

E-leaders and late e-adopters:

Sectors differ in their use of ICT for doing business

E-Champions: The ICT services sector, the manufacture of electronics and electrical machinery and the automotive industries are the most e-business intensive sectors.

Among the more E-Intensive Sectors are the chemical industries and business services.

Tourism and retail are among the E-Specific Sectors which use ICT for very specific purposes. Tourism, for example, is the leading sector with respect to sell-side e-commerce.

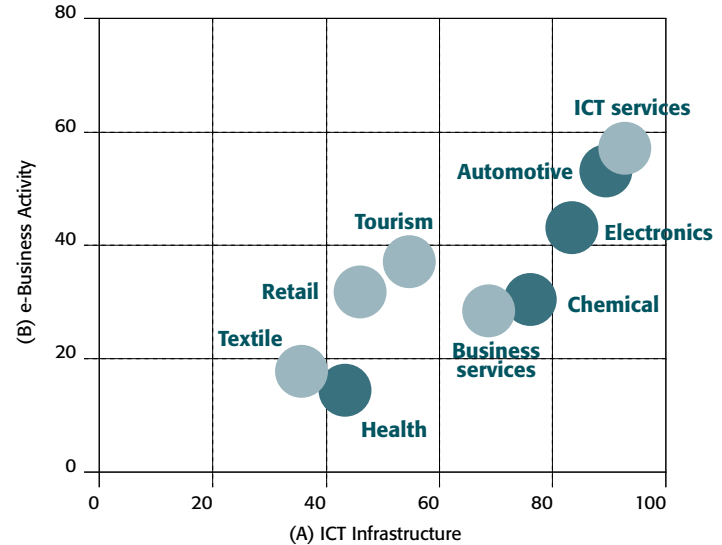
The textile industries (among the manufacturing sectors) and the health & social services sector are Late E-Adopters. Although this is partly explained by the dominance of SMEs in these sectors, there is still untapped potential.

The eEurope 2005 Action Plan calls for the benchmarking of its main targets. One of the indicators approved by the Council to be used in this context is the "E-Business Index". This is a compound index to adequately capture the complexity of the dynamic e-business environment.

The *e-Business W@tch* has developed a proxy from a sectoral perspective to the eEurope 2005 E-Business Index and applied it to the 10 sectors monitored in 2003/04, using the survey results of the 2003 e-Business Survey. This Index is composed of two subindices: one for ICT Infrastructure and one for the use of this infrastructure (e-business activity).

The index clearly shows the differences in the use of e-business between companies from different sectors and size-bands. Regional differences also exist, but are less pronounced in comparison.

The eEurope 2005 e-Business Index for sectors of the EU economy
(proxy developed by the *e-Business W@tch*)



E-business for small firms and international companies

Advantage for larger firms to exploit e-business opportunities

Increasing the efficiency of business processes, for example to reduce processing costs related to commercial transactions, is a major objective driving companies to implement e-business.

This applies to companies from all size-bands, but fixed costs for technology implementation and maintenance tend to be relatively higher for small companies. Larger firms, which can afford more powerful solutions, are more likely to benefit from efficiency gains. In fact, the diffusion of advanced e-business software solutions for automating business processes (such as ERP solutions and SCM software) increases by company size.

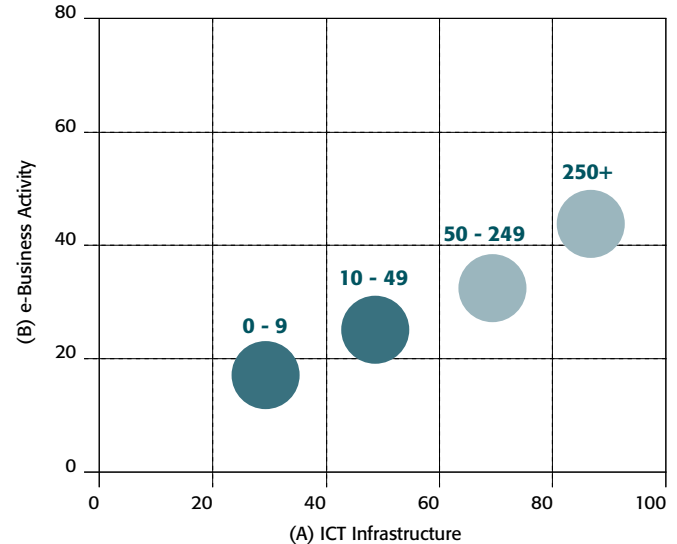
The ICT systems of large companies obviously tend to be more complex and sophisticated than those of small firms. This translates into more intensive and advanced electronic business practices.

Good examples are companies in the transport equipment manufacturing sector and the chemical industries. In these sectors in particular, there is a significant digital divide between the large, often multinational firms, which are international leaders in e-business adoption, and the many small supply companies which often adhere to much more traditional forms of trading.

E-commerce specialists among small companies

On the other hand, there are many SMEs that have specialised in trading online, mostly over the internet. An astonishing finding: The share of firms conducting more than 5% of their transactions online is highest among the small enterprises (10-49 employees) both for selling and for procuring online.

The eEurope 2005 e-Business Index for size bands
(proxy developed by the *e-Business W@tch*)



Source: *e-Business W@tch* (Survey 2003)

E-commerce: a slow but powerful evolution ...

... toward integrated sales and procurement systems

Electronic commerce, defined as buying and selling over the Internet or other online networks, has gone through different stages of development during the past years.

Although the level of transactions conducted over online networks is still comparatively low in most sectors, it would be a big mistake to underestimate the powerful impacts which these developments have already had on specific markets.

For many companies, it is important to actively participate in this development. But this requires much more effort than just setting up a simple website. The real challenge is to integrate sales and procurement processes electronically, with trading partners as well as within the company itself.

Share of online transactions still modest

A significant share of enterprises has started to sell and/or purchase electronically. In many cases, however, this is still a side-business. Processes are not yet electronically integrated and connected within or between enterprises.

In total, enterprises representing about 16% of employment said in 2003 that they made online sales, but only 9% said that those sales accounted for more than 5% of their total sales volume. Similarly, only every second firm that purchased supply goods online said that these accounted for more than 5% of total supplies.

The *e-Business W@tch* estimates that the total share of all purchases (in terms of volume) that were conducted over the internet or other online channels and protocols was about 6% across all sectors in 2003, with ICT services being the leading sector (10% of total). The share of e-sales was estimated to be lower (2%), with tourism taking the lead (5%) in this respect.

B2C: Net-influenced sales more important than online transactions

While the level of online transactions appears to be relatively low, the Internet already plays a most important role as a "sales agent" in some markets today. For example, a significant share of used car

sales (in some countries close to 50%) are net-influenced or initiated. In the real estate sector, online services have also become a very important source of information for browsing the market.

The Internet is playing a powerful role since it has tremendously increased the transparency of prices in the market – both for consumers and for businesses. This development is far from being completed and may lead to a further shift of power towards consumers and buyers. In retail, for example, this new situation has contributed to reducing profit margins, putting pressure on small companies in particular.

B2B: Will e-procurement foster market concentration?

The single major driver and objective for companies to implement e-procurement strategies is to decrease the costs related to commercial transactions, for example processing and changing orders, and also to reduce error rates. As large companies are implementing sophisticated schemes to exploit this cost saving potential, a shift of power from suppliers to buyers may take place.

What remains to be seen is whether and to what extent these developments will lead to further concentration, particularly in sectors with complex supply chains, such as the automotive or electronics manufacturing industries.

The European E-Business Scoreboard

Introduction to the methodology

The objective of this scoreboard is to compare the importance of ICT and e-business applications in 10 sectors of the European economy. It uses 16 indicators which are related to different business functions. For reasons of consistency and comparability, all indicators are based on data obtained through the e-Business Survey 2003 of the *e-Business W@tch*.

Normally, benchmarking activities of this type imply that a higher score stands for a better performance. In this context, however, the objective is not to compare performance in terms of "better" or "worse". Rather, the scoreboard should visualise the different importance which information and communication technologies can have for various sectors of the economy.

Structure of the Scoreboard

The European E-Business Scoreboard was developed by the *e-Business W@tch* in 2004 in order to compose the intensity of e-business use across different sectors and in different functional areas of business activity. It consists of 16 component indicators on ICT and e-business which are grouped into four categories:

- (i) the connectivity of the enterprise
- (ii) Internal business process automation
- (iii) procurement and supply chain integration
- (iv) marketing and sales.

The selection and definition of component indicators considered data availability (a selection criteria was that data were available for all sectors monitored and for the EU-5 countries) as well as data reliability (in the sense that only a minimum of indicators which reflect subjective perceptions of the interviewee were used). Some of the component indicators consist of more than one variable by themselves. The tables on the following pages show the definition of all 16 component indicators.

The Scoreboard is flexible in terms of scope and choice of indicators. Additional categories could be added on demand. If component indicators are modified or exchanged, however, aggregate values for the respective category will be effected. The structure of the Scoreboard reflects to some extent current methodological work of the OECD on e-business. The OECD is also adopting and

suggesting a business process oriented framework for measuring electronic business developments.

Percentages and Index values

The Scoreboard presents data both as percentages and as indexed values.

- Percentages express the share of employees from a sector that work in enterprises that use an application as defined in the following table.
- Indexed values take into account the percentages from all sectors and show how a specific sector differs from the all-sector-average. An index value is based on mean values and standard deviations. Constituting values are z-values, i.e. $z = (x - \text{mean}(x)) / \text{stddev}(x)$. This procedure results in a distribution with $\text{mean}(z) = 0$ and $\text{stddev}(z) = 1$. Thus, index values express the multiple of the standard deviation (1 or (-1)) for a specific sector and the selected indicator. 0 equals the mean value for all sectors, a value of +1 that the percentage is higher than the mean percentage of all sectors by the extent of the standard deviation. Negative values show that the percentage is lower than the mean percentage of all sectors.

All spider diagrams are based on index values. The reason for using indexed values rather than simple percentages is that they adjust data with respect to typical cross-sectoral gaps.

Overview:

Indicators of the E-Business Scoreboard

A. Connectivity of the enterprise	A.1	Enterprises connecting computers with a LAN	= the percentage of employees working in enterprises that have connected computers with a Local Area Network (LAN).
	A.2	Internet connectivity	= the percentage of employees working in enterprises that are connected to the internet, with a supplementary indicator for the type of internet connection in terms of bandwidth. The percentage of employees working in enterprises that are connected with a bandwidth of less than 2 Mbit/s is computed with a factor of 0.5, enterprises connected with ≥ 2 Mbit/s bandwidth with a factor of 1.0. The maximum value of 100 would be returned if all employees from a sector work in enterprises connected to the internet with ≥ 2 Mbit/s bandwidth.
	A.3	Remote access to the company network	= the percentage of employees working in enterprises where it is possible to access data from the company's computer system from a remote location.
	A.4	Wireless access to the company network	= the percentage of employees working in enterprises where it is possible to access the company network through wireless technology, for example by means of a wireless LAN (W-LAN).
B. Internal business process automation	B.1	Use of an intranet	= the percentage of employees working in enterprises that use an intranet.
	B.2	Use of online technology to track working hours / production time	= the percentage of employees working in enterprises that use online technologies for production process controlling purposes by tracking working hours of employees and / or production times
	B.3	Use of ERP systems	= the percentage of employees working in enterprises that have implemented an ERP (enterprise resource planning) system
	B.4	Perceived impact of e-business on internal work processes	= the percentage of employees working in enterprises that say that the use of e-business applications has significantly or somewhat changed their internal work processes. The latter are computed with a factor of 0.5.

