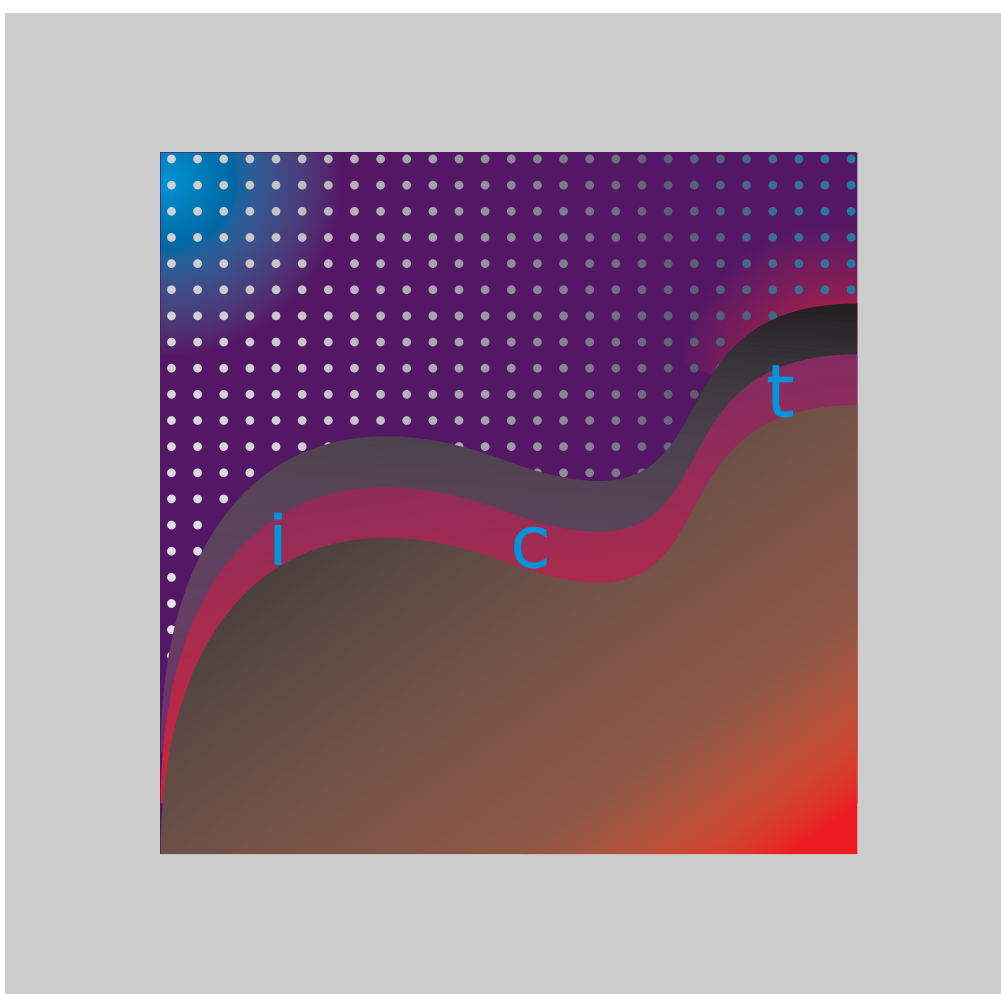


UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

E-COMMERCE AND DEVELOPMENT REPORT 2001

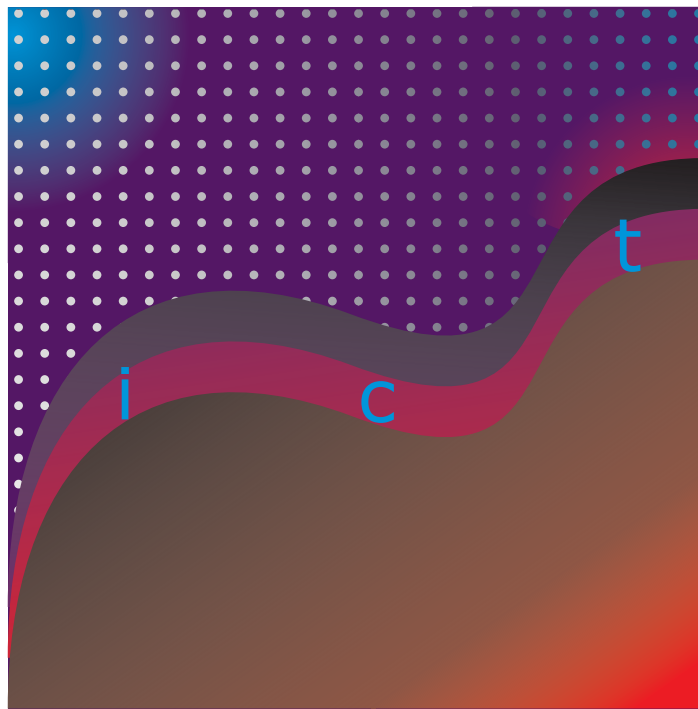
Prepared by the UNCTAD secretariat



UNITED NATIONS
New York and Geneva, 2001

Part Two

IMPACT OF ELECTRONIC COMMERCE ON SELECTED SECTORS



Chapter 3

ELECTRONIC COMMERCE AND TOURISM FOR DEVELOPING COUNTRIES

A. Introduction

Tourism and its Internet incarnation, often called “etourism”, is regularly cited as one of the fastest growing e-commerce sectors. During 2000 online travel bookings in the United States and Europe rose to \$15.5 billion from \$8 billion in 1999. Online travel bookings now exceed online software and hardware purchases, previously the leading category in consumer electronic commerce. Estimates for online travel bookings for 2001 vary between \$18 and 25 billion.¹

Considering the importance of the tourism economy for many developing countries, and in particular its role as an employer and earner of foreign currency, the need to maintain and increase competitiveness through adopting e-commerce best practice is acute.² The use of the Internet and e-commerce, by tourism producers and consumers alike, raises a variety of issues regarding its impact on the tourism industry, in particular in developing countries where tourism is often an economic sector of primary importance. The main actors in the tourism industry include Governments, tour operators, distributors and wholesalers, hotels, airlines and other transport operators, and most important of all, the tourists themselves. Each of these actors has a stake in the development of the electronic market. Each expects to be affected in different ways by electronic commerce. Their concerns and interests need to be addressed comprehensively so that action that is realistic and relevant to all can be recommended.

Tourism is an interesting sector for appreciating the potential of electronic commerce for the economies of developing countries in several respects. Firstly, tourism is a sector in which a significant number of developing countries have established competitive

advantages over the years. Secondly, tourism has remained largely a traditional service activity in which, until recently, buyers, sellers and intermediaries were well defined. Studying the relationship between tourism and e-commerce should provide an insight into at least two fundamental and broader questions, namely:

1. How do new information technologies and the Internet affect the structure of the global tourism industry and what are the effects on the competitiveness of developing countries?
2. How can the “old economy” (represented by tourism) combine with the “new economy” (represented by electronic commerce) in developing countries? How much room for manoeuvre does this combination create for local governments and enterprises to develop and maintain competitive advantages in global markets?

This chapter will discuss why tourism is an information product and a “confidence good” and its suitability for adopting e-commerce practice and tools. It looks at how business-to-business and business-to-consumer electronic commerce relationships are established and how these can improve customer service, reduce costs and promote market expansion. It identifies the roles that national tourism offices (NTOs) and destination marketing organizations (DMOs) may assume in developing countries in the movement to etourism as well as the technical and economic constraints that are likely to be encountered and the opportunities available. It suggests strategies that may be adopted to enable developing country tourism producers to set up and manage an Internet and e-commerce presence and operation. Finally, it proposes some conclusions that may form the basis for e-commerce policy in the tourism sector of developing countries.

Table 12
International arrivals and tourism receipts

	International Tourist Arrivals 1999 (thousands)	International Tourism Receipts 1999 (\$ millions)	Annual growth rate of receipts average 1990/1999 (percentage)	Share of world-wide receipts 1999 (percentage)
France	73 042	31 507	9.32	6.92
United States	48 497	74 881	11.73	16.45
Spain	46 776	32 400	11.75	7.12
Italy	36 516	28 359	11.50	6.23
China	27 047	14 098	44.76	3.10
United Kingdom	25 394	20 223	8.00	4.44
Canada	19 465	10 171	9.92	2.23
Mexico	19 043	7 223	5.73	1.59
Austria	17 982	12 533	-1.35	2.75
Germany	17 166	16 730	3.21	3.68
Hong Kong (China)	11 328	7 210	7.46	1.58
Switzerland	10 700	7 739	0.87	1.70
Netherlands	9 881	7 092	11.29	1.56
Thailand	8 651	6 695	9.13	1.47
Malaysia	7 931	3 540	16.26	0.78
Singapore	6 258	5 974	3.89	1.31
South Africa	6 026	2 526	20.55	0.56
Brazil	5 107	3 994	22.57	0.88
Tunisia	4 832	1 560	10.47	0.34
Indonesia	4 728	4 710	17.48	1.03
Republic of Korea	4 660	6 802	13.83	1.49
Egypt	4 489	3 903	28.83	0.86
Morocco	3 817	1 880	8.35	0.41
Argentina	2 991	2 812	19.98	0.62
Dominican Republic	2 649	2 524	22.90	0.55
India	2 482	3 009	14.74	0.66
United Arab Emirates	2 481	607	29.14	0.13
Israel	2 312	2 974	16.33	0.65
Philippines	2 171	2 534	14.18	0.56
Zimbabwe	2 103	202	27.48	0.04
Uruguay	2 073	653	20.04	0.14
Viet Nam	1 782	86	0.23	0.02
Chile	1 622	894	10.61	0.20
Bahamas	1 577	1 503	2.57	0.33
Cuba	1 561	1 714	47.80	0.38
Jordan	1 358	795	9.20	0.17
Iran (Islamic Republic of)	1 321	662	61.10	0.15
Jamaica	1 248	1 279	11.56	0.28
Costa Rica	1 032	1 002	29.51	0.22
Subtotal	450 099	335 000		73.61
World total	650 200	455 100	2.90	100.00

Source: World Tourism Organization.

B. Towards etourism

1. Developments and trends

In 1999, a total of \$455 billion was generated by selling tourism services to international (foreign)

tourists. This represents an average annual growth rate of 6.3 per cent when compared with the \$263.4 billion generated in 1990.³ However, if domestic tourism and all travel are included, global demand for tourism and travel services is expected to amount to \$4,475 billion for 1999. Forecasts made for 2010

predict total international tourism receipts of \$1,325 and a global tourism demand of \$8,972 billion.⁴

In 1999, developing countries managed to capture 29 per cent of international tourism receipts, or \$131 billion. However, this figure may be misleading since China, perhaps the largest tourism destination among developing countries, by itself accounts for a full \$14 billion. Together with earnings generated by the Hong Kong Special Administrative Region (SAR) of China, this figure would exceed \$20 billion and severely distorts any presentation of cumulative data for developing countries as a group.⁵ Furthermore, China, the Republic of Korea, Thailand, Singapore and Indonesia together generated 35 per cent of all international tourism receipts accruing to developing countries in 1999.⁶

In contrast, the participation of least developed countries (LDCs) in the global tourism market is small and uneven. The United Republic of Tanzania, the Maldives, Cambodia, Nepal and Uganda together account for over half the total international tourism receipts of LDCs.

Table 12 shows the performance of a select group of important tourist destination countries. Growth rates of international tourism receipts were, on average, 50 per cent higher in the developing countries included in table 12, in comparison with those of developed countries. This is reflected in a general shift of tourism arrivals towards developing country destinations.

Developing countries have often used their natural and geographical endowments to achieve remarkable growth in their tourism sector. However, a number of circumstance that are common, but not exclusive, to developing countries work against their efforts to develop a strong tourism export sector:

- A generally weaker bargaining position *vis-à-vis* international tour operators and distributors;
- Long distances and less than strong or no competition, which result in high air fares;
- Global distribution systems (GDSs) and computer reservation systems (CRSs) that are owned by large international airlines;
- An increasingly competitive global tourism sector where natural competitive advantages are becoming less significant.

The tourism sector is profiting from globalization and liberalization, and it is important that developing countries position their national tourism industries to maximize any future benefits from these processes. The tourism product is an amalgam of a wide range of products and services. A strong national tourism industry can reduce a country's reliance on too few exporting sectors and thus tends to stabilize export earnings and foreign currency receipts.⁷

2. Information is confidence

The tourism product has a distinguishing feature that has thrust it into the forefront of the electronic commerce revolution: at the point of sale tourism is little more than an *information product*. A consumer obtains *product information* through the media, friends or a travel agent.⁸ The *information* provided is often based on the consumer's queries and expressions of interest, i.e. *personal information*. Then the consumer pays up front, or provides *information* about how to be billed or gives *credit card information*. In return, he or she receives a ticket or a booking that confirms the details of the required travel, lodging and other services. Thus, in exchange for payment, the consumer receives yet again more *information*.

During the period leading up to the time when the product is actually consumed, consumers must be confident that the experience purchased will materialize and satisfy their expectations. We may therefore consider tourism to be a "confidence good".⁹ While the price and customer service during the booking procedure are important competitive factors, tourism producers and intermediaries are increasingly competing on the confidence inspired in the customer directly through the *quality of the information* they provide.

At delivery, the actual tourism product may have several components that are particularly *information-intensive*, such as learning about local history and interacting with local communities and culture. It is often assumed that providing this type of *information* is the focus of DMOs and NTOs. Finally, a tourism product may be judged successful if it is unforgettable for the consumer, in a positive sense, and in particular when the consumer shares the *memories and impressions* — again more information — with family and friends, thus promoting the particular tourism product and destination. Thus the circle of *information* flows is completed.

Table 13
Ranking by type of company

Rank	Company URLs surveyed per category	Type	Composite unique visitors (thousands)
1	50	On-line agents	23 482
2	45	Airlines	21 586
3	61	Resources/reviews	14 624
4	97	Hotels/resorts	13 446
5	174	Destinations	10 079
6	51	Hotel booking	7 475
7	61	Transport	5 196
8	44	Vacations	4 895
9	14	Rental cars	4 198
10	13	Cruise lines	1 781
11	10	Timeshares	1 624
12	6	Travel adventure	1 320
13	7	Bed & breakfast	857

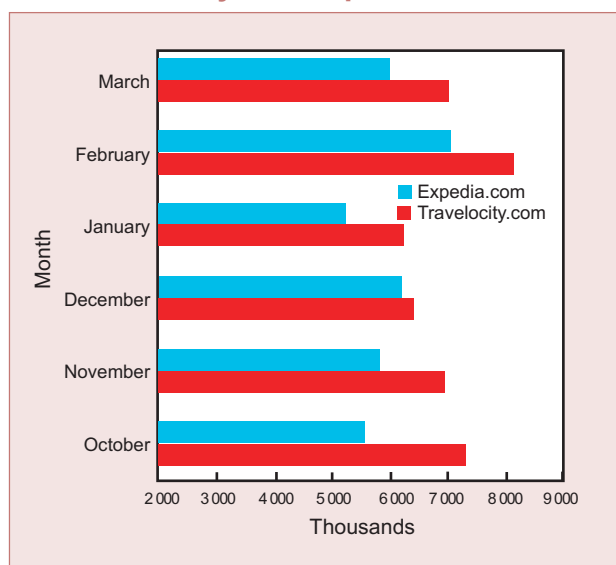
Source: Top9.com (February 2001).

Table 14
Ranking of on-line agents

Rank	Overall web rank	Company name	Unique visitors (thousands)
1	56	travelocity.com	8 155
2	71	expedia.com	7 052
3	443	cheaptickets.com	1 906
4	497	lowestfare.com	1 706
5	854	hotwire.com	1 093
6	873	trip.com	1 073
7	1 524	travel.com	673
8	1 751	onetravel.com	599
9	3 426	sidestep.com	315

Source: Top9.com (February 2001).

Chart 2
Unique visitors per month at Travelocity and Expedia websites



Source: Top9.com

The tourism industry is learning fast that the Internet can satisfy the acute need for information at all stages of the tourism product's life cycle far better than any other existing technology. The Internet and its inherent interactivity empowers people to find information quickly and precisely on any destination or activity that is arousing their interest. Consumers expect instant information and, increasingly, the possibility to design or customize the tourism product sought, and to pay for it on-line.

In response, the tourism industry has developed its on-line presence mostly following the traditional subcategories. Within each subcategory we can find businesses with varying levels of "click-to-brick ratios".¹⁰ The basic structure of the on-line industry is presented in tables 13 and 14 and chart 2.

The table and chart rankings are based on the number of unique visitors¹¹ a particular on-line tourism producer has had. Because many on-line companies also have offline high-street operations, using unique visitors to measure e-commerce activity can bring a more focused insight regarding the relative size of on-line activity. At first glance, it is obvious that the category of on-line agents is the most prominent representative of etourism.¹² Unsurprisingly, the large global airlines are close behind in second place. Reflecting consumers' great thirst for information, on-line information resources rank third, ahead of several accommodation categories and car rental.¹³ This is an indicator of the great challenge for DMOs in developing countries and will be discussed in section C of this chapter.

When we look at the category of on-line agents more closely, we find a very concentrated sector. Between themselves, Travelocity.com and Expedia.com capture about 65 per cent of unique visitors browsing the on-line agent category. The dominance of the two leading on-line agents may be explained by the resources made available to them during their initial period of set-up and market entry through their parent companies.¹⁴

The use of the Internet in developed countries for purchasing tourism products is increasing dramatically. Of the total e-commerce sales of \$64 billion in 1999, travel, transport and hotel reservations as a group represented the largest category of Internet transactions, accounting for 38.5 per cent of all on-line sales. The major part of these transactions originated and materialized in the United States.

Almost half of Americans have booked either airfare, hotel reservations or car rentals online during 2001, up from barely more than one-fourth in 2000. Twenty percent of business travelers say they have made online bookings, up from 16 percent in 2000.¹⁵ On-line sales in Europe are forecast to increase substantially. In 1999 only 0.1 per cent of the European travel market, worth GB£ 540 billion, was sold on-line and it is expected that Internet sales will have grown sixfold by 2002. For the United Kingdom it is estimated that by 2003, 30 per cent of flight-only bookings will be made on-line, as well as sales of 15 per cent of standard packaged holidays and 20 per cent of last minute and late packaged holidays.¹⁶

The changes which the tourism industry is experiencing present an opportunity for developing countries to improve their relative position in the interna-

tional market, provided that they empower themselves to approach their customers and business partners on the Internet and build confidence. It is certain that embracing digital communication and information technology is no longer an option, but a necessity.

The hard reality in the tourism industry today is that “if you are not online, you are not on sale”.¹⁷ Destinations and businesses eager to have an impact on the market must be online. Small or remote destinations and products with well-developed and innovative websites can now have “equal Internet access” to international markets. This implies equal access to telecom infrastructure and financial services, as well as to training and education. It is not the cost of being there, on the on-line market place, that must be reckoned with, but the cost of not being there.

