the provision of a trading portal or some other form of web-based marketing or information assistance for client enterprises. Some agencies, of course, already act as market facilitators providing marketing assistance and may purchase and resell goods and services on behalf of client enterprises. The use of a trading portal can be seen as an extension of this, and there may be benefits for agencies in developing their own eCommerce capacities. However, web-based approaches need to be considered on a strict cost/benefit basis in comparison with other more traditional avenues of marketing and trading. In addition, such investments should take full account of the requirements for a needs-based approach set out in Section C2.

Rather than setting up their own web-based marketing, agencies should first consider the following approaches.

- Facilitating access to existing portals.
- Working through and coordinating with other web-based facilitators.
- Helping clients work through trusted third parties and other private sector trade facilitators (Table 4 provides a list of possible eCommerce facilitators).

The following case studies provide examples of current practice in developing countries for eCommerce support to small enterprise, including 'for profit' and 'not for profit' agencies. Each of the case studies provides examples of one or more of the eCommerce support categories outlined above.

Agency Case A: Makerere University Small Business Centre

Overview: The Small Business Centre (SBC) was established in 1998. It is a commercial government agency that is largely self-funding and has three permanent staff and 15 part-time facilitators. Its aim is to promote an enterprise culture and support the creation and development of small businesses, targeting both students and MSE entrepreneurs for training.

ICT Resources: SBC has access to a lab of 30 computers based in the University's Business School, though most communication with clients is undertaken via phone or post.

Support for eCommerce: SBC offers a wide range of enterprise-related training courses such as business start-up, retail management, costing and pricing, and customer care. Training is carried out in both local language and English and, two weeks after course end SBC staff carry out a follow-contact with the client by phone or visit. Within some of the training courses, participants are able to pick up some knowledge of ICTs, though there are no specific eCommerce-related training courses.

Provision of eCommerce training would face some basic challenges including lack of awareness of eCommerce and lack of access to ICTs among participants, plus a more general lack of value attributed to training by entrepreneurs. This prevents high fees being charged for training, leading to financial constraints on SBC (thus restricting opportunities for development of eCommerce facilities and training).

Reflections On Best Practice: eCommerce needs to be approached with some care given the very limited base and demand locally – understanding eCommerce-related needs requires careful research on pros and cons including the use of cost-benefit analysis. At the current time, the need is for awareness raising and training on eCommerce for agency staff before those staff can themselves think of trickling down skills to enterprises. On the question of use of eCommerce by the agency itself, one can readily create a website detailing the support that is on offer but the impact would be debatable since most of the target clientele cannot access the web. Use of mobile phones and, perhaps, email would be a more viable first step in strengthening relations between the agency and its clients.

Agency Case B: Business Uganda Development Scheme for Small-Scale Enterprise

Overview: BUDS-SSE was founded in 2000 and now has six full-time workers, drawing co-funding from the European Union. Its main focus is the acquisition of technical skills by enterprise personnel through training in order to increase the capacity and performance of small enterprise. It provides enterprises with a grant equivalent to 50% of the cost of its business diagnostics and training provision services.

ICT Resources: These include a local area network of PCs with an Internet link plus services such as email. They are in the process of developing a website that will include a facility for online preliminary applications from entrepreneurs. BUDS-SSE itself makes use of the Internet for business information, donor correspondence and dissemination of information.

Support for eCommerce: The agency includes an assessment of ICT/eCommerce needs within its general initial assessment of enterprises based on the proposals that entrepreneurs present. This is usually followed by a diagnostic evaluation of the enterprise to determine what kind of support can be provided. Any ICT support provided would likely have some eCommerce angle – for example, BUDS-SSE has provided assistance on setting up a website, ICT outsourcing, and Internet marketing. In the main, BUDS-SSE focuses just on awareness raising and skills acquisition through training.

Support for eCommerce faces some quite severe challenges. Local entrepreneurs have limited access to ICTs and those with a phone and fax are reluctant to advance beyond this stage. Entrepreneurs have limited ability to analyse their own business situation, thus finding it hard to see how eCommerce would fit in. More generally, there is a lack of appreciation of business development services and a lack of finances, which make it difficult for agencies themselves to expand or innovate into areas like eCommerce.

