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eCommerce for Small Enterprise Development

A Handbook for Enterprise Support Agencies in India

2005

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This handbook can be used together with **'eCommerce for Small Enterprise Development – A Handbook for Entrepreneurs in India',** 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

Exchange rate used in handbook: 1 US Dollar = 50 Indian Rupees.

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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 India, including small-scale industries (SSIs). 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). Your agency may be considering raising its level of support and involvement in eCommerce – through increased use of computer-based information systems, use of the Internet or through expanding communications via email, mobile phones and the World Wide Web (WWW). If so, 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 present an overview of eCommerce in India (Section B).
- To explain the different ways in which small enterprises use eCommerce (Section C).
- To review current practice in India for eCommerce support for small enterprises, and outline an approach to enterprise needs analysis for eCommerce (Section D).
- To encourage a strategic approach to eCommerce support by agencies (Section E).
- To provide information about different aspects of eCommerce (Section F).
- To point toward further information and support for eCommerce in India and from overseas (Sections G&H).

The first thing you should do is read through **Sections A & B** to learn more about eCommerce, then look at **Section C** to gauge how far your clients have climbed the 'eCommerce ladder'. Next look at **Section D** that focuses on client support. Section D1 outlines different approaches to eCommerce support for small enterprises and Section D2 presents agency case study examples from India. Section D3 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 E. E1-E4** 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 E5** suggests areas where agencies can actively lobby government to further assist with the development of eCommerce for small enterprises in India.

Finally, look at **Section F** that provides information on various aspects of 'best practice' for small enterprises implementing eCommerce, and **Sections G & H,** which provide sources of further information and support for eCommerce in India and from overseas.

A. Introduction

eCommerce is emerging as a new way of helping business enterprises to compete in the market and thus contribute to India's economic success. eCommerce is important for economic growth, increased business opportunities, enhanced competitiveness and better access to markets. At present in India 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 eCommerce opportunities for SSIs and rural businesses are growing due to steadily improved access to the technical and communication infrastructure.

Since the time of Indian independence in 1947, a significant feature of the Indian economy has been the rapid growth of the small-scale industry (SSI) sector. The SSI sector is considered to have a major role in the Indian economy due to its 40% share of national industrial output along with an 80% share in industrial employment and nearly 35% share in exports. The SSI sector has been assigned an important role in the industrialisation of the country by the government of India.

SSIs are distinguished from the large-scale and the medium-scale industries on the basis of capital resources and labour force in the units. In 2002-2003 there were more than 3.5 million SSI units trading throughout India, with a fixed investment of Rs.90.5 billion (US$1.8 billion). The SSI sector employed about 20 million people and produced Rs.7420 billion (US$148 billion) of output – Rs.860 billion (US$17 billion) of which went for export. These figures highlight the importance of the SSI sector.

In an increasingly competitive and globalised world, SSIs need to compete more effectively in order to further boost domestic economic activity and contribute toward increasing export earnings. SSIs will also continue to play an important role in increasing employment and incomes and thus contribute to poverty reduction on a sustainable basis. In fact, rural businesses may be among the biggest beneficiaries of eCommerce. Lower costs afforded through eCommerce can provide opportunities for many rural and regional communities to revitalise their economic base. The Internet can give small enterprises and communities the ability to present a regional image to the world and create focal points (or portals) for inquiries about local businesses and their offerings (see, for example, the case of Toehold in Section C of this handbook).

Business 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.

A1. What Is eCommerce?

eCommerce involves the sale or purchase of goods and services by businesses, individuals, governments or other organisations and is conducted over computer networks. 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 telephone, fax, TV, electronic payment and money transfer systems, electronic data interchange (EDI) and the Internet.

- Mobile phones, email and the Internet provide most scope for small businesses. Applications include Internet retailing, Internet banking and electronic settlements, browsing and customer selection of products and services. The Internet provides access 24 hours a day, seven days a week – any time – anywhere. Thus, time and place are no longer binding factors.

- Participation in eCommerce is important not only for conducting commercial transactions, but rather in the way it encourages transformation of internal systems and increases efficiencies in terms of cost, responsiveness to customers, customisation of offerings, and through the potential emergence of new products and services.

- eCommerce also offers a landscape of opportunities for improving people management, strengthening communication-intensive business processes, and for deepening affiliation among employees, and workforce capabilities.

eCommerce may involve selling directly from businesses to consumers (B2C eCommerce). eCommerce can also be conducted directly between businesses (B2B eCommerce). This is where eCommerce is growing most rapidly. These include portals that operate as electronic marketplaces (e.g., www.exportindia.com) or as auction sites (e.g., www.matexnet.com). 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 (B2G) eCommerce that refers to the growth in supply of goods and services for online government procurement – potentially a large growth area in India.

A2. What Is Driving eCommerce For Small Enterprises?

The need for small enterprises in India 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 in 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.

It is important that enterprises – and the agencies that endeavour to support them – understand the driving forces for eCommerce. For example, many sector-based B2B marketplaces do not necessarily use the Internet as a medium – but commonly use private networks or auction sites where access is restricted – such as in the automotive sector or for agricultural and horticultural products. In order for enterprises in India to participate in these marketplaces it is necessary to gain market entry to these supply chains, and to understand how they operate.

Individual sectors (e.g., financial and business services or travel and tourism) require individual analysis to assess market entry requirements. It is also important, therefore, to understand what is driving eCommerce on a sector-by-sector basis.

A3. What Are The Benefits Of eCommerce?

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 accrue as the enterprise moves up the eCommerce adoption ladder (see Section C1). 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. It is likely that eCommerce activity will need to run in parallel with more traditional business methods. For example, an enterprise will need to continue to produce paper-based marketing material (brochures, stationery, leaflets, etc) as well as building up a web presence. Taken overall, the costs associated with eCommerce (see Advice Sheet 9) are unlikely to be justified without significant increases in revenue.

Hence, many small businesses are still sceptical about generating revenues directly through the Internet. The use of the Internet in India for commercial purposes (online trading) is still very low – primarily due to the lower than anticipated amount of Internet traffic and the lack of (credit card) payment facilities.

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 small enterprises, 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 and building new skills. 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 such as happened during the Dotcom boom during the late 1990s.

An eCommerce venture may well fail completely! Any new business venture is likely to fail. As the Dotcom boom and subsequent bust demonstrated, eCommerce ventures are probably more likely to fail than conventional businesses. This emphasises the importance for small businesses of not throwing all their eggs in the eCommerce basket. Failure can be avoided in one of two ways. First, by deciding not to adopt eCommerce at all. Second, 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. The benefits for your agency of actively supporting eCommerce will involve building capacity in four areas:

- Improving your own knowledge concerning eCommerce.
- Using eCommerce to improve your own processes – new and better ways of doing things.
- Involving people – encouraging and providing new skills and capacities for your staff.
- Using technology efficiently and effectively.

eCommerce can also improve the agency's ability to advocate on behalf of clients. This may involve using eCommerce technologies to solicit funds and to interact more effectively with donors or other governmental and non-governmental organisations. But you need a balance – as shown below if the agency itself uses eCommerce there can be both pros and cons.