Chart 3
Tourism before the Internet

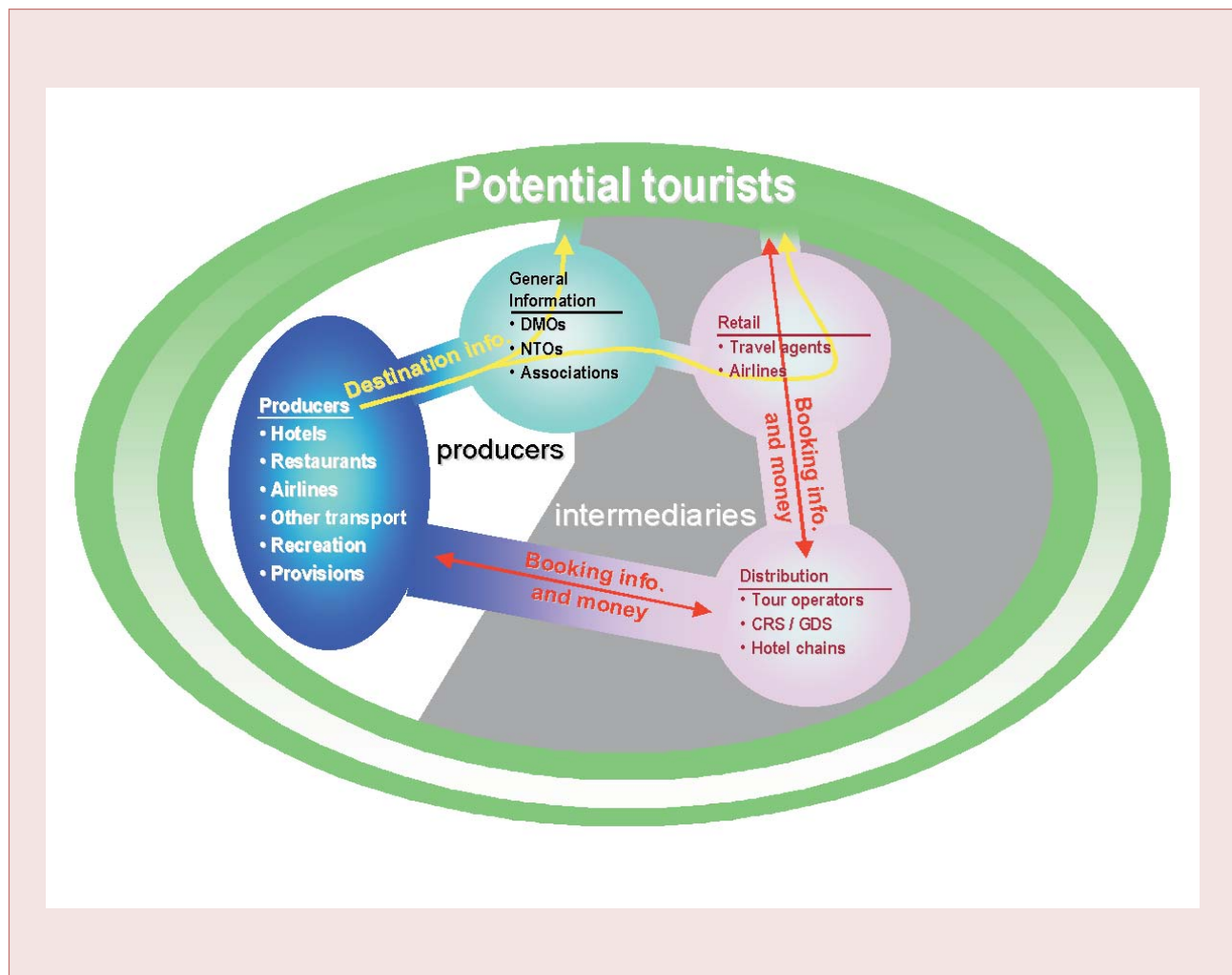
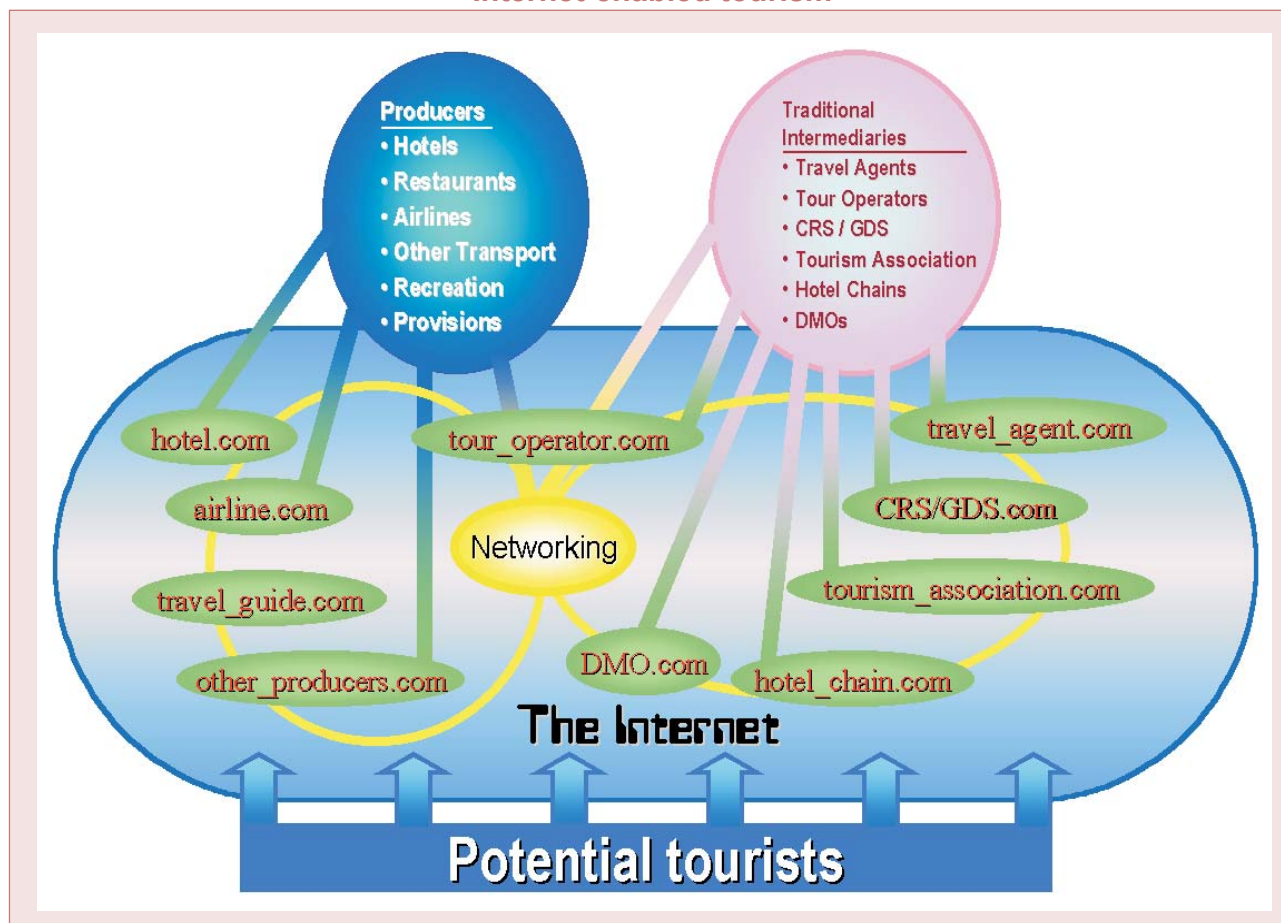


Chart 4
Internet-enabled tourism



Box 7
OpenTravel Alliance

The OpenTravel Alliance presents a strategy for the travel industry to take advantage of the near universal access to the Internet. Internet and related technologies can significantly affect the way the travel industry operates throughout the global economy. Industry representatives responsible for product distribution can now transform the travel industry into one large supermarket of products and services.

To use the Internet along with established channels, the industry needs a common standard for the communication of information. An industry standard provides a format for communicating data between travellers and travel-related businesses, as well as among the businesses themselves. This standard will encourage development of systems that can help create new collections of services to better meet the demands and expectations of travellers and the travel industry.

The OpenTravel Alliance will produce a standard capable of exploiting the low-cost, fast communications that have arrived with the Internet. When implemented, the standard will encourage the exchange of trip-centric information between all industry participants, regardless of how they are connected.

Although developing a standard may look like a purely technical exercise, it actually requires the active participation of the travel industry. Communication across multiple channels offers significant benefits, thus the travel industry needs a well-defined set of common data elements or vocabulary. An OpenTravel vocabulary can serve as a common language for travel-related terminology and a mechanism for promoting the seamless exchange of information across all travel industry segments. Organizations that already represent the industry, along with key suppliers from all travel segments, have started taking ownership of the concept of OpenTravel. The OpenTravel Alliance has established working groups and task teams, and begun a development process. This has produced a version 1.0 dealing with customer profiles, however, there is still much work to be done. When implemented, OpenTravel can:

- Embrace the backbone of communication protocols on the Internet and elsewhere;
- Include UN and proprietary electronic data interchange travel message sets;
- Extend the OTA standard to new uses as needed.

OpenTravel, the Extensible Markup Language (XML) and the Internet provide an opportunity for the travel industry to communicate across multi-channels. Individuals responsible for the supply and distribution of travel products and services are invited to lead this change by offering their organization's support for and involvement in the OpenTravel Alliance.

The OTA membership list can be obtained at <http://www.opentravel.org/opentravel/index.htm>.

3. Restructuring the industry

The change in the structure of the tourism industry can best be appreciated by comparing chart 4, depicting Internet-enabled tourism, with chart 3 representing its pre-Internet structure.

When one looks at chart 4, it is immediately obvious that the Internet enables all the traditional players to become infomediaries.¹⁸ Less obvious is the disappearance of the distinction between those intermediaries which only give destination information to travel agents and consumers, and those that both receive and give destination and booking information in all directions of the value chain and also receive, direct or forward payments.

This hierarchy of direction of information and payments is substantially disrupted with the advance of the Internet-enabled tourism industry. From the B2C¹⁹ angle, a tourist may now book on-line any combination of tourism services with or through any combination of producers and inter- or info-mediaries. The B2B²⁰ dimension of tourism increases significantly when individual producers and inter- or info-mediaries start linking their proprietary booking systems with one another. When networked, they can provide a much greater variety of tourism products.

This linkage of diverse tourism capacity, or networking, as it appears in chart 4, can be achieved using the Internet as an information conduit. Before the Internet, networking was done by concentrating the capacity of individual tourism producers with one of the GDS or CRS computer systems using a privately owned or leased electronic data transfer network. The GDS and CRS would then provide retail agencies with computer terminals through which the agents could query and book the available capacity (rooms, flights, rent-a-car, etc.). Having each developed their own hardware specifications, software and information transfer protocol, the GDS and CRS systems are not good at talking to each other. Producers with proprietary booking systems also find it difficult, if not impossible, to share booking information. A detailed discussion of the GDS and CRS systems from the B2B perspective is presented in chapter 4 of this report.

The Internet may be used to network global tourism capacity with as yet unseen scope and detail. While its reliability and security are sometimes questioned, the benefits of its outreach as a public network and

the relatively low cost of access far outweigh such perceived disadvantages.

The lack of broadly agreed data standards has, so far, impeded the development of online tourism. One industry initiative aiming at data interchange standardization is the OpenTravel Alliance (OTA).²¹ Box 7 outlines OTA activities.

The proposed OTA standard is based on the XML Internet meta- or markup language.²² XML enables the transfer of structured data. It consists of data definitions that can be embedded in the viewed website as needed and can be recognized by a software browser. These data definitions remain invisible to the viewer while the software browser “knows” what type of data it is handling. The actual data (e.g. flight number, date, type of vehicle) can then be presented coherently and exchanged in a more accessible and user-friendly manner using the public Internet. XML is licence-free and computer-platform-independent. It is important to note that working standards exist only when users embrace them, and not because any particular body or organization has decided to adopt or enforce them. On the other hand, the existing proprietary networks will not disappear overnight. The tourism industry will most probably witness the coexistence and assimilation of new XML/Internet systems and the old proprietary systems still being used by major GDSs and CRSs in an open network system.

Networked tourism businesses allow individual tourism companies to provide a much larger spectrum of tourism products to potential clients in addition to their core accommodation, travel or other products. This would empower the tourism business to act as a broker and agent, and possibly develop partnerships for referrals and commissions for business generated for third parties.

Making one's own reservation system accessible on the Internet may be technically more efficient in comparison with building a network together with existing systems offered by GDS operators or the new Internet-based infomediaries, as well as other tourism businesses in the locality or market segment. However, doing so defies the purpose of moving forward to websites that incorporate client profiling, personalized and dynamic information delivery and customer/enterprise relationship management. Knowing a customer's preferences, or enabling her or him to express a comprehensive and detailed prod-

uct preference is useless if the owner of the web page offers only his own limited product (e.g. accommodation only), through an “Internet-enabled” reservation system, and cannot offer products and services from other providers (e.g. travel, rent-a-car, sports activities). The demand for a “one-stop shop” offering a complex tourism product that follows a consumer-customized itinerary of, say, accommodation, travel, car rental and recreational activities will promote B2B relations in the sector.

Having established online booking as a normal operation, the challenge facing the travel industry is bringing online the “travel consultant”. The system producing the necessary consumer profiling and, most importantly, the relationship of confidence between consumers and the online automated virtual travel consultant must be of superior efficiency, if unavoidably less human than the relationship that a consumer would hope to develop with her or his travel agent.

With the majority of actors in the tourism market reinventing themselves as infomediaries it is not surprising that today there are more than 1,000 travel websites. However, some industry analysts expect this number to fall substantially, rather than increase, within the next three years.²³

Not all tourism companies will necessarily become on-line travel agents or Internet-enabled wholesalers or distributors. Some may decide to become destination portals. Others may re-emerge as travel markets, handling bids and offers from many buyers and sellers. Those with strong technical proficiencies may choose to provide technology for running and connecting on-line tourism businesses: e-platforms and e-switching and networking. Each company or organization should pursue a business model that takes advantage of its own competitive strengths.

4. The demise of the travel agent

Much attention has been given to the predicted demise of the travel agent. The travel agent traditionally worked in collaboration with the other players in the tourism distribution chain that used its monopoly on booking information and payment transfers to impose terms and conditions on both tourism producers and consumers which often left much to be desired. The Internet revolution threatens to demonopolize information flows and is doing away with information bottlenecks.

The first and most obvious bottleneck for the prospective tourism consumer is her or his physical “brick and mortar” high-street travel agent community. The traditional wisdom was that it is worth “shopping around” as no one agent had the best price or product for every particular destination or activity. Such activities are increasingly being considered a waste of time and a source of frustration, in particular when a purchase has been made on the basis of the good selling skills of an agent and later the consumer finds the same or a similar product for less. In addition, the actual “shopping experience” is usually relegated to browsing through a colour brochure while waiting in a queue for a “travel consultant” to finish with another customer. Thus, the high-street travel agency is losing its advantage in comparison with the on-line experience. The Internet has the power to provide a comprehensive offer on the shopper’s desktop, and consumers are more likely to take up the search for their perfect holiday from the comfort of their home or office, rather than visit and queue in high-street agencies. The agent’s advantage of having direct contact with clients is fading rapidly with the improvements in Internet bandwidth and interactivity. Finally, there is a physical limit to how many clients a physical travel consultant can service per day.

From within the distribution chain, travel agents are being bypassed by GDS operators who see economic gains in putting their system on-line and making it directly available to consumers, while saving the costs of commissions and fees paid to agents. The pre-Internet position of travel agents is unsustainable, and agents are exploring their own online strategies as well as possibilities for creating their own CRS and GDS systems. As agents are often too small to pursue global ambitions, one solution may lie in forming business associations of agents. An example of this approach is the United States Travel Agent Registry (USTAR), established in 1996.²⁴ USTAR brings together 700 travel agents and its main objective is to deploy Genesis, its own CRS system. The advantages for consumers would be that Genesis will offer better diversified travel and tourism experiences. USTAR has been expanding the Genesis concept outside its national market and has grown its network to include Canada, Europe, Australia, India and Mexico.

In order to succeed, future infomediaries must establish themselves as a credible brand with positive consumer recognition. Companies that have a physical presence in the market and an established

Box 8 Asiatravelmart.com

Asiatravelmart.com describes itself as "Asia's number one on-line travel marketplace". It is an Internet-based booking engine platform for travel buyers and sellers around the world to meet, interact and trade travel-related products and services via a secure Internet connection. The company plays a dual role as an operator of an Internet Travel Reservation System and as a clearing house for secure e-commerce payment. Individuals and corporate customers from around the world can interact with over 43,000 travel suppliers and travel agents from more than 200 countries providing over 110,000 wholesale products.

Asiatravelmart.com SES (Secure Electronic Settlement) processes real-time credit card transactions based on both Secure Sockets Layer (SSL) and Secure Electronic Transaction (SET) protocols. Its main purpose is to provide Asiatravelmart.com's global clients with cutting-edge, credit card transactions that are secure and are able to support multiple currencies. Asiatravelmart.com acts as a facilitator to collect payments from buyers on behalf of the suppliers. Asiatravelmart.com SES supports multi-currency transactions over the Internet in Malaysian ringgit, Singapore dollars, Hong Kong dollars, US dollars, pounds sterling, Australian dollars, and Japanese yen.

Asiatravelmart.com offers a spectrum of customized solutions in various versions:

- Internet booking engines
- Internet Payment Gateway (supports multi-currencies)
- Business Travel Management System (BTMS)
- ePartners Engine
- Wireless technologies

More information is available from the company's website: www.asiatravelmart.com.

Box 9 Kalakbayan Travel Systems

Kalakbayan Travel Systems Inc. (KTSI) has created Lakbay.Net, an Internet-based national travel reservation system that primarily aims to provide travellers with accurate Philippine travel information and easy-to-use reservation and payment facilities.

The core commitment is to provide sustainable infrastructure and service to the Filipino people and its travel and tourism industry and the development of Filipino communities through sustainable, grassroots tourism initiatives. KTSI aims to be customer-focused and responsive to the challenges of convenience, accessibility, service excellence, and social responsibility. The Lakbay.Net Internet travel site is KTSI's virtual travel agency. It offers:

- E-commerce enabling services for network members on-line reservation and payment system;
- Various tour package offerings as well as special interests tourism;
- Travel stories by fellow travellers - peer-to-peer communication;
- Destination marketing - a travel information service featuring provinces, cities and municipalities.

The Lakbay.net is based on a community-based approach combined with private sector initiative, with a close partnership with non-governmental organizations (NGOs), and local governmental organizations (LGUs) and central government, using appropriate and diverse technology. Its e-business model brings together the website for B2C commerce, a B2B portal for tourism producers, e-services for the business community, consisting of a booking system and e-payment facilities, and off-line marketing through a dedicated television channel, Lakbay TV.

business, generating sales and earnings, have a double advantage. They should be able to build an online brand identity on top of their offline brand and real-world operations where they physically come into contact with and have immediate feedback from customers. Furthermore, they are in a position to establish and finance their online brand identity in parallel with existing marketing and public relations activities and with funds generated from existing activities.

However, pre-Internet players also have important disadvantages. Often, they are encumbered by a costly network of physical shops and long-standing arrangements, with varying degrees of exclusivity, with producers and agents. Moreover, "technologically challenged" high street agencies and retailers in

developed countries often cannot provide comprehensive and detailed information on developing country destinations beyond distributing what is made available to them by the tourism industry wholesalers and distributors. Their knowledge of client habits and preferences is wasted if they cannot respond in an informed manner and provide more than clarifications on the content in the wholesaler's brochure.

Pure infomediaries, like many dot-com start-ups, initially may have to spend substantial funds on marketing campaigns designed to establish their brand from the ground up. Often sales and earnings do not provide enough funds and therefore they incur losses for what investors hope will be a limited time. The turnaround is supposed to happen when

revenues increase and marketing costs decrease to a sustainable level.²⁵

It is the ambition of every industry player embracing the Internet to become a dominant web point of entry, or “portal”, for prospective tourism consumers. While the quality of the B2C relationship is crucial, it is unattainable without a fully developed B2B network, since only through extensive partnerships with other tourism companies can the on-line tourism company, or “etourism.com”, offer a comprehensive but flexible and competitive product. For this reason it is very likely that the structure of the Internet-enabled tourism will not be static.

The inability to settle on a definite vision of the future is in itself a liberating feature that encourages entrepreneurial creativity and experimentation. Also, it does away with the common wisdom that all technical or managerial solutions must necessarily be imported from the developed world. Two different, yet equally interesting examples of possible directions to follow are *Asiatravelmart.com* and *Kalakbayan Travel Systems*. Their approaches are presented in boxes 8 and 9.

C. Destination organizations

1. Change, management and the Internet

Destination marketing organizations (DMOs), be they government bodies or business associations, can favourably contribute to modernizing the tourism industries of developing countries. It is imperative that the permanent advances in technology and best business practice be shared by all industry players across all categories and countries.²⁶

The role of the DMO, an organization dedicated to a single destination, is fundamentally different from the role of an intermediary without a destination focus or responsibility. This particularity has led many DMOs to realize that promoting environmental and cultural sustainability is vital for maintaining their destination’s touristic competitive edge. Thus, the term “marketing” seems no longer broad or suitable enough to describe the new responsibilities. The term “destination management organization” is often preferred as it speaks of a heightened level of accountability towards local communities and tourists alike. It also implies a realization that a destination’s resources are not inexhaustible and that they need to

be managed in order to maximize returns for both present and future generations.

The traditional DMOs are boards of tourism or tourism business associations. While many use the Internet to provide basic destination information, there is a general consensus that much more can be achieved given the existing technical possibilities of the web medium.²⁷ The usual explanation for under-performance is that the DMO’s clients, its local or national tourism industry, are not the actual paying tourists. This inherent dualism can make it difficult to measure the effects of DMO activities, namely increasing the number of arrivals and improving tourists’ perceptions of the quality of the tourism experience on offer and their willingness to pay accordingly.

A country’s tourism industry usually finances its DMO through taxes or budget contributions. In return, the DMO communicates its country’s touristic offer to the international market through various channels, including direct contact with the consumers, through physical offices in the world’s major capitals, brochures, film and television and through being present at tourism trade fairs and similar “live” activities as well as through the Internet.²⁸

An important objective of DMOs is to build a global brand for the destination and inspire credibility and trust among consumers. Providing information through a website is an attractive and convincing way to achieve this objective as the Internet is increasingly the information medium of choice for travellers worldwide. Dedicated travel portals and consumer communities and bulletin boards have become important sources of, what is assumed to be, unbiased and first-hand travel information.

The World Tourism Organization has focused a significant part of its activities on developing capacity with the local or national DMOs that would allow them to embrace Internet-based communications and e-commerce practice, assume a position of leadership and disseminate knowledge and best practice within their environment. Box 10 provides an outline of the approach used.

The structural changes in the tourism industry caused by the e-commerce revolution may encourage the appearance of a new type of private sector DMO. A tourism company may find it advantageous to broaden its on-line offer by including booking for other tour-

Box 10 Model of adaptation to new technologies in services

At each point on the pyramid is one of the three basic aspects of adaptation to the new technologies in services: training, acquisition and use. The "training in new technologies" aspect is at the top of the pyramid in order to underline its strategic importance in a knowledge-based society. The "acquisition of or access to the new technologies" and the "use or usage of the new technologies" aspects are at the base of the pyramid. The arrows connecting the different aspects illustrate how the relationships are organized. The pyramid is framed by four synonyms: "partnership, alliance, group, consortium" to illustrate the different types of associations in which more and more companies are evolving in the era of electronic commerce.

"Training" aspect

The term "training" is used here in a broad sense and also includes the activities aimed at increasing awareness, monitoring, and dissemination of the knowledge related to the new technologies. In a world in which the changes induced by the new technologies are constant, knowledge-acquisition and manpower-training activities occupy a strategic place in companies that want to remain competitive. Companies must at the same time integrate new qualified employees trained in educational institutions in the new technologies, as well as offer training programmes in the new technologies to the employees that they already have. Training and its related activities (e.g. awareness programmes, dissemination, technology watch), which are strategic aspects of a knowledge-based society, must be part of the companies' regular activities.