Overview:

Indicators of the E-Business Scoreboard

C. Procurement and supply chain integration	C.1	Enterprises purchasing at least 5% of their supplies online	= the percentage of employees working in enterprises saying that they purchase at least 5% of their supplies online via the Internet or other online networks (for example via EDI based connections to their suppliers)
	C.2	Use of SCM systems	= the percentage of employees working in enterprises that use an SCM (supply chain management) system
	C.3	Integration of the IT system with that of a supplier	= the percentage of employees working in enterprises that purchase some of their supplies online and have integrated their IT system with that of a supplier for this purpose
	C.4	Electronic exchange of documents with suppliers	= the percentage of employees working in enterprises that exchange documents (other than plain text e-mails) electronically with their suppliers
D. Marketing and sales	D.1	Enterprises maintaining a website with a content management system	= the percentage of employees working in enterprises that have a website and use a content management system to maintain and update the website
	D.2	Use of CRM software systems	= the percentage of employees working in enterprises that use a CRM (customer relationship management) software to organise data about their customers electronically
	D.3	Enterprises selling at least 5% of their goods & services online	= the percentage of employees working in enterprises saying that online sales via the Internet or other online networks (for example via an extranet) constitute at least 5% of their total sales volume
	D.4	Enterprises with an online sales system offering the capability of secure transactions	= the percentage of employees working in enterprises that make online sales and whose online sales system offers the capability of secure transactions by means of a secure server, for example using SSL, TLS or a comparable technical standard

Scoreboard Indicator:

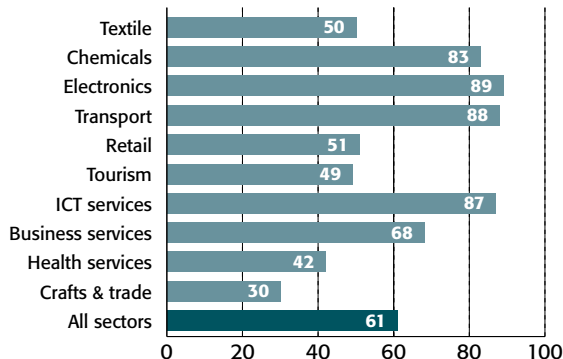
A.1: Enterprises connecting computers with a LAN

A Local Area Network (LAN) is the most common way of connecting computers for sharing files, communication facilities and software applications within a small area, typically inside a building, company or organisation.

Rather than the mere use of computers, the existence of a LAN is a good indicator whether companies possess the minimum network architecture for automating internal business processes electronically.

About 60% of employees in the EU work in companies with a LAN. Even 30% of micro-enterprises with less than 10 employees use a LAN to connect their few computers, and close to 90% of large enterprises.

Connectivity: Local Area Network



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N ~ 500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

AGe: "... Please tell me if your company uses this application or not: (e) a Local Area Network, that is a LAN. A LAN is a network connecting computers at one building or site."

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

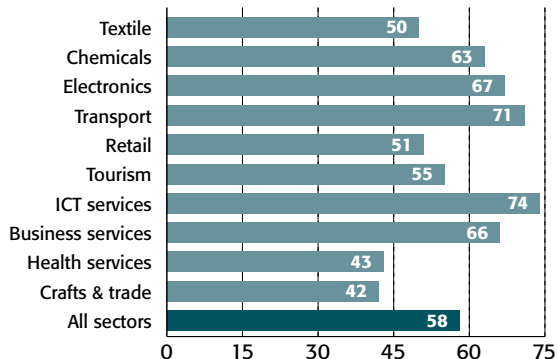
A.2: Internet connectivity

This index considers whether enterprises are connected to the internet and the type of their connection in terms of bandwidth. The index could take a maximum value of 100, which would mean that all companies from a sector are connected to the internet with a bandwidth of at least 2 Mbit/s.

Basic internet access has become a standard across the economy. At least 70% of employees in any of the 10 sectors benchmarked work in companies that are connected to the net. In most sectors, the figure is 90% or above.

The sectors with the most advanced Internet connections are manufacturing sectors dominated by large companies and service sectors where data exchange is particularly important, for instance business services.

Connectivity: Quality of Internet access



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N ~ 500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

A2: "Does your company have access to the Internet?" and A5: "What is the maximum bandwidth of your company's connection to the Internet?"

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

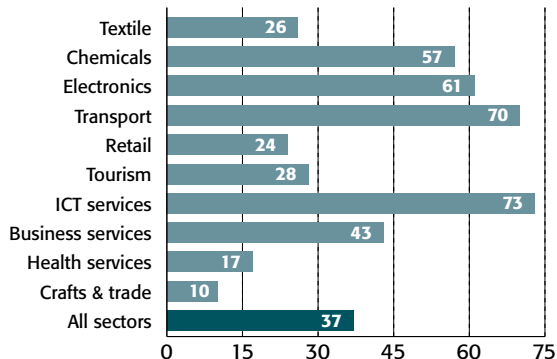
A.3: Remote access to the company network

Giving employees remote access to the company's computer network is a pre-requisite for mobile and flexible forms of work. If staff at branch offices, homebased teleworkers and travelling staff (managers, sales representatives) can remotely access data from the company's network, this will enhance the companies' business process efficiency.

The sectors that possess the best internet connections are also those whose companies are most likely to enable remote access to their network. Differences are more pronounced, however.

As can be expected, usage depends very much on the size of a company. Adoption rates range from 15% of micro companies to 60% of large enterprises.

Connectivity: Remote access



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N~500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

A30: "Can employees of your company access your computer system remotely from a non-business location, for instance from home or from a hotel?"

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

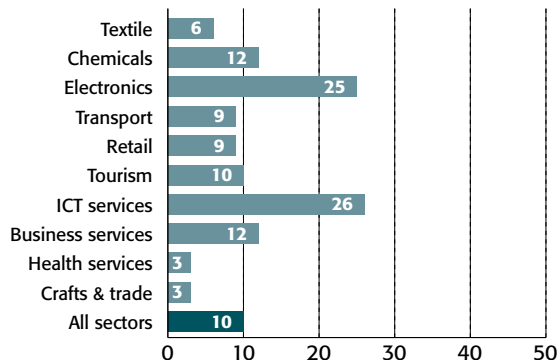
A.4: Wireless access to the company network

Wireless technology is rapidly evolving. It already plays an important role in everyday life (think of, for instance, cordless telephone sets, remote door openers, cordless computer peripherals).

Wireless access technology is also an increasingly important issue for companies, for example to facilitate access to the network in meeting rooms through a local W-LAN, to enable cordless connections to printers in small offices, to provide wireless bridges for LAN/WAN connectivity, and even as part of CRM technologies.

In 2003, one in ten companies had implemented a wireless access technology. A company internal wireless LAN which allows a mobile user to connect to a local area network is probably the most common application currently.

Connectivity: Wireless access



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N~500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

A31: "Can employees of your company access the computer system remotely via wireless devices?"

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

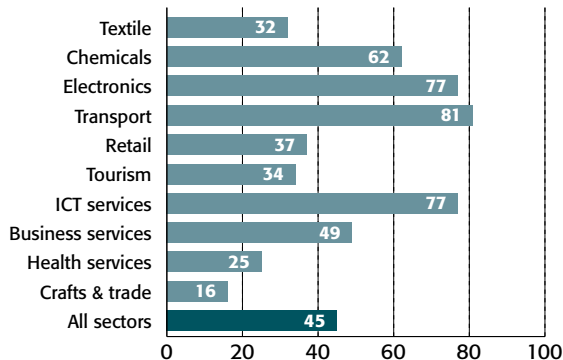
B.1: Use of an intranet

An intranet is a private network within an enterprise. The main purpose is to share company information and computing resources among employees. An intranet is therefore an application to facilitate the knowledge exchange within the enterprise and is used in this Scoreboard as a component indicator for internal business process automation.

As the value of an intranet increases by company size, sectors in which large firms dominate (transport equipment manufacturing, electronics) are better equipped with intranets than sectors where SMEs are relatively more important (textile industries, retail).

In total, 45% of employees from the 10 sectors benchmarked work in firms that have an intranet.

Internal processes: Intranet



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N~500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

A6c: "... Please tell me if your company uses this application or not: (c) an intranet."

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

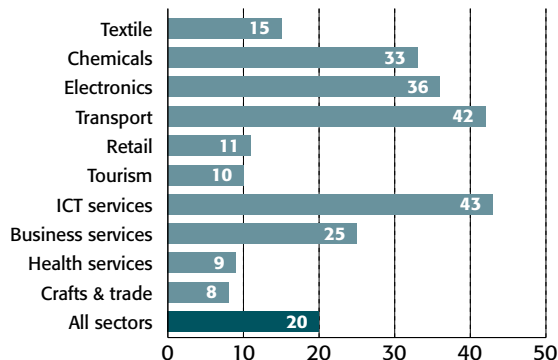
B.2: Use of online technology to track working hours and/or production time

Electronic business promises not only to increase the efficiency of business processes, but also to improve the information base for planning, controlling and project management.

Companies can use online technologies to track working hours that are spent on a specific project and to measure related production times.

This is particularly important in large projects and those which involve staff from different departments or even different firms (collaborative projects). Consequently, manufacturing sectors are more likely to use online technology for this purpose. Information intensive service sectors (ICT services, business services) however, are also making intensive use of such applications.

Internal processes: Tracking working hours and production time



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N~500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

B70c: "Do you use online technologies to support the following internal business processes: (c) to track working hours and production time?"

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

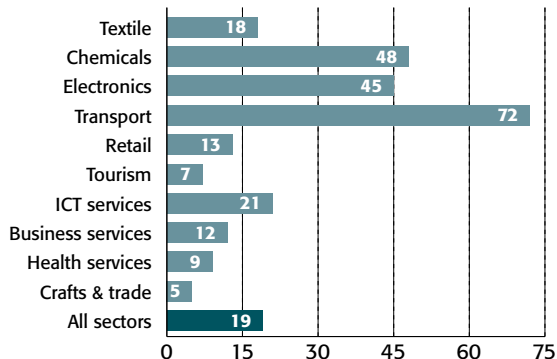
Scoreboard Indicator:

B.3: Use of ERP systems

An Enterprise Resource Planning (ERP) system is a multi-module application software that supports enterprises in planning their business in a broad way. Systems can cover all major business activities within a company, including product planning, parts purchasing, inventory management, order tracking, human resources, projects management, and finance. In most cases, an ERP system is integrated with a relational database system.

ERP systems are most useful for larger companies that have to manage a complex supply chain including physical supplies (raw materials, components). These are typically manufacturing sectors (in this sample the chemical industries, the manufacture of electronics and electrical machinery and of transport equipment).

Internal processes: Use of ERP systems



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N ~ 500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

B60d: "Has your company implemented (d) an ERP, that is an Enterprise Resource Planning System?"

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

B.4: Perceived impact of e-business on internal work processes

The *e-Business W@tch* asked companies whether the internet and their electronic business activities have changed internal work processes.

This Index adds answers that processes have “significantly” changed and – with a scaling factor of 0.5 – those that say they have “somewhat” changed.

Although this Index is based on the subjective perception of decision-makers rather than hard facts, the results are mostly plausible and reflect the assessment of the respective sector studies. The low level of perceived impacts in transport equipment manufacturing, and the relatively high index for the retail sector come as a surprise, though, as other e-business indicators would suggest a different picture.

Internal processes: Perceived impact of e-business on internal work process

	E-business has significantly changed internal work processes	E-business has somewhat changed internal work processes	Index
Textile	4	17	12
Chemicals	5	23	16
Electronics	12	27	25
Transport	5	27	18
Retail	8	26	21
Tourism	12	28	26
ICT services	16	36	34
Business services	16	27	29
Health services	5	19	14
Crafts & trade	4	13	11
All sectors	10	26	23

Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N ~ 500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

C22b: “According to your experience, how would you rate the impact of the Internet or of e-business technologies in your company on (b) internal work processes?”

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

C.1: Enterprises purchasing at least 5% of their supplies online

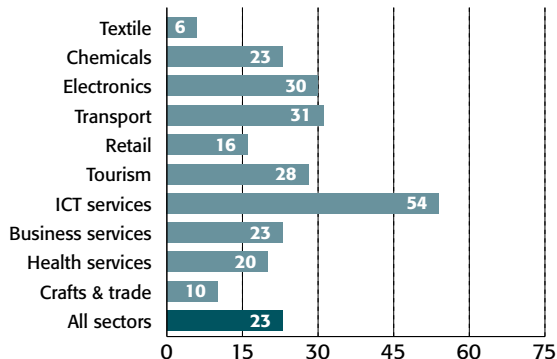
A significant share of enterprises from most sectors (46% in total, if weighted by employment) has started to purchase supply goods electronically.

However, in many cases this is still a sideline. Only about half of those companies estimated that online purchases accounted for more than 5% of their total supplies.

To eliminate occasional online buyers where e-procurement has hardly any significance for their overall business, this index only counts firms where e-purchasing has reached the 5% level.

Telecommunications and computer related services (ICT services) are outstanding in that respect.

Procurement and supply chain integration: Online purchasing



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N~500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

B34: "Does your company use the Internet or other online services to purchase goods or services?" and B40: "Please estimate how large a share of your total purchases is conducted online."