Reflections on Best Practice: BUDS-SSE backs the idea that, where needs fall beyond their mandate, they would call on other agencies to provide eCommerce assistance. This good theoretical idea, though, faces the practical challenge that there are few local agencies that can provide eCommerce-related assistance. They see awareness raising and skill building as the main eCommerce priorities at present for most small enterprises. They do see eCommerce playing a role for small enterprise but caution that this must be based on a sound diagnosis of the enterprise – its needs and its capacities. There is no point ploughing ahead with purchase of ICTs if the enterprise lacks key foundations necessary for fulfilment, such as an ability to deliver the right quality and quantity of outputs that eCommerce-developed customers may demand.

Agency Case C: Association of Women Entrepreneurs of Karnataka

Overview: AWAKE is a non-commercial organisation with five full-time employees. Its main clientele are women entrepreneurs of whom 80% are below the national poverty line. It focuses on supporting new and established enterprises with programmes to help enhance the quality of enterprise operations via management counselling/advice and training courses.

ICT Resources: AWAKE has seven PCs that are linked together and to the Internet. They have their own website that they guide email-based enquirers to. The site also has membership forms that those with Internet access can print, fill and post back. They make use of email for contacting clients, including those in remote areas with access to telecentres, thus saving time and money on communication.

Support for eCommerce: AWAKE has acted as an ICT-enabled information intermediary supporting commerce. In one example, AWAKE staff wanted to support clients in one area growing vanilla beans. They undertook a web search and gathered information on ways to add value to basic farming by processing the beans into vanilla essence. This information was distributed to clients who now sell vanilla essence rather than simply lower-priced beans. AWAKE has made a basic start on web-enabled eCommerce by providing on its website a list of all its client entrepreneurs and their activities. AWAKE has also conducted training for eCommerce, leading some of the entrepreneurs to create their own website that has allowed direct customer links.

Reflections on Best Practice: AWAKE's eCommerce-related support in the future will definitely be enhanced because entrepreneurs are becoming increasingly interested in ICT-enabled business. Within AWAKE's own interactions with its clients, though, there is seen to be a continuing need for face-to-face interaction. This must have not just a rational side, dealing with advice and counselling on business, but also an emotional side as well. Only through making this emotional connection can AWAKE properly deliver the business messages – including those related to eCommerce – that it wants to get across.

Agency Case D: Explocity

Overview: Explocity is a private company with 100 employees, providing information-related services (branding, advertising, marketing, etc) to the small business sector on a fully fee-paid basis.

ICT Resources: Explocity has its own PCs and hosts a main website, based around an open source platform provided by a local IT consultancy. As noted below it also provides links to the ICT resources and services of other providers.

Support for eCommerce: Explocity's central service is the provision of a combined soft-and-hard copy portal of information about its client enterprises, for use as a marketing tool. Clients provide information on their businesses to Explocity which packages that information in two forms. First, as a section of the main website which Explocity designs, builds and hosts. It provides various value-added facilities on this site: mutual links to major commercial portals to bring in more web traffic; search and other interactive facilities to encourage potential buyers to use the site; a mobile phone service link that can provide news updates, contacts and local information from the main website to mobile phone users; and chat/instant messaging services for use by Explocity's own entrepreneur clients and by buyers who might wish to contact them to purchase goods and services. Second, all information from Explocity's clients is printed as a magazine – this comes out every 15 days with the same information being updated at the same time onto the website. The magazine is then circulated through appropriate channels to likely buyers – both businesses and individuals.

Reflections on Best Practice: The main lesson from Explocity's experiences is the need to avoid getting carried away by the hype surrounding eCommerce. Explocity had assumed in the late 1990s that the website would become the main focus for marketing and income, but this has not proved to be the case. The printed edition of their output still generates by far the major source of their revenue, and the same is true for the small enterprises that use their services. Although the web-based service is not seen as loss-making, it has certainly not generated the initially-anticipated revenues. Lower-than-anticipated take-up of web-based eCommerce is seen as due to lack of incentives for buyers to change their habits, limits on ICT access, and lack of credit card usage among the local population.

As an example, one of their clients runs a flower delivery service. To date less than 10% of its orders have come via the online route. Existing customers and traditional marketing remain its mainstays. The value of the website is thus more to act as an 'electronic brochure' rather than as a source of direct purchases. This seems to be the model for most enterprises except where the enterprise can deliver its outputs in digital format, which most MSEs using the Explocity service cannot. Hence, any approach to eCommerce must be 'twin-track': retaining a strong focus on traditional means of commerce/marketing and ensuring these are integrated with and strengthened by basic steps to eCommerce such as web publishing and interacting.