Benefits of eCommerce for 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.

Risks of eCommerce for 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?

B. eCommerce in India

B1. How Big Is eCommerce In India?

India is on the threshold of emerging as a key player in global eCommerce. This is reflected in the rapid growth of Internet users. By 2002 there were an estimated 16.6 million Internet users throughout India with India having exhibited the highest growth rate of any region in the world – 137% increase between 2001 and 2002 (UNCTAD, 2003). Total online users are around 35 million in 2005. The IT sector is growing at an annual rate of 30% across the board. Between 1985 and 2005, the growth rate of the IT sector was almost 5 times faster than world GDP growth.

Table 1. eCommerce Network Access – Country Comparisons (2002)

	India	**China**	**UK**	**USA**
GNI per capita ($US)	470	960	25,510	35,400
Population (millions)	1049	1280	59	288
Telephone mainlines per 1000 population (main city)	136	584	-	-
Telephone mainlines per 1000 population (countrywide)	40	167	591	646
Mobile phones per 1000 population	12	161	841	488
Internet users per 1,000 population	16	46	423	551

Source: International Telecommunications Union (2003)

Table 2. Comparison of Internet Growth (2000 to 2002)

	Internet Users by Country (thousands)			**% Change**	
Country	2000 (000)	2001 (000)	2002 (000)	2000-2001	2001-2002
United States	124,000	142,823	155,000	8.5%	15.2%
China	22,500	33,700	59,100	75.4%	49.8%
United Kingdom	15,800	19,800	24,000	21.2%	25.3%
India	5,500	7,000	16,580	136.9%	27.3%

Source: International Telecommunications Union (2003)

The total volume of eCommerce transactions in India grew very rapidly at first: from Rs.130 crore (US$26m) in 1998/9 to Rs.1200 crore (US$240m) in 2000/1, of which around 90% was business-to-business transactions. The bursting of the Dotcom bubble then slowed down growth but there is now evidence of a significant revival in

eCommerce worldwide. This time many of the lessons of the past have been absorbed and eCommerce transactions are tempered by realistic expectations.

By 2004/5, total eCommerce transactions in India were estimated at around Rs.2250 crore (US$450m). B2C eCommerce had grown particularly quickly, now making up Rs.650 crore (US$130m) – more than one quarter of the total. Areas of growth include travel and ticketing sales, electronic gadgets, household appliances and gifts.

As noted, now and in the future, the bulk of eCommerce is **B2B** transactions. The principal benefits of eCommerce are likely to accrue from collaborative initiatives across an industry supply chain (sharing of inventory information, collaborative product design, etc). To capture these benefits, businesses will need well-connected supply chains and well-connected internal systems. Automotive and consumer goods are expected to lead B2B eCommerce adoption in India. The potential marginal impact in automotive and consumer goods could be as high as 4% of sales. Both these industries are dominated by large companies with the willingness to drive eCommerce adoption across their supply chains, which can have a beneficial knock-on effect for small businesses operating in the sector.

Currently, there is a huge variance in readiness for supply chain connectivity across industries. For example, the Boston Consulting Group (India) estimates that by the end of 2001, some sectors in the consumer durables industry had almost 90% of their procurement and 80% of their sales to distributors/dealers web-enabled, whilst other sectors had less than 10% of their suppliers and dealers online.

B2C eCommerce offers fewer opportunities for small business. Although transaction volumes for B2C are growing fast, the Internet is unlikely to become a key sales channel in any industry in India and the overall penetration is expected to remain below 1% of retail sales. Cultural factors and the current convenience of offline retailing are the key factors that will limit online sales. Telecom services, consumer electronics, travel, automotive products and financial services will be the most important sectors of B2C eCommerce activity.

However, as evidenced in other countries, 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 in their competitive positions.

For the vast majority of small enterprises and their customers (particularly those in rural areas) multiple external factors are still impeding eCommerce adoption. These 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. Hence, vast differences exist between enterprises and sectors in terms of value that can be realised from eCommerce.

Box 1. SWOT Analysis for eCommerce in India

Strengths:	**Weaknesses:**
• Active participation and promotion in using eCommerce. • STPI units, agencies and NGOs are promoting eCommerce. • Government support to upgrade technology. • Good English language proficiency. • Entrepreneurs are enthusiastic in adapting to technological change. • IT service sector is growing rapidly.	• Lack of IT infrastructure, knowledge and skills especially in the rural areas. • Urban-rural gaps in use of computers and the Internet. • Inefficiency of financial and banking system to support SSI. • Security system is not reliable. • Poor telecom and communications infrastructure for reliable connectivity. • Multiple gaps in the current legal and regulatory framework. • Fear of transparency in operations. • Cost of electricity is high. • Approach to government support and subsidy is very difficult.
Opportunities:	**Threats:**
• Increased customer orientation for all businesses through rapid feedback. • Indian small and medium enterprises can project their capability globally. • Growth in traditional sectors such as handicrafts, textiles, art, natural medicines through tapping into global markets. • Indian cultural heritage – monuments, temples, classical music etc. can be marketed to assist tourism. • Forecasts indicate that India has the potential to create a very large eCommerce market. • Outsourcing software and IT services from USA and other advanced countries. • Domestic use of eCommerce utilising mobile networks for better communication.	• Competition and penetration from outside firms. • The corporate giants can continue to grow stronger and stronger. This poses a threat to SMEs but is also a challenge. • There is a danger of creating two classes of operators – fast track and laggards. • The combined strength of eCommerce and telecommunications may monopolise political and financial power. • Lack of national, sub-regional and regional web data centres and communication facilities will shift business to places where those facilities exist. • High cost of bandwidth in India as compared to other countries. • Competition has increased and there is a threat of losing market to large overseas companies.

B2. Assessing eReadiness For Small Enterprise In India

Assessing eReadiness means finding out how ready SSIs are to engage in eCommerce. At a national level, the Global Information Technology Report ranks 82 countries on their level of eReadiness which is defined according to the degree of preparation of a country to benefit from developments in ICT, taking into account a wide range of indicators including policy, legal, security, infrastructure and market factors. India ranks 37 in the world with a networked readiness index (NRI) of 3.89 ahead of countries such as Poland (3.85), Greece (3.77) and China (3.7). This high scoring reflects the considerable comparative advantage India has developed in the IT sector.

The potential for small enterprises to take advantage of India's rapidly improving networked readiness will vary considerably, depending upon geographical location and access to physical and human resources. Therefore, for the majority of SSIs and rural enterprises in India, eReadiness needs to be assessed from a broader perspective – gauging their ability to respond to the challenges of eCommerce – given the infrastructure, institutional and regulatory environment within which they are currently operating in their locality.