"Acquisition of new technologies" aspect

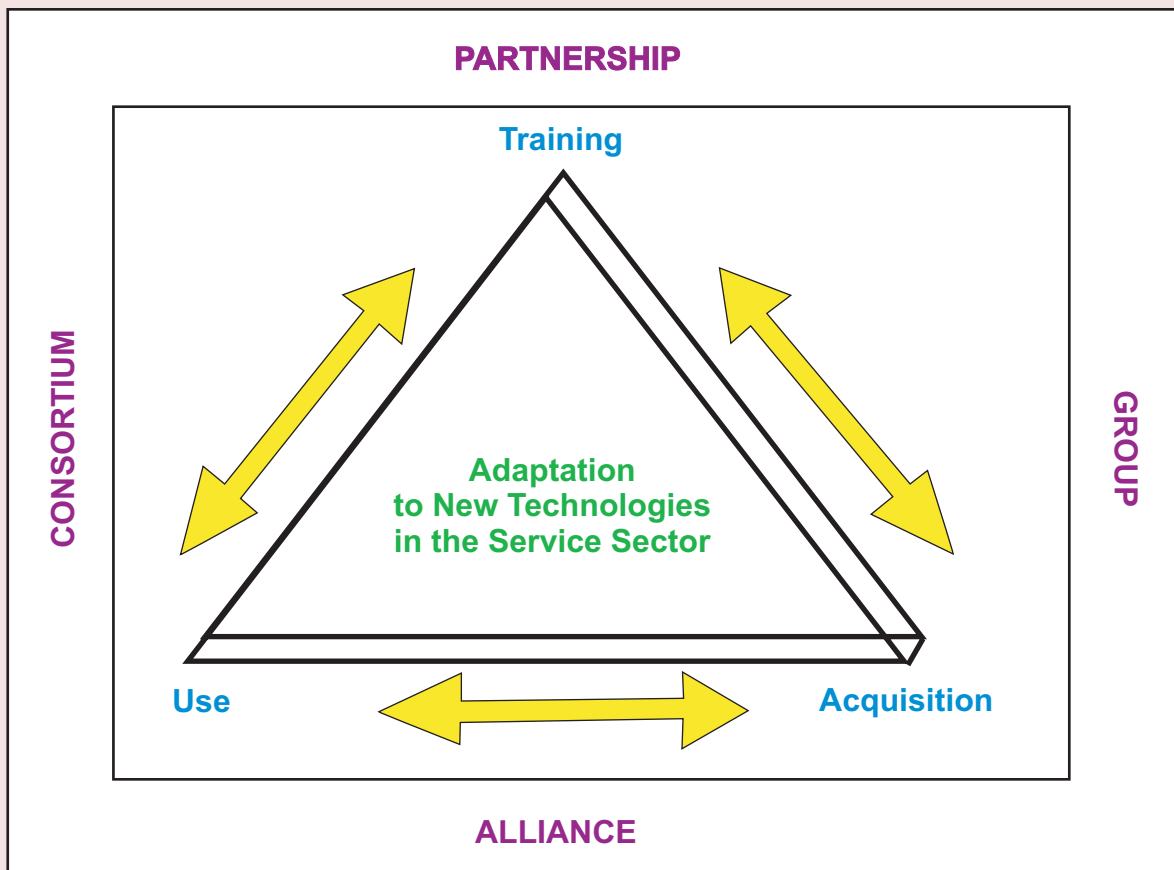
Another important facet of the adaptation pyramid involves the acquisition of new technologies. A number of questions can be asked in this regard. What portion of the budget must a company devote to the acquisition of new technologies? Which technologies really meet the company's needs? Which suppliers offer the best quality-to-price ratio for technological products and solutions? How often must the hardware be updated or replaced? Should generic technological products be purchased or should the products be custom-made? What are the advantages of being part of a group or a network that provides technological solutions? Such questions illustrate the problems involved in the acquisition of new technologies.

"Use of new technologies" aspect

The "use" aspect involves the uses that companies make of the new technologies. Specific technologies correspond to two main types of usage: technologies related to the company's internal operations (e.g. management, control) and those related to marketing activities (e.g. distribution, promotion, advertising, building customer loyalty). Internet-related technologies are considered the most strategic within the context of the new economy at the start of the twenty first century. It should be emphasized that tourism and travel products now rank first in purchases made by consumers over the Internet.

The pyramid of adaptation to new technologies illustrates the current trend in the companies in a given sector to join forces so that they can better face the challenges of the new economy.

Note: This model was designed by François Bédard, a special adviser in new technologies for the World Tourism Organization and a professor at the Université du Québec in Montreal.



Box 11 Tanzania-web.com

While not using state-of-the-art technology, the Tanzanian Tourist Board has set up a very friendly and informative website which is easy to navigate and can be rapidly updated. It is comprehensive on destination information and provides a link to the official web pages of the Government of the United Republic of Tanzania containing useful but not exclusively tourism information. An e-mail link and a chat room provide a degree of interactivity. What could be added in future versions is a frequently asked questions (FAQ) page as well as some weather information. The page on climate is accessible through the info page but not directly from the home page. Travellers are strongly recommended to use verified tour operators. Some are suggested, including several with offices in the United Kingdom. The website does not handle commercial transactions. It is hosted and administered by a London-based company.

Box 12 Jamaicatravel.com

The Jamaica Tourist Board website provides exhaustive destination information and links. In addition to links to local and international tourism companies, there is an abundance of information on events and activities, including exploration of local history, culture and nature. The FAQ page provides interesting material, although it tends to be very specific or geared to travellers from North America. Interaction with local communities is strongly encouraged and the Board runs a special "Meet the People" programme. The "visitor's forum" does not seem to be very frequented, the last posting being dated 25 April 2001, clearly not taking advantage of the possibilities of the medium. The website has two sets of navigation links on certain pages, which may be confusing. There is no indication of the host or administrator.

ism service providers. Its efforts to offer a comprehensive product will lead it to establish relationships with local tourism companies and promote and support their online capabilities. When its offer reaches a critical size and scope, it would practically become a DMO. As documented in table 14, the provision of destination information and reviews is the third largest generator of web page visitors in the on-line travel sector.

2. Internet leadership

Etourism presents a unique chance for traditional DMOs to promote their position in the global industry. In developing countries, their role is doubly important as they can assume a position of leadership in actively promoting the development of an Internet-enabled national tourism industry. DMOs are in a unique position because they can represent the national tourism potential with quality information that answers basic questions any visitor may have: how do I get there, where should I stay, what is there to do and how much will it cost? The Internet provides infinite possibilities for delivering exciting and entertaining information to consumers. Boxes 11 and 12 give examples of web pages from Tanzanian and Jamaican developing country DMOs.

Internet presence is no longer an option for any entity aspiring to be a DMO. Rather, it is an obligation and a question of determination to help develop and improve the national tourism industry that finally pays for the DMO's services. Destination, together with activity, is the first decision a potential tourist makes when looking for a suitable product online. If the DMO cannot produce "instant information gratification", another destination is only a few mouse clicks away. The opportunity to capture a client will be lost as web surfers are notoriously impatient.

The Internet enables the DMO to assume many of the functionalities of the new infomediaries already described. This is because they are, by definition, the focal point of a *de facto* business network. DMOs may spotlight the important domestic tourism companies, although this does not have to be a strict policy orientation, particularly since tourism is a multi-component export product that also contains value added from the broadest spectrum of destination tourism SMEs, non-tourism businesses and public utilities. The goal is to increase tourism revenues which may encompass more than just travel and

accommodation earnings. Therefore, the battle for tourist dollars may possibly take precedence over the battle on behalf of the dominant domestic tourism industry players.

The developing country DMO is ideally placed to encourage and help its tourism industry to go on-line and compete in the on-line market. It can help individual companies market their websites. It may develop its own e-commerce applications and should promote consistency across e-commerce platforms that would enable synergetic B2B relations and therefore joint marketing of products and capacity.²⁹ An often voiced ambition is that the DMO website should become the destination's portal for prospective tourists. This ambition further underlines the need for extensive B2B partnerships in the sector. A destination portal would have to provide links and information on all tourism products offered that are of a reasonable quality and standard.

The DMO can also represent the industry and, if necessary, promote legislative and economic reforms that would reduce costs and technical barriers associated with telecom and Internet service provider (ISP) services, and enable online payments and finance. Individual tourism businesses are often not in a strong bargaining position when negotiating terms and conditions with banks: DMOs can negotiate on behalf of their members to reduce on-line transaction costs and commissions.

DMOs themselves should adopt what is often called a "total Internet strategy"³⁰ and should help and encourage all tourism companies in their destination to do the same. It consists of a number of elements that are presented in no strict order:

- Define the objectives of online presence;
- Conduct a competition overview;
- Study the consumer, his or her travel and tourism needs, preferences in acquiring product information and payment habits;
- Develop co-marketing strategies with tourism companies and other DMOs;
- Introduce information technology in everyday back-office operations;
- Plan for flexibility in the online development budget;
- Define success criteria and measurements;
- Define technical and design criteria;

- Integrate existing proprietary/legacy systems;
- Develop human resources;
- Focus on product quality;
- Establish online partnerships with all players with maximum data and content interface;
- Provide special assistance to small- and medium-sized enterprises (SMEs) and indigenous suppliers;
- Plan for third- and fourth-generation websites.

Several of these elements are of critical importance to developing countries, and are discussed in more detail below.

Define technical and design criteria

An overwhelming choice and complexity, together with a slow download, often result in consumers permanently avoiding a particular website. In website development, the following key success factors may be considered:

1. Ensure that the message and content of the website are appropriate for its audience; the use of the native language of the tourist is a definite advantage in attracting interest in the destination; DMOs should consider setting up non-English versions of their websites in the native languages of the most numerous visitors;
2. Create a lively design which maintains consumers' interest throughout the website, and reflects the nature of the destination and the DMO's corporate or promotional style; visual appeal and a website full of memory-gobbling graphics are not necessarily the same thing;
3. Do not compromise performance in order to exploit multimedia features; consider having two versions of the website, one being more suitable for low-tech users;
4. Ensure that the functionality of the website meets business objectives, such as awareness raising, information provision and transaction processing; pay constant attention to new user requirements and customer expectations;
5. Ensure that the content is current and accurate and that third-party information published on the website maintains a similarly high standard; do not publish information that cannot be updated;
6. Test the site thoroughly before launching it.

The design criteria may be influenced by the profile of incoming tourists. Learning about their Internet browsing, financial and touristic habits and aspirations is necessary, but this cannot be accomplished exclusively through on-line market research. Interviews and surveys, done "by hand", with tourists and tourism companies (hotels, car rental companies, etc.) may often be necessary.

Focus on product quality

It is important for DMOs to promote investment in developing and enhancing the quality of the tourism product and infrastructure. Neither marketing nor the Internet alone will guarantee success. Technology does not eliminate the need for quality and standards, but increases it as products can be transparently compared. It cannot replace credibility, quality control, knowledge, customer experience and contact. A lack of roads, airports, accommodation, facilities, guides and, most importantly, connection with local life and communities cannot be overcome through software.

However, the use of information technology for processing travellers and their documentation at exit and entry points and the streamlining of administrative procedure can virtually increase infrastructure capacity in multiples, in terms of throughput of travellers. It may also be more cost-effective than building additional arrival halls at airports and employing more migration and customs officers. Points of entry are the first contact that travellers have with a receiving destination. The good and positive experience of efficiency, or the lengthy discomfort of administrative procedures, necessarily becomes part of the destination experience and is an important element for judging product quality. Improving traveller throughput requires that the computers of DMOs, private sector tourism companies and various government offices are on a common network and run a software platform. Existing software solutions are increasingly turning to the XML standards and to the Internet.³¹

SMEs and indigenous enterprises

DMOs should promote and encourage small hotels and resorts to have websites with secure e-commerce capabilities. Funding may be provided for Internet training and technical workshops. The lack of third-party local websites is a major discouraging factor for expanding DMO Internet activities and leadership.

E-commerce allows DMOs and local communities to communicate better and more directly with their clients with the aim of putting into practice full costing for the tourism services provided, including environmental and cultural depreciation and maintenance.

E-commerce legislation must be in place to protect consumers from fraud. A lack of trust is the main reason why many consumers are hesitant to buy goods and services on-line. International tour operators inspire consumer confidence by their mere size and physical presence in the tourist's high street. SMEs, by definition, are not global players and legislation for consumer protection must therefore be in place so that tourists do not shy away. Arbitration of conflicts and appropriation of remedies should be swift and efficient. The DMO website should inform consumers about legal details and direct them to the responsible government authorities if they need further clarification.

Plan for third and fourth generation websites

Vital marketing information about consumers can be collected passively while they are on-line, indicating, for instance, how many times a person visited a certain webpage, how long they spent viewing the information, etc., or by motivating them to volunteer information by filling in forms or querying a database. This information is then used to identify and communicate with travellers and explore their preferences for specific destinations and product niches. This in turn enables DMOs to track information on who buys what, goes where, how often and for how long.

Third-generation Internet sites allow for client profiling based on monitoring browsing activity. They can then produce dynamic and personalized content for the visitor. Fourth-generation sites incorporate active customer relationship management, and rely on a more extensive knowledge of the customers' professional or private needs, habits and lifestyles. It is, however, uncertain how far customers will want to go in giving such detailed information as fourth-generation websites are still uncommon.

In order to develop and nurture a one-to-one relationship with customers it is advantageous to communicate by e-mail wherever possible, as it is personal and immediate, but less intrusive than the telephone. Database-filtering tools may be used to

ensure that proactive mail shots have a personal feel. Competitions, auctions, chat rooms, feedback forms and quizzes may be organized to encourage customers to tell more about themselves.

A first and fundamental step in moving to a third-generation website is to provide fast and accurate response to e-mail queries from prospecting customers. Monitoring and categorizing these queries will quickly provide the backbone for a useful FAQ page. Existing FAQs, set up in advance of a website going live, should be revised taking into account the substance of the first batch of e-mail queries.

3. Marketing

Website marketing is needed because merely having a website does not guarantee business. Having a website is like being listed in the Yellow Pages. The site still has to be promoted whether on billboards, in magazines, in the press, on television or at trade fairs.

Given the significant resources needed to advertise a website in the off-line media, DMOs, in particular from developing countries, may consider establishing regional and subregional portals that could be marketed jointly and that would direct Internet traffic towards their own websites. Private sector tourism companies should provide finance for such portals if these can improve sales.

A website should have clear and distinct strategies for micro- and macro-marketing. Micro-marketing, or marketing targeted at one particular person or client, is made possible with the Internet and its ability to provide interactive and customized messages to its users. The FAQ and e-mail response system described above are starting points.

Macro-marketing starts with choosing and promoting the website's name or its uniform resources locator (URL) (e.g. www.unctad.org). Provided that the chosen URL has an aural and verbal appeal, using a non-Internet medium for promotion may be worthwhile. Developing good relations with the NGO community and the Government can bring rewards.³² An exchange of banners and links with other sites could also be beneficial.

Websites should also be listed with as many relevant search engines as possible so that they can be easily

found when travellers are searching for information on-line. Getting listed usually requires an on-line submission of the website URL to a search engine (Yahoo, Alta Vista, HotBot, Excite, etc.). From the date of submission, it can take two or more months for the website to be included in the search engine's database and start appearing on query results. The registration service is often free of charge. However, if a website owner wishes to pay a fee, his or her URL can be listed within one or two weeks.³³ Registering with several search engines with one submission is another fee-based service.

A major concern has been how high a ranking a website can achieve on a given query or search. Attaining a high ranking requires a knowledge of how one's website is entered in a search engine's database and how the actual database is catalogued and indexed. Some search engines do manual reviews of websites submitted for listing, while others have automated this process. Several search engines require a submission of keywords along with the URL name, while others use the hidden text embedded in the page by the website owner ("meta-text") to generate searchable keywords, while still others ignore meta-text altogether and search for keywords within the visible text on the website itself. The choice of keywords by the search engine is also a process that can be manual or automated. The information most likely to be included in the keyword search is the website's full name and the contact information on the "home" or "index" page: the first page that opens when keying in the URL.

All search engines reserve the right to refuse inclusion as they are privately owned and are not a public service. The website owner should be informed of the different procedures and techniques for getting listed and attaining a high ranking for each and every search engine. Sufficient time and resources should be allocated to registering the website. If this not done properly, the investments in graphic design, functionality and offline marketing may not bring expected the returns. However, even the most pedantic registration cannot replace offline marketing.

D. Directions for action

The order of presentation should not be regarded as prejudging the importance of the conclusions outlined below. While there is an attempt at comprehensiveness, the speed of new developments and the

competitiveness of the tourism sector will inevitably raise new issues and produce new modalities in the relationship between the new and old tourism industries that can only be guessed at. At present, the need for some practical recommendations supersedes the temptation to make futuristic predictions.

The particular role which DMOs can play is described, where relevant, within the particular conclusions. Because action and policy need to be implemented often by both government and businesses, and their associations, it is better to focus on what needs to be done, rather than on who should do it. Each and every developing country may find that it needs a different mix of participants to bring its tourism ambitions to fruition.

1. Improve competitiveness

Tourism producers and destination organizations in developing countries that adopt the Internet and e-commerce best practice have a chance to improve their competitiveness. There is, however, no unique recipe or formula for doing so. Competitiveness can be improved by producing better products, with greater tailoring to clients, more efficiently, faster to market with less waste and fewer inputs, and at better prices. A fundamental role of DMOs is to better the quality of destination information. Such improvements enhance the competitiveness of many, if not all, tourism producers in that destination.

2. Adopt appropriate technology

Infomediaries in developing countries should develop their e-business strategy having in mind the technical capacities of their national or regional tourism producers for using Internet technologies. Solutions must be appropriate for both consumers and producers. Technology adoption may be incremental. A producer may start with an "e-mail only with next day booking confirmation" system and work up to full on-line booking and payment. A third and fourth generation web presence may follow after the previous mode of operation has been mastered. If the confidence and resources are there, a tourism producer may wish to leapfrog several development phases. The national or regional DMOs and government offices should support the ambitions of such businesses and promote best practice.

It will rarely be possible to achieve a homogeneous e-commerce approach for a national tourism industry

and all its players. Therefore, a diverse appropriate technology strategy is preferable to forcing “cutting edge” solutions. Broadband and wireless technologies of the “third generation” (3G) with sufficient bandwidth for Internet-based data transfer will soon be available. Devising a technology strategy should not necessarily consider existing fixed-line or terrestrial ISP and telecommunications capacity to be a permanently limiting factor.

3. Interface the traditional with the new economy

Early in this chapter we observed that tourism is an information-heavy product and thus suitable for treatment with information technology tools. The fundamental challenge is to take the traditional tourism product, delineate its information from its physical components, and selectively manage them using Internet and e-commerce technologies — without losing sight of the overall short- and long-term objectives of building competitiveness and sustainability.

4. Build the business web

The winner in the competitive tourism game will be the company or DMO that inspires consumer confidence, through quality data and physical product performance, and is able to offer a comprehensive yet tailor-made product. In the pre-Internet but recent past, providing a comprehensive tourism product meant integrating the different components of travel, accommodation, recreation, and so forth, within one business entity or structure, often with an almost complete reduction in tailoring flexibility. Internet-based information systems and e-commerce do away with this by allowing diverse producers to jointly offer their products and capacity without entering into structured and rigid hierarchical relationships and losing control over their capacity. The tourism business web may eventually take the place of the tourism wholesalers and distributors as the industry locus. This would be in line with the general consensus that B2B e-commerce, embodied in the business web concept, will be the dominant form of commercial Internet use for the foreseeable future.

Assisting the development of tourism business webs may become a priority activity for DMOs. Because of the great technological challenge and lethargic entrenchment in the disappearing pre-Internet verti-

cal market structure, the development of local, national or regional tourism business webs or portals may need to be kick-started by DMOs, often in cooperation with international organizations active in this field. Among themselves, DMOs need to establish substantive cooperation, in particular to profit from one another’s detailed knowledge of outgoing tourists’ linguistic, touristic and Internet requirements and habits.

5. Know your customers, speak their language

When caught up in marketing campaigns and while negotiating and contracting capacity with distributors, tourism producers can easily lose sight of the need to closely interact with consumers and listen and learn about their needs, and to use this in refining and improving what is on offer. While Internet and e-commerce technologies offer unprecedented possibilities for interactivity and dialogue, traditional surveying and gauging tools estimating customer preferences and satisfaction are still very relevant. Footwork and face-to-face interviewing may be a necessary starting point for building a B2B network or business web. Market research, whatever the technology or even without technology, is a hugely important activity.

A fundamental factor for success is to speak the language of the prospective customers. A successful tourism strategy must assess the linguistic origins of its major client groups and replicate Internet content in their languages. Keeping in mind that tourism is to a great extent a retail business, English-only content will not satisfy, say, German or Japanese clients. But speaking the clients’ language is not just a linguistic matter: it may also mean understanding their Internet habits and ways of learning, openness to on-line dialogue and attitudes towards privacy, as well as the underlying legal system. Data privacy and other legal implications are discussed in detail in chapter 6 which is devoted to legal and regulatory developments in electronic commerce.

Developing country DMOs, in cooperation with the DMOs of tourists’ countries of origin, may be well placed to acquire and disseminate knowledge about how their tourism industry should adapt their Internet, as well as offline, client interaction in order to maximize competitiveness.

6. Provide clients with on-line payment possibilities

On-line payment facilities for retail clients using credit cards are an absolutely fundamental business tool that must be made available to the national tourism sector. The lack of such possibilities encourages tourism businesses to move their accounting and profit centres off-shore or to financially more advanced destinations. This results in leaving only the physical production of tourism services at the destination and thus decreases employment, reduces foreign currency inflows and encourages transfer pricing.

A lack of on-line payment facilities does not motivate developing country tourism producers to reduce their involvement with global distributors and take charge of marketing and selling their capacity themselves. While criticism of global distributors for unfair trade practices is not uncommon, providing on-line payment facilities for domestic tourism businesses must follow if such criticism is to be taken seriously.

DMOs can provide a voice to the fragmented industry producers in promoting their requests to the financial authorities and banks to provide them with on-line payment. When on-line payment is in place DMOs may, on behalf of the entire tourism industry, negotiate with domestic banks better terms and conditions for on-line payment than particular tourism companies would manage on their own. DMOs may be instrumental in informing their tourism industry about secure transactions and risk management techniques.

7. Enable tourism through training and education

Most of the above actions cannot be implemented without empowering and enabling people to take advantage of new Internet and e-commerce technologies. The quality of information provided and how

it is structured depend, fundamentally, on the skills of tourism professionals in the particular destinations. The harvesting, analysis and interpretation of information about clients and their tourism wishes and habits, and its use to improve competitiveness also constitute a human effort.

E-commerce and Internet technology can improve communication and can make doing business easier. The ability of people at both ends of the message or transaction to use these technologies is a precondition for their wide adoption and impact. Persons and institutions in developed countries have had a head start in exploiting the newfound possibilities. Their counterparts in developing countries, and in particular in the tourism sector, may well appreciate the active involvement of an institution such as a DMO to kick-start or accelerate this process at the level of human resources development, training and education.

8. General government policy

The type of national information technology and telecom policy which a government wishes to pursue is a policy decision that typically takes into account national interests and commitments in multilateral trade negotiations. Maintaining certain restrictions on financial institutions and tourism producers (and not only on them), for the sake of stability and possibly at the expense of growth, is also a policy decision. Changing commercial legislation to promote healthy electronic commerce practice and to bolster consumer confidence is another policy issue and is subject to government decision as to its nature and extent. Finally, the level of leadership which national tourism boards and tourism business associations will exercise in embracing the digital age is also subject to decision. The scope for positive government influence is large and proactive decision-making will certainly help maintain, if not improve, a country's competitive advantage in the tourism industry.