The rapid growth in mobile telephony means that this looks a promising avenue. However, past experiences suggest caution in approaching 'mCommerce', particularly until latest-generation, Internet-enabled handsets become more widely used.

Agency Case E: Matex

Overview: Matex is a private firm that employs around 45 people and provides business support and brokering services to fee-paying clients, 88% of which are small enterprises.

ICT Resources: Matex runs its own web-based trading exchange, MatexNet, which it began in 1999. This is hosted on Matex's main server which links to PCs in various branch offices.

Support for eCommerce: Matex offers an online exchange that connects large-scale industries and micro/small enterprises together. Large industries sell surplus and scrap items to the MSEs. The MSEs can sell their finished products to the large industries. The idea is that middlemen are eliminated because the online exchange allows direct one-to-one trading. MatexNet also has an online auction service for those items that are best sold to multiple buyers.

Matex's CEO explains: *"Companies have a surplus of inventory build-ups of machinery and goods which are in excellent condition but unusable due to design changes, plant upgradation or excess production – these are inevitable in any manufacturing system. These companies are usually the large ones, and the surplus blocks space and money. And as other people in small firms require this inventory, but don't know where to get them, this is where MatexNet steps in, providing a matchmaking service".*

Firms register with MatexNet online and can then list or search for items for trade – Matex had a client base of around 2,000 firms with about 200,000 traded items listed. Buyers or sellers can find the information themselves via the website, plus Matex itself scouts for appropriate traders using email, fax and phone calls. Initial information for a trade is obtained from the website and the buyer—seller pair make initial contact via email. The remainder of the transaction is then undertaken offline with Matex charging both buyer and seller 2.5% of the traded value. Matex also has consultants who can suggest ways to add value to particular purchases.

Reflections on Best Practice: Benefits of online trading for MSEs are direct cost saving, provision of both a sell and buy facility, reduced overhead and labour costs, transparency, accessibility and speed. The main barriers are building trust and verification of MSEs. Skills are also important – there is a need for both suppliers and vendors to receive sufficient training in the use of web-based trading systems, online auctions and the workings of eCommerce.

Matex also notes limits to its online, disintermediated model of eCommerce. Middlemen do still get involved in some trades in order to try to negotiate better rates on behalf of buyers. Likewise, although what MatexNet provides is essentially a virtual domain, a large part of the interaction is done personally. It is thus necessary to mix the personal with the virtual for the success of eCommerce.

C2. Analysing Enterprise Support Needs

Section C1 has suggested five forms of intervention that may be adopted by agencies to assist enterprises with eCommerce. These include the option to decide that eCommerce may not be relevant for many enterprises. Before considering intervention, agencies need to answer two fundamental questions:

- First, how do you go about analysing the specific eCommerce-related needs of enterprises (i.e. what questions do you ask your clients)?
- Second, based on the kind of answers you get, what type of support interventions do you then provide?

Answers to these questions are listed below but you should also refer to Section C1 of the companion Entrepreneur Handbook, which provides a structured guide to eCommerce analysis of small enterprise.

1. Identifying Information and Communication Needs

The best approach to identifying the information and communication needs of your clients is to start from the customer (or market) and work backwards. This requires a market-focus – on factors external to the enterprise.

Customers and Markets: you should ask your clients the following types of questions:

- How do you currently conduct business with your customers?
- In which areas do you interact directly with customers (e.g., sales, billing, delivery, after-sales, etc)?
- What type of information do you collect about your customers – how effectively is that information used at present?
- How do you receive information about follow-up orders, new customers or new business opportunities?

Suppliers and Collaborators: you should ask your clients the following types of questions:

- What particular constraints do you face in accessing enterprise inputs (finance, materials, skills)?
- How do you access/receive information about these inputs?
- How do you communicate with your suppliers?
- How do you cooperate with other enterprises/agencies to access or receive information about inputs?