For the majority of enterprises that are currently excluded from eCommerce, an appreciation of eReadiness should emphasise the following:

- *Access* – to affordable access technologies, local access network infrastructure and responsive ISPs (Internet Service Providers).
- *Awareness* – of eCommerce technology and market opportunities.
- *Knowledge* – of the online environment, the benefits of eCommerce and viable business models.
- *Skills* – access to new ICT skills and business skills.
- *Language* – eCommerce applications and content in local languages.
- *Trust and confidence* – government and agencies can play a key role by making eCommerce a national priority.
- *Business cost factors* – relating to transport, delivery, and other overheads.
- *Socio-cultural factors* – that influence technology's diffusion and use.
- *Market analysis* – including value chains and market conditions.

A number of tools have been developed that adopt varying approaches to assessing eReadiness for small and community-based enterprises – see, for example: http://www.bridges.org/ereadiness

Because the impact of eCommerce is so diverse, analysis should be carried out on a sector-by-sector basis. Sectors featured in this handbook that demonstrate the greatest potential for eCommerce in India include the automotive sector (see Enterprise Case Studies 2&3); tourism and related markets such as arts and crafts (see Enterprise Case Study 6); agricultural and food industries (see Enterprise Case Studies 4&5). There is also considerable potential to benefit from eCommerce technologies in the domestic market (see Enterprise Case Studies 1,2&3).

B3. How Is The Government Assisting eCommerce For Small Enterprise?

Business groups have welcomed India's new legal framework for eCommerce, which enables electronic signatures and eTransactions. An improved legal and regulatory environment will help to change the way Indian entrepreneurs do business and advance the country's position as an emerging superpower in the global information economy.

In an effort to boost the IT sector and develop eCommerce in India, the government has:

- Passed the Information Technology Bill. The bill gives legal recognition to digital signatures and outlines the penalties and procedures for dealing with cyber crimes.
- Eased foreign direct investment (FDI) restrictions in the eCommerce sector. Foreign equity of up to 100% will be permitted in business-to-business (B2B) ventures, provided overseas concerns agree to divest 26% of their holdings to the Indian public within a five-year period. For business-to-consumer (B2C) ventures, foreign equity will be capped at 49%.
- Relaxed initial public offering (IPO) requirements for IT-related businesses. The minimum IPO requirement for IT companies seeking to list in India was reduced to 10% from 25%, subject to a minimum of Rs.2 million securities to be offered to the public and minimum public offer net size of Rs.500 million (US$10 million)
- Through enacting laws to protect intellectual property rights (IPR).

The following important initiatives have been taken by the Indian Government to promote the Internet and eCommerce infrastructure:

- Permission given to private Internet Service Providers to set up international gateways.
- Permission for Internet access through the cable TV infrastructure.
- Initiation of the setting up of the National Internet Backbone.
- The opening up of national long-distance telecommunication services to private operators.
- Complete non-monopolisation of undersea fibre connectivity for ISPs.
- Free right of way facility, with no charge in cash or kind, for private access providers to lay optical fibre networks along national highways, state highways and other roads.
- The Department of Telecommunications has allowed interconnectivity of government and closed user group networks.
- The establishment of Public Tele Info Centres (PTIC) having multimedia capabilities has been permitted.

C. Indian Enterprise On The Road To eCommerce

This section outlines the steps to eCommerce describing the differing stages of eCommerce development – presenting six local enterprise case studies (thumbnail sketches) that highlight an eCommerce application for each stage. The case studies show how enterprises are benefiting from eCommerce by illustrating practical examples. More detailed versions of these case studies can be found in the sister handbook to this one, for entrepreneurs: http://www.ecomm4dev.org/

C1. 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.

Thumbnail Sketch: Gayatri Granites
Located in the Industrial Area of Ilkal, Bagalkot. The enterprise produces granite slab and tiles, and carries out polishing and styling. There are eight employees and the business was established in 1992-93 under sole proprietorship. The main customers are located in India, and recent annual turnover was Rs.35 lakhs. The entrepreneur uses mobile phones primarily to interact with clients and dealers of raw materials. Use of phones gets an immediate response and it is a more direct means of communication. As the entrepreneur states: *"before when clients used to call and we were not present in the office, we used to miss them. But now when they call and if we are not in the office, the person in the office gives our mobile number to them, and we are contacted. Thus we do not have to stick around in the office but can also do other work alongside."*
Contact: Mr Ramanujan Darak.
Tel: (08351) 770939

Step 2. Getting Online: Email messaging – a powerful business communication tool
This involves sending or receiving emails from a computer terminal either located on the 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).

Thumbnail Sketch: Shan Marc
Located on the Peenya Industrial Estate, Bangalore. The business manufactures metal gaskets for spark plugs used in automobiles, focusing 100% on the home market. The factory achieved the ISO 9001 certification in the year 2000. The business was established in 1987, there are 8 employees, and recent annual turnover was approx Rs.26 lakhs. Recently, they started creating designs of gas turbines using CAD and sending them via email to international business clients. Designs of gas turbine parts are rendered in 3-D using the Pro E software package. These designs are sent via email to clients outside India. This enterprise has made maximum use of email and the web to make contact with specialist organisations in the engineering sector.
Contact: Mr. Maria Dass.
shanmarc@hotmail.com

Step 3. Web Publishing – to reach a wider customer base
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).

Thumbnail Sketch: Adam Sons
Located at the Industrial Estate in Mercara. The business makes machinery such as that used for processing coffee. They have 9 employees. 5% of the unit's work is for the export market. They have been exporting machinery for 5 years now. The home market is based all over their own District. Recent annual turnover was Rs.63 lakhs. They have attracted prospective clientele and enthusiastic persons who have browsed through the net to get information regarding their coffee units. They have received good leads through www.googlesearch.com where they are listed. 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 businesses and having a website gives substantial evidence to the authenticity of the unit.
Contact: Mr Thahir.
www.adamandson.com info@adamandson.com

Step 4. Web Interacting – to improve relationships with users
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.

Thumbnail Sketch: Ace Foods Limited
Located at the Industrial Estate in Yeyyadi. The business produces packaged food products. It employees 25 men and women, and was established in 1984. 40 % of products are exported to the Middle East, Australia and the USA. The business has a static web model with a product catalogue. The web model serves to describe their products - a medium to convey broad details to their clients. With the Internet, export-related tasks have become simpler and more convenient. Dr Kasturi cited an example – the business was in constant touch with a client in the USA on a casual basis through email and through phone calls. One day, this client placed a huge order. Communication via the Internet made the relationship grow. He states: *"without the new technology we would not have been able to do what we are doing - as simple as that"*. And he added: *"a keen business acumen is also essential"*.
Contact: Dr Kasturi Umesh Pai or Mr. Annappa Pai.
www.acefoodspl.com info@acefoodspl.com

Step 5. Web Transacting – moving to true eBusiness
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 payments systems, and for B2B eCommerce will involve payment through secure banking systems.