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

C.2: Use of Supply Chain Management software systems

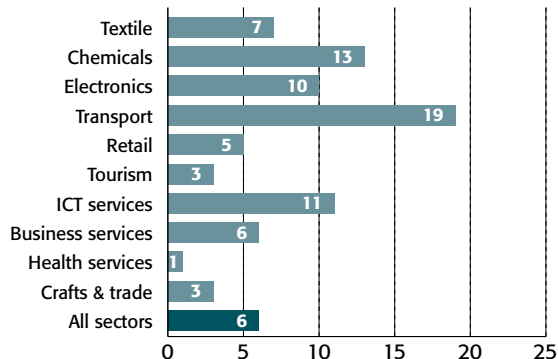
Supply chain management (SCM) solutions promise to give firms an integrated view of their supply processes, including the movement of materials, related information (ordering status) and finances (payment, credit terms).

SCM helps to better co-ordinate these flows, which should enable firms to reduce processing costs, for example by reducing inventory, and to improve service both to their suppliers and customers.

Similarly to ERP systems, SCM is mostly used by (large) manufacturing companies, for instance in the automotive and chemical industries. But even in those sectors less than 20% of all companies currently use an SCM system.

With respect to size-bands, the SCM gap is between SMEs (3-7%) and large enterprises (13%).

Procurement and supply chain integration: SCM use



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N~500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

B60a: "Has your company implemented (a)
an SCM, that is a Supply Chain Management
system?"

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

C.3: Integration of the IT system with that of a supplier

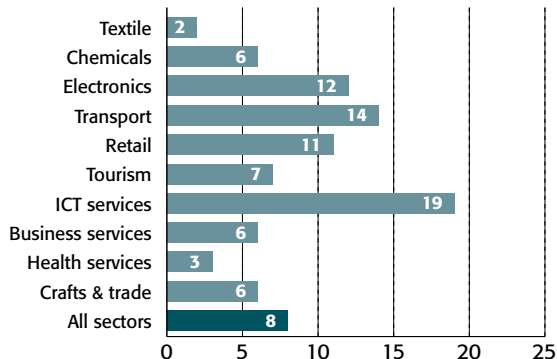
In many cases, companies have started to purchase supplies online, but the related processes are not yet electronically integrated and connected within or between enterprises.

While firms representing 46% of employment make at least some purchases online, only 8% have actually integrated their IT system with that of a supplier, for instance by using EDI based firm-to-firm connections.

Procurement related inter-firm connectivity is highest among manufacturing sectors and sectors with a comparatively long tradition of using EDI (retail).

12% of large companies say they have integrated their system with suppliers, but only 5-6% of SMEs.

Procurement and supply chain integration: IT integration with suppliers



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N~500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

B39: "Is your IT system integrated with that of a supplier for placing orders?"

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

C.4: Electronic exchange of documents with suppliers

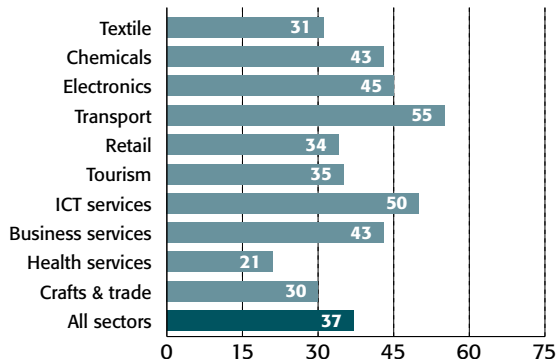
The *e-Business W@tch* asked companies whether they use online technologies (other than e-mail), for example the Internet or an extranet, to exchange documents electronically with suppliers.

In most sectors, the share of companies that say they do so compares to about 70-85% of the share of companies that actually makes online transactions.

In the textile industries and the crafts sectors, the practice of exchanging documents electronically is actually more widely diffused than completing transactions.

The available statistics do not however include information as to whether data in these documents is standardised, using specific e-business standards.

Procurement and supply chain integration: Document exchange with suppliers



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N~500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

B41 d: "Does your company use online technologies other than e-mail, like for example the Internet or an extranet, ... (d) to exchange documents electronically with your suppliers, for instance orders?"

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

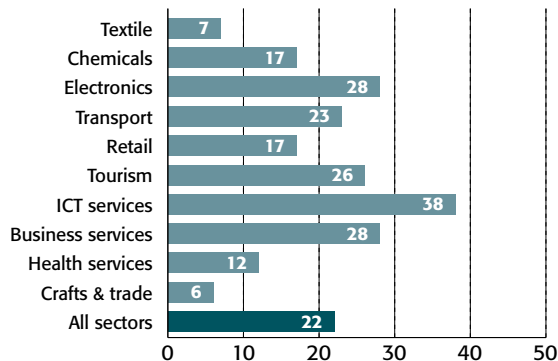
D.1: Enterprises maintaining a website with a content management system

A website on the internet with some information about the firm, its products or services, and about new developments, is a basic component in most electronic marketing schemes.

However, the mere existence of some sort of web presence is no longer a good indicator. Except for micro enterprises (33%), a vast majority of firms (70% of SMEs, 90% of large companies) already has a website. Many of those are known to be rather simple and static sites which do not really constitute an active marketing tool that is vital for the business.

The scoreboard therefore only counts enterprises which use a content management system (CMS) to update and maintain their site. This is a kind of filter, as the use of a CMS indicates that a site is regularly updated and has real importance.

Marketing and sales: Website maintenance with CMS



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N ~ 500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

B1: "Does your company have a web site on the Internet?" and B3: "Does your company make use of a content management system, which allows different departments to access the web site and update information?"

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

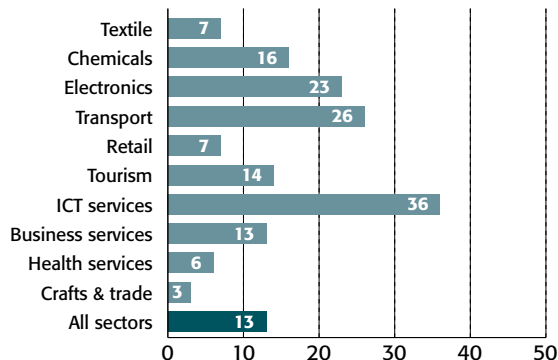
D.2: Use of CRM software systems

Online interaction with customers can collect and furnish a wealth of data on customers' behaviour and needs. Customer relationship management (CRM) solutions promise the ability to synthesize this data and to provide a universal view of the customer, thus improving the effectiveness and efficiency of marketing and sales.

However, the implementation of CRM suites can consume large amounts of money. The return on investment is normally difficult to calculate and can often only be realised in the medium and long run.

For these reasons, CRM technology is not widely diffused and mainly used by large companies, in particular if they deal with a large number of customers (for instance in telecommunications).

Marketing and sales: CRM use



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N~500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

B60b: "Has your company implemented ...
(b) a CRM, that is a Customer Relationship
Management system"

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

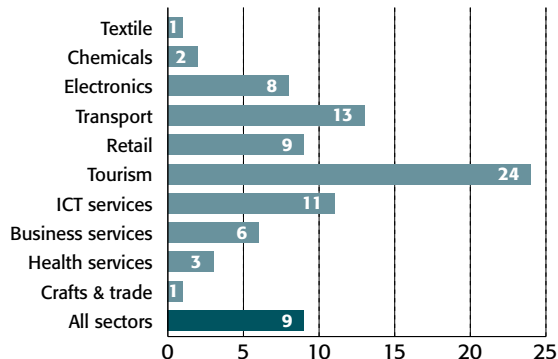
D.3: Enterprises selling at least 5% of their goods and services online

The development of electronic commerce has usually been judged by the volume of goods and services that are sold on the internet or through other online networks. This volume is still below the level of expectations expressed during or before the dot.com boom time.

Enterprises representing about 16% of employment said in 2003 that they made online sales, but only 9% said that those sales accounted for more than 5% of their total sales volume. Figures vary considerably by sector, though, with tourism standing out.

However, the Internet already plays a most important role as a "sales agent" in some markets today. For example, a significant share of used car sales are net-influenced or initiated.

Marketing and sales: Online selling



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N ~ 500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

B21: "Does your company sell goods or services on the Internet or through other online distribution channels?" and B26: "Please estimate how large a share of your total sales is conducted online."

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

Scoreboard Indicator:

D.4: Enterprises with an online sales system offering the capability of secure transactions

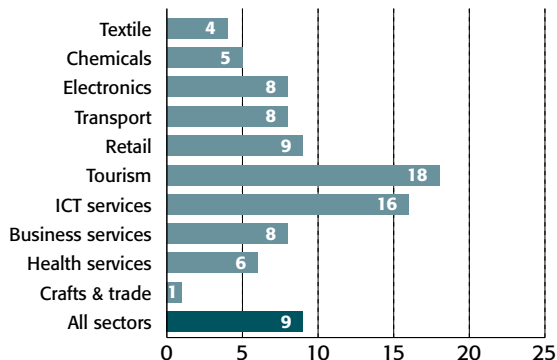
Many companies have started to sell goods or services online, but the related processes are not yet electronically integrated with the backend system.

Another aspect which qualifies the way how companies conduct online sales is security. Consumers are concerned about data security when entering confidential information (such as credit card data).

This scoreboard indicator shows the percentage of companies that use specific protocols to ensure privacy between communicating applications and their users on the Internet, typically Secure Sockets Layer (SSL) or its successor, Transport Layer Security (TLS).

As can be expected, companies from sectors with a higher propensity towards online selling are more likely to use such protocols.

Marketing and sales: Secure transaction capability



Base:

EU-5 (DE, ES, IT, FR, UK),
all enterprises from a sector.
N~500 by sector.

Weighting:

by employment
(= enterprises comprising ...%
of employment in a sector).

Survey question:

B30: "Does your online sales system offer the capability of secure transactions by means of a secure server? We mean for example using SSL, TLS or a comparable technical standard."

Source:

e-Business W@tch
(Decision Maker Survey 2003 – March/Nov.)

Published at

www.ebusiness-watch.org

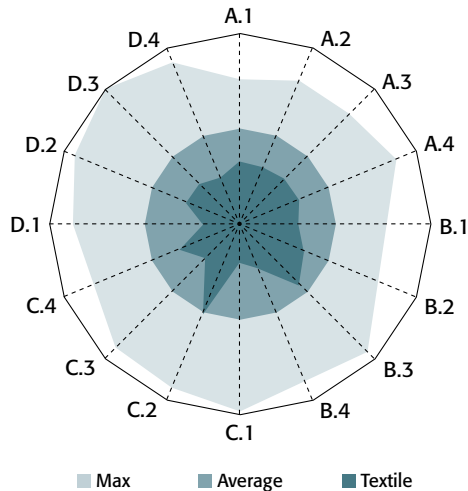
Sector Scoreboard: The textile industries

**SMEs dominate -
e-business less developed than
in other manufacturing sectors**

The textile, clothing and leather industries are dominated by SMEs, a large share of which is concentrated in regional clusters.

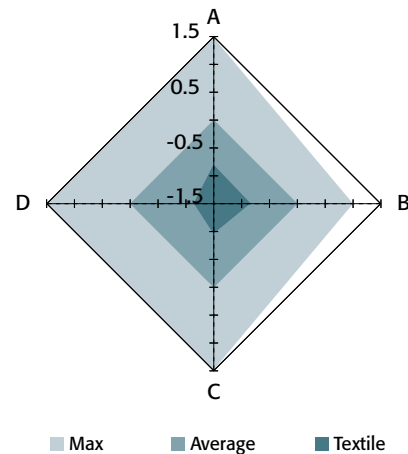
Survey results indicate that there is a divide between these industries and the rest of manufacturing and service sectors analysed by the *e-Business W@tch*. This divide is comparatively larger than the divide between larger and smaller companies within the sector itself.

Nevertheless, ICT and e-business will be essential to speed up information flows along the value chain, even if adoption rates are still lower than in other sectors.



Categories

- (A) Connectivity of enterprises
- (B) Internal business process automation
- (C) Procurement and supply chain integration
- (D) Marketing and sales



Scale: Indexed values, whereby
Max = maximum indexed value for one
of the 10 sectors benchmarked
Average = mean value for all 10 sectors

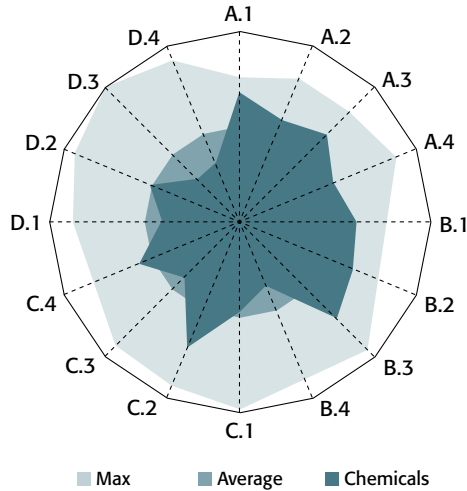
Source: *e-Business W@tch* (Survey 2003)

**Sector Scoreboard:
The chemical industries**
Manufacturing sector with a cautious e-business approach

Chemical companies tend to be pragmatic and rather conservative users of information technology. They are not leading adopters of e-business. Other manufacturing sectors such as electronics or the automotive industries are more intensive users.