Notes

- 1 <http://www.emarketer.com/>, “eTravel report cites estimates from 30 research organizations and studies”, 4 April 2001; C. H. Marcussen, “Trends in European Internet distribution of travel and tourism services”, <http://www.rcb.dk/uk/staff/chm/trends.htm>: All figures are estimates.
- 2 In anticipation of possible developments and in view of the timely need for policy debate and direction, the UNCTAD Expert Meeting on Electronic Commerce and Tourism was held in Geneva from 18 to 20 September 2000. It discussed the changes which the international tourism industry is experiencing by adopting the Internet as a business and economic medium. It analysed the change in the structure of intermediation, the breakdown of the traditional value chain and the opportunity given to destination marketing and management organizations. In its recommendations, attached as an annex to this chapter, the Expert Meeting proposed a number of elements for supporting the development of e-tourism.
- 3 World Tourism Organization, “Tourism market trends”, Madrid, 2001.
- 4 World Travel and Tourism Council, “Travel and tourism’s economic impact”, Madrid, March 1999.
- 5 The Hong Kong Special Administrative Region (SAR) of China generated more than USD 10 billion in tourism revenues in 1999.
- 6 World Tourism Organization, “Tourism Market Trends”, Madrid, 2001.
- 7 A detailed discussion of the economic relevance of tourism may be found in the UNCTAD publication “International trade in tourism related services: Issues and options for developing countries”, TD/B/COM.1/EM.6/2, 8 April 1998.
- 8 Sometimes information can be first-hand. However, if information turns into a sense of familiarity, this seriously decreases the perceived value of the tourist destination because its primary quality may be its uniqueness and difference from the consumer’s everyday environment or experiences. Familiarity erodes this quality.
- 9 H. Werthner and S. Klein, “ICT and the changing landscape of global tourism distribution”, *Electronic Markets*, 1999, Vol. 9, no.4.
- 10 The “click-to-brick” ratio represents the proportion of orders generated online. Payment and physical delivery may be offline, however.
- 11 Unique visitors are counted using their unique Internet protocol address, as assigned by their Internet service provider. They are counted only once during a predetermined period (e.g. unique visitors per month or unique visitors per year), no matter how many times they visit the website throughout this period. Software that tracks and counts how many people have viewed a website can distinguish between visitors who visit the site only once and those who repeatedly return to the it. This is different from “hits” which indicate the number of requests for web pages from a website.
- 12 The category “on-line agents” refers to online only or Internet pure-play tourism agencies that do not own significant physical production capacities such as high-street retail outlets.
- 13 This category relates to websites that process few or no commercial transactions but serve as destination guides and destination information centres. They may consequently provide links and refer tourists to businesses that provide accommodation, travel and other services related to a particular destination and generate their own earnings in this way. In some cases they may qualify as DMOs, provided that their level of commitment is high and they promote sustainable destination management practice.
- 14 Sabre Holdings Corporation and USA Networks are the respective parent companies. Travelocity.com is a wholly owned subsidiary of Sabre, while USA Networks owns 75 per cent of Expedia.com. Sabre is a global leader in electronic travel distribution. USA Networks is a major cable television operator. For more information see <http://biz.yahoo.com/p/t/tsg.html>, <http://biz.yahoo.com/p/t/tvly.html> and <http://biz.yahoo.com/p/e/expe.html>.
- 15 <http://www.thestandard.com/>, “The net - more U.S. travelers don’t leave home without it”, 12 June 2001.
- 16 Genesys-The Travel Technology Consultancy, “The Battle of Brand” , *Travel Trade Gazette*, <http://www.genesys-consulting.com/ttg/article000425.htm>
- 17 World Tourism Organization, “Marketing tourism destinations online”, Madrid, 1999, pg. 4.
- 18 For a more detailed discussion on disintermediation in e-commerce, and the growing role of infomediaries, see “Building confidence: Electronic commerce and development”, UNCTAD/SDTE/Misc.11, United Nations publication, Sales No.E.0011D.16, 2000.
- 19 The expressions “B2C”, “B2B” and “B2G” mean respectively to “business-to-consumers”, “business-to-business” and “business-to-government”, which are the three major forms of e-commerce. For a more detailed explanation, see “Building confidence” (note 18).

- 20 Ibid.
- 21 <http://www.opentravel.org/opentravel/index.htm>
- 22 <http://www.w3.org/XML/1999/XML-in-10-points>
- 23 <http://www.wired.com/news/ebiz/>, “T2: Budding travel monopoly?”, 8 June 2000.
24. United States Travel Agent Registry, <http://www.genesistds.com>
- 25 Genesys - The Travel Technology Consultancy, “Online travel entrepreneurs” in Travel Trade Gazette, <http://www.genesys-consulting.com/ttg/article000228.htm>
- 26 The role of government or national institutions in creating an enabling environment has been dealt with in some detail in the UNCTAD publication “Building confidence” (see note 18).
- 27 A good overview can be had by going to <http://www.towd.com>, a portal that provides links to many DMO websites.
- 28 <http://www.towd.com> provides an exhaustive search of on-line and presence and contact details of most DMOs worldwide.
- 29 The Tourism Authority of Thailand has developed a “do-it-yourself” e-commerce kit for its members that allows a tourism company to create, on the basis of templates, an internet storefront, an on-line catalogue, an on-line reservation system, real-time secure payment, order tracking and an intelligent search system. UNCTAD, in its efforts to bring more least developed country DMOs online, has developed a Model Tourism Portal and a corresponding training programme in order to bring about local empowerment and ownership of web content, as well as sustainable and best practice website management and administration.
- 30 A total Internet strategy is often defined as using the web to unite and integrate in one’s own website and previously disjointed applications such as e-mail, databases, third-party web content and payment transactions. The Internet becomes the top-level application providing a seamless fulfilment of client demands.
- 31 SITA (<http://www.sita.org>) is an e-commerce travel industry association that has developed several IT solutions for handling passengers and their documentation.
- 32 Kalakbayan Travel Systems Inc. (www.lakbay.net) has a dedicated travel channel on cable television which it uses to inform consumers and “push” them towards the Internet for more information and for bookings.
- 33 This is true at the time of writing but may vary considerably, with the registration delays likely to increase in the future because of the ever-growing number of applications for registration. Payment may also be required for for-profit entities in the business listings categories of the search engines’ databases.

Annex

Recommendations of the UNCTAD Expert Meeting on Electronic Commerce and Tourism, Geneva, 18 - 20 September 2000

*(Adopted by the Expert Meeting at its closing plenary meeting on 20 September 2000,
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1. Individual experts expressed their views on policies and strategies to be adopted by developing countries in order to increase their participation in electronic commerce in tourism and on the possible role of UNCTAI) and other international organizations in realizing the development benefits of those policies and strategies. The following is a summary of recommendations made by various experts. Not all the views were necessarily shared by all the experts; consequently, the summary reflects a wide diversity of views.

A. Recommendations to Governments and enterprises

2. Solutions for e-commerce in tourism should also address broader issues of electronic commerce in general, and their effects and benefits for development.
3. Ensure that tourism is considered alongside an appropriate multisectoral strategy for improved Internet access and telecommunications infrastructure, and use this strategy to influence investment in telecommunications.
4. Liberalize telecommunications and Internet services in order to attract new investment, reduce prices and improve the quality of service.
5. Create and continually update local content on the Internet in local languages and languages of the most important tourism consumers in order to provide information and databases on tourism experiences and attractions and general information about destinations.
6. Review available research, and conduct additional research when necessary, on e-commerce in tourism in order to provide information on market trends, consumer needs, website use, demographic profiles and the impact of non-availability of online payments and other information that may support the development of a sustainable tourism industry.
7. Implement appropriate mechanisms in developing countries for the safer use of electronic payments in tourism transactions at the local, regional and global levels.
8. Promote tourism that is sustainable in a social, cultural, environmental and economic sense. To this end, develop partnerships and links among all parties in the tourism supply chain, including government, destination management organizations (DMOs), local tourism service providers, travel agents and other intermediaries, global distribution systems (GDSs), travel portals and the information and communication technology (ICT) sector, as well as the local community and foreign suppliers.
9. Integrate new tourism channels into traditional and non-traditional distribution channels and foster the development of special-interest tourism websites, for example for eco-tourism and cultural tourism. These channels could be supported by the development of a common product database to share development costs and provide impartial information.
10. Develop a national vision, plans and policy guidelines on tourism and involve industry players and local communities in developing tourism strategies and products within the context of overall tourism marketing and development strategies.
11. Establish appropriate laws and regulations and service standards in order to build trust and consumer confidence and to ensure privacy and the protection of consumers and intellectual property rights. Also, cooperate in setting up an international framework to protect travellers conducting transactions on the Internet.
12. Call upon Governments to make joint efforts to ascertain whether the international e-tourism market is working in a way that does not promote unfair or anti-competitive practices which constitute barriers to the tourist industry for developing countries.
13. DMOs at all levels should be strengthened in order to be in a better position to coordinate the relevant public and private actors and thus be enabled to play a broader role. They will be essential for positioning developing countries

to be able to take advantage of new ICTs. In order to be effective, DMOs have to be representative of relevant stakeholders at the local level, institutionally established and provided with the necessary human, financial and logistical resources. Ultimately, this could allow developing countries to benefit from vertical cooperation and integration.

14. With respect to e-commerce, DMOs should play a broader role. They should promote destination markets in key tourism portals, search engines and gateways and also list destinations under as many links as possible so that descriptors are not limited to, for example, tourism or names of the country alone.
15. Build and enhance destination brand image in order to improve consumer awareness and confidence, and reflect this in any web strategy.
16. Develop capacity building through training and basic education in relevant fields, for example informatics and telecommunications, and conduct awareness campaigns about e-tourism.
17. Governments and donor agencies should stimulate activities in e-commerce through grants, tax incentives, special credit lines and other seed funding arrangements, and empower DMOs with technology and financial resources.
18. Online transactions must be combined with the development of physical tourist attractions, satisfactory product fulfilment and supply of support services, such as banking, insurance, transport and customs. Since not all suppliers will be ready for online transactions, destination strategy should include offline transactions support, local call centres and use of local knowledge.
19. Traditional travel agents and other intermediaries should transform themselves by adopting new information technologies and enhancing their expertise and creativity, so as to improve their efficiency and ensure their continuity.

B. Recommendations to UNCTAD

20. In cooperation with other appropriate bodies UNCTAD should:
21. Analyse the effect that tourism-related e-commerce has had or will have on development, and development policies. The objectives of this analysis should include identification of positive, negative or indifferent effects, as well as their causes, and formulation of recommendations for maximizing the development benefits of e-commerce.
22. Disseminate information to developing countries on approaches and elements of government policies on e-tourism, taking into account successful experiences in the developing and developed countries.
23. Give priority attention and support to the development of sustainable e-tourism in developing countries.
24. Stimulate exchanges of experiences among Governments and tourism enterprises of developing countries on the one hand, and Governments and enterprises of other countries on the other hand, and disseminate to developing countries information on experiences in e-tourism through website and periodic publications, inter-organizational cooperation, etc.
25. Signpost and carry out case studies and analysis of e-commerce in tourism, including problems of online payments, trust-building issues such as encryption and electronic certificates or signatures, and new technologies such as interactive television and cellphones that can support e-commerce; and collaborate with tourism research centres and academic institutions in order to promote capacity building and knowledge in e-tourism in developing countries.
26. Encourage the adoption of open data standards, e-signatures and new Internet developments (e.g. new top-level domains such as geo) where these would assist in opening up the e-tourism market place, taking into account in particular the development dimensions, of the sector; and ensure that e-commerce serves equitably the needs of developed and developing nations, and can contribute to social and environmental accountability within the tourism industry.
27. Promote exchanges on how to increase the effectiveness of DMOs.
28. Suggest possible arrangements for UNCTAD to act as an incubator for e-commerce and small and medium-sized e-tourism enterprises through appropriate United Nations programmes.
29. Examine ways to promote the visibility of tourism portals in developing countries and possible arrangements for the establishment of a global, central tourism portal for the benefit of developing countries.
30. Assist in the promotion of partnerships between DMOs in developing countries on the one hand, and intermediaries and origin country DMOs on the other hand, and encourage joint marketing within DMOs in developing countries.
31. Develop capacity building through training and basic education in relevant fields, for example informatics and telecommunications, and conduct awareness campaigns about e-tourism.

Chapter 4

BUSINESS-TO-BUSINESS ELECTRONIC MARKETPLACES: THEIR NATURE, IMPACT AND PROSPECTS IN DEVELOPING COUNTRIES

A. Introduction

This chapter examines business-to-business (B2B) electronic commerce.¹ In the last few years B2B transactions have witnessed a rapid growth in various types of market places (e-markets)² in which large numbers of buyers and sellers are connected to form online trading communities in order to exchange goods, services and information. The chapter provides an overview of the nature of and ongoing changes in e-markets, their economic impact and prospects for their growth in developing countries.

Some published sources show that Internet-based B2B e-marketplaces are becoming a dominant force in overall B2B e-commerce. It is predicted, for example, that by 2004 e-markets will be the single largest component of B2B e-commerce. Forrester Research, for instance, predicts that e-markets will account for 45 to 77 per cent of B2B e-commerce supply chains by 2004, while International Data Corporation (IDC) predicts that in 2004 e-markets will represent 56 per cent of all B2B e-commerce.³

The rapid growth of e-markets is attributed in part to technological developments that provide applications that can power e-market transactions, but more importantly it arises from the benefits that can accrue to sellers and buyers. Current trends show a number of important features that are emerging in e-markets. These include the growth of consolidations and a preference among large enterprises for using private e-markets as opposed to public or independent or third-party e-markets. Also, e-markets are increasingly being seen as a framework for promoting collaboration among trading partners across the entire supply chain.

Available data show that the bulk of e-market transactions take place in the United States, although there

is a sizeable expansion of B2B e-market activity in Europe and to a lesser extent in the Asia-Pacific region. As a result, most of the published case studies and data relate to experiences of United States firms.⁴ While the United States environment is significantly different from that of the majority of developing countries, it is nevertheless expected to provide a fair indication of the opportunities available, and the challenges faced by the developing countries.

B. The main features of B2B e-markets

B2B e-markets are a fast-growing component of e-commerce and are introducing a variety of new features and business models. This section outlines the major elements of those market places and how they compare with other forms of e-commerce.

1. Comparison with B2C e-commerce

There are a number of important differences between B2B and B2C e-commerce. The main comparisons between them are summarized in table 15. It is evident that the characteristics of B2B e-markets are considerably different from those of B2C e-commerce. Despite the existence of fundamental differences between the two, there are also important areas of convergence. This applies to the similarity of transactions for certain products or services and the existence of linkages between B2B and B2C transactions in the supply chain.

As regards products and services, certain transactions in B2B and B2C are not easily distinguishable. Good examples include online purchases of airline tickets, books and software. These tend to be purchased in small quantities and perhaps at similar prices both for businesses and consumers.

Table 15
Comparison between B2B e-markets and B2C e-commerce

Market characteristic	B2B e-markets	B2C e-commerce
Value/size of transactions	Very large value	Relatively small, including mini orders
Buyer-seller relationship	Usually long-term, based on contracts; personal, non-price factors important to buyer; market may be seller- or buyer-driven; integration between market place and traders' and third-party back-end systems	Mostly short-term and spot sales; transactions between strangers, price being the main consideration for the buyer; market predominantly buyer-driven; no integration with buyers' systems.
Participants	Many participants interacting in a given transaction - networks of suppliers; partners and buyers.	Many consumers dealing directly with single sellers (one supplier, many customers);
Functionality requirements	High degree of functionality required; factors other than price information essential	Less functionality required beyond price information
Pricing	Negotiated prices, long-term contracts, auctions, catalogue prices	Fixed prices, mainly catalogue
Payment system	Credit cards, bank credit, electronic account-to-account payments	Credit cards, electronic account-to-account payments
Order fulfilment	Stringent requirements regarding availability of products and particulars of fulfillment; global express deliveries	Fulfillment requirements more flexible and less stringent, global express deliveries
Infrastructure requirements	More complex, customized	Minimum requirement – a browser with Internet access
Entry conditions	Cost of technology and economies of scale may create entry barriers, especially for sellers	No major entry barriers
Network effects	Beneficial to both sellers and buyers	Beneficial to sellers and less to buyers
Intermediaries	Intermediaries are bypassed but also used in some cases	Intermediaries are bypassed
Product designation	Custom-made according to specification	Standardized
Sales procedures	On-line catalogues, tender	On-line catalogues
Security issues	Network security and corporate privacy	Protection of consumer information and needs

Source: Compiled from various sources; for example, see Sculley and Woods (2001), and Morgan Stanley Dean Witter (2000).

A development that has also contributed to this form of convergence is the growth of small, often one-person businesses that operate at home or in small offices. It is generally difficult to distinguish between the business owner and the consumer, and hence the type of transaction.

The second form of B2B-B2C convergence relates to the linkages on the supply chain. Some companies are integrating their Internet strategies straight from B2C retailing for their products to their internal

information systems and on to external B2B supply orders with other companies. Thus orders from consumers may be electronically transmitted to contractor manufacturers that make the products and ship them directly to distributors and buyers. A number of initiatives are being undertaken by a number of technology companies to develop market-place applications that can integrate supply chains through e-market networks that include B2B and B2C transactions.⁵

2. Comparison with other B2B e-commerce

B2B e-markets differ from other forms of B2B e-commerce in that the e-markets involve a large number of buyers and sellers that engage in many-to-many transactions and relationships. They create a trading community in which buyers' orders are matched with sellers' offers and the trading partners benefit from other forms of collaboration. This is different from one-to-many B2B e-commerce models, in which single companies establish websites to sell or buy from other companies. It is only when single buying companies or single selling companies team up to create an environment of online multiple buyers and sellers that an e-market is established.

3. Comparison with traditional stock and commodity exchanges

There is also a distinction between the new types of Internet-based B2B e-markets on the one hand and traditional types of exchanges, particularly stock exchanges and primary commodity exchanges, on the other hand. Stock exchanges are places where businesses sell and buy shares, stocks and bonds (securities). They are owned by stockbrokers or members' firms, although some of them now include membership from the general public. They are auction markets that take place on the physical floor of the exchange and the transactions are conducted by public competitive bidding. Trading is done through brokers and specialists and the procedures are largely manual, although some degree of automation is being introduced.

Commodity exchanges, on the other hand, are organized markets for buying and selling such primary commodities as coffee, sugar, grain, cotton, rubber, crude oil and metals, for example gold, silver, copper, aluminium, tin and nickel. Commodities may be traded in (i) the spot market, where commodities are available for immediate transactions; (ii) in the forward market, where the transactions take place at some specified date in the future between specific contracting parties; or (iii) in the futures market. As in the forward market, in the futures market the parties agree to buy or sell a specific quantity of a commodity on a particular date in the future, but they try to reduce risk by hedging against fluctuations in commodity prices. By fixing the price of the commodity in advance, futures contracts enable buyers and sellers to hedge against spot price

fluctuations. Also, through futures contracts participants may make a profit by speculating on price movements.

It is evident from the above that there are fundamental differences between traditional stock and commodity exchanges and B2B e-marketplaces. First, in B2B e-markets intermediaries do not play a pivotal role in the transaction processes to the same extent as they do in stock/commodity exchanges. Second, in the stock/commodity exchanges there may be no long-term contractual relationships between trading partners. By contrast, e-markets go beyond the matching of buyers and sellers by providing a trading community in which the whole range of activities on the supply chain are integrated, including the back-end functions of the trading partners. Third, goods and services traded on e-markets are priced using a variety of pricing models, including dynamic, negotiated pricing, while in stock/commodity exchanges auctions and public competitive bidding are the main pricing mechanism. Fourth, in e-markets trading is largely automated, while in the stock and commodity exchanges, transactions rely on "physical" auctions on the exchange floor.

Finally, in e-markets the Internet provides the backbone of the market activities. While in stock and commodity exchanges the Internet is being used to exchange information, the core functions take place physically on the floors of the exchanges. In recent years, however, a new form of security trading has emerged - the electronic communications network (ECN). ECNs are essentially small stock exchanges that provide an electronic marketplace in which buyers and sellers are matched automatically. Examples of companies that operate such markets include Instinet, Archipelago, Island, Tradepoint and Easdaq. These companies provide trading opportunities for institutional investors (B2B) as well as for retail investors (B2C).⁶

4. Main categories and ownership of B2B e-markets

E-markets may be grouped into various categories according to different criteria such as ownership, the types of products traded and the main groups of traders involved. Because of the multiplicity of these criteria, it may not be possible to fit them into single, non-overlapping categories. The main broad categories are described below.

Vertical and horizontal e-markets

Vertical e-markets are primarily industry-focused in that they provide exchange capabilities for sellers and buyers dealing in homogeneous products or in a particular industry that trades in direct goods, that is those goods that are a part of the final product created by the enterprise. They provide integrated exchanges in sectors such as health care, food, environment, manufacturing, communications and advanced technology⁷.

Horizontal e-markets, on the other hand, are multi-industry and provide exchange capabilities for sellers and buyers in more than one industry to procure generic, indirect goods or services, that is goods that are not part of the final product of an enterprise. Such goods can be used in multiple industries, such as office furniture, office supplies and construction materials, financial accounting, human resources services and items that are referred to as MRO (maintenance, repair and operations).⁸

The distinction between vertical and horizontal e-markets tends to be blurred where companies try to attain scale economies by combining their purchasing of indirect goods with that of goods which are part of their core supply chain. Some horizontal e-markets have started to integrate with vertical e-markets, thus permitting traders in a vertical market to have access to horizontal markets, and vice versa.⁹

Independent, third-party B2B e-markets are owned and operated by enterprises that are not considered to be a trading partner. Their role is to provide a forum for buyers and sellers to find each other and complete online transactions. They rely on order matching and transaction fees for their revenue. A third-party e-market may be a propriety exchange owned and operated by a single large company functioning as a neutral intermediary¹⁰ or operated by several independent companies that have no affiliation with buyers or sellers¹¹. It may, however, also cooperate with leading firms in a given industry, in certain cases receiving equity investment from players in the industry. These include most of the early breeds of venture-backed e-markets.