Thumbnail Sketch: Kamal Bells
Located at the Industrial Estate in Rajajinagar. 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 that contain their components are used in the motor industry. Recent annual turnover was almost Rs.2 crores. Kamal Bells are well informed about the various benefits of eCommerce due to location in Bangalore. They have registered with a site called www.exportindia.com through which they have received a lot of information from similar units and clients from all over the world. They cite an example where an entire transaction was done via the web: *"We received an order by email from HAL [Hindustan Aeronautics Ltd] in Bangalore. There was an application form on the net, which we filled in; and all further correspondence was followed up through email; thus the entire transaction was completed through the net".* The entrepreneur reminds us, 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".*
Contact: Mrs Nirmala S. Murthy
Kamalbells@vsnl.com

Step 6. Web Integration – a fully e-enabled enterprise
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.

Thumbnail Sketch: Project ToeHold
Located in Malleswaram, Bangalore. ToeHold manufactures and markets traditional leather slippers and sandals. These are manufactured by artisans of a marginalised community in the Belgaum Region of Karnataka. There are 8 full time employees. Established in 1999, it is run on a cooperative basis. ToeHold's customers are mainly shoe stores and boutiques in Australia, Japan, Italy and other countries. 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. Orders 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. A management information system keeps track of customers and predicts their buying patterns. This helps them to optimise their leather and accessories purchases and keep inventory levels low. Workers in the villages are able to speak to their head offices via mobile telephone. Decisions get taken faster and get communicated down the line cheaper.
Contact: Madhura Chatrapathy
ascent.bangalore@vsnl.com

D. eCommerce Support

For enterprises seeking to climb the steps to eCommerce it will be as important to understand their own 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 currently on offer in India. It then suggests how your agency might go about improving the analysis of enterprise support needs for eCommerce.

D1. 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 India 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 manuals 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 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 D3.

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 5 provides a list of possible eCommerce facilitators).

The following case studies provide examples of current practice in India 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.

D2. Examples Of eCommerce Support For Small Enterprise

Case Study A: AWAKE (Association of Women Entrepreneurs of Karnataka)

E-mail: awakener@vsnl.com URL: www.awake-india.org Contact: Ms Dhanavanti Jain.

AWAKE has 5 full time employees. AWAKE has a trained professional staff that co-ordinate all programmes. All the employees have portfolios and are allotted activities according to on-going projects. AWAKE is a non-commercial registered society. The agency's focus is on woman entrepreneurs. Out of these 80% of the target audience is below the poverty line. AWAKE supports new and established enterprises with programmes that help them enhance the quality of their operations through management counselling and development courses.

ICT Resources: AWAKE has a high-speed cable connection to the Internet. They also have an EPABX facility connecting all departments via 7 computers. AWAKE have their own website. Ms Jain says *"Having a website is very convenient. We get emails from Washington, New York, etc. inquiring about our work. So we tell them to log on to our website as all the information is listed there. Also it is very useful as the site has a membership form, which people can download, fill and mail to us. The forms are in the HTML format."*

AWAKE is developing a mobile kiosk that will list all the latest government policies, schemes, profiles of member entrepreneurs, some case studies and also profiles of sponsors. They intend to have all this data in the local language (Kannada).

Support for eCommerce: For members who are based in rural areas, communication is much easier using email. Entrepreneurs based in outlying towns also operate using email. She says that many clients go to the website and learn about the various benefits that AWAKE can offer. The important thing is to disseminate information. She cites the example of vanilla beans from which you get the essence. Shimoga is the growing area for these beans and there is quite a demand for it. Ms. Jain says: *"We started disseminating information that when you process the beans you create added value. We passed on information to entrepreneurs in Shimoga that was downloaded from the Internet. Thus, before, these rural businesses just sold vanilla beans, they are now selling vanilla essence."*

AWAKE has conducted training for eCommerce. It is in the process of making a list of entrepreneurs and is also developing hyperlinks to reach them individually. In one area, people log on to the net to contact their clients. The entrepreneurs have also created their own website and are directly dealing with their customers. They also feel that transactions by email are very fast and beneficial. Ms Jain says: *"we are creating a database. We are looking for a major fund to make an expansive website in which we can make a detailed listing of our member entrepreneurs. Right now we have made a CD"*

Reflections on Best Practice: eCommerce-related support in the future will definitely be enhanced as now all entrepreneurs are becoming driven by the technology. Ms Jain says: *"what AWAKE does is to facilitate opportunities and thereafter monitor progress to sustain stability of the deal"*. Ms Jain also emphasises that the website and email can be used for sundry communication and casual contact, but most interaction with clients (like counselling) has to be face-to-face. She says that to make use of individual websites, initial awareness is needed. AWAKE can just trigger an interest, and cannot force anyone to have a website. Thus, she says that it works through word of mouth. *"Entrepreneurship is not just business counselling but also emotional counselling... and in the process, make them more aware"*.

Case Study B: Explocity Limited

URL: www.explocity.com Contact: Mr Atul.

Explocity is a private company with 100 employees, providing information services to the small business sector from centres in Bangalore, Delhi, Mumbai, Chennai, Kolkata and Hyderabad. Clients include any brand establishment, franchisee or outlet that requires fee-paying information services (e.g., advertising).

ICT Resources: Explocity uses an open source platform from Mahiti Infotech, where entrepreneurs can update their own website space regularly. Explocity develops the initial website for the client. The entrepreneurs can then update information on their own. Explocity also has relations with Indya.com & MSN and the website provides links to these sites. Explocity have also tied up with 'Hutch and Spice mobile phone services' that can give instant news updates, emergency service contacts and local information via mobile networks.

Support for eCommerce: Explocity provide an information distribution channel with additional features enabled by the Internet – such as the ability to download from web sites, provide web links, search facilities and interactivity. Regional centres send information to Explocity HQ through email or via an FTP server for finalising the layout. Clients can also include brand names. All information is listed on the website and the same content is also available in printed format. A new edition of Explocity is printed every 15 days and uploaded simultaneously on the Internet. Chat and instant messaging have also proven beneficial to small business clients.

Reflections on Best Practice: Mr Atul states that in the late 1990s they considered expanding their website. However, according to him, the Internet usage in India that initially seemed promising had not been realised.

At present most revenue for Explocity is still obtained through printed material. This demonstrates the importance of continuing to focus on a printed edition – through which the company has generated highest revenue – alongside developing the web-based facility. The company has not really incurred any losses though the Internet but did not reach the heights they had anticipated.

Regarding the issues faced in setting up web-based support activities, Mr Atul states that now they are more sceptical about collecting revenues through Internet usage due to insufficient traffic, low uptake and lack of credit card payment services. For example, a flower delivery service client in Bangalore received less than 10% of orders online. Anything that cannot be delivered in a digital format is problematic as 'it would not be scalable' through web-based marketing; that is, from the initial stocking stage till to the final delivery of the service to the customer.

Wireless technology and the use of mobile telephone services is now more popular, and likely to drastically increase. Moreover, if Internet access can be made more widely available via mobile networks there might be more people using it. However, for such a facility one would need high-end sets with General Packet Radio Service (GPRS) technology which will remain unaffordable for the majority.

Case Study C: MatexNet Pvt. Ltd.

E-mail: jagan@matexnet.com URL: www.matexnet.com Contact: Mr Jaganni Vasan.