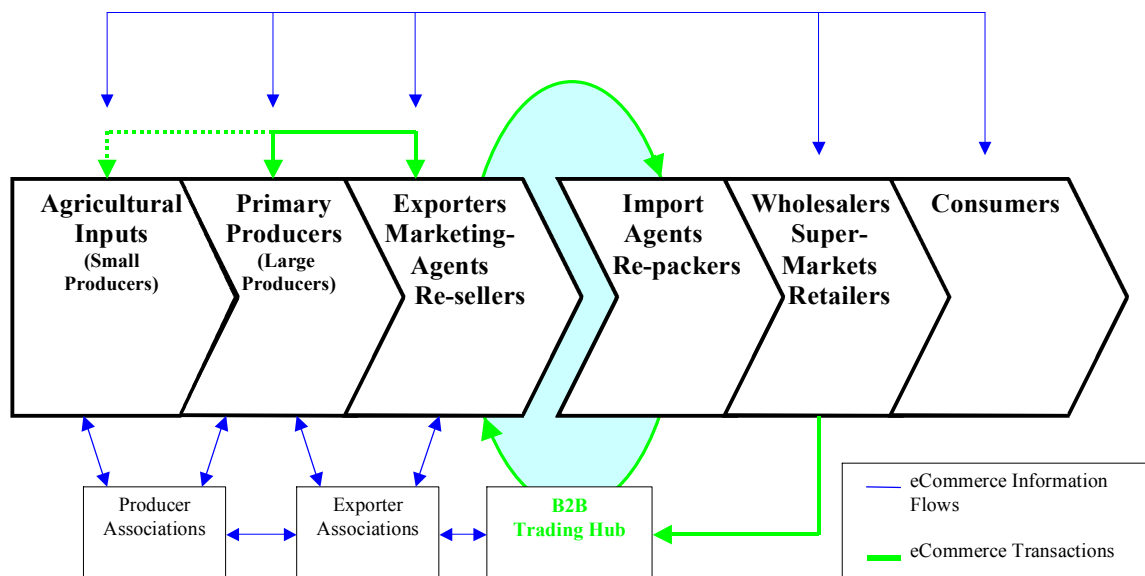
You should encourage the entrepreneur to identify their own requirements according to the quality of information they are currently receiving, and identify the particular strengths and weaknesses associated with their current information sources and communication channels. An assessment of information needs should involve listening to the entrepreneur and encouraging them to participate, whilst also bringing an independent understanding of challenges facing the enterprise.

2. Understanding the Value/Supply Chain

A second, complementary approach – again concentrating on external factors – is to examine the needs of the enterprise in relation to the value/supply chain within which it operates.

The value chain describes the main activities necessary to move from the initial production of goods and/or services by an enterprise to their final purchase and consumption by customers or consumers. These activities are typically carried out along a supply (value) chain that involves adding complementary inputs concerning, for example: quality and standards compliance, transport and logistics, packaging and re-packaging, marketing and re-selling. A typical value/supply chain for agricultural/horticultural products is outlined in Figure 1.

Figure 1. Typical Supply Chain for Agricultural/Horticultural Products



The Value Chain: you would ask your clients the following types of questions:

- Which activity(s) does the enterprise carry out itself and which are carried out by others (suppliers, partners, agents, etc)?
- What are the primary existing marketing channels – either controlled by the enterprise or by others (e.g., agents, re-sellers, distributors,, etc)?
- How does your location benefit (or restrict) integration into your value chain?
- Describe the relationships the enterprise has with external partners (e.g., training, support, exclusivity agreements, etc)?

By understanding the value chain it becomes possible to identify areas where more value can be added (or leveraged) for the enterprise through the use of eCommerce. By identifying his/her own position in the value chain, the entrepreneur can become more aware of the business opportunities that may arise due to eCommerce, or the market factors that may constrain eCommerce.

3. Enterprise Resources for eCommerce

A third complementary approach is to focus on internal capabilities and resources of the enterprise.

The level of available resources (financial, technical, human and time) will determine whether or not an enterprise can successfully adopt eCommerce. Here it is important to assess both the business and ICT-related resources. The ability of an enterprise to apply ICTs to business problems is more important than whether or not they have access to ICT facilities. It is important, therefore, to ask questions about how the enterprise is using eCommerce, or how they intend to use it, for the benefit of their business, and what demands this will place on available resources.