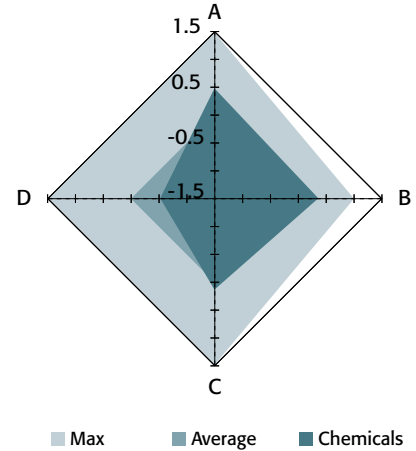
Still, in terms of business connectivity and internal business process automation, companies from the chemical industries are better equipped than firms on average across all sectors. This does not hold true for customer facing e-commerce, which is not yet widely used.

A key objective in this sector is to realise cost saving potentials by making supply chain processes more efficient. The chemical sector has the highest diffusion of ERP systems among all 10 sectors benchmarked.



Categories

- (A) Connectivity of enterprises
- (B) Internal business process automation
- (C) Procurement and supply chain integration
- (D) Marketing and sales



Scale: Indexed values, whereby
Max = maximum indexed value for one of the 10 sectors benchmarked
Average = mean value for all 10 sectors

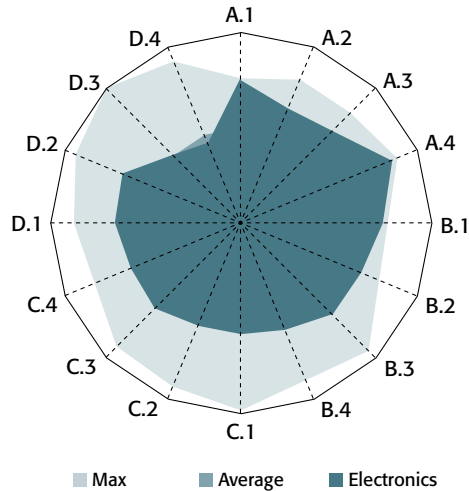
Source: e-Business W@tch (Survey 2003)

Sector Scoreboard: Electrical machinery and electronics

Manufacturing sector with an intensive use of e-business

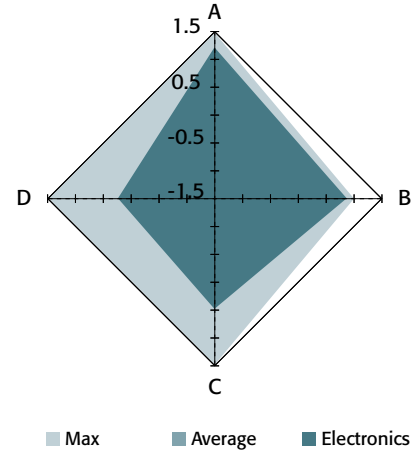
Companies from the electrical machinery and electronics industry are leading adopters of e-business. They tend to be intensive users, clearly above the average use rates of all nine sectors benchmarked. All indicators are above average, except regarding secure transaction capability for making online sales.

More generally, e-marketing and e-sales applications are not as widely used and diffused as other e-business activities. The e-business focus of the sector is on business process automation and supply chain integration.



Categories

- (A) Connectivity of enterprises
- (B) Internal business process automation
- (C) Procurement and supply chain integration
- (D) Marketing and sales



Scale: Indexed values, whereby
 Max = maximum indexed value for one of the 10 sectors benchmarked
 Average = mean value for all 10 sectors

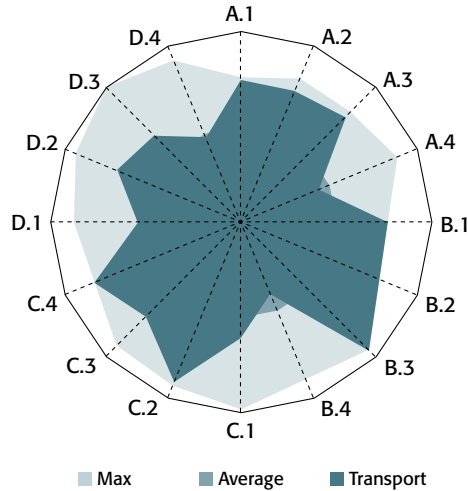
Source: *e-Business W@tch* (Survey 2003)

Sector Scoreboard: Transport equipment manufacturing

Manufacturing sector with a pronounced gap in e-business usage between large and small firms

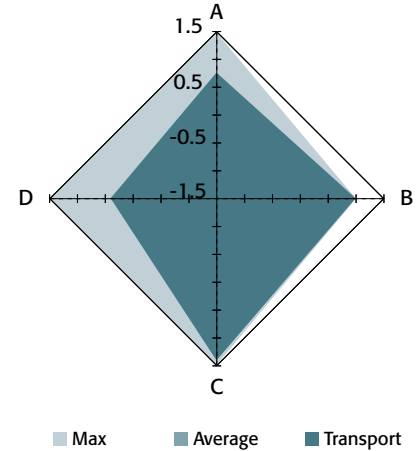
Large companies and OEMs in the transport equipment sector are already advanced users of e-business technologies. They are equipped with highly developed IT infrastructures and make active use of various e-business applications for internal processes, procurement and supply chain integration, and also for marketing purposes.

On the opposite side, small companies in this sector clearly lag behind in terms of IT infrastructures and e-business usage. As the scoreboard is based on employment-weighted data, the diagrams are biased towards large enterprises which dominate this sector.



Categories

- (A) Connectivity of enterprises
- (B) Internal business process automation
- (C) Procurement and supply chain integration
- (D) Marketing and sales



Scale: Indexed values, whereby
 Max = maximum indexed value for one of the 10 sectors benchmarked
 Average = mean value for all 10 sectors

Source: *e-Business W@tch* (Survey 2003)

Sector Scoreboard:

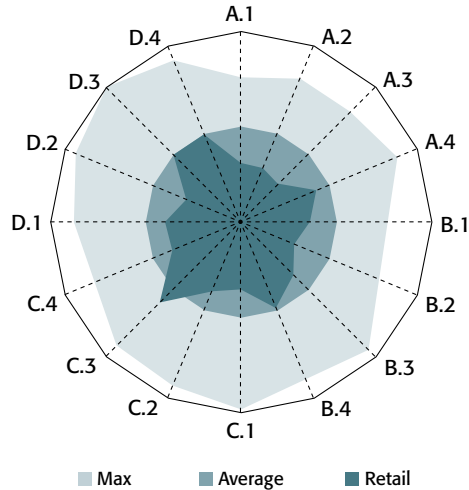
Retail

Still untapped potential for e-business in the retail sector

The use of e-business in the retail sector is far from being a pervasive reality and falls below the average adoption rates in other sectors.

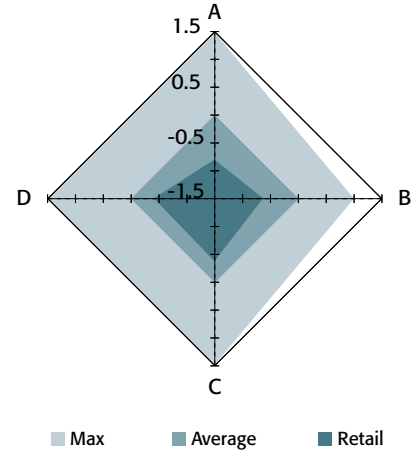
One of the reasons is that SMEs play a dominant role in the retail sector in contrast to most manufacturing sectors. SMEs are, however, frequently clustered and organised as buying or franchising groups which allow scope economies and power negotiation in relations with the upstream and downstream players in the value chains.

Purchasing online is the most important application for e-business, with the objective of optimising supply chain processes.



Categories

- (A) Connectivity of enterprises
- (B) Internal business process automation
- (C) Procurement and supply chain integration
- (D) Marketing and sales



Scale: Indexed values, whereby
Max = maximum indexed value for one of the 10 sectors benchmarked
Average = mean value for all 10 sectors

Source: *e-Business W@tch* (Survey 2003)

Sector Scoreboard:

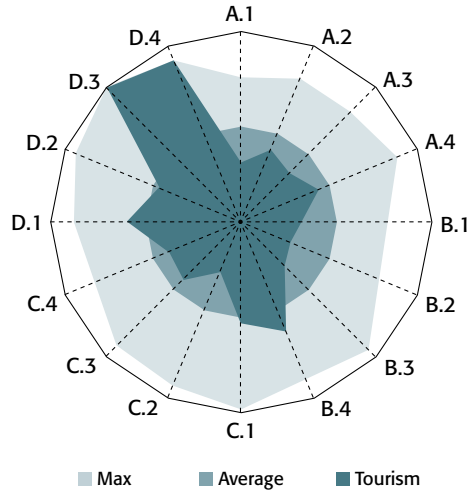
Tourism

Tourism has specialised in online marketing and sales activities

The tourism sector is possibly the one sector which has experienced the strongest impact of the Internet.

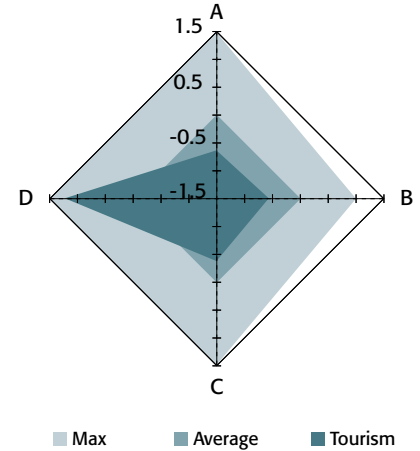
Tourism suppliers have been looking for new ways to expand channels of distribution so that they can reach target travellers in a more efficient and effective way. The Internet is the ideal tool for this objective.

While tourism is the leading sector for e-marketing and sales applications, the sector is below average in other e-business areas. This reflects that the automation of internal business processes and the integration of supply chain processes are less important for service than for manufacturing sectors.



Categories

- (A) Connectivity of enterprises
- (B) Internal business process automation
- (C) Procurement and supply chain integration
- (D) Marketing and sales



Scale: Indexed values, whereby
Max = maximum indexed value for one of the 10 sectors benchmarked
Average = mean value for all 10 sectors

Source: *e-Business W@tch* (Survey 2003)

Sector Scoreboard:

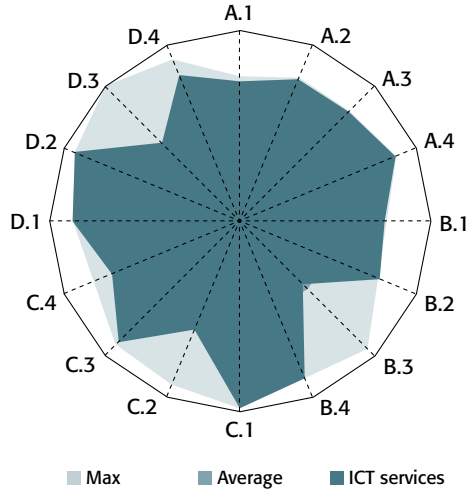
ICT services

Telecommunications and computer related services – leaders in e-business

The ICT services sector is predestined to practise e-business, since the sector is not only a user, but also a key provider of IT related services. Thus the sector is very familiar with online technologies, and necessarily an early-adopter in this matter.

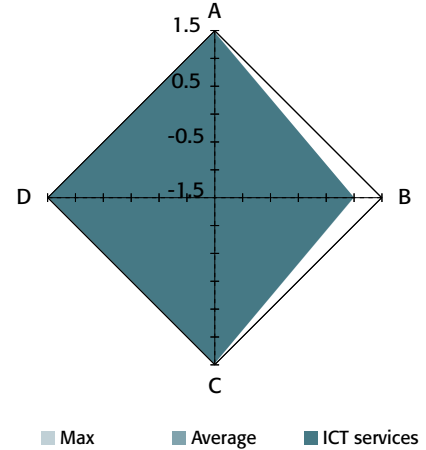
This applies to all business functions. Employees commonly use online tools in their every day work, and e-business is a strategic tool used to improve efficiency throughout the company and to enhance collaboration with the company partners.