Matex employs around 45 people and provides business support and brokering services to clients – 88% of which are small enterprises from Mumbai, Pune, Kolkata, Bangalore, Chennai, Coimbatore etc. Matex provides assistance to businesses in the formulation and deployment of solutions for effective execution of internal and external business processes such as inventory management, purchasing and logistics.

ICT Resources: Matex started online trading in 1999. They rely on networking between the various branches of MatexNet throughout India. The central server is in Bangalore with a back up in Chennai. All orders are taken online. MatexNet also has an online auction service.

Support for eCommerce: Matex offers an online exchange to connect large-scale industries and small enterprises (SEs) together. Large industries sell new surplus and scrap to SEs. SEs can sell their finished products to the large industries. Therefore, middlemen are avoided, due to online direct one-on-one trading. Matex helps companies liquidate their inventory. In a review in the year 1999, they claimed that they already have a client base of 2,000 SEs, along with about 200,000 traded items listed.

MatexNet asks companies to register with them online. These clients can sell both excess raw material as well as finished inventory. MatexNet scouts for buyers and sellers in two ways. The information is posted on the net, plus they also invite people to come to the site by sending emails, faxes and making phone calls. The buyers also get all the information from the Net and also get in touch via email. The rest of the transaction is physical. MatexNet also uses consultants who can suggest ways to add value to purchases. MatexNet charges 2.5% of the traded value from both the buyer and the seller for the transaction.

Mr Vasan states: *"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 require this inventory, but don't know where to get them, this is where MatexNet steps in, providing a matchmaking service".*

Reflections on Best Practice: Benefits of online trading on the net for SEs 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 SEs. 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 working of eCommerce. Regarding online trading, Mr Vasan states that as transactions on the net are cost efficient, online trading is most appropriate for SEs. However, traders (middlemen) do still play a role as SEs can often negotiate better rates with traders individually.

Although what agencies like MatexNet provide is essentially a virtual domain, a large part of the interaction is done personally. It is thus very necessary to mix the personal with the virtual for the success of any business.

Case Study D: Small Industries Service Institute (SISI)

E-mail: sisibng@vsnl.com URL:www.sisikarnataka.org Contact: Mr Badrinath.

With 60 employees this agency is a Government of India undertaking and is around 50 years old – established for the provision of support services to small enterprises. With effect from 1st October 2001, it has been converted into a Technology Resource Centre (TRC) for SSIs. SISI is part of a national network under the Small Industries Development Organisation (SIDO); which is an apex body and a nodal agency for formulating, coordinating and monitoring the policies and development of small-scale industries in the country. The functions of SISI are primarily to provide industrial extension services to small-scale industries mainly centred around the technical aspects of operations.

ICT Resources: SISI operate a Small Enterprise Information and Resources Network (SENET): a computerised database for the small and medium enterprises and other promotional agencies at state and national level. Information is provided through SISI's website. They also run a Technology Resources Centre (TRC) providing technology data banks, technology-related information, and services to facilitate technology transfer.

Support for eCommerce: SISI mainly deals with information distribution to provide help for all sectors/clients of the small-scale sector. It downloads information from various websites for their internal workings and research. Owing to the provision of online services by SISI, clients can also obtain services online, including requests for information through email. Mr Badrinath stated*: "eCommerce and such other activities are not our focal point. However, we do educate our clients about the importance of eCommerce in their business. Yet, sensitisation is one aspect, and actual implementation is another. We attempt to sensitise. We do not monitor the efficiency and effectiveness of our attempts at creating awareness and neither do we monitor the enterprise usage of eCommerce or maintain any statistics in relation thereto. Yet, by & large we can say that there has been a considerable rise in usage of computers and information technology by small-scale units".*

Reflections on Best Practice: Educational programmes highlighting specific and unique benefits of eCommerce to the specific units need to be developed rather than obvious or general benefits which are commonly known. Mr Badrinath believes that agencies should not necessarily take direct responsibility for educating entrepreneurs in the advantages of eCommerce. In SISI's case, for example, it has therefore been important to work effectively with other agencies who can offer eCommerce expertise.

Mr Badrinath cautioned against complacency on eCommerce. Even though various small enterprises are presently surviving comfortably without eCommerce, entrepreneurial units would become irrelevant if they do not commence the use of eCommerce in the next 5-6 years. *"We still have money transactions conducted in banks and we also have ATM booths enabling these. Therefore convenience is drawing people to use eCommerce. When the environment is such that they cannot do without it, then they will use it more effectively".*

He concludes that it is advisable for all units to commence the use of eCommerce if they want to stay competitive in their business. The first step would involve evaluating and gaining information about the available technology, and then subsequently trying to inculcate the same into practice in their business processes.

Case Study E: Visveshvaraya Industrial Trade Centre (VITC)

Email: vitc@mantraonline.com URL: www.vitcblr.org Contact: Mr. B R. Umakanth.

VITC employs 7 full-time staff including an export manager and 4 industrial promotion officers specialising in trade development. VITC's clients are predominantly rural artisans and industries. VITC is the designated nodal agency in its state for promotion of international trade. VITC provides proactive and supportive institutional mechanisms for the growth of exports, focusing on sustainability, export promotion, sector strategies, and building an effective and competitive export infrastructure. VITC concentrates on marketing, but also gives financial assistance or any other help if required. Clients include the Ambedkar Hastashilpa Yojna, a Government of India enterprise scheme supporting rural artisans.

ICT Resources:
VITC has the provision for video conferencing/networking between offices. Its HQ communicates with sub-offices through video conferencing. In this way 4 to 12 people can converse together, not wasting time travelling from office to office. All computers in the office are used for communication. The plan for the current year is to obtain software and trade information from the National Centre of Trade Information (NCTI). In NCTI, global inquiries are made which can be fed through the VITC portal and distributed to the registered users/members of VITC.

Support for eCommerce: VITC operates a portal www.vitcblr.org which provides a platform for the exporters and importers of India in general and of the state in particular to have a direct interface with their trade counterparts world-wide. The portal is interactive and provides hyperlinks to other websites (such as the NCTI portal) that give information about export policies and regulations. The VITC portal also has a facility for fee-paying advertisers. VITC also holds training sessions at regular intervals to educate medium, small and tiny units about eCommerce. VITC are in the process of setting up a B2B exchange. Once the portal has uploaded all the relevant information, there will be provision for online secure transactions.

Reflections on Best Practice: Mr Umakanth states that entrepreneurs should attend orientation courses conducted on eCommerce, particularly where experts in the private sector are put forward as role models. These experts share their experiences and discuss ways to conduct business. He also advocates VITC's approach of collaborating with various agencies in the service sector, which provide export incentives where 100% eCommerce facilities and programmes are launched with a nominal fee, informing various units on the benefits of eCommerce usage and trade opportunities.

VITC has outsourced an eCommerce contract to a private agency. This has worked well but in-house support is also important, as the in-house person will be more aware of the internal workings of the agency.