Enterprise Resources: you would ask your clients the following types of questions:

- How are you currently using ICTs to benefit your business?
- How do you think your business can be improved through use of eCommerce technologies (a web-presence for example)?
- What extra costs do you think your business will incur if you opt for eCommerce?
- How will eCommerce help you develop your skills? Which skills do you think will be important?

Assessment of enterprise resources should adopt a 'costs and benefits' approach. The entrepreneur should be encouraged to identify the costs and benefits associated with expending resources on eCommerce. This should emphasise the importance of considering direct costs, opportunity costs and risks of failure (see Section A4). It will also help identify areas of need that can be most cost-effectively addressed. The approach of most clients to eCommerce is likely to be a compromise between the plans the enterprise wishes to execute and the available resources for investment.

Thus, your agency's approach to the raising of awareness and the sensitisation of clients should be enterprise-centred and entrepreneur-led.

D. Agency Strategy on eCommerce

Fundamentally, eCommerce strategy for an agency supporting small enterprise should address the following key issues:

- How eCommerce will benefit small enterprises.
- How to raise greater awareness among small enterprises of what eCommerce has to offer.
- How to respond to the technical and business questions posed by small enterprises.
- How to equip small enterprises with eCommerce and business skills in relation to use of the Internet, sales, marketing, supply management etc.

This handbook section will help you to understand more about these issues in relation to your enterprise clients.

D1. Agency Strategy For eCommerce And Small Enterprise

Most small enterprises in your country will not be able to jump straight into eCommerce due to a wide range of financial, human and infrastructure constraints. For most enterprises, eCommerce should be viewed as a gradual step-by-step process (see Section B1) of technological upgrading and business development that will require attendant changes in skills, management practices and attitudes.

For this reason, eCommerce should be integrated into overall business goals and strategies. The target market of the enterprise should, therefore, shape your approach to assisting with eCommerce – whether to advise enterprises to adopt eCommerce, and if so, to what extent and in what way. Table 2 can assist you to identify business goals together with your clients, and help you to consider potential strategies and tools to achieve those goals.

eCommerce can be used to upgrade existing business tools or to introduce new methods – leading to improved business communications, better customer service, creative marketing initiatives, improved trading relationships or reduced costs. **An integrated approach** to eCommerce should emphasise the following:

- *The target market* – should shape business planning and whether or not an enterprise should adopt eCommerce.
- *Business planning* – eCommerce plans should not be separated from wider business plans.
- *Cost benefit analysis* – make sure the costs of eCommerce can be justified by the benefits.
- *New technologies* – their role should be assessed only after clear business objectives are established.
- *Online/offline integration* – online and offline activities need to complement each other to increase revenue and bring cost savings.

Agency strategy should also emphasise the *involvement and feedback* from the customers, suppliers and staff of your clients – collectively known as **eCommerce users**. They will often be in the best position to indicate areas where eCommerce can bring improvements and benefits for your clients, and they may be able to indicate the best way to implement any new ideas.

Table 2. Business Goals and Strategies

Possible Business Goals	Business Strategies You Could Adopt	Business Tools You Could Use
<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.

D2. Understanding eCommerce Users

eCommerce users are those people, enterprises or organisations that are likely to interact with your clients via eCommerce. eCommerce solutions for your clients should be driven by users – by the external business relationships and networks that are important to the enterprise – primarily customers and those involved in the enterprise supply chain. These networks and relationships can be usefully classified as follows:

Target Audience: an enterprise will be competing with many other enterprises to reach its target audience (customers), offering similar products and services via the web. This highlights the importance of product/service differentiation and careful targeting. eCommerce plans can be tailored to small, easily identifiable groups. eCommerce plans should be designed around user needs after consultation with potential users (primarily existing or potential customers or key actors in the supply chain) to make sure the correct needs are identified.

Existing Customers: eCommerce allows an enterprise to communicate and interact with customers in a far more productive way than ever before. eCommerce plans can focus on nurturing individual relationships with existing customers. For example, data can be gathered on customer preferences – the ways they prefer to purchase and the specification of products and services. This data can then be collated and analysed to show buying trends.

Potential Customers: eCommerce via the Internet can make your clients' businesses known to vast numbers of potential customers. For example, careful marketing of a website (see Advice Sheet 5) can increase 'traffic' or 'hits' from the right kind of potential customers. Maintaining this marketing activity will ensure that the right people know how to find your clients' enterprises.