More than 80% of companies from the sector say that e-business already constitutes a significant or some part of the way their company operates today.



Categories

- (A) Connectivity of enterprises
- (B) Internal business process automation
- (C) Procurement and supply chain integration
- (D) Marketing and sales



Scale: Indexed values, whereby
Max = maximum indexed value for one of the 10 sectors benchmarked
Average = mean value for all 10 sectors

Source: *e-Business W@tch* (Survey 2003)

Sector Scoreboard:

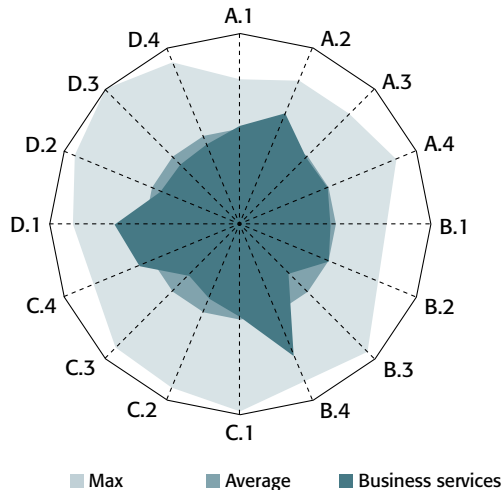
Business services

Small companies with modern ICT infrastructure

Business services enterprises rely on a comparatively modern ICT infrastructure. The deployment of LANs or Internet connections is more widespread than on average in other sectors covered by *e-Business W@tch*.

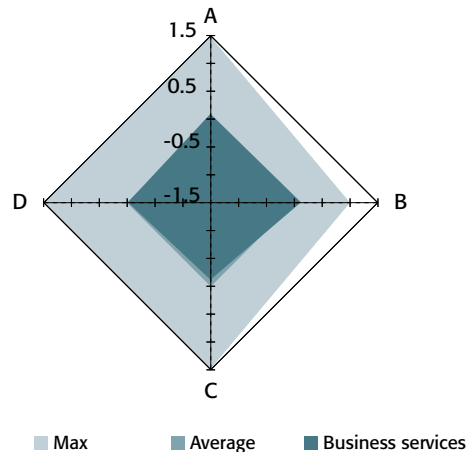
This is especially remarkable since the sector is characterised by a strong dominance of micro and small enterprises. About 99% of all business services enterprises have less than 50 employees. Online technologies are mainly used as tools to support collaboration among employees as well as the management of third-party-relationships.

In contrast, the deployment of complex software systems such as ERP or SCM systems is among the predominantly small companies in this sector less likely.



Categories

- (A) Connectivity of enterprises
- (B) Internal business process automation
- (C) Procurement and supply chain integration
- (D) Marketing and sales



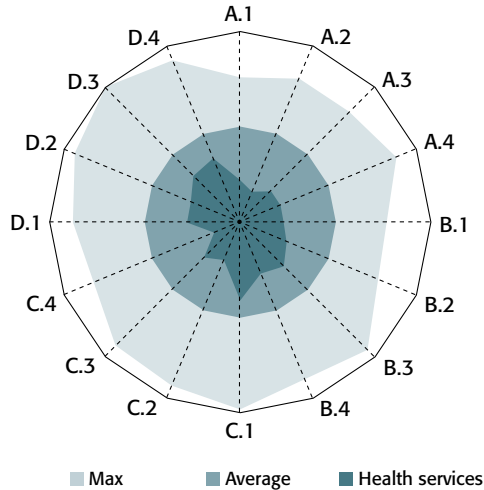
Scale: Indexed values, whereby
Max = maximum indexed value for one of the 10 sectors benchmarked
Average = mean value for all 10 sectors

Source: *e-Business W@tch* (Survey 2003)

**Sector Scoreboard:
Health and social services**
Considerable regional differences
depending on national health systems

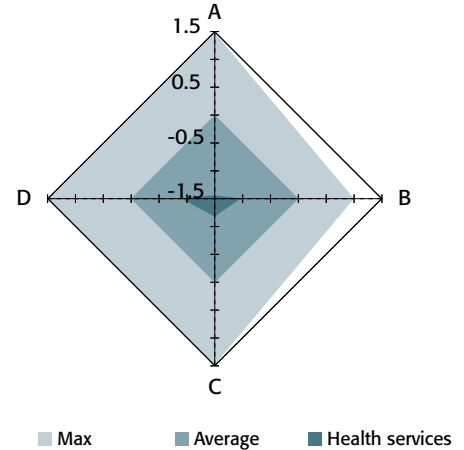
As evidenced by the aggregate scoreboard, the health and social services sector posts the lowest index values of all sectors. Connectivity, the key factor for e-business progress in health systems, scores the lowest value of all dimensions. Internal business process automation, and in particular marketing and sales show slightly better results, but the state of achievement is still a far cry from the more advanced sectors.

Structural characteristics (mostly micro organisations in many countries), the absence of competition in most business fields and the dominance of public players contribute to this situation. However, these average values sometimes mask stark differences across size classes and Member States.



Categories

- (A) Connectivity of enterprises
- (B) Internal business process automation
- (C) Procurement and supply chain integration
- (D) Marketing and sales



Scale: Indexed values, whereby
Max = maximum indexed value for one of the 10 sectors benchmarked
Average = mean value for all 10 sectors

Source: e-Business W@tch (Survey 2003)

Sector Scoreboard: Crafts and trade

Craft firms rely on traditional business methods

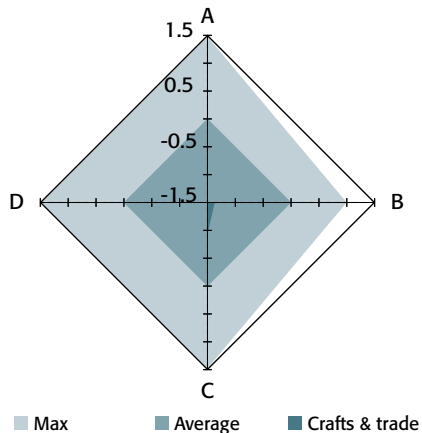
Adoption rates of e-business applications in the crafts sector are below average for all component indicators of the Scoreboard. This is largely due to the fact that this sector by definition only includes companies with less than 50 employees.

Many craft firms lack critical size and investment power for comprehensive e-business use. Compared to small companies from other sectors (see right diagram), the gap is much smaller, but still exists.

Online procurement appears to be the electronic function that is relatively most important to crafts.

Scoreboard based on figures weighted by employment

(compares crafts to other sectors irrespectively of the different size of companies)

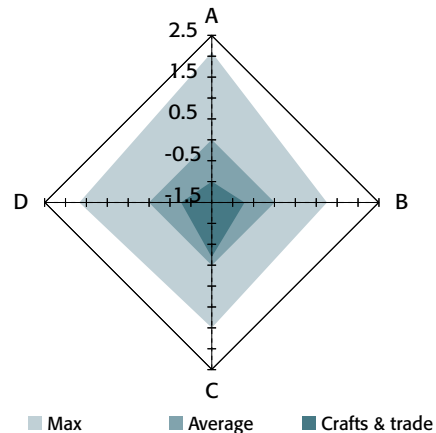


Categories

- (A) Connectivity of enterprises
- (B) Internal business process automation
- (C) Procurement and supply chain integration
- (D) Marketing and sales

Scoreboard based on figures in % of enterprises

(effectively compares crafts to other small companies from other sectors)



Scale:

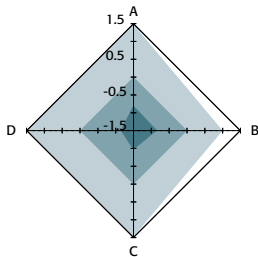
Indexed values, whereby
Max = maximum indexed value for one of the 10 sectors benchmarked
Average = mean value for all 10 sectors

Source: *e-Business W@tch* (Survey 2003)

The European E-Business Scoreboard 2003/04

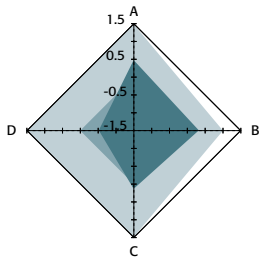
Electronic business profiles of 10 sectors

The textile industries



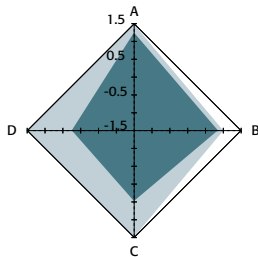
■ Max
■ Average
■ Textile

The chemical industries



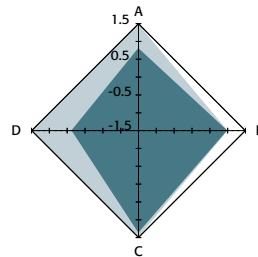
■ Max
■ Average
■ Chemicals

Manufacture of electrical machinery and electronics



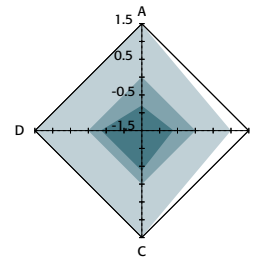
■ Max
■ Average
■ Electronics

Transport equipment manufacturing



■ Max
■ Average
■ Transport

Retail



■ Max
■ Average
■ Retail

Categories

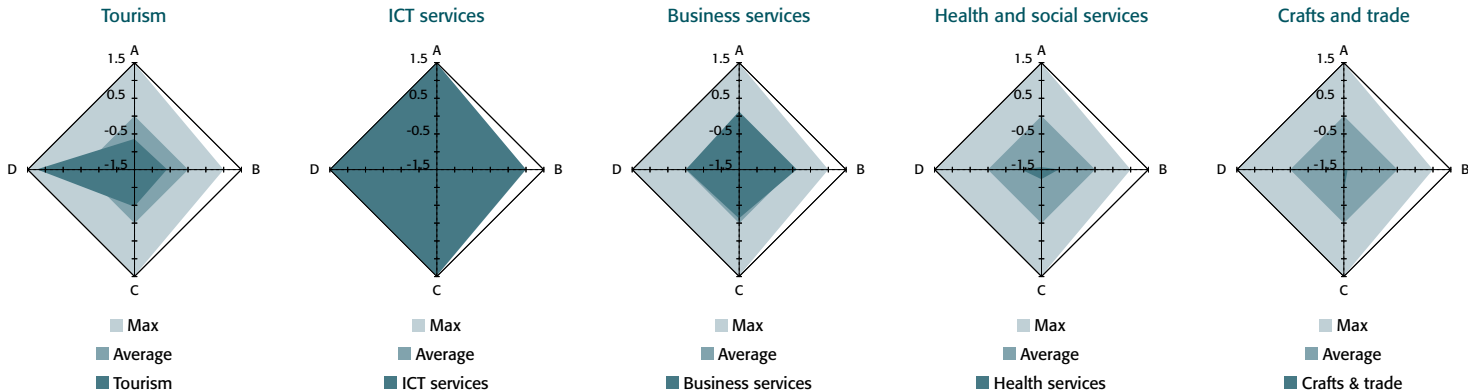
- (A) Connectivity of enterprises
- (B) Internal business process automation
- (C) Procurement and supply chain integration
- (D) Marketing and sales

Scale: Indexed values, whereby
 Max = maximum indexed value for one of the 10 sectors benchmarked
 Average = mean value for all 10 sectors

Source: *e-Business W@tch* (Survey 2003)

The European E-Business Scoreboard 2003/04

Electronic business profiles of 10 sectors



Categories

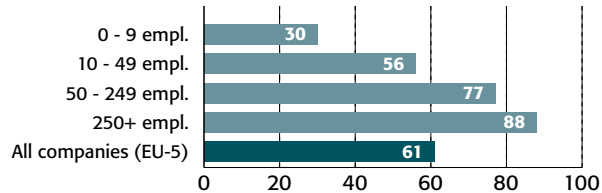
- (A) Connectivity of enterprises
- (B) Internal business process automation
- (C) Procurement and supply chain integration
- (D) Marketing and sales

Scale: Indexed values, whereby
 Max = maximum indexed value for one of the 10 sectors benchmarked
 Average = mean value for all 10 sectors

Source: *e-Business W@tch* (Survey 2003)

Scoreboard for company size-bands

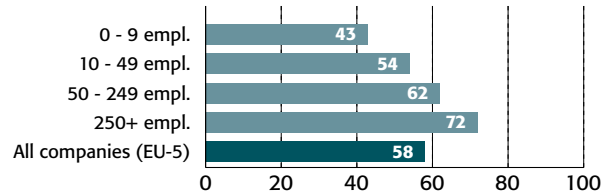
A.1 Enterprises connecting computers with a LAN



	Use PC	Have a LAN	Have a WAN
0 - 9	88	30	4
10 - 49	98	56	11
50 - 249	99	77	29
250+	100	88	60

Figures in % of enterprises (size-bands) / % of employment (all companies EU-5).