Third-party exchanges are more likely to grow in markets that are characterized by fragmented demand and supply. They would tend to succeed in such markets because they can reduce transaction costs by aggregating and matching buyers and sellers. If, how-

ever, only the buy side is fragmented, the benefits for sellers would be reduced, and conversely the benefits on the buy side would be reduced if only the sell-side markets were fragmented.

Independent third-party e-markets are, in principle, attractive to both buyers and sellers, but their success would largely be dependent on whether they can actually attract sufficient numbers of buyers and sellers into the market place and generate cash flow from transaction fees. To achieve this, some third-party e-marketplaces have had to develop partnerships with bricks-and-mortar companies. However, independent e-markets that accept equity investments either from buyers or sellers may lose their neutrality and hence their attractiveness to one or other side of the market.

Industry consortia

Some existing bricks-and-mortar companies have come together to create their own independent e-markets. These may be organized either by buying companies or by selling companies.

Buyer-driven e-markets are formed by large enterprises dealing in large-volume purchases.¹² In these e-markets the traders are also owners. These may be private, with content and management being under the buyer, or they may be public with the management being placed under a separate venture such as a consortium. Having established the markets, sellers are either encouraged or forced to trade in the market place.

Supplier- or seller-driven e-markets are formed by large supply companies. They are less numerous than buyer-driven ones. Their creation may be for defence, aimed at pre-empting the possibility of their customers setting up buyer-driven exchanges. Alternatively, they may be set up in response to the presence of buyer-driven e-markets.¹³

In buyer- and seller-driven e-markets, the companies that establish the markets are likely to be the ones that are better placed to reap more of the benefits from the market. Thus in a seller-driven exchange the exchange acts as an aggregator of supplies and plays the role of an auction for buyers. On the other hand, in a buyer-driven exchange the e-marketplace aggregates a large number of buyers to create the force of a large single buyer and negotiate with suppliers on the buyers' behalf.

Industry consortia B2B e-markets have the advantage of secure support from large sellers or buyers. The buyer-driven e-markets in particular appear to be the easiest to create since in most trades the buyers seem to have the balance of power. Seller-driven exchanges may face difficulty in attracting large buyers that may already have access to volume discounts. Generally, industry consortia have faced a number of impediments that have limited their growth. These have included the fact that their members are commercial rivals, difficulties in creating a suitable ownership and corporate structure and in integrating their disparate back-end technologies, failure to provide a neutral trading environment and risks in sharing information.¹⁴

Private B2B e-markets

These are private or proprietary trading exchanges operated and owned by single owners as opposed to consortia. Their objective is to support or enhance their core businesses.¹⁵ There is a growing consensus in the industry that private B2B e-markets will become the most preferred business model. For example, Deloitte Consulting found in a study that 73 per cent of firms surveyed said that private e-marketplaces would become the most important form of collaborative commerce for their business.¹⁶ The study pointed out that the complex capabilities that public e-marketplaces have been struggling to implement were now being successfully implemented in private e-marketplaces.

Another study, by Boston Consulting Group, also predicts that private e-marketplaces will become dominant.¹⁷ The study notes, however, that the ability of single sellers or buyers to set up their own e-marketplaces could be overestimated. The study showed that 54 per cent of sellers and only 13 per cent of buyers expected that single-seller sites would serve as their primary e-marketplace for any given product. Overall, however, private e-marketplaces are expected to play an increasing role in B2B e-markets.

5. Revenue sources

The creation, hosting and operation of B2B e-marketplaces are functions undertaken by a variety of companies. The sources of revenue of the operations of the e-marketplace are therefore varied, depending on whether a company is an application service provider or market-place operator or owner. The sources include transaction fees, auction service

fees, sales of software, advertising, subscription fees and professional service fees.

Transaction fees

These are the principal source of revenue for many e-marketplaces. The fees are levied either as a fixed amount or as a percentage of the value of the transaction. In some cases different fees may be charged for individual components of a transaction, such as invoicing, payment services, cash transfers and transport documents. The transaction fee is often charged to the seller, but there are market places where they are charged to the buyer or to both sellers and buyers.

Software sales and licences

Companies that host market places or provide software used by sellers and buyers derive some revenue from software in the form of licence fees and maintenance of the installed system.

Advertising fees

Advertising fees may be an important source of revenue for some e-marketplaces, although some industry observers consider that the growth of Webvertising has been quite limited. A major move from advertising in other forms of media such as newspapers and television to the Web has not materialized. Consequently, for e-marketplaces, Webvertising is likely to remain a minor revenue source compared with other sources.

Subscription/membership fees

These are a common source of revenue and are imposed as flat periodic fees for example on a monthly or annual basis. A few e-marketplaces have tried to charge a subscription fee per transaction. However, this method appears to be unpopular with sellers or buyers as it tends to impose higher charges than flat periodical rates, and also tends to be confused with transaction fees described above.

Professional service charges

Providers of software that is used in e-marketplaces usually give training and other services to implement the installed applications. These services are charged to users. This applies particularly in user companies that do not possess their own internal professional

technology departments and have to rely on third-party application service providers. There are a number of other revenue sources such as data mining charges and sponsorship income.

The relative importance of revenue sources will depend on the way the e-marketplace is structured in terms of ownership and service provision. In a market place where the bulk of the operations are provided by third parties that do not own the marketplace, user fees paid by buyers and sellers will be a critical factor in generating revenue. On the other hand, if the market place and the applications used are owned and operated by the trading parties, user fees may be less important. In this case, the owner/operator may attach greater importance to the market place as a promoter of trading relationships and transactions and for building customer loyalty rather than as a generator of user fees.

C. The market structure of e-markets and competition policy implications

This section examines the level of market concentration and entry conditions in B2B e-markets, both of which are essential to an understanding of the behaviour of markets and the degree of competition.¹⁸ It may also help in the overall assessment of the opportunities available to developing countries to cre-

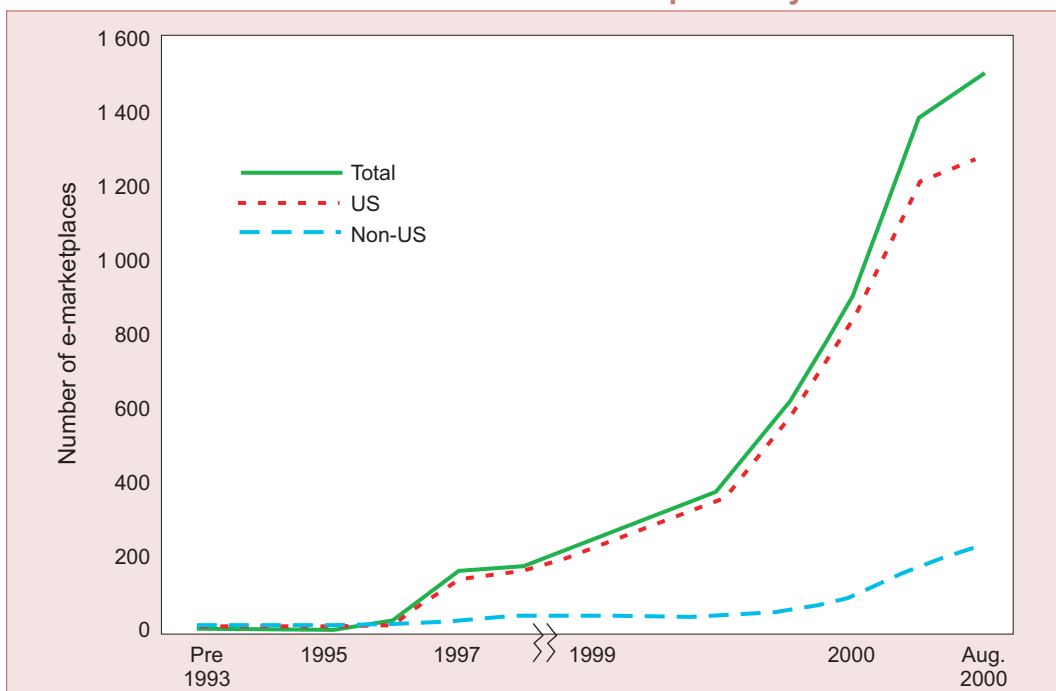
ate e-markets. In addition, it describes issues of competition rules related to B2B e-markets.

1. Level of concentration

The level of concentration relates to the number of market places and the distribution of transactions over various market places. It also relates to the scope of the boundaries of markets within which e-markets operate. For example, the market boundaries of vertical e-markets could be defined in terms of the coverage of industries served by the e-markets, while for horizontal exchanges a much wider spectrum of exchanges would be included. Players in B2B e-markets tend to maintain links with traditional product and service trading channels, thus making the definition of their market boundaries complex.

Estimates of the number of market places in different types of e-markets vary widely. Chart 5 provides estimates of total B2B e-markets formed up to the year 2000. Table 16 shows the number of horizontal and vertical B2B exchanges worldwide in 2000. While most projections of future market places show that there will be an explosive increase in their number, there are no reliable figures on the exact number of e-markets actually in operation, as some estimates include e-markets that may have been announced but not yet commenced operation. Even some of those that may have established a physical presence may not have carried out any significant transactions yet.

Chart 5
Number of B2B e-markets formed up to the year 2000



Source: Deloitte Consulting and Deloitte & Touche (2000a).

Table 16
Estimated number of vertical and horizontal B2B exchanges worldwide in the year 2000

Vertical exchanges	
Advertising and media	8
Agriculture	41
Automotive	20
Aviation	10
Chemicals and plastics	47
Construction	35
Electronic and IT components	26
Energy	26
Environment	8
Financial	32
Food and beverage	51
Forestry and wood	11
Health care	41
IT products and services	26
Machinery and vehicles	19
Marine	3
Metals	15
Packaging	6
Printing	26
Pulp and paper	14
Telecom	31
Textiles	10
Transport	48
Other	83
Horizontal exchanges	
Hospitality	9
MRO	24
Office	7
Services	20
Other	54
Total	751

Source: eMarketer (2001).

Equally important, the number of e-markets tends to vary between different industries or activities and therefore the levels of concentration and competition should be seen in terms of individual industries or market segments. Some small industries such as security services may have very few exchanges. Also, some niche markets such as fromage.com and e-instantcoffee.com involve one or two e-markets.

By contrast, large industries such as chemicals and financial services tend to have a large number of exchanges. In these cases, however, there are usually a few market leaders accounting for the largest share of the total market. The degree of competition in the larger e-markets may be restricted further by collaboration or inter-market integration arrange-

ments. Examples of such arrangements include relationships established between Oracle and SciQuest and between Ariba and Chemdex.com that attempt to link up horizontal markets with specialized vertical markets. The growth of collaboration is increasingly being supported by technology companies, such as i2Technologies that are trying to promote systems suitable for creating co-operation between several e-markets. There are also a number of other factors that may influence the level of competition, such as differences in levels of functionality, type of ownership, specialization and availability of financial backing.

2. Entry conditions

The competitiveness of e-marketplaces can also be assessed in terms of the ease with which they can be set up. The ease of entry influences the number of e-markets that are actually established and hence the level of concentration. It also determines the presence of potential competition, which in turn is an important stimulus to actual competition. The factors that determine the ease of entry include the cost of establishing an e-market, the length of time it takes to establish it, the disadvantages faced by a new e-market when compared with already established markets, access to technology and the cost of winding up if the e-marketplace fails.

E-markets are generally characterized by low barriers to entry, and this tends to encourage the establishment of many market places. However, e-markets that attain critical mass¹⁹ first tend to create a competitive advantage and erect significant barriers to entry by other exchanges. In this connection, analysts expect that the high rates of failure experienced in B2C e-commerce may be replicated in B2B e-markets. For example, in B2C e-commerce it has been relatively easy to establish online bookstores, and many have been created. However, only a few of them, for example Amazon, have achieved critical mass and have emerged as market leaders, thus providing them with commercial advantage over other potential online bookstores. In the B2B environment e-market operators do recognize the fundamental importance of critical mass and the role of market leadership. This has created a high degree of competition to gain leadership and in the process only the successful first movers are expected to survive.

Successful e-markets will be the ones that will become most attractive to buyers and sellers, and such

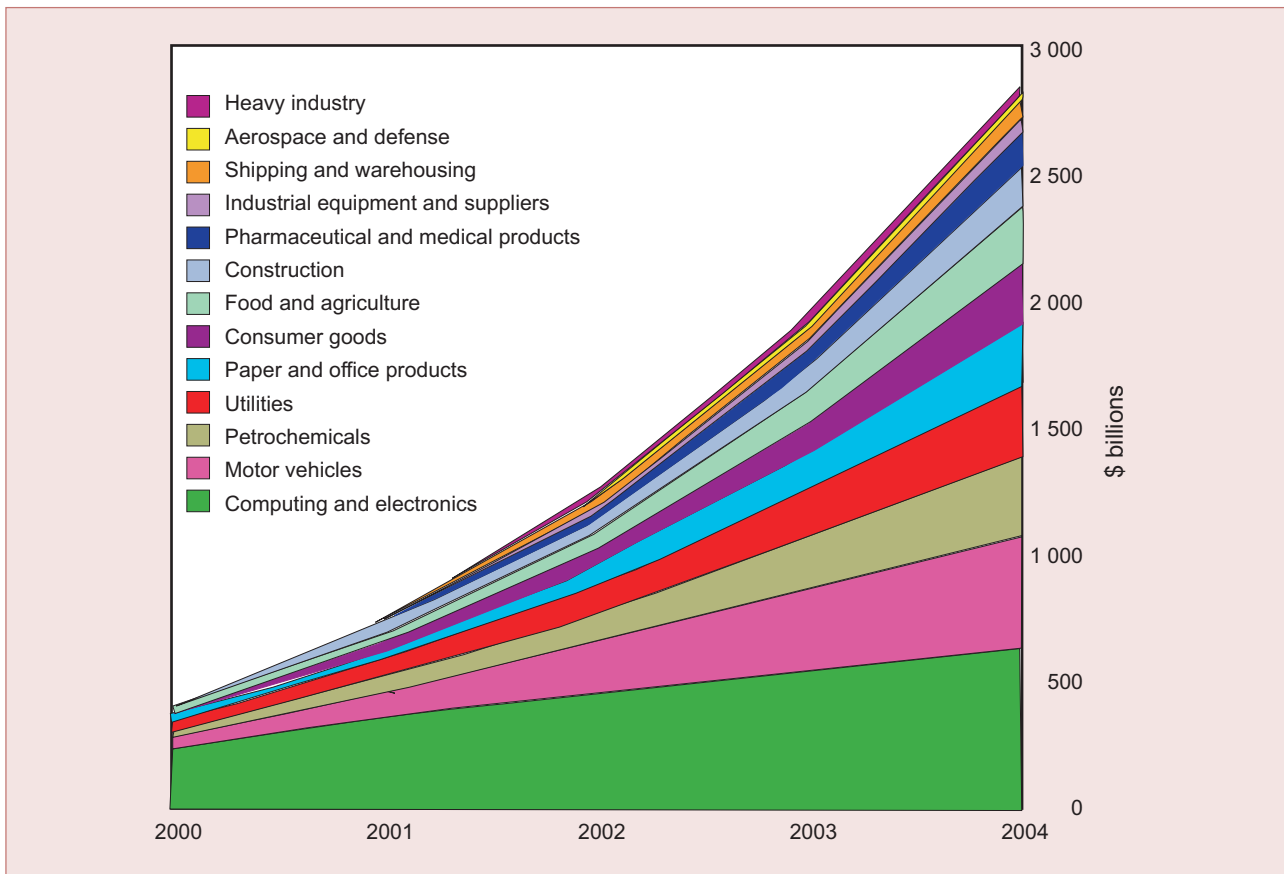
an attraction tends to become self-sustaining. Also, major buyers and sellers are more likely to retain their membership in a successful e-market rather than move to newly established ones. There could, however, be exceptions to this tendency. In industries where buyers or sellers may be slow to accept e-markets, first movers may not necessarily be successful and become dominant. They may instead provide lessons to subsequent movers, who may introduce innovations through which they may attract buyers and sellers and thus achieve success and dominance.

Overall the situation as it stands may be described as one in which many B2B e-markets are still in their early stages of creation, and it is too early to assess the true degree of concentration and competition. The trend so far has shown the ability of first movers to establish market leadership, even though in some cases new entrants have been able to compete with first movers and succeed in attaining market leadership.

3. Competition policy issues

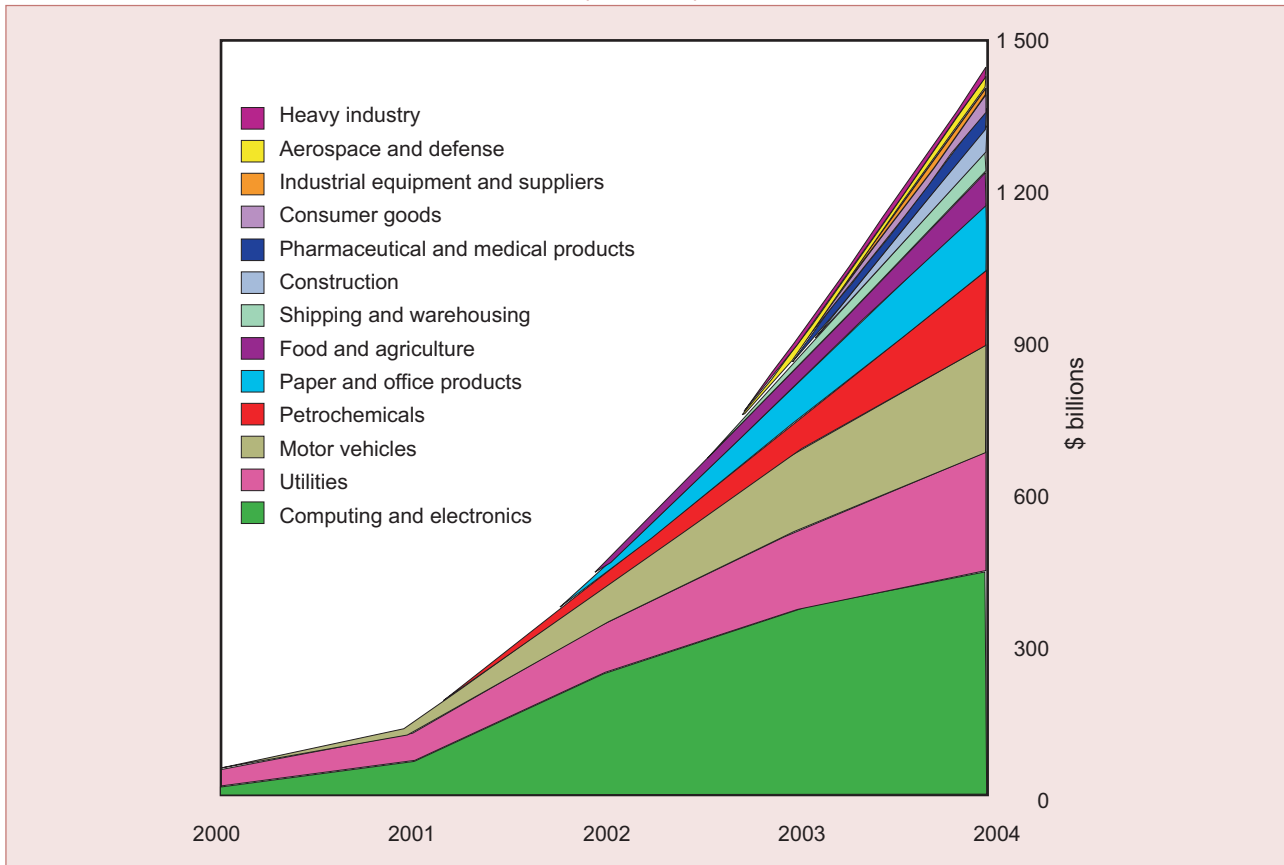
Governments and competition authorities have an interest in B2B e-marketplaces in so far as they have implications for competition policy. However, given that many B2B e-markets are still in their formative stages, competition authorities have only started to pay attention to the possible competition issues that such markets may raise. In the United States, for example, the Federal Trade Commission (FTC) has issued a report²⁰ in which it recognizes that B2B e-markets are likely to have pro-competitive attributes. So far, authorities have been applying existing antitrust standards to determine the presence of anti-competitive behaviour. The FTC, for example, has approved the establishment of Convisint.²¹ However, the FTC's stance may change as more experience is gained about B2B e-market business models. In the case of Convisint, the FTC indicated that it reserved the right to re-examine its decision in order to reinvestigate possible antitrust concerns.

Chart 6
Projected growth of on-line B2B sales in the United States, by industry, 2000-2004
(\$ billions)



Source: Forrester Research, Inc. (2000).

Chart 7
Projected growth of on-line B2B sales in the United States,
via e-markets, by industry, 2000-2004
 (\$ billions)



Source: Forrester Research, Inc. (2000).

Table 17
Projected B2B e-commerce by region, 2000-2004
 (\$ billions)

	2000	2001	2002	2003	2004	As a % of worldwide B2B commerce, 2004
North America	159.2	316.8	563.9	964.3	1,600.8	57.7
Asia/Pacific Rim	36.2	68.6	121.2	199.3	300.6	10.8
Europe	26.2	52.4	132.7	334.1	797.3	28.7
Latin America	2.9	7.9	17.4	33.6	58.4	2.1
Africa/Middle East	1.7	3.2	5.9	10.6	17.7	0.6
Total	226.2	448.9	841.1	1,541.9	2,774.8	100.0

Source: eMarketer, (2001)

The possible antitrust concerns about B2B e-markets, for example as expressed in the FTC report, relate to three main areas, namely the sharing of price and other commercial information that may provide scope for collusion and price fixing, exclusionary behaviour among the market places and possible reduction of competition resulting from the creation of the market places.

Evidence of price fixing could be based on indications of price increases occurring after the creation of an e-marketplace. Also, indications of discussions relating to price or the sharing of information about costs and prices data could be considered to be evidence of collusion and price fixing. As regards exclusionary behaviour, the authorities may view a market place as a form of cartel with a potential to increase prices and also control the quantity of goods

or services traded. Exclusionary behaviour also relates to companies that create e-markets and prevent competitors from becoming members. This becomes an antitrust issue if the exclusion limits or eliminates competition. Finally, there is a perception that the process of creating B2B e-markets in itself could affect the growth of competition in e-markets by including too many industry members or by “forcing” buyers or sellers to deal with a given e-market to the exclusion of other e-markets.