VITC feels it is important to include eCommerce in an agency's support concept. As he states: *"We are presently trying to do something unique and we also expect other trade organisations like the Chamber of Commerce to replicate the model by which VITC performs. In the process VITC is forming export clubs for interactions between organisations and units".*

D3. Analysing Enterprise Support Needs

Section D1 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 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 do you get, what type of support interventions do you then provide?

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 to 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?

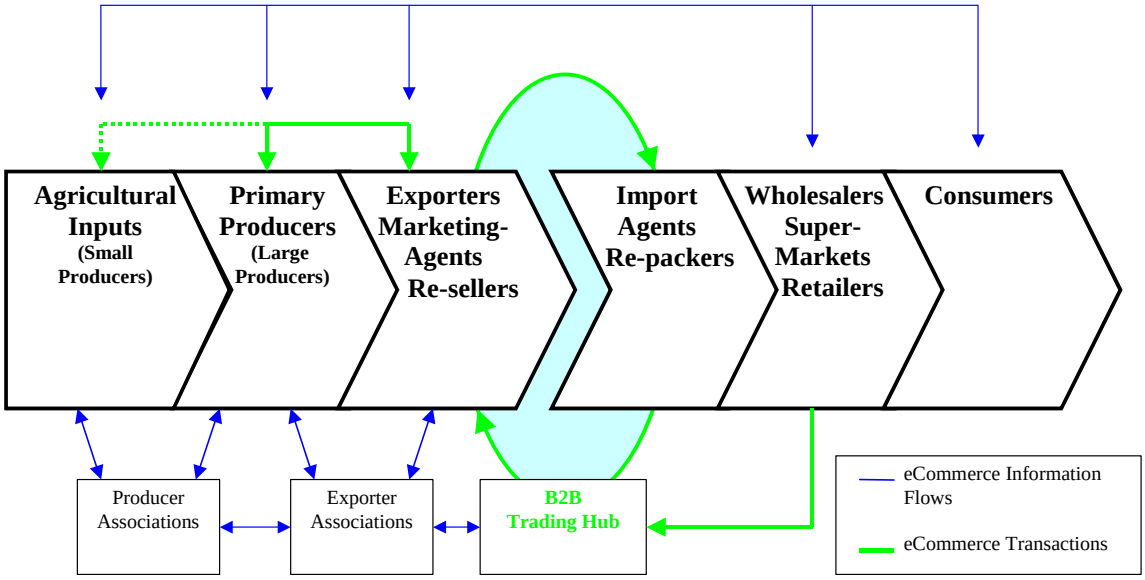
You should encourage the entrepreneur to identify their own requirements according to the quality of information they are currently receiving, and identify the particular strengths and weaknesses associated with their current information sources and communication channels. An assessment of information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

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.

2. Understanding the Value/Supply Chain

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 below.

Fig 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)?
- 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.

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

3: Enterprise Resources for eCommerce

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.

E. 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.

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

E1. Agency Strategy For eCommerce And Small Enterprise

The target market of the enterprise should 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 3 can assist you to identify business goals together with your clients, and help you to consider potential strategies and tools to achieve those goals.

Table 3: Business Goals and Strategies

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

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.
- *Effective 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.

E2. 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. Solutions should be tailored to small, easily identifiable groups. Solutions 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. Solutions can focus on developing and 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 client 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 the primary actors in their supply chain and 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.

E3. Determining eCommerce Entry Points

This involves deciding what form of eCommerce is most suitable for client enterprises according to the steps model (see Section C1). As an outside agency, you should not make this decision, but you should encourage clients to take full account of the requirements of user groups. The way in which users are driving eCommerce will determine the ways in which eCommerce can assist the client. The key entry points for Internet-based eCommerce in India 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).

The needs of users should determine the eCommerce entry point for the enterprise. 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 India that clients will move immediately to Web transacting or Web integration and it would be important that enterprises move successfully up the preceding steps beforehand. The following (Table 4) 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 4: Steps to eCommerce – What Kind of eCommerce?

Steps to eCommerce	User Group Drivers	Benefits	Costs	Overall Impact
Step 6: Web Integration	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.
Step 5: Web Transacting	Primarily driven by requirements of customers.	Speed and convenience, but overall limited benefits – 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.
Step 4: Web Interacting	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.	High benefits with relatively moderate costs.
Step 3: Web Publishing	Requirements of customers and the marketplace.	Better marketing. Better branding. Easily updated, well presented materials.	Moderate investment costs.	Moderate benefits and relatively moderate costs.
Step 2: Email Messaging	Requirements of customers, suppliers, collaborators, support agencies and employees.	Considerably improved business communications.	Moderate investment costs.	High benefits and moderate costs.
Step1: Simple Messaging	Requirements of customers suppliers, collaborators support agencies and employees.	Considerably improved business communications.	Low investment costs.	Potentially high benefits and relatively low costs.

E4. Other Issues For Agencies

Sustainability

Financial sustainability will be a key success factor for any eCommerce project – the ability to recover investment costs and to be able to replace, update and maintain 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 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.

Scaling up

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 E1-E3 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 F.

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 E2, 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 5 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. 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) towards scaling up eCommerce, and 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 5. eCommerce Facilitators – Strengths and Weaknesses

Facilitator	Role	Strengths	Weaknesses
Sector-Based Agents/Brokers (Commission-based) Example: www.exportindia.com	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.
Resellers	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.
eCommerce-Based Trading Hubs or Portals (Commission-based) Example: www.matexnet.com	Solely web-based marketing activities. Accept and place orders. Internet transactions and electronic banking.	Wider market access.	Creates 'dis-intermediation'. Lack of personal market relationships and contacts.
Industry Organisations Example: www.sisikarnataka.org	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.
Fair Trade Organisations Example: www.catgen.org	Provide market outlets based on fair trade principles. Most offer web-based services and marketing.	Assistance with quality control and product/service development. Special assistance to women producers. Better returns.	Tend to lose market share to commercial importers/agents. Narrow market that can be seasonal (high demand at Xmas, for example).
NGOs/Business Support Organisations Example: www.awake-india.org	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.
ISPs or IT Consultants Example: www.mahiti.org	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.

E5. Strategies For eCommerce Promotion

Table 6 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 6. What Should Agencies Be Lobbying Government For?

Strategies	Some Suggested Government Actions
Raising Awareness	• Establishing business—government partnership at national and provincial level. • Organising awareness seminars in collaboration with business associations, consumer councils, government, media regulators and international bodies.
Enhancing Network Infrastructure	• Establishing high-speed business quality EC networks, Internet exchanges, large peering exchanges, and improving access networks. • Improving interoperability and interconnectivity. • Producing user-friendly terminal equipment. • Improving network penetration in rural areas.
Sector Support And Trade Facilitation	• 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. • Provision of tax holidays, concessions and eCommerce-friendly trade regulations.
Improving Policy And Regulation	• Legal and regulatory reform to remove barriers, promote competition and build necessary trust. • Policy implementation should move toward the accommodation of eCommerce within existing legal and regulatory frameworks and to build in new requirements concerning electronic transactions, signatures, data protection, intellectual property rights (IPRs) and data security issues. • Government should encourage the financial and banking sector to fully implement the necessary changes that will enable electronic transactions and credit card payments. • Cyberlaws facilitating authentication/certification, cross border trade, privacy, security, and consumer protection should be enacted if these are not already in place. • Affordable telecom tariffs should be in place to support eCommerce applications; e.g., reducing connection charges and not timing local calls. • Protection of IPR and facilitating use of national and local languages.