A.2 Internet connectivity Index: companies connected and quality of connection

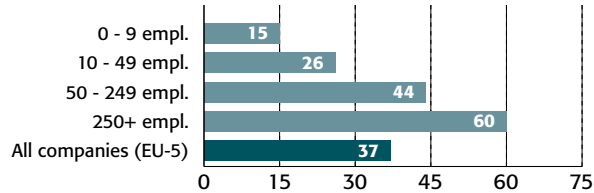


	Connected to the internet	Of those:		
		Use analogue dial-up modem	Connected with < 2 Mbit/s	Connected with \geq 2 Mbit/s
0 - 9	75	27	65	14
10 - 49	91	20	60	20
50 - 249	97	14	60	29
250+	97	8	39	48

Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

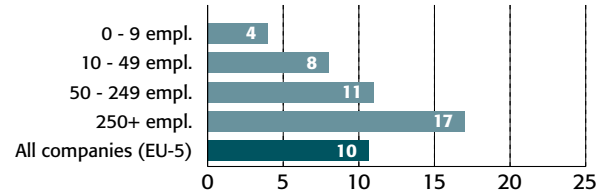
Scoreboard for company size-bands

A.3 Remote access to the company network



	Remote access in the chemical industries	Remote access in transport equipment	Remote access in ICT services
0 - 9	15	16	51
10 - 49	26	13	78
50 - 249	51	44	78
250+	71	78	79

A.4 Wireless access to the company network



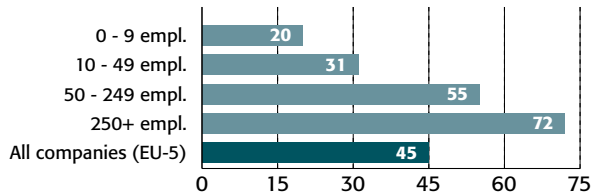
	Wireless access in electronics	Wireless access in retail	Wireless access in ICT services
0 - 9	5	4	10
10 - 49	7	7	23
50 - 249	14	10	29
250+	35	14	33

Figures in % of enterprises (size-bands) / % of employment (all companies EU-5).

Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

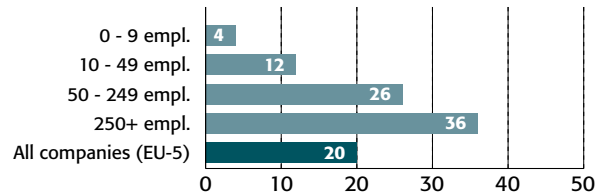
Scoreboard for company size-bands

B.1 Use of an intranet



	Use an intranet	Use Knowledge Management software	Use e-learning
0 - 9	20	5	5
10 - 49	31	8	9
50 - 249	55	8	10
250+	72	16	20

B.2 Use of online technology to track working hours / production time



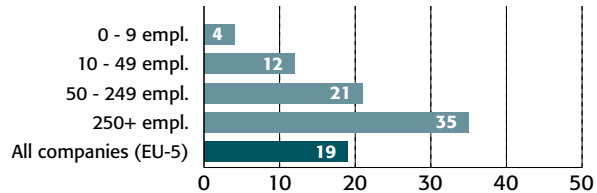
	Automated travel reimbursement	Online support for HR management
0 - 9	3	4
10 - 49	5	11
50 - 249	9	23
250+	22	40

Figures in % of enterprises (size-bands) / % of employment (all companies EU-5).

Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

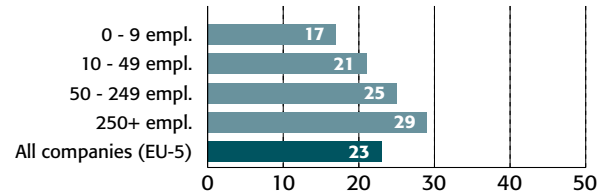
Scoreboard for company size-bands

B.3 Use of ERP systems



	Use of ERP in the chemical industries	Use of ERP in transport equipment	Use of ERP in retail
0 - 9	5	3	7
10 - 49	14	10	23
50 - 249	43	34	24
250+	61	76	19

B.4 Perceived impact of e-business on internal work processes



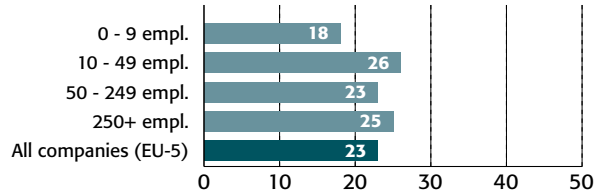
	Significant impact	Some impact	No impact
0 - 9	9	16	75
10 - 49	9	23	68
50 - 249	11	27	62
250+	13	34	53

Figures in % of enterprises (size-bands) / % of employment (all companies EU-5).

Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

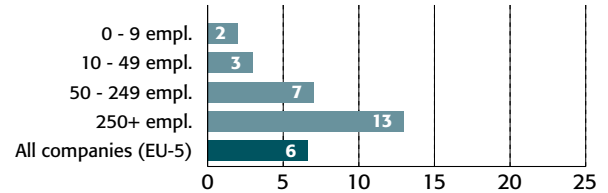
Scoreboard for company size-bands

C.1 Enterprises purchasing at least 5% of their supplies online



	Make online purchases	Of those	
		Online purchases 5 - 25 %	Online purchases > 25 %
0 - 9	30	37	22
10 - 49	46	43	15
50 - 249	51	32	13
250+	56	35	9

C.2 Use of SCM systems



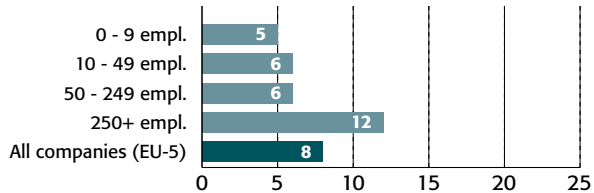
	Use of SCM in the textile industries	Use of SCM in chemicals	Use of SCM in ICT services
0 - 9	0	1	2
10 - 49	3	7	8
50 - 249	5	7	6
250+	25	19	18

Figures in % of enterprises (size-bands) / % of employment (all companies EU-5).

Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

Scoreboard for company size-bands

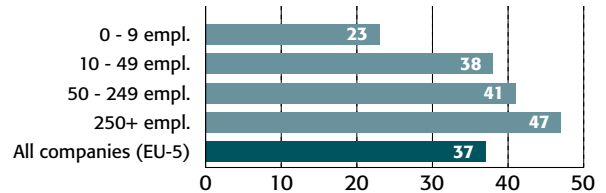
C.3 Companies integrating their IT system with that of a supplier



Of those companies that purchase online

	via extranet	via EDI	via e-marketplaces
0 - 9	22	3	21
10 - 49	20	3	25
50 - 249	28	3	20
250+	33	9	25

C.4 Electronic exchange of documents (other than e-mail) with suppliers



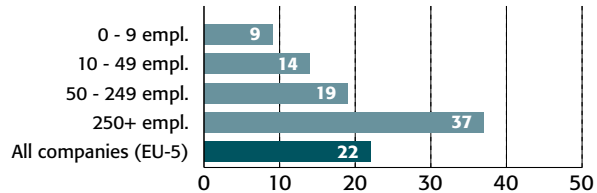
	Online collaboration in designing products	Online negotiation of contracts
0 - 9	9	8
10 - 49	10	11
50 - 249	17	16
250+	21	15

Figures in % of enterprises (size-bands) / % of employment (all companies EU-5).

Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

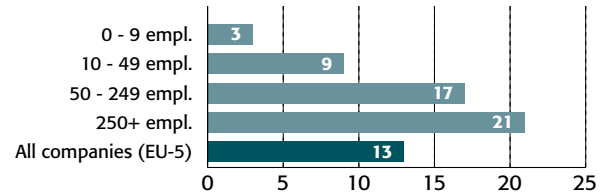
Scoreboard for company size-bands

D.1 Enterprises maintaining a website with a content management system



	Have a website	of those: Use a CMS system
0 - 9	33	27
10 - 49	66	22
50 - 249	78	25
250+	91	41

D.2 Use of CRM software systems



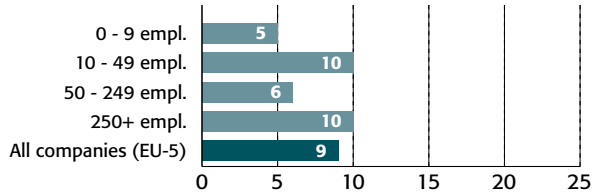
	Use of CRM in the transport equipment	Use of CRM in tourism	Use of CRM in ICT services
0 - 9	1	4	14
10 - 49	4	5	28
50 - 249	11	14	43
250+	26	37	46

Figures in % of enterprises (size-bands) / % of employment (all companies EU-5).

Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

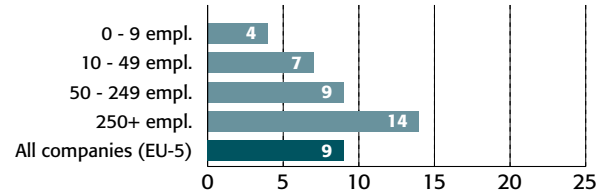
Scoreboard for company size-bands

D.3 Enterprises selling at least 5% of their goods & services online



	Make online sales	Of those:	
		Online sales 5 - 25 %	Online sales > 25 %
0 - 9	9	35	23
10 - 49	17	48	13
50 - 249	16	33	7
250+	19	46	6

D.4 Enterprises with an online sales system offering the capability of secure transactions

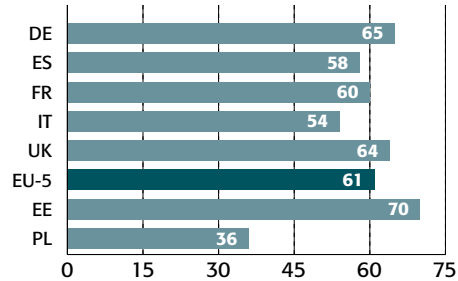


	Of those companies that make online sales:		
	Enable online payment	IT system integrated with customers	Online sales system integrated with backend
0 - 9	39	28	5
10 - 49	32	11	12
50 - 249	26	33	18
250+	53	39	48

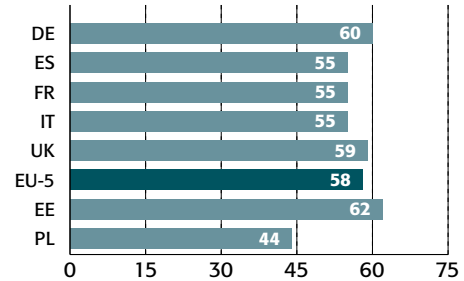
Figures in % of enterprises (size-bands) / % of employment (all companies EU-5).

Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

A.1 Enterprises connecting computers with a LAN



A.2 Internet connectivity Index: companies connected and quality of connection

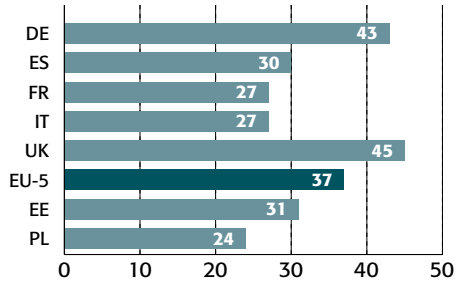


Base: all enterprises in a country from one of the sectors covered. N ~ 500-900 by country.