Suppliers: Sourcing enterprise inputs (or information about inputs) online can be cheaper than offline. It is far easier to compare costs and availability. An enterprise can get full details of products and services at the touch of a computer key. Once a trading relationship with a supplier has been forged online, order status can be monitored and stock availability and delivery times can be checked, often without time-consuming phone calls.

Partners and Collaborators: Your clients' collaborators and business partners, such as distributors or agents, are a key part of their supply chain. eCommerce will allow enterprises to establish regular and speedy contact with these partners and with wider business networks (see Advice Sheet 6).

Enterprise Employees: Computers can liberate staff rather than constrain them. eCommerce can help automate some routine administrative and communication tasks, leaving employees to carry out more satisfying and cost-effective work such as attending directly to customer service.

D3. Determining eCommerce Entry Points

This involves deciding what form of eCommerce is most suitable for client enterprises according to the steps model (see Section B1). As an outside agency, you should not make this decision yourself but you should encourage clients to do so, taking full account of the requirements of the user groups discussed above. The way in which users are driving eCommerce will determine the ways in which eCommerce can assist the client. Use of a mobile phone (Step 1) is the obvious entry point to eCommerce for the majority of MSEs. The key entry points for Internet-based eCommerce in developing countries are:

- **Step 2: Communicating electronically.** Electronic forms of communication such as mobile communications and email offer a low-cost, convenient way to connect more effectively with users (see Advice Sheet 2).
- **Step 3: Web publishing.** An online brochure, for example, offers ease of updating information, and inclusion of graphics makes this a cost-effective way to provide information to users (see Advice Sheet 4).
- **Step 4: Web interacting.** Creates involvement of users by encouraging two-way communication, asking and answering questions, learning about user needs and tailoring communications (see Advice Sheets 4&5).

Since the needs of users should determine the eCommerce entry point for the enterprise, then consideration should be given to how both online (eCommerce) and offline (non-eCommerce) solutions can be effectively combined to suit user – principally customer – needs. However, resource constraints for most enterprises will almost certainly mean that eCommerce solutions will need to be prioritised. When setting priorities it will be important to consider the time frame within which the enterprise expects to achieve real benefits from eCommerce, for example:

- Some eCommerce solutions (such as email) are likely to bring immediate and significant benefits to a business.
- Web transacting may bring some commercial advantage but with high immediate costs and only marginal overall business benefits.
- Entry into eCommerce may produce benefits but not always in relation to key business goals/strategies.

It is unlikely in most developing countries that your clients will – or should – move immediately to Web transacting or Web integration and it would be important that enterprises move successfully up the preceding steps beforehand. Table 3 is a guide to which of the eCommerce 'steps' would be the most appropriate entry point for an enterprise. It considers the requirements of users that are driving eCommerce, the benefits that could be achieved for a business, and the potential costs involved.

Table 3. Steps to eCommerce – What Kind of eCommerce?

Steps to eCommerce	Market Drivers	Benefits	Costs	Overall Impact
<i>Step 6: Web Integration</i>	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.
<i>Step 5: Web Transacting</i>	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.
<i>Step 4: Web Interacting</i>	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.
<i>Step 3: Web Publishing</i>	Requirements of customers and the marketplace.	Better marketing. Better branding. Easily updated, well presented materials.	Moderate investment costs.	Moderate benefits and relatively moderate costs.
<i>Step 2: Email Messaging</i>	Requirements of customers, suppliers, collaborators, support agencies and employees.	Considerably improved business communications.	Moderate investment costs.	High benefits and moderate costs.
<i>Step1: Simple Messaging</i>	Requirements of customers suppliers, collaborators support agencies and employees.	Considerably improved business communications.	Low investment costs.	Potentially high benefits and relatively low costs.

D4. Other Issues For Agencies

Sustainability

Financial sustainability will be a key success factor for any eCommerce project – the ability to recover investment costs and the ability fund replacement, update and maintenance of ICT equipment on a recurrent basis. Other sustainability factors will also be important, and will depend on the skills and good business sense of your clients as well as their financial resources. These will include:

- **Technical factors** – to make the correct choice of technology, and to be able to gain access to the local network infrastructure.
- **Content factors** – to make effective use of information generated through eCommerce and to build knowledge of the eCommerce market. Continuous updating of business information will be required (such as through the regular updating of a website).
- **Social factors** – to use eCommerce effectively to build and maintain networks of contacts and build 'social capital' for the business.
- **Business factors** – to base eCommerce plans around a sustainable business model, and produce tangible commercial benefits – either through increased revenues and/or reduced costs.
- **Human factors** – to acquire the skills and training for effective implementation of ICTs, and to keep ICTs running, but also to plan future changes to the resources – to be able to adapt skills to new opportunities and changing market conditions.