Enhancing Operational Efficiency	• Increasing investment in networks, establishing performance indicators and monitoring network performance. • Encouraging competition to improve local access. • Developing business models by getting feedback, implementing pilot projects and establishing test beds. • Expanding and enhancing multipurpose business centres for eCommerce applications – especially in suburban and rural areas. • Establishing effective pricing policies for data- and other eCommerce-related services. • Promoting large-scale integration of finance and telecommunications services at various levels.
Capacity Building, Education And Training	• Establishing eCommerce Councils comprising industry leaders, government executives and representatives of concerned international organisations. • Organising seminars and HRD programmes. • Encouraging industry sectors to establish programmes for transition from conventional commerce to eCommerce.
Appropriate eCommerce Technologies	• 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.
Enhancing Consumer Confidence	• Raising consumer awareness through media publicity, insurance coverage and compensation against fraud, and encryption. • Organising seminars in association with Consumer Protection Councils, regulators and international organisations. • Issuing discussion papers on key issues and inviting comments from the public. • Giving legal status to electronic contracts. • Establishing voluntary codes of conduct. • Creating an info-centric culture for shopping and consumer satisfaction.

F. 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 computers range from Rs.15000 (US$300) to as much as Rs.45000 (US$900) depending upon the type of computer, the software installed, where one buys the computer and the warranty given. Most computer points in India also sell second hand-reconditioned computers that range between Rs.4000 (US$80) and Rs.12000 (US$240). Mainly local computer shops provide second hand-reconditioned computers.

Computers can be purchased in India 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 India 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 (a list is provided in Section E of this handbook)

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 search, and search engine 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 Cafes** in India. Most of these are located in urban centres where any individual who cannot afford to own a PC, but needs to use the Internet, can have access. The average charge in these cafes ranges from Rs.15 to Rs.25 per hour. More details concerning the possible costs associated with developing web-based eCommerce in India 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 through the telephone network. 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 documents, photographs, drawings, or any other computer data file.
- 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. Owning this is costly, but email services can also be accessed from shared facilities such as Internet Cafes 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** – 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 and 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:

- **Data Base Management.** Collecting 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.

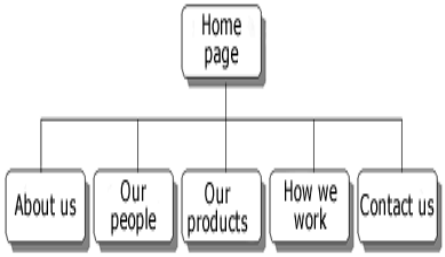
The Internet will also help you do **web-based market research.** By conducting investigation into market trends and customer requirements, enterprises can develop innovative strategies to compete. The Internet can be used to learn more about customers, industries, products and services, and market trends. You can collect information from the people who visit your website. Customer feedback provides a valuable insight into future needs and purchasing behaviour.

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 advanced in eCommerce, 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 SMEs. 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 and image files such as JPEGs or GIFs. It will typically link a home page to other pages containing information on the enterprise (see diagram). The website may include a shopping cart where customers can purchase products online with their credit card or where offline payment methods are outlined. To create a dynamic information-driven website, a database is integrated into the site and information can be displayed when someone requests it. The advantage is that the database can be updated and changed regularly. The database serving the website may consist of client information, such as account details and sales history and can be stored on standard software packages such as Microsoft Access.



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

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

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

Basic Web Design Tips:

- Pages must display or download quickly. If your website downloads too slowly the customer may give up and try a competitor's website.
- Images (photographs and graphics) need more time to download than text, so use a small number of images, repeat the same few illustrations or logo throughout the site, or install a button on the web page, to allow the customer to access a text-only version.
- Short paragraphs and sentences are the norm when writing for the web.
- Customers need to locate information easily. Visitors to websites tend to scan pages rather than read the entire text, so signpost the information with clear headings.
- Information on the site needs to be organised and easy to find. Links and buttons, which take the visitor to different places on the site, should be labelled.
- 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're 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's 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 outsiders, 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 requirements checklist for your website:

- 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 to 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**. This 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 IT 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 and other forms of media are frequently purchased online due to their suitability for shipping through the post or via couriers. Remember, when a customer buys online they tend to expect a better standard of service.

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 – this should not be neglected – by telephone or in person if local. This is especially important when customers have problems or complaints. Customer service help lines should emphasise 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.

In India 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 – approximately Rs.1000 (US$ 20) per month or Rs.12000 (US$240) per year and in addition a set up fee of Rs.2500 (US$50) is 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. However, this comes at a high cost (from Rs.15000 (US$300) annually for the lowest bandwidth (64kbps) to Rs.120000 (US$2400) per year for the highest bandwidth (512 kbps)). In addition an installation fee of Rs.5000 (US$100) is 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 Internet Cafes.

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. In India, registration of the domain costs an average of Rs.500 (US$100) for one 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 costs between Rs.3000 (US$60) and Rs.7500 (US$150) per year.

Designing a website costs approximately Rs.250 (US$5) per page for a simple website with few graphics. The cost of a full website ranges from Rs.25000 (US$500) to Rs.150000 (US$3000) 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 would require an initial cost of Rs.4500 (US$90) to Rs.45000 (US$900) with hosting and subsequent costs between Rs.6000 (US$120) and Rs.36000 (US$720) per year for maintenance. 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, maybe 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.

Intellectual property rights (IPRs): The ease with which electronic content can be copied and reproduced raises a multitude of IPR issues. It is often not clear who owns the intellectual property in a website – 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 – via the Internet.

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 be able to obtain legal advice on 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 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 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. Reputable 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 muddied, 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 much 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 global 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 small enterprise entering eCommerce should consider. But you should gather information and local opinions about it first.

G. Finding eCommerce Support In India

Professional advice will be important for success. There are many potential sources of help with eCommerce plans of your agency and clients. Examples of some general organisations in India that help small enterprise are given below. It will be important to talk to agencies who have specifically taken the route of supporting eCommerce in small enterprises.