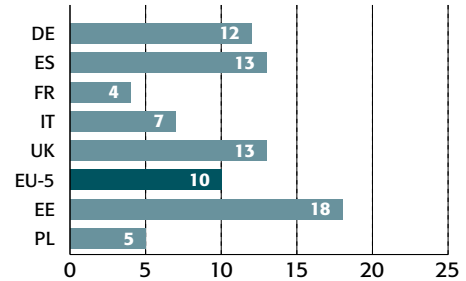
Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

A.3 Remote access to the company network



A.4 Wireless access to the company network



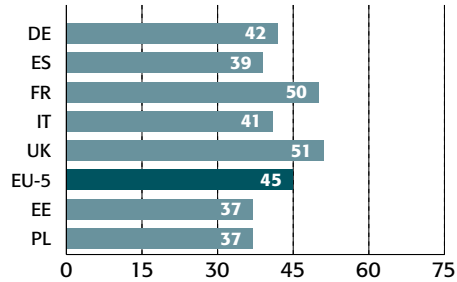
Base: all enterprises in a country from one of the sectors covered. N ~ 500-900 by country.

Weighting: by employment (= enterprises comprising ...% of employment in a country).

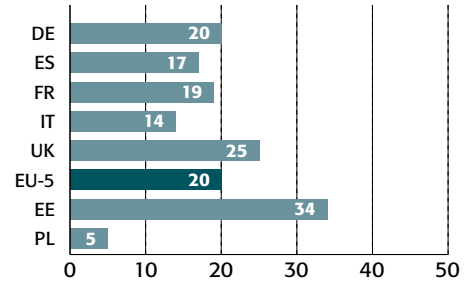
Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

Regional scoreboard

B.1 Use of an intranet



B.2 Use of online technology to track working hours / production time

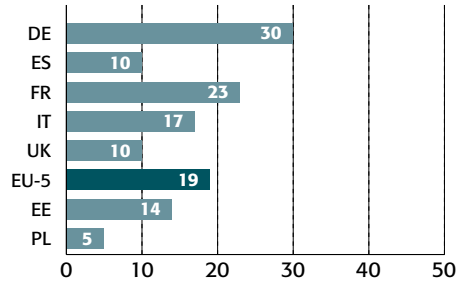


Base: all enterprises in a country from one of the sectors covered. N ~ 500-900 by country.

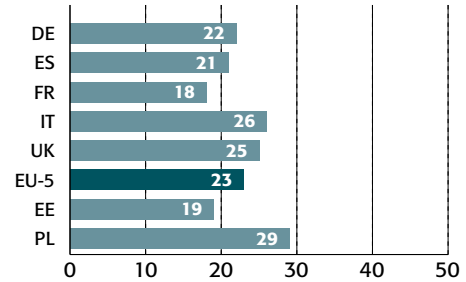
Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

B.3 Use of ERP systems



B.4 Perceived impact of e-business on internal work processes (index)



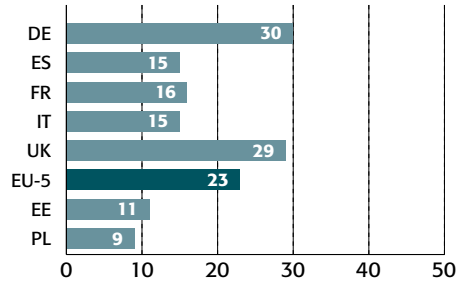
Base: all enterprises in a country from one of the sectors covered. N ~ 500-900 by country.

Weighting: by employment (= enterprises comprising ...% of employment in a country).

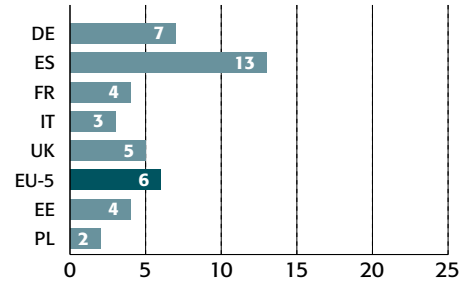
Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

Regional scoreboard

C.1 Enterprises purchasing at least 5% of their supplies online



C.2 Use of SCM systems

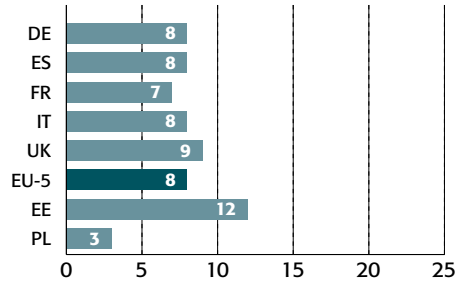


Base: all enterprises in a country from one of the sectors covered. N ~ 500-900 by country.

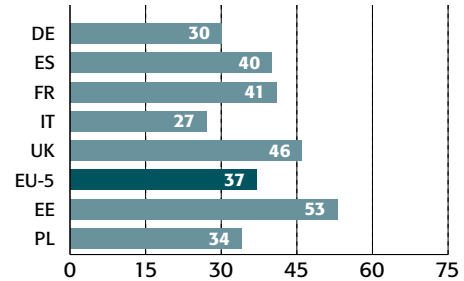
Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

C.3 Integration of the IT system with that of a supplier



C.4 Electronic exchange of documents (other than e-mail) with suppliers

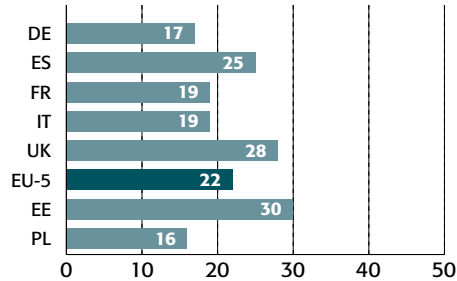


Base: all enterprises in a country from one of the sectors covered. N ~ 500-900 by country.

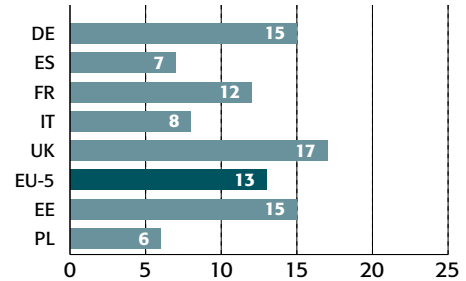
Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

D.1 Enterprises maintaining a website with a content management system



D.2 Use of CRM software systems



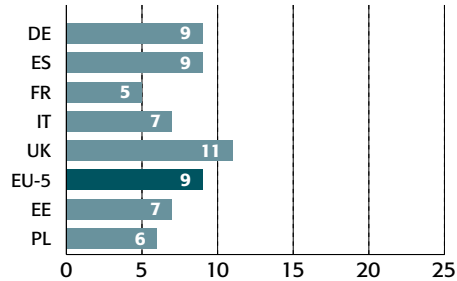
Base: all enterprises in a country from one of the sectors covered. N ~ 500-900 by country.

Weighting: by employment (= enterprises comprising ...% of employment in a country).

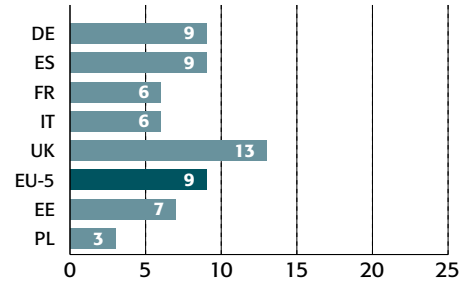
Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

Regional scoreboard

D.3 Enterprises selling at least 5% of their goods & services online



D.4 Enterprises with an online sales system offering the capability of secure transactions



Base: all enterprises in a country from one of the sectors covered. N ~ 500-900 by country.

Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – March/Nov.)

Special Analysis: E-Business in the New EU Member States

1. Manufacture of textiles and leather products

	EE	LV	PL	SK	EU-5		EE	LV	PL	SK	EU-5
1 Are connected to the internet	95	82	71	92	82	9 Make online purchases	24	3	14	28	23
2 Are connected with \geq 2 Mbit/s	11	2	11	12	18	10 Use e-marketplaces for procurement	0	0	2	6	4
3 Have enabled remote access to company's network	16	18	15	24	26	11 Have connected their IT system with that of a supplier	14	2	0	2	2
4 Have a website on the internet	69	35	39	60	47	12 Use an SCM system	11	2	<1	<1	7
5 Make online sales	3	3	2	6	5	13 Use an ERP system	37	2	1	6	18
6 Processing online orders is integrated with the back-end system	<1	<1	<1	<1	1	14 Say that e-business constitutes an important or some part of their operations	35	40	55	24	37
7 Have connected their IT system with that of a customer	3	3	2	0	2	15 Plan to increase their e-business budget in 12 months period ahead	19	57	22	29	28
8 Use a CRM software	13	<1	1	<1	7	16 Have outsourced some of their IT activities	70	58	18	28	26

Base: all enterprises. N~50-100 per country. EU-5 include DE, ES, FR, IT, UK.

Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – November)

Special Analysis: E-Business in the New EU Member States

2. Manufacture of chemicals and chemical products

	CZ	EE	LV	PL	EU-5		CZ	EE	LV	PL	EU-5
1 Are connected to the internet	97	99	88	93	98	9 Make online purchases	61	45	40	14	51
2 Are connected with \geq 2 Mbit/s	18	35	27	19	29	10 Use e-marketplaces for procurement	15	0	19	2	12
3 Have enabled remote access to company's network	61	40	39	42	57	11 Have connected their IT system with that of a supplier	4	23	3	7	6
4 Have a website on the internet	93	86	70	82	84	12 Use an SCM system	0	5	9	2	13
5 Make online sales	17	8	16	4	9	13 Use an ERP system	18	13	22	12	48
6 Processing online orders is integrated with the back-end system	5	0	0	1	3	14 Say that e-business constitutes an important or some part of their operations	60	44	54	66	59
7 Have connected their IT system with that of a customer	5	5	0	1	4	15 Plan to increase their e-business budget in 12 months period ahead	35	25	53	35	45
8 Use a CRM software	5	22	13	10	16	16 Have outsourced some of their IT activities	24	92	70	33	n.a.

Base: all enterprises. N~50-100 per country. EU-5 include DE, ES, FR, IT, UK.

Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – November)

Special Analysis: E-Business in the New EU Member States

3. Manufacture of electrical machinery and electronics

	EE	HU	PL	SI	SK	EU-5		EE	HU	PL	SI	SK	EU-5
1 Are connected to the internet	100	99	97	94	99	98	9 Make online purchases	53	16	44	40	61	59
2 Are connected with \geq 2 Mbit/s	34	23	22	36	14	36	10 Use e-marketplaces for procurement	6	2	3	3	9	28
3 Have enabled remote access to company's network	34	26	37	60	50	61	11 Have connected their IT system with that of a supplier	24	1	2	3	14	12
4 Have a website on the internet	80	73	91	84	83	87	12 Use an SCM system	0	0	0	1	13	10
5 Make online sales	12	13	26	10	23	14	13 Use an ERP system	15	13	8	22	21	45
6 Processing online orders is integrated with the back-end system	0	0	0	1	8	8	14 Say that e-business constitutes an important or some part of their operations	57	26	74	93	39	67
7 Have connected their IT system with that of a customer	10	0	9	3	21	3	15 Plan to increase their e-business budget in 12 months period ahead	25	14	45	61	37	42
8 Use a CRM software	19	1	2	7	22	23	16 Have outsourced some of their IT activities	82	46	49	81	49	n.a.

Base: all enterprises. N~50-100 per country. EU-5 include DE, ES, FR, IT, UK.

Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – November)

Special Analysis: E-Business in the New EU Member States

4. Manufacture of transport equipment

	CZ	EE	HU	PL	EU-5		CZ	EE	HU	PL	EU-5
1 Are connected to the internet	100	100	100	97	99	9 Make online purchases	57	19	40	42	65
2 Are connected with \geq 2 Mbit/s	27	33	17	2	43	10 Use e-marketplaces for procurement	8	0	2	9	32
3 Have enabled remote access to company's network	56	38	61	26	70	11 Have connected their IT system with that of a supplier	15	0	8	0	14
4 Have a website on the internet	87	67	80	93	89	12 Use an SCM system	11	0	27	0	19
5 Make online sales	7	6	16	2	17	13 Use an ERP system	35	3	35	20	72
6 Processing online orders is integrated with the back-end system	0	0	0	1	13	14 Say that e-business constitutes an important or some part of their operations	51	45	57	71	80
7 Have connected their IT system with that of a customer	7	6	0	1	10	15 Plan to increase their e-business budget in 12 months period ahead	35	16	35	48	35
8 Use a CRM software	13	0	21	9	26	16 Have outsourced some of their IT activities	62	86	68	43	n.a.

Base: all enterprises. N~50-100 per country. EU-5 include DE, ES, FR, IT, UK.

Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – November)

Special Analysis: E-Business in the New EU Member States

5. Retail

	CY	EE	LT	LV	PL	SK	EU-5		EE	LV	PL	SK	PL	SK	EU-5
1 Are connected to the internet	98	87	91	59	71	86	80	9	47	33	17	24	14	44	38
2 Are connected with \geq 2 Mbit/s	7	36	26	11	5	7	21	10	11	3	5	8	4	11	9
3 Have enabled remote access to company's network	15	34	22	17	24	18	24	11	1	6	6	8	5	19	11
4 Have a website on the internet	28	63	42	17	58	43	52	12	3	0	13	0	0	0	5
5 Make online sales	3	10	5	4	13	1	17	13	5	10	40	0	2	0	13
6 Processing online orders is integrated with the back-end system	1	2	0	0	3	0	8	14	50	60	48	43	69	49	48
7 Have connected their IT system with that of a customer	2	10	5	0	3	0	4	15	38	45	22	27	36	25	29
8 Use a CRM software	7	12	8	0	6	0	7	16	21	72	51	41	22	11	n.a.

Base: all enterprises. N~50-100 per country. EU-5 include DE, ES, FR, IT, UK.

Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – November)

Special Analysis: E-Business in the New EU Member States

6. Tourism

	CZ	EE	MT	PL	SI	EU-5		CZ	EE	MT	PL	SI	EU-5
1 Are connected to the internet	100	97	100	72	97	90	9 Make online purchases	77	27	44	9	14	47
2 Are connected with \geq 2 Mbit/s	20	15	21	10	24	21	10 Use e-marketplaces for procurement	18	5	6	1	4	10
3 Have enabled remote access to company's network	19	29	46	19	46	28	11 Have connected their IT system with that of a supplier	13	8	11	0	4	7
4 Have a website on the internet	75	80	66	80	76	76	12 Use an SCM system	0	0	5	3	0	3
5 Make online sales	34	33	52	25	29	37	13 Use an ERP system	0	8	10	3	8	7
6 Processing online orders is integrated with the back-end system	34	33	52	25	29	37	14 Say that e-business constitutes an important or some part of their operations	78	70	76	67	90	62
7 Have connected their IT system with that of a customer	11	28	9	9	11	9	15 Plan to increase their e-business budget in 12 months period ahead	43	26	54	31	61	39
8 Use a CRM software	2	12	3	0	2	14	16 Have outsourced some of their IT activities	16	82	33	20	87	n.a.

Base: all enterprises. N~50-100 per country. EU-5 include DE, ES, FR, IT, UK.

Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – November)

Special Analysis: E-Business in the New EU Member States

7. ICT services

	CZ	EE	PL	SI	EU-5		CZ	EE	PL	SI	EU-5
1 Are connected to the internet	100	100	90	100	98	9 Make online purchases	92	77	55	75	74
2 Are connected with \geq 2 Mbit/s	48	82	31	82	51	10 Use e-marketplaces for procurement	17	5	29	11	22
3 Have enabled remote access to company's network	76	85	50	89	73	11 Have connected their IT system with that of a supplier	9	12	12	8	19
4 Have a website on the internet	94	95	84	90	88	12 Use an SCM system	1	18	9	3	11
5 Make online sales	22	35	37	36	24	13 Use an ERP system	7	25	10	33	21
6 Processing online orders is integrated with the back-end system	1	7	11	5	8	14 Say that e-business constitutes an important or some part of their operations	81	87	78	95	82
7 Have connected their IT system with that of a customer	6	33	16	3	12	15 Plan to increase their e-business budget in 12 months period ahead	13	50	52	64	43
8 Use a CRM software	38	41	21	56	36	16 Have outsourced some of their IT activities	60	82	38	84	n.a.

Base: all enterprises. N~50-100 per country. EU-5 include DE, ES, FR, IT, UK.

Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – November)

Special Analysis: E-Business in the New EU Member States

8. Business services

	EE	HU	PL	SI	SK	EU-5		EE	HU	PL	SI	SK	EU-5
1 Are connected to the internet	98	94	80	100	84	97	9 Make online purchases	45	33	20	34	53	50
2 Are connected with \geq 2 Mbit/s	50	21	17	32	11	35	10 Use e-marketplaces for procurement	9	5	3	0	10	7
3 Have enabled remote access to company's network	41	33	19	49	32	43	11 Have connected their IT system with that of a supplier	20	1	0	4	12	6
4 Have a website on the internet	67	38	56	59	56	72	12 Use an SCM system	3	2	6	0	0	6
5 Make online sales	18	11	6	9	9	11	13 Use an ERP system	11	3	2	13	4	12
6 Processing online orders is integrated with the back-end system	1	0	2	4	1	4	14 Say that e-business constitutes an important or some part of their operations	52	41	61	85	47	68
7 Have connected their IT system with that of a customer	16	1	3	4	3	4	15 Plan to increase their e-business budget in 12 months period ahead	21	20	42	56	34	37
8 Use a CRM software	27	5	9	14	6	13	16 Have outsourced some of their IT activities	77	36	22	73	19	34

Base: all enterprises. N~50-100 per country. EU-5 include DE, ES, FR, IT, UK.

Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – November)

Special Analysis: E-Business in the New EU Member States

9. Health and social services

	CZ	EE	PL	SI	EU-5		CZ	EE	PL	SI	EU-5
1 Are connected to the internet	99	97	68	96	72	9 Make online purchases	59	31	11	28	34
2 Are connected with \geq 2 Mbit/s	13	5	10	13	15	10 Use e-marketplaces for procurement	15	4	1	0	5
3 Have enabled remote access to company's network	39	12	23	38	17	11 Have connected their IT system with that of a supplier	14	8	3	3	3
4 Have a website on the internet	51	48	42	36	41	12 Use an SCM system	0	1	0	4	1
5 Make online sales	6	3	0	8	7	13 Use an ERP system	0	4	3	0	9
6 Processing online orders is integrated with the back-end system	0	0	0	7	0	14 Say that e-business constitutes an important or some part of their operations	27	43	42	77	45
7 Have connected their IT system with that of a customer	4	1	0	0	2	15 Plan to increase their e-business budget in 12 months period ahead	8	36	25	55	24
8 Use a CRM software	0	4	0	0	6	16 Have outsourced some of their IT activities	16	67	14	68	16

Base: all enterprises. N~50-100 per country. EU-5 include DE, ES, FR, IT, UK.

Weighting: by employment (= enterprises comprising ...% of employment in a country).

Source: *e-Business W@tch* (Decision-maker survey 2003 – November)

Methodological notes

The data presented in this pocketbook are results of a decision-maker survey about e-business in European enterprises in 2003.

This is an annual survey carried out by the *e-Business W@tch*, constituting a cornerstone of its monitoring activities. The first e-Business Survey took place in spring 2002. The second survey (2003) was carried out in March (part 1) and November (part 2). Part 2 extended the regional and sectoral scope of the survey.

Timing and scope of the survey 2003

The e-Business Survey 2003 was split into two parts. The first part consisted of 3,515 telephone interviews with decision-makers in enterprises from five EU countries which were conducted in March 2003. The second part had a scope of 4,570 interviews in the EU, 100 interviews in Norway and 2,632 interviews in the 10 new EU Member States (NMS) and was conducted in November 2003. The questionnaires used in the two parts of the survey were largely the same. A few new questions were added in the second part in order to cover issues of special topical interest for policy.

Fieldwork

The field work of the surveys in the EU-15 and in Norway was carried out by Ipsos Germany in co-operation with its partner organisations on behalf of the *e-Business W@tch*. Fieldwork in the 10 new Member States was carried out by NFO Aisa (Czech Republic) and its network.

Interview method

The fieldwork was carried out using mostly computer-aided telephone interview (CATI) technology. Face-to-face interviews were used in Lithuania, and a mixed approach in Malta. The decision-maker in the enterprise targeted by the survey was normally the person responsible for ICT within the company, typically the IT manager. Alternatively, particularly in small enterprises without a separate IT unit, the managing director or owner was interviewed.

Population coverage and sampling

The highest level of the population for the e-Business Survey was the set of all enterprises which are active at the national territory of one of the respective countries and which have their primary business activity in one of the sectors specified by NACE Rev. 1 categories. The selection and composition of sectors took into account their economic importance and the relevance of e-business activities.

The most important viewpoints used for breakdown of the population in the survey were (i) the economic activity, (ii) the national territory of the enterprise and (iii) the size in terms of employees. The survey was carried out as an enterprise survey, i.e. data collection and reporting focus on the enterprise (rather than on the establishment), defined as a business organisation of one or more establishment comprised as one legal unit.

The sample drawn was a random sample of companies from the respective sector population in each country where the respective sector was to be surveyed with the objective of fulfilling strata with respect to company size class. Strata were to include a share of at least 10% of large companies (250+ employees) per country-sector cell, 30% of medium sized enterprises (50-249 employees) and 25% of small enterprises (10-49 employees). Micro enterprises with less than 10 employees were also included in the survey. Samples were drawn locally by fieldwork organisations based on acknowledged business directories and databases.

Sectors covered

Manufacturing

1. Manufacture of textiles and leather products
2. Manufacture of chemicals and chemical products
3. Manufacture of electrical machinery and electronics
4. Manufacture of transport equipment
5. Crafts and trade

Service sectors

6. Retail
7. Tourism
8. ICT services
9. Business services
10. Health and social services

SECTORS COVERED BY THE E-BUSINESS SURVEY 2003

No.	NACE Rev. 1 Section	Division/Group	Sector Name
01	D	17, 18, 19	Manufacture of textiles and textile products, leather and leather products
02	D	24, 25	Manufacture of chemicals and chemical products
03	D	30, 31 (except 31.3 - 31.6), 32	Manufacture of electrical machinery and electronics
04	D	34, 35	Manufacture of transport equipment
05	D	Parts of (17-19), 20, (30-32), (34-35), 36, 45	Crafts And Trade: In addition to companies from sub-sections covered by other sectors: Manufacture of wood products; manufacture of furniture; construction and site preparation. Only enterprises with 0-49 employees.
06	G	52.11, 52.12, 52.4	Retail
07	H / I / O	55.1, 55.2, 62.1, 63.3, 92.33, 92.52, 92.53	Tourism
08	K	74	Business services
09	I / K	64.2, 72	Telecommunications and computer-related services
10	N	85.11, 85.12, 85.3	Health and social services

The e-Business Survey 2003: Variables

Variables - indicators

The set of ICT and e-business indicators for which data were collected in this survey was organised into the following modules:

- **Background information** (basic company data, innovation activities)
- **ICT infrastructure and e-skills** development in the company
- **E-commerce and e-business activities** (internal business process automation, procurement and supply chain integration, exchange of standardised data, marketing and sales activities)
- **Impact of e-business** (impact of selling and procuring online, perceived effects on work processes, satisfaction with outcome)
- Assessment of **future importance** of various e-business technologies

Weighting principles

Two weighting schemes have been applied: weighting by employment and by the number of enterprises. Data are presented in either way depending on the kind of the analysis to be made.

- Values that are reported as weighted by employment should be read as "enterprises comprising x% of employees". To give an example: The indicator "percentage of companies selling online" - if weighted by employment - is defined as "companies comprising x% of employees sell online". The reason for using employment weighting is that there are very many more micro enterprises than non-micro enterprises. The unweighted figure would effectively represent mainly the smallest sizes of firm.
- Values that are reported as enterprise-weighted figures are to be read as "x% of enterprises", reflecting the number of enterprises as legal entities but not their relative economic importance in terms of employment.

Weighting was based on the latest available universe figures by Eurostat. Missing or undisclosed universe data had to be imputed. The imputation procedures depended on auxiliary or proxy data availability, taking into account where available information about higher

industry aggregations, nearest neighbour data, turnover-employment correlation and secondary sources other than Eurostat and allowing for the constraint of predetermined ranges such that imputed data had to be contingent with published sectoral, national and European universe totals as well as for final plausibility checks for every single imputed data item. The weighting cells correspond to the data reporting pattern used as regards industries and employment size-classes. Uniform expansion factors are applied to enterprises within one of the four size-classes per industry per country. As for data that refer to a base other than the universe of all enterprises (e.g. indicators appropriately reported for online selling enterprises only), expansion factors are adjusted to the different shares of observations per cell that build the computation base.

Further background information

More information about the methodology, the full questionnaire and lists of the fieldwork organisations that carried out the survey in the various countries as well as of the directories used for sampling can be downloaded from the *e-Business W@tch* website (<http://www.ebusiness-watch.org>).



European
Commission

ISBN 92-894-7237-5



www.ebusiness-watch.org