In short, B2B e-markets have so far not produced breaches of competition rules, although inherent in them are tendencies that may lead to the creation of dominant market power and the possible exercise of anti-competitive practices.

D. The evolution of e-marketplaces

1. The evolution of e-markets

The forerunner to Internet-based B2B marketplaces were transactions conducted via electronic data interchanges (EDIs) that for decades linked large firms with their major suppliers through computer networks. The EDIs enabled member firms to automate their transactions and standardize the exchange of business information, and thus achieve large cost savings through enhanced efficiency. Similarly, banks have been employing closed computer networks for the electronic transfer of funds. However, EDI required large capital expenses to establish and implement. As a result, their application was and is being limited mainly to large firms, since small firms could not afford the necessary capital and operational outlays.

The availability of the Internet provided an opportunity for the development of B2B transaction networks at much lower costs than EDIs. The initial impetus to form e-markets came mainly from independent exchanges dealing in individual industries such as electronics, chemicals, steel and telecommunications,²² with standardized products and in which there were already advanced computer-based procurement systems. E-markets are now evolving into another stage of enhanced collaboration by adding new added-value services to the market place. Also, as mentioned earlier, in this stage large traditional bricks-and-mortar companies are coming together to create their own e-markets in competition with the independent exchanges. Chart 6 shows a forecast of

the value of total B2B online trade in the United States by type of industry, and chart 7 shows a forecast of B2B sales in the United States via e-markets. Table 17 shows projected B2B e-commerce by regions of the world.

2. Industries that are most attractive to e-market solutions

It has been suggested that some industries and business processes may be more attractive than others for the application of e-market solutions. That being the case, potential investors would be advised to look into the underlying factors. Forrester Research (2000) has identified five industries, namely computing and electronics, motor vehicles, petrochemicals, utilities, and paper and office supplies, as industries constituting the largest group of users of e-market solutions.

A number of writers have suggested the factors that may favour e-market solutions as being the following:²³

- (i) High buy- and sell-side fragmentation of the supply chain, making it difficult for buyers and sellers to achieve price and product discovery independently;
- (ii) High selling and distribution costs;
- (iii) Highly variable demand for the transacted products or services;
- (iv) Limited access to market information;
- (v) High search costs;
- (vi) Digital readiness of the companies operating in the industry.

3. Geographical scope of e-markets

The geographical scope of e-markets varies and includes (i) local e-markets servicing local areas within a country, (ii) national e-markets, (iii) regional e-markets servicing the trade of a group of countries, such as Europe and the Asia-Pacific region, and (iv) global markets. While the Internet eliminates physical geographical boundaries, in reality there may be a number of factors that may restrict the scope of an e-market in terms of its commercial value to users or the physical availability of the traded products and services. Some products or services such as security services, temporary employment bureaux and second-hand car sales tend to have localized markets for which a local e-market can be defined. Other factors such as language, local laws, commercial practices and

currency convertibility could also set practical boundaries for e-markets. Some products such as electricity cannot be transported over long distances from their points of production. Thus B2B e-markets for electricity tend to be local or regional or national.

While an e-marketplace may find it beneficial to operate in a local or regional market that provides a niche, the main advantage of the Internet is that it provides sellers and buyers with global access. To this end, a major international initiative has been undertaken to facilitate the globalization of B2B e-commerce. An international commercial organization — the Global Trading Web (GTW) — has been established by Commerce One in cooperation with a number of other technology companies.²⁴ The GTW is a network of global and regional interoperable e-marketplaces that operate in inter-marketplace B2B e-commerce. It connects buyers and sellers through regional e-marketplaces located in all the regions of the world.²⁵ Within the framework of GTW local e-markets can be accessed in local languages and in accordance with local laws and business practices. Through it, businesses of all sizes around the world can source, buy and sell goods and services on a global basis. GTW can be accessed by a wide range of commercially available buying and selling applications.

E. The functionality and impact of B2B e-markets

1. Functionality of e-markets

Simply defined, the functionality of an e-marketplace refers to what capabilities it can offer. These capabilities fall into four main areas: (i) content or information made available to buyers and sellers, (ii) the ability to match buyers with sellers, (iii) the ability to handle online transactions, and (iv) the ability to support collaboration by integrating functions of trading partners. Functionality goes well beyond technological capabilities and includes all the core functions of a traditional commercial market. It is considered to be a key element in the overall operations, competitiveness and commercial success of an e-marketplace.

Not all participants in a market place will value different kinds of functionality in the same way. Similarly, the required functionality may differ in different types of markets or industries; for example, content that is useful in a metals e-market may be different from the one for energy or agribusiness trading.

Table 18
Elements of functionality of B2B e-markets

Type of capability	Details of functionality
Content/information	Directories listing companies, their profiles and ratings, aggregated catalogues, electronic brochures with product listings and trading participants' identity and background, information on products, their features, quality and prices, inventory listings, bulletin boards, on-line information browsing capability; ability to search information on order status and tracking; ability of buyers to pre-qualify vendors; databases on tariffs and transport charges; information about the site and customer services; buyer guides and news.
Matching buyers with sellers	Auctions, reverse auctions, on-line negotiations (bid/ask, RFP/RFQ), exchange, barter.
Commercial transactions purchase orders, and guage toms	Ability to process payments, credit financing, credit validation, tax laws, trade restrictions, integrating business management accounting, on-line exchange of information and transaction-supporting documents, such as invoices and shipping documents; import/export compliance; providing on-line linkage to transportation logistics and other third-party services linked to purchases, support for multi-currency and multi-lan-transactions; tariff and tax data collection and management; automated landed cost calculations, cus-compliance and documentation.
Collaboration	Sourcing of products, order fulfilment, international trade customs, duties and tariffs, linking back-end systems of trading partners to the market place, fraud detection, digital certification, availability of authentication and encryption capability and digital signature, support for collaborative applications such as joint estimation and forecasting of demand, synchronizing production; optimizing order configuration, fulfilment and delivery, demand aggregation, inventory management, production planning and scheduling; research, customer and market intelligence, data mining and warehousing, service guarantees and contingency plans in case of collapse of market place during active trading, discussion forums, job postings.

Information/content

The provision of information is the most basic but necessary function of an e-market. The information provided by the e-market may range widely, including a listing of products, industry directories, prices and a variety of databases, such as databases of shipping terms and tax laws. By aggregating information and catalogues of different sellers, e-markets permit buyers to have access to a wide range of product or service information in one location, reduce search costs, make product comparison, and simplify choice. Some e-markets create virtual exhibits of vendors that provide buyers with detailed product information in the same fashion as a trade fair. Others are more dynamic, by being able to constantly update information, for example by listing new products as they become available or providing news of changes in currency exchange rates.

Matching buyers with sellers

The second functionality is the ability to connect buyers' needs with suppliers' offerings. This is provided through product postings, requests for proposals and requests for quotes (RFP/RFQ), auctions and online negotiating capabilities, as described earlier.

Transactions capability

The third functionality is the handling of actual transactions. Perhaps this is the most involved function, comprising such capabilities as handling payments, credit financing, credit validation, online exchange of information and transaction-supporting documents, and providing online linkage to transportation, logistics and other third-party services.

Collaboration

The fourth functionality is collaboration. It concerns the involvement of an e-market in the full range of B2B processes and support to members in such functions as quality assurance, production planning, forecasting and demand aggregation. Collaboration involves the exchange of vast amounts of information regarding products and services, and details of transactions. The information is exchanged through a number of channels within the market place, including discussion forums, virtual conferences, chat rooms and meetings, bulletin boards, newsletters, classified advertisements, industry and market reports, product reviews and directories. Through these

channels market participants are able to make suggestions and comments concerning products and other matters of general interest. Thus suppliers can receive useful feedback from each other and from buyers. One of the possible outcomes of this is the building of confidence between market participants, something that has often been said to be lacking in e-commerce.

The various elements of B2B e-market functionality are summarized in table 18.

The role of technology in achieving functionality

It is beyond the scope of this chapter to provide details of technologies that power e-market processes. It is important, however, to mention that B2B e-marketplaces and the implementation of their business models rely to a very large extent on technology infrastructure. The market maker must possess or have access to a technology that is capable of handling the full range of commercial processes from ordering to order fulfillment and settlement. The technology must support transactions involving large numbers of users over the Internet and be capable of handling complex business practices, user relationships and integration with third-party commercial applications.

The central importance of technology infrastructure is borne out by the fact that the growth of B2B e-markets is closely correlated with a rapid growth in the number of e-marketplace solution companies. Also, most market makers have found it imperative to form alliances with companies selling or operating e-marketplace technology solutions.²⁶

2. The impact of B2B e-markets

Research publications and the popular press show that B2B e-markets are likely to become hubs of B2B transactions. The following are a few quotations. Forrester Research notes that "Our interviews show the torrid pace with which firms are escalating their B2B plans. Fuelled by this widespread activity, online business trade has hit hyper-growth - moving even faster than our previous projections. Based on our analysis of supply chain characteristics and e-commerce readiness in 13 industries, Forrester projects that B2B sales over the Net will skyrocket to \$2.7 trillion in 2004."²⁷ Gartner states that "Business-to-Business (B2B) e-commerce will grow at aggressive rates through 2004, causing fundamental changes to

the way businesses do business with each other. The catalyst for B2B e-commerce is e-market maker activity. E-market makers are projected to facilitate \$2.71 trillion e-commerce sales transactions in 2004, representing 37 percent of the overall B2B market.”²⁸

Other studies also provide an indication of the benefits of B2B e-markets.²⁹ It should be noted, however, that many e-markets are still in their formative stages and therefore have yet to provide sufficient data for study. In part, data on transactions in B2B e-markets tend to be inadequate since the final details of such transactions, including prices and transaction volumes, may not necessarily be known to the market place. This arises partly from the fact that some transactions initiated online are completed offline.³⁰

The full impact of B2B e-markets goes beyond activities related purely to transactions and includes collaborative activities between members. The value of these non-transactional functions is hard to quantify. What is apparent, however, is that more and more companies around the world are participating or planning to participate in B2B e-markets, and a consensus seems to be growing to the effect that much of the existing traditional B2B trade is likely to migrate to the Internet and make use of B2B e-markets. The interest in B2B markets may in part be a defensive strategy by companies to retain their existing share of the market or as a move to capture business from other companies. There is also increasing pressure on companies not to be left behind and to adopt online transactions as a form of best practice. All this is happening rapidly, even before the real impact of the e-marketplaces is fully articulated and demonstrated.

The possible impact of B2B e-markets covers a wide range of factors, such as transaction costs, disintermediation, pricing transparency and the building of online trading communities, as outlined below.

Transaction costs

Transaction costs have received most attention in the discussion of the benefits of e-commerce, including B2B e-markets. There are a number of ways such costs can be reduced in B2B e-marketplaces. The first one is the reduction of search costs. In the traditional supply chain, buyers need to go through multiple intermediaries and spend a large amount of time in

searching information about suppliers, products and prices. Being more efficient than traditional information channels, the Internet reduces search costs, which include effort, time and money. In B2B e-markets a large number of buyers and sellers, often engaged in similar lines of business, are brought together into a single trading community and this reduces search costs even further.

The second source of cost reduction is the ability of the Internet to reduce the costs of processing transactions, for example invoices, purchase orders and payment arrangements. These can be automated and implemented more quickly than through other channels such as telephone and fax. Improved efficiencies in trading processes can also be achieved through the ability of the e-marketplace to process sales through online auctions without buyers or the goods traded having to move to auction sites. Third, online processing adds value to other functions throughout the supply chain, for example improved inventory management and logistics costs, all of which are linked to transactions.

Disintermediation

One of the widely predicted changes resulting from B2B e-markets and e-commerce in general is the transformation of the traditional supply chain through suppliers being able to interact and transact directly with buyers, with the consequent elimination of intermediaries and distributors. This is largely because of the possible reductions in information and other transaction costs and increased market transparency that reduces the role of intermediaries as sources of information. Some observers have suggested, however, that by using information and communications technology (ICT), intermediaries can become more efficient and add value to their services, thus ensuring the continued demand for those services. It has also been pointed out that ICT expands the possibilities for companies to outsource some of their functions to other firms, thus expanding even further the need for intermediaries.

The experience in B2B e-markets shows that while the traditional middlemen may indeed be losing ground in some areas, new forms of intermediaries are emerging. The independent, third-party e-marketplaces themselves could be considered to be intermediaries by definition, as they are placed in between suppliers and customers in the supply chain. On the other hand, the market places established by

bricks-and-mortar companies are designed for the companies to link up directly with established trading partners, thus eliminating the role of intermediaries.

Pricing transparency

One of the most visible consequences of e-markets is increased price transparency. By bringing together large numbers of sellers and buyers an e-marketplace reveals market prices and transaction processing to participants. The Internet makes it possible to place information on each purchase into a common network and thus make the information readily available to all members of the market place. One result of price transparency is a reduction in price differences prevailing in the market place. Also, buyers are allowed more time to compare prices and make better purchasing decisions.

B2B e-markets also increase the scope for dynamic and negotiated pricing, in which multiple buyers and sellers participate in setting prices collectively by engaging in continuous two-way auctions. In such auctions, prices are arrived at through an automatic matching of bids and offers. In addition, B2B e-markets provide an effective framework for demand aggregation in which many buyers can cooperate to buy a single product or service and then sellers compete for the transaction. By aggregating their requirements, the buyers are able to obtain lower prices than if they had acted individually.

Economies of scale and network effects

The growth of e-markets provides scope for the creation of economies of scale. There are considerable upfront expenses in establishing an e-market, such as programming costs. This creates the traditional supply-side cost-based economies of scale. In addition, however, by linking large numbers of buyers and sellers, e-markets provide demand-side economies of scale or network effects. The latter do not relate to the supply side in the form of reduced average costs, but they relate to the fact that the addition of each incremental participant in a market creates value for all existing participants on the demand side. Large numbers of participants, i.e. critical mass, are a key factor that attracts users to an e-market since it promises benefits to both buyers and sellers.

F. Participation by developing countries in B2B e-markets

Participation by developing countries in e-commerce is limited owing to a variety of factors such as lack of infrastructure and awareness, high costs of Internet connectivity and inadequate skilled human resources.³¹ While developing countries account for only a small share of B2B e-markets, the latter have grown significantly in the last few years, although there is no reliable data on the numbers of such markets that have been created. The bulk of this growth seems to have concentrated in a certain developing economies, notably Brazil, Mexico, Argentina, China, Hong Kong (China), Singapore, Malaysia and the Republic of Korea. The extent of the operations of e-marketplaces in developing countries must take into account the fact that e-marketplaces based in the United States and other developed countries have established international capabilities and are extending their reach to developing countries. Thus buyers and sellers from developing countries can in principle become participants in such markets.

Even though the growth of B2B e-commerce in developing countries is expected to continue to be limited, there is no doubt that enterprises in those countries will in the longrun establish a significant presence in B2B e-markets. In addressing this issue, it is important to distinguish between their participation as buyers and sellers in existing e-marketplaces and their participation as creators or operators of their own e-marketplaces.

1. Participating in existing B2B e-marketplaces

Many companies, and even some large ones in the United States, have yet to join e-markets. To sell or buy through e-markets, a company needs to make a conscious decision to do so. Such a decision is a strategic business decision and may be determined by a number of factors, for example profit expectations. Alternatively, buying or selling through e-markets may be a means of challenging competition, a necessary move to retain established trading partners who may have migrated to online transactions, or merely the result of pressure to follow market trends and practices. In other cases, the market places themselves take various measures to attract buyers and sellers to trade in their market places.³²

Since the outcome of participation in an e-marketplace as a buyer or seller may be uncertain, companies need to develop an e-commerce action plan in order to maximize opportunities for ensuring competitiveness and commercial viability. The following is a range of possible questions that a company may consider in formulating an e-commerce action plan:

- (i) By joining an e-marketplace, will the company lower its transaction costs and ensure an increase in revenue? What methods will be used to assess these outcomes?
- (ii) Does the company possess a basic online presence?
- (iii) Does the company possess system applications and technologies that would be needed in order for it to integrate effectively with suppliers or buyers in the e-marketplace?
- (iv) What knowledge does the company have about e-markets and how they work?
- (v) Is the company a dominant player (buyer or seller) in the industry?
- (vi) By joining an e-market, would the company expand its customer base by increasing the number of trading partners?
- (vii) If the company is a supplier, does it have online product or service fulfillment and customer support service?
- (viii) Are the company's competitors participating in e-market places?
- (ix) Should the company join online trading while retaining traditional trading channels? How will joining e-markets affect relationships with existing trading partners?
- (x) What is the added value of retaining existing trading relationships through participation in an e-market?
- (xi) How long does a company have to wait before the benefits of participating in an e-market begin to be realized?
- (xii) How many and which types of e-markets should the company join?
- (xiii) If the company joins a number of e-markets, what are the requirements for ensuring compatibility between system applications?
- (xiv) Will joining an e-market lead to the company losing its identity and brand image?
- (xv) What would be the cost of technologies and infrastructure needed for the company to participate in an e-market?
- (xvi) What type of e-market business model should a company adopt, taking into account its size and scope of its activities?

This type of checklist can help a company to plan proactively. A company may need, however, to go further and undertake a more detailed assessment of return on investment associated with joining a B2B e-market. Such an assessment would include an estimate of tangible variables such as increased revenue earnings, reduction in purchase and fulfillment cycles, transaction costs, inventory costs, and reduction in operational and administrative costs. The intangible variables would include such variable as improved integration and relationships with customers and increased competitiveness. The benefits and costs would then be compared in order to determine the value of the change-over to online trading. This is just one example of an approach that a company could use in arriving at a decision. Each company would of course employ a method that takes into account its own circumstances.

2. The promotion of online B2B markets in developing countries

In addition to participating in existing B2B e-markets as sellers and buyers, developing country firms could promote the growth of online B2B markets in activities that have potential for such markets. In particular, opportunities could exist in certain activities in which developing countries have a competitive advantage and the critical mass required for the success of e-markets. These may include traditional economic activities such as tourism and primary commodities marketing, and new activities such as teleservices.³³ This section attempts to assess opportunities that may be available to developing countries in creating B2B and other markets in tourism and primary commodities marketing. It is intended primarily to reflect the organizational structures or marketing practices of these sectors and how those structures and practices present opportunities or obstacles for entry by developing countries.

While the focus of this chapter is on B2B e-markets, both the distribution of travel/tourism products and primary commodities marketing have yet to develop business models similar to B2B e-markets of the type outlined earlier. The discussion here is therefore a

more general one covering various forms of B2B and in some cases B2C transactions.

(a) Tourism and travel

Tourism and travel³⁴ are information-intensive activities that lend themselves well to Internet applications. Tourism is estimated to be one of the largest and fastest-growing industries in the world. Also, it is a key economic sector in the economies of many developing countries. The Internet is becoming the most effective channel for international tourism marketing, as more and more potential tourists use it to access information on travel, hotels and destination attractions.³⁵ Therefore, developing countries need to take measures to exploit the new Internet technologies in order to ensure that they are adequately involved in the supply and distribution of tourism/travel products. It is important, however, to understand the structure of the tourism/travel industry and, in particular, how products and services are distributed, both offline and online, and also how the main players in the industry relate to each other. Such an understanding may provide a basis for assessing the opportunities for tourism/travel service suppliers and intermediaries in the developing countries. An examination of e-commerce in tourism is presented in chapter 3 of this report. In this chapter the subject is treated for the sole purpose of assessing the scope for participation by developing countries in online B2B tourism/travel transactions.

Transactions in tourism and travel-related services are centred on a system of distribution channels that involve many players. These include suppliers of services, namely airlines, hotel operators, car rental operators, tour operators and travel agents, and

global distribution systems (GDSs). The GDSs collect, maintain and distribute data and information on tourism and travel. Their core business is to connect buyers and sellers in the travel distribution channel. They evolved from computer reservation systems (CRSs), which are databases that enable tourism/travel service operators to manage their inventories. The GDSs expanded from airline bookings by incorporating other forms of products such as hotel rooms, car rentals, cruises, tours, railway, bus and ferry tickets, travel insurance, theatre and sports tickets and foreign currency exchange.

Through integration of various CRSs and a range of tourism products, the GDSs are able to provide global distribution services for the travel industry. This in turn provides travel agents and other users with "one-stop shops" for all information and reservation matters that need to be covered in order to build a travel package. Travel agents are the main customers of the GDSs and at the same time they sell the largest share of all tourism and travel products. This obliges airlines, hotels and other suppliers to offer their products to the GDSs for distribution.

At present there are four main GDSs in international tourism distribution, namely Amadeus, SABRE, Galileo and WORLDSPAN. There are in addition smaller GDSs such as Axess, Abacus, Gets, Infini Travel Information and TOPAS. The reasons why a few GDSs are able to dominate the distribution system relate to the extremely high capital costs involved, and the technical skills and industry knowledge required to build the distribution systems. Another factor is the fact that most travel agencies are already linked to the existing GDSs, and a new entrant may find it extremely difficult to dislodge them from those linkages.

Table 19
Ownership and GDS affiliations of major on-line travel agencies

Site	Corporate	Consumer	Public company	Majority owner	Powered by
Expedia		X	Y	Microsoft	Worldspan
Travelocity		X	Y	Sabre	Sabre
Priceline.com		X	Y	Priceline	Worldspan
Trip.com	X	X	N	Galileo	Galileo
ETravel	X		N	Oracle	Various (choice of corporation)
BizTravel	X		N	Rosenbluth	Worldspan
SAP Travel	X		N	SAP	Amadeus
AmericanExpress.com		X	N	American Express	Sabre
Continental.com		X	N	Continental Airlines	Worldspan

Source: Global Aviation Associates, Ltd. (2001).

While traditional bricks-and-mortar travel agencies dominate the distribution of travel/tourism products³⁶, in recent years there has been a considerable increase in the use of the Internet as a tool for the distribution of tourism and travel products.³⁷ This development has resulted in the emergence of large online travel agencies, such as Travelocity, Expedia, Internet Travel Network, ORBITZ and Preview Travel. These travel agencies retail travel services on their own accounts and, in addition, provide information to other agencies and intermediaries. The online travel agency business is highly concentrated — for example, Travelocity and Expedia between them control over 70 per cent of Internet bookings outside those made online directly through airlines.³⁸

The Internet has provided an opportunity for agencies and other intermediaries, even the smallest ones, to use alternatives to the traditional CRS/GDSs. It has also provided possibilities for new business models to the GDSs themselves, as some of them are responsible for a number of online travel/tourism ventures.