Sustainability of eCommerce will be an issue for your clients. It will also, of course, be an issue for your agency – you will need to find ways to ensure that your own eCommerce support programme is also sustainable in financial, technical, social and other ways.

Scaling Up and Collaborating with Others

For business support agencies, scaling up eCommerce may involve two concerns.

- Firstly, helping individual enterprises to climb the eCommerce ladder, employing the type of business-led approach outlined in Sections D1-D3 of this handbook.
- Secondly, by helping to replicate successful use of eCommerce through the transfer of skills and know-how between enterprises.

Successful scaling up of eCommerce activities should be based on the sustainability factors outlined above, and carried out with reference to the eCommerce best practice guidelines presented in Section E.

Enterprises should be encouraged to take small steps initially into eCommerce by starting at the bottom of the ladder and working their way up. Piloting and market testing of business solutions involving eCommerce will be important in this respect.

As indicated in Section D2, this is best achieved by involving users, and obtaining feedback, at an early stage.

Replicating success and transferring lessons between enterprises, or between sectors, presents greater challenges to agencies. Different enterprises and sectors can have very different characteristics and ways of doing business. Hence, it is not always possible to transfer eCommerce solutions directly from one to the other. Generic best practices (i.e., to be business-led, to involve users, to consider both costs and benefits) can be universally applied. However, solutions involving specific applications of eCommerce should be developed by the enterprises themselves in collaboration with facilitators that are likely to be most effective. Table 4 outlines the strengths and weaknesses of potential eCommerce facilitators and provides some local examples.

For enterprise development agencies, the scaling up of eCommerce interventions need not involve large (and expensive) expansion of their own eCommerce activities. It is more likely to involve building effective partnerships with other more established eCommerce facilitators of the type listed in Table 4. Agencies should also seek to build a strong sense of ownership and commitment amongst client enterprises over any scaling up activities.

It is important, therefore, that your agency has clear vision (a strategic plan, even) towards scaling up eCommerce, and that you are able to decentralise or disburse the implementation processes by making your approach client-led. It is likely that this will be achieved most effectively through building partnerships either with the private sector or other – possibly more experienced – eCommerce facilitators.

Enterprise support agencies should, however, have a strong role to play at the piloting and market testing stages of eCommerce projects, and with regard to subsequent monitoring and evaluation. Enterprise support agencies should also play a key role in the dissemination of information and knowledge concerning best practice and lessons learned.

Table 4. eCommerce Facilitators – Strengths and Weaknesses

Facilitator	Role	Strengths	Weaknesses
<i>Sector-Based Agents/Brokers</i> (Commission-based)	Offer web-based marketing activities. Able to accept and place orders; skilled at information brokering. Logistics and supply chain management.	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>	Only purchase and resell. Able to accept and place orders. Information brokering.	Quick route to market. More flexibility for producers in the market.	Less security in the market. Price sensitive. Only purchase and resell.
<i>eCommerce-Based Trading Hubs or Portals</i>	Solely web-based marketing activities. Accept and place orders. Internet transactions and electronic banking.	Wider market access.	Create 'dis-intermediation'. Lack of personal market relationships and contacts.
<i>Industry Organisations</i>	Subscription-based. Can provide market coordination and information brokering services.	Able to advocate on behalf of producers.	Limited access to market. Lack of market proximity.
<i>Fair Trade Organisations</i>	Provide market outlets based on fair trade principles. Most offer web-based services and marketing.	Assistance with quality control and product/service development. Possible special assistance to women producers. Better returns.	May lose market share to commercial importers/agents. Narrow market that can be seasonal (high demand at Xmas, for example).
<i>NGOs/Business Support Organisations</i>	Providers of advice, training and some marketing assistance.	Possible sources of finance or subsidy. Local access to resources.	May have little market access, knowledge or proximity.
<i>ISPs or IT Consultants</i>	Offer access to networks, web development services and possibly business advice.	Able to offer local technical support.	May have technical expertise, but not knowledge of the market within which an enterprise is operating.