G1. India-Based Small Enterprise Support Agencies

1. Asian Centre for Entrepreneurial Initiatives
111,1st Floor, 11th Main Road, Near 15th Cross, Malleswaram,
Bangalore 560 003
Phone: 080-334 7318/331 0184
Fax: 080-331 5396/334 7318
Email: ascent.bangalore@vsnl.com
Web: http://www.toeholdindia.com

2. Asian Society for Entrepreneurship Education & Development
ASEED House C-8/8007, Vasant Kunj
New Delhi 110070
Phone: 011-6130635,6130242,6896151
Fax: 011-6130635,6130242,6896151
Email: training@aidmat.com

3. Association of Women Entrepreneurs of Small Scale Industries
No. 37, Velachery Road, Chennai
600 042 Tamil Nadu
Phone: 044 22430661
Fax: 044 22431046
Email: raabpipe@vsnl.net

4. Centre for Entrepreneurship Development
Plot No. 1 (A&B), Belur Industrial Area, Belgaum Road,
Dharwad
580 011 Karnataka
Phone: 0836 2486868, 2486836, 2486837, 2486869
Fax: 0836 2486695
Email: dircedok@hotmail.com, dircedok@rediffmail.com
Web: http://nitpu3.kar.nic.in/cedok/

5. Entrepreneurship Development Institute of India
No. 419/4 (Upstairs), XII Main Road, Dr. Rajkumar Road (80 Feet Road), 6th Block (nr Bhashyam Circle) Rajajinagar,
Bangalore 560 010
Phone: 080-23119361, 09880324135
Fax: 080-23119360
Email: ediro@giasbg01.vsnl.net.in
Web: http://www.ediindia.org/

6. Federation of Indian Women Entrepreneurs
5A, Tiger Lane Western Avenue
Sainik Farm
New Delhi 110062

7. Karnataka Small Scale Industries Association
2/106,17th Cross, Magadi Chord Road,Vijayanagar
Bangalore
560040 Karnataka
Phone: 080 23353250/23358698
Email: kassia@blr@vsnl.net.in
Web: http://www.kassia.com

8. Marketing Organization of Women Entrepreneurs
No 26 & 27, 1st Floor Corporation Shopping Complex 3rd Cross Road, R A Puram
Chennai
600 028 Tamil Nadu
Phone: 044 495 4317
Web: http://www.indianngos.com/moowes/

9. National Institute of Entrepreneurship and Small Business Development
A-23, Sector-62, Industrial Area, Phase- II
Noida
201301 Uttar Pradesh
Phone: 095120-2403051 91-95120-2403052 91-95120-2403053
Fax: 095120-2403062 91-95120-2403057
Email: info.niesbud@nic.in

10. National Institute of Small Industry Extension
Yousufguda
Hyderabad
500 045 Andhra Pradesh
Phone: 040-23608544-218 / 23608316-217
Fax: 040-23608547 / 23608956 / 23541260
Web: http://www.nisiet.org, http://www.nisiet.gov.in, http://www.nisiet.com

11. The National Small Industries Corporation
NSIC Bhavan, Okhla Industrial Estate,
New Delhi 110020
Phone: 011 - 26926275, 26926370,
Fax: 011 - 26926820, 26920907
Email: cp@nsicindia.com
Web: http://www.nsicindia.com

12. Self-Employed Women's Association
SEWA Reception Centre
Opp. Victoria Garden , Bhadra
Ahmedabad 380 001
Gujurat
Phone: 079-25506444, 25506477, 25506441
Email: mail@sewa.org
Web: http://www.sewa.org

13. Small Scale Industries Advisory Board
Ministry of Small Scale Industries
Room 254, Udyog Bhawan, Rafi Marg
New Delhi 110011

14. Small Industries Development Bank of India
Temple Tower, 5th Floor, 476, Anna Salai, P.B. No.1312, Nandanam
Chennai
600 035 Tamil Nadu
Phone: 044-4330062
Fax: 044-4340348
Web: http://www.sidbi.com

15. Small Industries Development Organisation
A-Wing, 7th Floor, Nirman Bhavan
New Delhi 110011
Phone: 011-23022220, 23022221, 23022211, 23022209, 23022202
Fax: 011-23018315, 23016726, 23016068
Email: dcssi@laghu-udyog.com

16. Small Industries Service Institute
Rajaji Nagar Industrial Estate
Bangalore
560 044 Karnataka
Phone: 080-3351540 , 080-3351581, 080-3351582
Fax: 080-3205951
Email: sisibng@bgl.vsnl.net.in
Web: www.sisikarnataka.org

G2. Internet Service Providers (ISPs)

1. All India On Line
632, Sahidnagar
Bhubaneswar
Orissa - 751007
Phone : 91-674-2545328
Fax : 91-674-2544578
Email: aiolbbsr@aiol.com
Web: http://www.aiol.com

2. Broadband Pacenet (India) Pvt Limited
7/B, Shah Industrial Estate
Off Veera Desai Road, Andheri (W)
Mumbai - 400053
Phone : 91-22-56954516
Fax : 91-22-56954515
http://www.pacenet-india.com/

3. HCL Infinet Ltd.
E-4,5 & 6, Sector 11
Noida - 201301
Uttar Pradesh
Fax : 91-120-2442860
Web: http://www.hclinfinet.com

4. i2i Enterprises Limited
A4, B Cross Road, MIDC
Andheri (East)
Mumbai 400 093
Phone : 91-22-28352751/52/56
Fax : 91-22-28362335
Email: contact@i2ienterprise.com
Web: http://www.i2ienterprise.com

5. IceNet.Net Limited
3rd Floor Capri House
Behind Express Hotel
Alkapuri, Baroda
Phone : 91-265-2323377
Email: baroda@icenet.net

6. Mantra Online/Bharti Infotel Ltd.
234, Okhla Industrial Estate, Phase-III
New Delhi 110 020
Tel: 91-11-51709031
Fax: 91-11-51709033
http://www.mantraonline.com/

7. Reliance Communications Infrastructure Ltd.
1st Floor, Gulmohar Cross Road no. 9
JVPD Scheme, Vileparle (w)
Mumbai 400049
Phone : 91-22-30388380
Web: http://www.powersurfer.net/

8. Sify Limited
II Floor, Tidel Park
No.4, Canal Bank Road
Taramani, Chennai - 600113
Phone: 91-44-22540770-77
Fax : 91-44-22540771
Web: http://www.sifycorp.com

9. Trak Online Net India (P) Limited
B4/47, Safdarjung Enclave
New Delhi 110 029
Phone : 91-11-26104192/93
Fax : 91-11-26102781
Email: info@net4india.com
Web: http://www.net4india.com

10. Videsh Sanchar Nigam Limited
Videsh Sanchar Bhavan
M.G.Road Fort
Mumbai - 400001
Phone : 91-22-56578765
Web: http://www.vsnl.in/

This list represents just a small sample of the ISPs operating in India.

H. Understanding More About eCommerce

H1. Glossary/Jargonbuster

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

Communications
Every network requires some medium or connection 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.

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. 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.

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 a 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 different web pages via the Internet.

ICT
Information and Communication Technology: electronic means of handling digital data.

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 popular 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-enabled computer in the world.

H2. Further Information – Web-Based Sources

A selection of online information about eCommerce for enterprise development from global sources.

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.

Help Us Improve This Handbook: ecomm4dev: Agency: Version 1

Please help us to improve this handbook by providing feedback:

1. Please tell us which parts of the handbook we should keep for the next version, because you found them useful.

2. Please tell us which parts of the handbook we could remove for the next version, because you did not find them useful.

3. Please tell us which new topics we should add to the next version, because they were missing from this version.

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