At least four types of online travel/tourism services have emerged. First, online services are offered by traditional bricks-and-mortar travel agencies that have built and maintained websites and booking tools, for example American Express and Carlson Wagonlit, and also smaller agencies. Second, there are direct online sales of inventory by travel/tourism service suppliers such as airline and hotel sites that have booking capabilities. Some airlines maintain such websites individually, while in other cases they operate joint websites. For example, a number of large airlines in the United States have set up a common Internet platform.³⁹ Similarly, in Europe a group of 11 airlines⁴⁰ have joined together to create a joint website that can provide services in competition to online travel agents and tour operators.⁴¹ The online distribution of services by service suppliers using joint websites is also developing in the hotel sector, as exemplified by the joint website planned by Accor, Forte and Hilton.⁴² Third, pure-play online travel agencies such as Travelocity and Expedia aggregate air, hotel, car and cruise options into a “travel supermarket”. These agencies differ from the traditional agencies in that they are not bricks-and-mortar storefronts. Lastly, there are portals, such as Yahoo, Lycos, AOL and Excite that enter into agreements with online agencies or GDSs to distribute travel/tourism products on their behalf. An example of this is the agreement between Galileo International and Viajo.com, a

large Latin American travel site.⁴³ Viajo.com will use Galileo’s computerized reservation systems as its booking engines.

There are therefore complex interlinkages between the various players in the travel/tourism supply and distribution channels. The GDSs were originally owned by major airlines, although most of them are now public companies with varying degrees of airline ownership. In turn the GDSs have ownership interests in or affiliations with online travel agencies. For example, Worldspan’s customers include Expedia and priceline.com. However, the GDSs also have purchased other agencies and entered into exclusive agreements with major Internet portals such as Netscape, AOL and Yahoo. Table 19 illustrates the types of ownership and GDS affiliations of major online travel agencies. While these affiliations may tend to change from time to time, they nevertheless illustrate the complexity of the linkages that exist between players in the industry.

The existence of a wide range of players offering online tourism/travel services has led to the growth of competition between them. Some suppliers and distributors have responded in different ways to the domination of the online agency business by a few firms.⁴⁴ For example, some airlines have reacted by attempting to reduce or eliminate commissions paid to online agencies. Others have created their own supplier-backed agencies to compete with the “independent” ones, and thus sell most of their products themselves. The case in point is the creation of ORBITZ by a group of United States airlines, namely United Airlines, Delta Airlines, Continental Airlines, Northwest Airlines and American Airlines. It was created largely as a reaction by the airlines, since they felt that their booking and ticketing business was being taken away by the large online travel agencies. A number of large airlines in Europe have also decided to create a joint online travel agency.⁴⁵

(b) Assessment of opportunities for developing countries in the tourism/travel industry

The above discussion has shown that the supply and distribution of tourism/travel products has traditionally been dominated by a few GDSs that are linked on a global basis to service suppliers and distributors. The use of the Internet has not totally transformed the basic structure of the conventional distribution channels, as most players, including online distributors, continue to rely on GDSs for informa-

tion and data.⁴⁶ However, the new technology is increasingly diminishing the role of GDSs since it enables suppliers to bypass them and thus create competition.

Developing country enterprises that supply and distribute tourism/travel services tend to be small and medium-sized enterprises (SMEs). They have to compete with large foreign-based suppliers or distributors that operate on a global scale. For example, major hotel chains have a presence in most developing countries, especially those with significant tourism activity. Similarly, major global airline service providers operate to most major tourist destination countries.⁴⁷ Not only are these global operators linked to the GDSs, but also many of them now make use of the Internet as well. This gives them a competitive advantage over developing country suppliers and distributors in their ability to reach suppliers and distributors as well as customers (tourists). Even where the developing country suppliers and distributors are not in direct competition with the global competitors, for example in local air travel, they tend to lack the channels for distributing their products to a wide international market. For example, although many suppliers and distributors have established websites, these are not interactive and are largely used for advertising only, without transaction capabilities such as booking and payments.

The use of the Internet for information, reservation, booking and marketing could help the developing country suppliers and distributors to reach wider markets and thereby increase their competitiveness. A number of developing country enterprises have been able to develop successful online distribution businesses. An example is the documented success of *Asiatravelmart.com*, which has been described in chapter 3 of this report. Other examples include *Despegar.com*, a Miami-based online travel site, which has launched online travel services in Argentina, Brazil, Chile, Colombia, Mexico and Uruguay.⁴⁸ *Despegar.com* is an interesting case in that it has the financial backing of major United States investment firms such as Hicks, Mus, Tate & Furst, Inc. and Merrill Lynch, as well as Accor, a major owner and operator of hotels worldwide.

Opportunities for online businesses also exist for small distributors through being affiliated to large players. A number of major online travel agents, for example, provide opportunities to small travel agents and tour operators through affiliation programmes

or agreements.⁴⁹ Through the latter, a travel agent or operator or any small business that possesses an operating website links to the large agents' websites. This linkage allows the small travel agent or operator to have access to large databases and various functionalities provided by the large agent's Internet portal. Customers that book travel through the website of the affiliate agent's tour operator are considered to be customers of the large agent. The affiliate is paid a fee or commission for sales of air tickets, car rentals, hotel reservations and other travel services made on that website. In return, the affiliate agrees to place the large agent's promotions on its websites for the purpose of selling the agent's products.

Affiliate programmes are also used by online suppliers of tourism services. For example, *World Choice Travel*, an online hotel reservation website, operates an Internet-based programme in which it connects to large numbers of travel agents and companies around the world.

Generally, however, individual SMEs may not possess the know-how and resources required to develop, support and maintain websites. In part, this could be overcome by creating regional cooperation. Such cooperation has, for example, been initiated by a group of airlines in the Asia-Pacific region.⁵⁰ In cooperation with *Travelocity*, a leading online travel agent that will provide the technology, the airlines have established an online travel exchange intended to include a wide range of travel services such as airline and hotel reservations, and car and land tours. The travel website expects to become the Asian region's leading provider of B2C and B2B online products and services. Other types of suppliers and distributors, such as hotels and travel agents, could emulate this form of regional cooperation. In Peru, the Association of Peruvian Travel Agencies (*Apavit*) has established a partnership with a major GDS, *Worldspan*. Under the partnership, *Apavit* has made *Worldspan* its preferred GDS, and *Apavit* member agencies have access to *Worldspan*'s products and services on preferential terms. Also, *Apavit* members get a direct connection to *Worldspan*'s portal via *Apavit*'s Home Page, when one is created.

One of the strategies that developing countries could use to overcome the individual weaknesses of their SME suppliers and distributors is to develop or strengthen the capability of tourist boards and other destination marketing organizations (DMOs) by using the Internet.⁵¹ A number of DMOs, although

not all from developing countries, provide examples that could be emulated by DMOs in developing countries.⁵²

MySwitzerland.com is a website set up by the Swiss tourist board, Swiss Tourism. It has established a booking engine on its website where travel and other products are sold, including hotels, last-time hotels, apartments, chalets and rental cars.⁵³ Swiss Tourism intends to develop partnerships with other enterprises and specialty travel sites or large online travel agents in order to expand its reach to tourists worldwide.

The Caribbean Tourism organization, while not being involved as a business enterprise for selling travel, recognizes that often tourist boards provide destination information but the potential tourist is left without adequate channels for booking holidays. Therefore, it plans to develop partnerships with tourism/travel operators and sell products on its website.

The Australia Tourist Commission's website is a major source for tourists to locate information about Australian tourism. It contains a large database of Australian tourism/travel products and is linked to other Australian regional travel sites. It provides suppliers with a channel for marketing their products in several languages.⁵⁴

The British Tourist Authority (BTA) is another example of an organization that recognizes that while many commercial websites provide destination information and sell tourism/travel products through the websites, a DMO can fulfil functions that a commercial website cannot fulfil. For example, the BTA, supported by a comprehensive search engine, provides comprehensive planning information and links to other searchable sites with more comprehensive details. The BTA's website maintains a large database on accommodation, visitor attractions and events throughout the country.⁵⁵

The initiatives of DMOs at the local or national level could be complemented or enhanced through regional cooperation. An example of such cooperation is the e-ASEAN initiative taken by the member countries of the Association of South-East Asian Nations (ASEAN). The organization has agreed a number of pilot e-commerce projects for the region, including the development of a portal for tourism, the Asean eTourism Portal. It is planned that the portal will provide a comprehensive information hub which, through the Internet, will provide travel and tourism information from all ASEAN countries. The portal

will create an integrated platform capable of providing various types of online transactions and payment methods.⁵⁶

(c) Primary commodities marketing

Many developing countries, and especially the least developing countries (LDCs), continue to rely on primary commodities for their exports and overall economic performance. In order to improve their competitiveness in world trade these countries need to diversify their economies into other sectors. However, alongside such diversification, they need to improve the marketing of their primary commodities since these will continue to play an important role in their economies in the foreseeable future.

Most primary commodities in developing countries, particularly in agriculture, are produced by SMEs. The marketing and exports of the commodities have traditionally been channelled through a wide variety of middlemen, resulting in high transaction costs and reduced revenue for the producers. For example, many countries established public marketing boards that were a monopoly, to buy and fix prices for agricultural commodities. These boards bought the commodities from producers and auctioned them to licensed private exporters who in turn sold them to overseas buyers. However, private sector traders have now replaced many of the marketing boards.

The problem both with the marketing boards and with the private sector traders is that producers are not well informed about market prices. It has been suggested that in some cases the traders tend to use the producers' lack of price information to pay them prices that are considerably lower than those that the traders obtain in overseas sales.⁵⁷ This problem could be overcome if producers could develop the capacity to discover market prices. In this connection a number of developing countries have established commodity exchanges. These could introduce transparency and allow the dissemination of price information to producers.⁵⁸ Electronic trading through the Internet could play a role in this process to enable the producers not only to have better access to price information but also to reach a larger number of buyers.

There are a few examples of primary commodity exchanges that are moving away from the traditional commodity exchanges to new methods based on the same business models as B2B e-markets. This change includes the automation of the roles traditionally per-

formed by human auctioneers, greater market transparency, booking and matching buy-and-sell orders on a first-come first-served basis, and the ability for communication to be made instantaneously. The following are examples.

Coffee exchanges

Several online coffee markets or exchanges have been established in recent years, while others are in the process of being created. Major examples include eGreenCoffee.com, InterCommercial Markets, Coffee-Exchange.com and CoffeeX.com. EGreenCoffee reports that it is already trading sizeable quantities of coffee from top producing countries such as Brazil, Indonesia, Guatemala, Uganda, Côte d'Ivoire, India, Costa Rica, Kenya and the United Republic of Tanzania.⁵⁹

Most of the existing exchanges were founded by major players in the international commodity trade, backed by technology companies and partners in the coffee and food trade, as well as financial investors. InterCommercial Markets (www.intercommercial.com) is based in New York and its partners include Brown Brothers Harriman & Co., an American bank, the Colombia Coffee Federation; two multinational coffee traders — ED & F Man Holding and Mercon Coffee Corporation; and a number of other companies such as Kraft Foods, VOLCAFE Ltd., Procter & Gamble Company, Dreyfus Corporation and the New York Board of Trade.⁶⁰

Coffee-Exchange.com is located in Costa Rica and was founded by an entrepreneur, Rodrigo Fernandez, in partnership with several private investors. EGreenCoffee was founded by a major coffee dealer. Its partners include a futures trading company (Sudcen), a large bank (ABN AMRO) and a Swiss certification firm (SGS). The exchange has now been acquired by Tradax Group (TDMX) Company. It is evident from these examples that the ownership of the exchanges is predominantly in the hands of major coffee dealers and buyers. Membership of the exchanges is open to coffee producers of all sizes, exporters, dealers, roasters, brokers and traders in coffee futures around the world. Participation in other forms is also open to other parties associated with the coffee trade such as financiers and logistics management companies.

Internet-based commodity exchanges are also being created for other primary commodity markets such as tea and cotton. Teauction.com is an Indian-based

B2B tea market that enables buyers and sellers worldwide to participate in tea auctions via the Internet. It also provides comprehensive information for the benefit of members and the tea trade at large.⁶¹ A United States based venture has planned the formation of a B2B e-market for the cotton industry. Its objective is to create an independent electronic exchange for sellers and buyers of cotton and also for its products and supplies.⁶²

The online commodity markets described here are all fairly new and information about their operations is still inadequate. Therefore, while in principle even SMEs that produce coffee or tea in developing countries can in principle participate in the markets, there are no data that show the numbers and profiles of producers or exporters from developing countries that participate. In the short run it is most likely that the brokers and intermediaries operating in traditional commodity markets will continue to play a major role, although the nature of their roles is bound to change.

While many of the exchanges have been created by enterprises located in developed countries, the examples of teauction.com and InterCommercial Markets show that enterprises in developing countries can also invest in such markets.

G. Future trends in B2B e-markets

E-commerce is characterized by rapid changes. B2B e-markets are a relatively new type of e-commerce and yet they have already undergone a number of business organizational changes during their brief existence. Analysts are predicting that further fundamental changes are underway and still others will occur.⁶³ This section outlines the main future developments in B2B e-markets.

1. Consolidation and strategic alliances between e-markets

It is predicted that B2B e-markets are likely to see a wave of consolidations or strategic alliances as market places attempt to achieve economies of scale and network effects. In the face of ongoing intense competition, e-markets will be obliged to adopt new strategies or business models in order to survive, and cooperation is the most likely strategy. By reaching wider markets through cooperation, the e-markets will be able to reduce their costs and increase value for trading partners. It is also expected that consolida-

tion will be used as a means to acquire technology. Technology solutions are developing rapidly and becoming a major driving force of e-marketplaces. Therefore, e-markets tend to form alliances with leading technology companies as a business strategy.

There have already been important examples of consolidation, such as the creation of retailers Sears and Carrefour, the supplier-controlled e-market MetalSite, MAriba's acquisition of Tradex Technologies, Trading Dynamics and SupplierMarket.com, and the acquisition of Petrochem.com by CheMatch.purchase. It is not certain what sort of consolidations will prevail or dominate. They may, for example, be between horizontal and vertical market places, between several vertical market places or between buyer-driven and seller-driven markets.

2. Greater specialization or establishment of niche markets

In addition to using consolidation, e-markets will address competition by attempting to develop differentiated or specialized services and thus create niches for themselves. There are considerable benefits if firms select functions in which they can create their greatest competencies. Such a strategy hinges on the fact that because of cost and effort, individual exchanges would find it difficult to create the whole range of capabilities or functionality in the entire value chain. There will therefore be opportunities for e-markets to increase their competitiveness by focusing on specific services, functions or processes such as financing, logistics, order management, inventory and purchasing. These services may then be provided to other e-markets.

3. Movement towards industry-controlled and private e-markets

A significant development in B2B e-markets is the entry by traditional buyer-side or seller-side industries through consortium arrangements, in competition with independent third-party e-markets. It is expected that this trend will continue to dominate future developments, as these new entrants have strong backing from large firms with secure financial resources, providing them with the ability to mount long-term competitive strategies. However, the industry consortia are also likely to face increasing competition from private e-markets, namely those formed by individual firms. These trends may not,

however, be totally clear-cut if the players in the various types of e-markets enter into strategic alliances.

H. Summary

B2B e-markets are expected to represent the largest share of global electronic commerce transactions. These markets bring together large numbers of buyers and sellers into single trading communities, thereby enhancing reductions in transaction costs and improving collaboration. They are distinguishable from B2C transactions, from B2B commerce that involves only one seller or buyer (one-to-many) and from traditional stock and commodity exchanges. They fall into various categories, the main ones being vertical markets, horizontal markets, independent third-party markets, industry consortia that are either buyer-driven or seller-driven markets, and private e-markets formed by single firms.

A large number of B2B e-markets have been established in different industries, and this has given rise to intense competition. While e-markets tend to have low barriers to entry, the attainment of liquidity and critical mass determines which of them will survive the competition. Generally, first movers tend to have the advantage in attaining critical mass, thereby creating barriers to entry for new comers. However, the structure of B2B e-markets has yet to reach a state of "equilibrium", as competition continues. Inherently, B2B e-markets have the potential for creating market dominance and anti-competitive behaviour. Competition authorities, however, have not so far established specific rules to address B2B e-markets.

B2B e-markets offer a wide range of capabilities or functionality concerning the content or information they provide, the handling of online transactions and support for collaboration, including linkages to members' back-end systems. Technology plays a critical role in the functionality of a B2B e-market. The impact of B2B e-markets includes reductions in transaction costs, reducing or changing the roles of intermediaries, enhancing pricing transparency, promoting economies of scale and network effects, and allowing trading communities to develop a wide range of collaboration activities.

Developing countries have so far accounted for a very small share of transactions in B2B e-markets. Before an enterprise decides to participate in e-markets as a

buyer or seller, it must consider a number of strategic questions and assess the expected return on investment. Developing countries may find opportunities to participate in or create online markets in sectors where they have had a significant presence, such as travel/tourism and primary commodity marketing. The distribution of travel/tourism products is dominated by a few large players. The Internet has promoted competition and opened up alternative channels of distribution. A number of schemes, including regional cooperation and affiliation with major players, are available to enterprises in developing countries to enable them to participate.

Primary commodities play a key role in many developing countries. Traditional marketing and export channels can be improved and expanded by using the Internet. Online B2B exchanges are being created in trades such as coffee, tea and cotton. Some of these have been created by developing country

enterprises. Many developing countries have established traditional commodity exchanges. These can provide foundations for the development of new online B2B commodity markets. Also, private sector buyers and export associations can be used to organize such online markets.

B2B e-markets have a relatively short history but have already undergone several changes. For the foreseeable future they are expected to experience consolidation and the formation of strategic alliances. Also, it is expected that they will tend to focus on the provision of differentiated and specialized products and services as part of their competition strategy. Furthermore, there is an apparent shift towards the development of industry-based or consortium-type B2B e-markets and also private B2B e-markets.

Notes

- 1 Other categories of e-commerce include business-to-consumer (B2C), where businesses sell to consumers; consumer-to-consumer (C2C), where individuals can buy and sell from one another in auctions; and consumer-to-business (C2B), where consumers post prices at which they are willing to buy goods and services from businesses.
- 2 They are also referred to as “exchanges” or “net markets”.
- 3 See Forrester Research, Inc. (2000) and International Data Corporation (2000).
- 4 Throughout this chapter the names of specific firms are mentioned purely for the purpose of illustration, without implying any judgement on the legal and commercial status of the firms concerned.
- 5 For example, the alliance between Ariba and Dell is aimed at creating a B2B portal for Dell’s SME customers powered by Ariba’s B2B e-commerce platform and integrating Ariba’s procurement software with Dell powerEdge services.
- 6 See Sculley and Woods (2001).
- 7 Specific examples include ChemConnect and e-Chemical (chemical industry) and e-Steel and MetalSite (metals industry). For more examples, see, for example, Legg Mason Wood Walker, Inc. (2000).
- 8 Examples include MRO.com, Ariba Network, SAP, Commerce One and Oracle.
- 9 For example, Ariba (a horizontal exchange) has established a relationship with SciQuest, while Ariba (horizontal) has linked up with Chemdex.com (chemical industry).
- 10 For example, Wal.Mart’s RetailLink.
- 11 For example, WorldOil.com.
- 12 An example of a buyer-driven exchange is Covisinst, which is an auto parts e-market created by GM, Ford, DaimlerChrysler and Renault/Nissan. Other examples include Trade Ranger (oil refining), eHitex and e2Open (electronics/high-tech sectors), Aerospan and MyAircraft, Exostar and e2open.
- 13 Examples of these include Works.com and Grainger.com.
- 14 See Brown (2000).
- 15 Examples of these include Nypro and e-Exchange. For a discussion see King (2000).
- 16 Deloitte Consulting (2001).

- 17 Boston Consulting Group (2000).
- 18 B2B e-markets are in reality markets for markets, in the sense that they bring together players who are already operating in markets.
- 19 Critical mass is the number of participants in an exchange that would ensure that the operation of the exchange can at least breakeven.
- 20 See United States Federal Trade Commission (2000).
- 21 See, for example, UNCTAD (2000).
- 22 The initial market places were established by independent companies, such as E-steel (steel industry), SciQuest (life sciences), Chemdex (chemicals industry), Freemarkets (industrial goods) and GoCargo (logistics services).
- 23 See, for example, Morgan Stanley Dean Witter (2000).
- 24 See www.commerceone.com/news/us/gtw_association.html.
- 25 At the end of 2000, GTW comprised a total of 80 global e-marketplaces. See Raisch (2001).
- 26 See, for example, eMarketer (2000b) and Raisch (2001).
- 27 Forrester Research Inc.(2000).
- 28 Gartner Group (2000).
- 29 See, for example, Raisch (2001).
- 30 For an extended discussion of statistics on e-commerce, see chapter 3 of this report.
- 31 For an extended discussion of participation by developing countries in e-commerce, see UNCTAD (2000) and chapter 9 of this report, which discusses a survey of e-commerce in selected least developed countries.
- 32 For examples of such measures, see Wilson (2000).
- 33 For an examination of teleservices in LDCs, see chapter 9 of this report.
- 34 Tourism and travel are closely interrelated activities and their transactions or the distribution of their products are largely handled through the same channels.
- 35 For a comprehensive discussion of e-commerce in tourism, see chapter 3 of this report.
- 36 It is estimated that traditional travel agencies account for over 75 per cent of all airline tickets. See Global Aviation Associates (2001).
- 37 It is estimated, for example, that travel reservations constitute the largest consumer and business purchases on the Internet (see www.phocuswright.com/research/index.html).
- 38 Global Aviation Associates (2001). Also see chapter 3 of this report.
- 39 See “eTourism marketplaces – a major revolution”, <http://www.etourismnewsletter.com/archives/3105200/efocus.htm>.
- 40 See “eTourism marketplaces – a major revolution”, <http://www.etourismnewsletter.com/archives/31052000/efocus.htm>.
- 41 The joint websites set up by the airlines are intended to distribute products related to air travel as well as other related products such as hotel reservations and car rentals.
- 42 This site was launched in April 2001. However, the Forte Hotel Group brands have now been purchased by various other companies.
- 43 See www.webtravelnews.com/archive/article.htm?id=363.
- 44 See for example, “Travelocity.com and Expedia.com’s globalisation strategies challenged”, at www.etourismnewsletter.com/archives/2000-2/ecommerce.htm, “Serious threats for the future of online and offline agencies”, at www.etourismnewsletter.com/efoc.htm, and “eTourism market places – a major revolution”, at www.etourismnewsletter.com/archives/31052000/efocus.htm
- 45 The participating airlines are British Airways, Air France, Lufthansa, Alitalia, KLM, Iberia, SAS, Aer Lingus, Austrian Airlines Group, British Midlands and Finnair. The joint airline travel agencies created by airlines should be distinguished from joint websites that are operated directly by the airlines themselves.
- 46 The availability of standard XML interfaces means that data sources such as the GDSs or other distributors can be accessed by users on the Internet.