D5. Strategies For eCommerce Promotion At National Level

Table 5 provides examples of actions that governments can take to support eCommerce. Agencies may see some 'macro-level' role for themselves in lobbying for these types of government actions.

Table 5. What Should Agencies Be Lobbying Government For?

Strategies	Some Suggested Government Actions
<i>Raising Awareness</i>	<ul style="list-style-type: none"> • Establishing eCommerce Councils comprising industry leaders, government executives and representatives of concerned international organisations. • Organising awareness seminars in collaboration with business associations, consumer councils, government, media regulators and international bodies.
<i>Capacity Building, Education And Training</i>	<ul style="list-style-type: none"> • Organising and supporting seminars and other training programmes for basic and specialist ICT skills • Supporting curriculum development to integrate eCommerce elements into small enterprise training. • Encouraging industry sectors to establish programmes for development of eCommerce. • Supporting development of the local IT sector. • Expanding and enhancing multipurpose business centres incorporating eCommerce applications – especially in suburban and rural areas.
<i>Enhancing Network Infrastructure</i>	<ul style="list-style-type: none"> • Supporting investment in high-speed ICT infrastructure in major areas of small enterprise activity. • Improving interoperability and interconnectivity of existing infrastructure. • Improving ICT penetration in under-served (including rural) areas. • Encouraging intermediated forms of ICT access such as telecentres and ventures based around community organisations like schools, local government offices, post offices, etc.
<i>Sector Support And Trade Facilitation</i>	<ul style="list-style-type: none"> • eCommerce should be mainstreamed within sectors of the economy that exhibit comparative advantage – such as tourism and major export sectors. Specific measures may include financial incentives. • Providing tax holidays, concessions and eCommerce-friendly trade regulations. • Learning about eCommerce business models by implementing pilot projects and establishing test beds. • Supporting use of eCommerce within the public sector.

<p><i>Improving Policy And Regulation</i></p>	<ul style="list-style-type: none"> • Legal and regulatory reform to remove barriers to eCommerce, promote competition in some areas of eCommerce and infrastructure provision, and build necessary trust. • Accommodation of eCommerce within existing legal and regulatory frameworks or development of new measures concerning electronic transactions, signatures, data and consumer protection, intellectual property rights (IPRs), authentication/certification and other data security/privacy issues. • Giving legal status to electronic contracts. • Supporting the financial and banking sector to fully implement the necessary changes that will enable electronic transactions and credit card payments. • Action to reduce telecom tariffs in order to encourage eCommerce usage; e.g., reducing connection charges and not timing local calls. • Facilitating use of national and local languages.
<p><i>Appropriate eCommerce Technologies</i></p>	<ul style="list-style-type: none"> • Quickly addressing key standardisation issues, electronic data interchange standards, formats and codes, etc. • Promoting mutual cooperation in design and manufacturing of eCommerce-related systems • Harmonising technical and operational standards, and striving for sustainable technology transfer.
<p><i>Enhancing Consumer Confidence</i></p>	<ul style="list-style-type: none"> • Raising consumer awareness and trust through media publicity, insurance coverage and compensation against fraud, and encryption. • Organising eCommerce seminars in association with Consumer Protection Councils, regulators and international organisations. • Issuing discussion papers on key issues and inviting comment from the public.

E. eCommerce Best Practice Guides

The guides provided in this section are aimed at entrepreneurs, and can be used by agencies to support their entrepreneur clients. The guides provide direct advice on practical issues that arise when small enterprises implement eCommerce.

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.

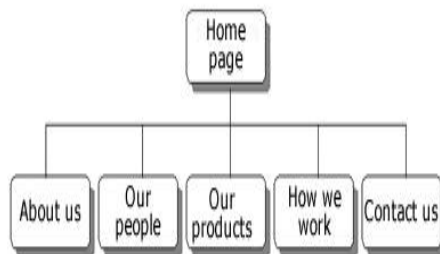
The Internet will also help you do **web-based market research**. By conducting investigation into market trends and customer requirements, enterprises can develop innovative strategies to compete. The Internet can be used to learn more about customers, industries, products and services, and market trends. 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 F2.

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 labeled. 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.

F. Understanding More About eCommerce

F1. 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.

F2. 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 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.