- 47 Penetration by large multinational enterprises into developing countries has been part of the wider trend of the globalization of the world economy in all sectors and particularly in services.
- 48 See www.webtravelnews.com/archive/article.html?id=492.
- 49 See for example, www3.travelocity.com/about/about_main...:EN/AFFILIATEAGREEMENT,00.htm.
- 50 See <http://www3.travelocity.com/pressroom/pressrelease/0,1090,1631/TRAVELOCITY,00.htm/26/03/01>.
- 51 The role of DMOs has been outlined in greater detail in chapter x of this report.
- 52 In addition to public bodies, DMOs can be associations of private tourism operators.
- 53 See Rice (2001)
- 54 See Australia Tourist Commission – Resources for the Australian Tourism Industry, <http://www.atc.net.au/market/intnet/intnet.htm>.
- 55 See Quarmby (2000).
- 56 See Asean e-Tourism Portal, eASEANtravel.com.
- 57 See, for example, Lovelace, (1998).
- 58 Commodity exchanges exist or are planned in many developing countries, such as Argentina, Brazil, Mexico, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Ecuador, Peru, Bolivia, India, Sri Lanka, Thailand, Malaysia, Singapore, Zambia, Zimbabwe and Kenya.
- 59 <http://www.egreencoffee.com/public/sundry/headline.asp?id=211lang=e>.
- 60 www.intercommercial.com/Icpublic/AboutUsEnglish.asp.
- 61 See www.teauction.com/home/aboutus.asp and www.teauction.com/home/faq.asp.
- 62 See www.cargill.com/today/release/00_5_24cotton.htm and <http://memphis.bcentral.com/memphis/stories/2000/07/17/story2.html>.
- 63 See, for example, Kendrick (2000), Covill (2000) and Konicki (2000).

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Chapter 5

TO WARDS DIGITAL GOVERNMENT

A. Introduction

Just as e-commerce is creating a new business environment for most sectors, including many traditional ones, so it is expected that the Internet will introduce deep changes in the organization, management and provision of government services in the next few years. Although e-government is still in its infancy, its effects on the way some Governments are performing some of their core functions, such as tax collection, law enforcement or even defence, are already discernible. On a smaller scale, but with potentially equally important long-term implications, the Internet is also beginning to influence the political process and the interaction between citizens and their representatives.

Although the Electronic Commerce and Development Report is not directly concerned with many of the above-mentioned matters, there are several reasons why it could not leave out e-government. The first one is that in most countries the public sector (broadly defined, and including regional and local Governments) is the largest economic actor, whether this is measured in terms of employment, expenditure or revenue.¹ The changes that the Internet will bring about in the way Governments manage these vast resources, especially as they interact with businesses, will have a deep impact on the overall efficiency of an economy, the competitiveness of its enterprises and its ability to attract foreign investment. The implications for a country's development prospects are obvious.

A second reason why e-government matters for e-commerce is that by embracing the Internet, Governments can accelerate the change in mentality that is needed for e-commerce practices to spread among private sector enterprises, particularly the mass of small and medium-sized enterprises in developing countries. Just as some large corporations have forced their suppliers and distributors to adapt to e-commerce in order to keep doing business with them, so Governments can stimulate the introduction of e-

commerce by demonstrating the potential of the Internet and by encouraging the private sector to adopt e-practices in their dealings with government agencies.

The sections that follow will present a broad picture of the main recent developments in the area of e-government, the key elements of e-government strategies and the prospects for the immediate future. A more in-depth examination of these matters, including case studies of e-government projects around the world, will be included in the next issue of the Electronic Commerce and Development Report.

B. A revolution biding its time

Broadly speaking, e-government could be defined as the use of information and telecommunication technologies, especially the Internet, to enhance access to and delivery of government services to benefit citizens, businesses and the staff of the public sector. In itself, the application of information technologies to government business is nothing new; on the contrary, government agencies have been among the earliest and largest users of information technologies. But operating a large number of mainframes to manage payrolls or tax collection, or even putting a personal computer on the desk of every civil servant, does not transform a traditional bureaucracy into an e-government. It is the Internet, with its capacity to break the barriers of time and distance and to bring together a wealth of information from a virtually unlimited number of sources, that is creating the possibility of reorganizing and networking government services to make them more user-centred, transparent and efficient. However, the pace at which Governments in general are adapting themselves to the Internet is considerably slower than the pace at which the private sector is adapting itself. The reasons for this are varied.

First, the size and complexity of government operations can explain the relative slowness in the spread

of e-government practices. Many government agencies deliver services that affect large numbers of people (pension benefits) and/or are politically and socially sensitive (education), or involve several levels of government that are accountable to different constituencies (law enforcement). These agencies cannot afford the disruption in service which they fear, sometimes with reason, is an inevitable part of the re-engineering of their operation that is required in order to become an e-government service provider.

Secondly, the inequality of access to the Internet is a matter of serious political concern. Governments cannot choose their customers: their services must be available to all. Today, even in those countries where Internet access is more widespread, only about half of the population has an Internet connection at home. Since government services must be equally accessible to all citizens, government agencies will not be able to become full-fledged online operators until Internet access reaches a significantly larger part of the population. Policies aimed at improving the access of the public to the Internet are therefore inextricably linked to the establishment of e-government services, particularly in developing countries.

Thirdly, there are fundamental differences between the incentives and deterrents faced by government agencies and commercial operators. For a company facing competition from dot.coms or from more traditional competitors who have been quicker in becoming "bricks-and-clicks" businesses, to ignore the Internet is not an attractive option. This is rarely the case of government agencies, which generally have a captive customer base. The exception, of course, is public sector operators (for instance, some railways and airlines) that face direct or indirect commercial competition and have been as rapid as their rivals in setting up commercial (and sometimes remarkably effective) online services.

Finally, organizational and cultural factors also matter. The typical hierarchical structure of government agencies is much less "Internet-friendly" than the more flexible, flatter structures now common in the private sector. The increased transparency and accountability that are inherent to the transition from the traditional to the digital organization can be perceived as dangerous in a government environment, either for legitimate reasons (such as security or privacy) or because they represent a risk for the bureaucratic establishment. Competing claims among

departments and/or various levels of government about responsibilities for e-government projects are not uncommon. Civil service values that stress respect for authority, rules and precedent are not necessarily the most attractive ones for the kind of employee that may bring with him or her the skills and preference for innovation that are so relevant in an Internet environment. Compensation packages in the public sector are also less likely to reward risk-taking and innovation than those of companies at the forefront of the digital economy. And resistance to change can often more easily find support in the generally more organized workforce of the public sector.

While all the reasons mentioned above are equally valid for developed and developing countries, in most of the latter the difficulties are compounded by the lack of telecommunications infrastructure, poor computer and general literacy, lack of awareness of the potential of the Internet and regulatory inadequacy that hinder other applications of the Internet there. Also, the investments required are perceived as too high for the budgets of many Governments of developing countries, even though the application of the Internet (and of information and communication technologies in general) to public management often results in significant net financial gains. The experience of the introduction of UNCTAD's Automated System for Customs Data (ASYCUDA) computerization programme² provides an interesting example in this regard.

In spite of all these reasons, the rise of e-government in the years to come will be as unstoppable as that of e-commerce. For instance, in August 2000 a report by Forrester Research estimated that by 2006 the Government of the United States would collect about 15 per cent of its tax and fee revenue online.³ This represents a three-fold increase compared with figures for the year 2000. The same report calculated that by 2006, Governments at all levels in the United States would receive 333 million online filings. In April 2000, the Gartner Group predicted that total government spending in the United States (including federal, State and local) in e-government projects would grow from \$1.5 billion in 2000 to \$6.2 billion in 2005.⁴ It is reasonable to expect that this trend will be reproduced in the rest of the world, in the same way as e-commerce has spread mainly from the United States to other advanced economies and more and more to developing countries. The next section will explore why.

C. The incentives to go online

Growing public expectations will be among the main factors behind the move towards e-government in most countries. As e-commerce becomes more and more a part of the everyday life of people, it will be harder for public sector service providers to lag behind in terms of the availability and the quality standards of services offered by private e-businesses. As the public grows accustomed to the convenience of round-the-clock, customized online services without the inconvenience of physically going to a public office and then wasting time in queues, public sector managers will be confronted with mounting pressure from users expecting to receive the same treatment as citizens as they receive as consumers.

The same organizational complexity that was mentioned earlier as a factor contributing to the slow development of e-government provides a good reason for public demand for more sophisticated online government services. The large number of government agencies that affect the activities of people and businesses in one way or another — each of them with its own regulations, practices and formal requirements — makes the relationship between citizens and government an ideal candidate for the efficiency gains provided by the Internet. For instance, a change of residence may require contacting agencies involved with, for example, tax, utilities, education, health care, driving licences and vehicle registration and voting registration. Each will ask for very similar but not necessarily identical information, provided in different forms and within various deadlines. In an ideal situation (and a quite unrealistic one for the time being), a fully operational e-government would allow users to log on to a secure website from which they could provide all necessary information which would then be checked and transmitted to all agencies concerned in a matter of minutes.

A second, strong incentive for Governments to go online is the political pressure for the public sector to “do more with less”. In the private sector, one of the clearest benefits for companies that have re-organized themselves to become e-businesses has been cost reduction at every stage of their value creation chain. Given the vast amount of financial and human resources handled by Governments, the potential savings in areas ranging from public procurement to personnel management are considerable. In the case of procurement, for instance, savings of

the order of 20 per cent are common among private companies that have moved their procurement operations to the Internet.⁵ It is true that Governments may not be able to automatically reap the same benefits as are now available to the private sector. For example, while the Internet makes it easier for private firms to outsource part of their activities to cheaper overseas contractors, many defence contracts are unlikely to be awarded to a foreign company. But even allowing for these kinds of differences, the savings in procurement costs derived from the widened scope of suppliers, lower administrative expenses and reduced need for financing stocks can be high.

Enhancing the overall competitiveness of the economy is another reason for Governments to embrace the Internet. Apart from helping in the more efficient use of a significant share of the nation’s resources (public consumption represents about 15 per cent of GDP worldwide), e-government will provide an example and an incentive for firms to adopt e-business practices, thus spreading the efficiency gains to the economy as a whole. And if in the “old economy”, an efficient Government was a key factor for successful development strategies, a good e-government will be equally important for the “new economy”. A well-run e-government will also help make a country more attractive to foreign investors and the mobile, highly skilled talent that can be crucial in enabling the new digital economy to take off.

These and other reasons have contributed to a change of perception among public sector decision-makers. Until recently, the most pressing concern for many Governments in the area of e-business was how to create the right environment for private e-business to prosper. It remains true that Governments have a crucial responsibility in areas such as the regulatory framework for e-commerce (including rules for e-contracts, consumer protection, taxes or privacy), ensuring the competitiveness of telecommunication services or equipping the population with Internet skills. However, public sector managers are now realizing that this is not enough. Governments (mainly, but not exclusively, in developed countries) are putting in place strategies to transform themselves into e-governments, and setting targets to measure progress.

Table 20 provides some information about the targets that the Governments of the G-7 and a few

Table 20
E-government service delivery targets of selected countries

Country	Electronic service delivery target
Australia	All appropriate Federal Government services capable of being delivered electronically via the Internet by 2001.
Canada	All key government services fully on-line by 2004.
Finland	A significant proportion of forms and requests can be dealt with electronically by 2001.
France	All administrations to provide public access to government services and documents by the end of 2000.
Germany	No high-level targets. Some departmental targets have been set.
Ireland	All but the most complex of integrated services by the end of 2001.
Italy	No high-level targets. Some departmental targets have been set.
Japan	All applications, registrations and other administrative procedures involving the people and the Government will be available on-line using the Internet or other means by the fiscal year 2003.
Netherlands	25 per cent of public services delivered electronically by 2002.
Singapore	Where feasible, all counter services available electronically by 2001.
Sweden	No high-level targets. Some departmental targets have been set.
United Kingdom	100% of government services carried out electronically by 2005.
United States	Provide public access to government services and documents by 2003. Provide the public with an option to submit forms electronically.

Source: Central IT Unit (2000).

other countries have set themselves as part of their e-government strategies.

D. Delivering e-government

A search for government sites in any popular Internet search engine will return thousands of governmental websites, with practically every country in the world represented. They can be roughly classified into five categories:

- (i) Those that merely provide Internet visibility. Sites from many developing countries fall into this category, but governmental websites from developed countries are also present. These sites usually include a few pages with basic information on the agency concerned and tend to be updated on a rather irregular basis. The business process of the agency remains unchanged.
- (ii) Sites that provide a one-way channel for information are also quite numerous. They may include a large volume of information on issues such as laws and regulations, procedures, objectives and policies of the agency concerned and institutional and contact information. When they are regularly updated, well organized and focused on the needs of the user rather than on the structure of the agency, these websites can provide a valuable service. However, they are not e-govern-

ment tools because they cannot support formal transactions. As in the previous case, setting up a website does not, by itself, change the way the agency operates.

- (iii) Sites which combine the content of the previous category with the possibility for users to interact with the staff of the agency, usually through e-mail. They may also include downloadable forms that can be later submitted offline. Complex transactions are not supported, but users can in theory provide information such as a change of address or ask questions. According to some surveys, a common problem is that a significant amount of these e-mail queries remain unanswered.⁶ This reflects the fact that it will take time to put in place a new customer-oriented organizational culture, which is a prerequisite for successful e-government (see below).
- (iv) A fast-growing number of sites, concentrated in developed or advanced developing countries, support formal transactions that involve either payments or the creation or transfer of legal rights (for instance, paying taxes, renewing a driving licence or claiming social security benefits). Some also allow users to check online the status of a request, or may use the information they accumulate about a citizen's particular circumstances to remind him or her of the need to renew a licence or the deadline for submitting a tax decla-

ration. These sites may include tools to help users complete online transactions, but they normally need to be combined with more traditional support systems, such as a telephone “hot-line”.

- (v) A handful of sites aim at providing services not on the basis of the way the agency entrusted with their delivery is organized, but according to the needs of the user. This implies that they must integrate a wide range of governmental services, normally under the same overall political responsibility (integrating the services of different levels of government raises complex political issues). Ideally, operating sites in this category should be the ultimate target of e-government efforts: a comprehensive government portal through which users could interact with their Government by asking simple questions such as “What do I need to do to set up a new business?” The system would ask the user to provide all relevant information and process it through the interlinked systems of the various agencies concerned without the user noticing it. Eventually, the user would receive in his e-mailbox legally valid e-documents reflecting all the actions taken by the agencies involved.

The list of Governments that have launched, or announced plans to launch, comprehensive Internet portals is long and not limited to developed countries. The list of those that are actually using them to provide e-transaction services is much shorter and mostly comprises local or State-level Governments, or countries with a highly centralized political system. Even at the government portals that are considered to be the most advanced only some selected services are operating fully online.

Even though government portals are crucial to most e-government strategies, their implementation is fraught with difficulties. They require change on an unprecedented scale, both in the processes of government agencies (to make them more user-centred and less hierarchical, to redesign procedures, to learn how to work better with other agencies) and in their management of information technology (for instance, to adapt legacy systems so that they can handle payments and e-signatures, or to adopt common approaches to issues such as data collection and processing).

Technology itself is not the main problem. First, what makes the Internet such a powerful force for change is that, at least in theory, it allows people using differ-

ent information technology platforms to communicate and work together thanks to a set of open standards and protocols. Second, in many applications of the Internet to government, the difference between e-government and e-business will be one of scale more than substance. This means that solutions that are already available for the private sector — from public key infrastructures for identification to Internet procurement software — can, with only relatively few changes, be applied to many government activities.

Organizational aspects are a more serious concern. Successful e-government agencies need to see the citizen as their customer, which represents a cultural revolution for many organizations. Becoming a user-centred organization may require a change in resource allocation priorities (for instance, from internal administration to customer service) and, as indicated earlier, a thorough review of the business processes of every agency. This means more than just streamlining or digitalizing forms: it involves deciding how many of the tasks an agency performs will remain relevant after the change. A user-centred agency will also need to give credible answers to concerns about the integrity and confidentiality of the sensitive data that government agencies often collect.

Agencies must upgrade the skills of their staff: technology without people will be useless. Motivating public employees to support the change to e-government can be challenging if the move is perceived to be motivated by cost-cutting (i.e. job-cutting) considerations rather than by the will to provide better value to citizens. The change in mentality must reach all levels in the government structure. Government decision-makers who feel uncomfortable using e-mail or who rarely surf the web cannot credibly lead the move to e-government.

Finally, some degree of inter-agency coordination needs to be ensured. This should not be confused with a preference for large, centralized projects. On the contrary, financial, technical and political reasons make this approach likelier to fail than one that gives priority to smaller projects with short, well-defined time frameworks and relatively modest objectives. There is, however, a need to ensure that a common vision of e-government exists and that consistent policies are applied in addressing issues such as security or privacy protection.

It seems therefore likely that in most countries the move towards e-government will tend to be incre-

mental. The current phase can be considered an experimental one, with Governments concentrating on limited, relatively low-risk applications of the Internet that do not pose too hard questions in areas such as security and privacy. As the demand for e-government grows, and agencies feel more secure in their handling of it, e-government will enter a second phase in which portals integrating a wider range of online transactions in a secure environment will be more widespread.

For most Governments the issue today is how to identify the areas where their first forays into e-government can be more productive. The experience so far points to procurement, self-service websites for the processing of relatively simple transactions (where business services should have priority) and intranets that allow agencies to share and exploit data more efficiently as the types of Internet applications in which early success is more likely.

E. A few starting points

The step-by-step approach that most Governments are likely to follow as they adapt their services to the Internet does not mean that ambitious long-term objectives should be abandoned. On the contrary, it is the success of focused, realistic e-government projects that will lend legitimacy to far-reaching visions of change. The final section of this chapter sets out a number of points that need to be kept in mind when launching e-government projects.

- **E-government requires reliable, fast technology.** Demand for e-government services is expected to grow at a rapid pace. But a web page that is frequently inaccessible at peak demand times can be extremely frustrating no matter how well designed the page is. Reliability problems in a widely used online service can damage the credibility of a whole e-government project. Untested technologies should be avoided and standard software solutions adopted as much as possible. In developing countries, technology choices should also be made keeping in mind that Internet platforms designed for use in a context of high-quality telecommunications infrastructure will not be a viable option for their e-government projects. And the personal computer need not be the only means of access to e-government services: m-commerce (e-commerce through cellular phones) is an example of a cheaper alternative that may be more adapted to the conditions of developing countries.
- **Start small and build on success stories.** Large, complex projects are more likely to fail and thus undermine e-government initiatives than modest, self-contained projects. On the contrary, the success of small but scalable projects boosts staff morale, provides valuable lessons that can be applied in more ambitious undertakings and will help create a critical mass of e-government users.
- **Digital government is not just digitized forms.** E-government is an opportunity to rethink the business process of governmental agencies, following a logic that places the user at the centre of every task performed.
- **Remember that not everyone will be online.** The Internet adds a new channel for the delivery of government services; in some areas it will eventually become the most popular one. But because of concerns about social inclusion, traditional channels such as counter service and the telephone will retain an important role. The special needs those categories of people who may find it harder to use the Internet in their dealings with the Government (for instance, illiterate people) must also be taken into account.
- **Recognize and address privacy and security concerns.** Government agencies handle and store a great deal of confidential information about people and businesses. An e-government project will not take off if people are not convinced that dealing with the Government online provides the same level of data protection as more traditional methods.
- **Prioritize government-to-business services.** E-government services aimed at the business sector are those in which efficiency gains are more likely to translate into improved competitiveness for the economy as a whole. Examples of such services include Customs, business taxation and government procurement.
- **Build up critical mass.** The success of an e-government project will be measured mainly by the number of users it can attract. For this, citizens and businesses need to be made aware of the availability and advantages of e-government services. Marketing campaigns may be complemented with financial (lower fees) and non-financial incentives (guaranteed faster

processing of tax returns filed online) for e-government users.

- **Ensure leadership and political commitment.** E-government will bring about profound changes in the relationships among government agencies, and between them and government, citizens and public employees. This complex challenge calls for political commitment and a clear strategic vision at the highest possible level. This should be accompanied by strong project leadership at the operative level, with the capacity to arbitrate between different departments.

- **Explore partnerships with the private sector.** Implementing e-government will require significant investment. Budgetary resources may need to be complemented with alternative sources of funding, including the possibility of joint private-public financing of concrete e-government projects. These partnerships may also allow e-government projects to benefit from the experience accumulated by the private sector in the area of e-business.

Notes

- 1 For instance, according to the World Bank (2001), in 1998 the current revenue of the central Governments of the world amounted to 26.4 per cent of global gross domestic product (GDP) and the total expenditure was 27.9 per cent of GDP. With regard to procurement, Eurostat (2001) data show that for the fifteen countries of the European Union, openly advertised public sector procurement (which amounts to just 13.1 per cent of all public sector procurement) represented 1.83 per cent of GDP, or almost \$155 billion.
- 2 See www.asycuda.org.
- 3 Forrester Research Inc., "Sizing U.S. e-Government", quoted in E-commerce Times (2000). www.ecommercetimes.com 31 August 2000.
- 4 Gartner Group Inc (2000).., press release available at www4.gartner.com
- 5 The Economist (2000).
- 6 According to a study of 81 government sites in the United States carried out by Jupiter Communications in April 2000, as much as 52 per cent of e-mail queries received no response, and only 12 per cent were answered within one day. See remains.eThestandard.com (2000).

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