

Upplýsingatækni Information technology

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ICT and e-commerce in enterprises 2003

Summary

The vast majority of Icelandic enterprises, 99 percent, use computers, and 97 percent have access to the Internet where "high speed" Internet connections are the most popular (81 percent). Enterprises with their own web site have increased in number since 2002 and are now 70 percent of all enterprises. Every one in five enterprises sold products or services through the Internet in 2002 and 37 percent of all enterprises purchased goods or services throught the Internet this same year. In the year 2003, 81 percent of enterprises with Internet access updated their security devices. In 2002 every third enterprise had problems with the security of their computer systems or electronic data.

This article discusses Icelandic enterprises' use of ICT in 2003, i.e. the use of computers, the Internet and IT systems for managing orders or purchases. Electronic commerce in the year 2002 will be discussed also, as well as the measures taken by firms to ensure safety of computer systems and electronic data. Results are presented by economic activity and by number of employees.

Introduction

Sample

In May 2003 Statistics Iceland in cooperation with Eurostat conducted a survey on enterprises' use of IC technology and e-commerce. Census was drawn from the PAYE register of the Tax authorities. The gross sample size covers all enterprises with at least 10 employees in October 2002 in selected activity sectors.

Method used

The survey was conducted as a postal survey. An introductory letter and a response envelope were sent along with the questionnaire. The respondents also had the opportunity to answer the questionnaire on-line by entering a form on Statistics Iceland's web site using the enterprise's ID-number along with a unique PIN-code, which was given in the introductory letter. Approximately half of all responses were delivered on-line. Participation in the survey was voluntary.

System of reminders

One written reminder was sent out and telephone reminders started approximately ten days after sending out the written reminder.

Response rate

Questionnaires were sent out to 1,357 enterprises. When processing and controlling of data began the net sample size was reduced to 1,243 enterprises, whereas enterprises that indeed had less than 10 employees and/or were registered by a wrong activity code and where the correct code did not meet the selection criteria had been removed from the sample.

Overall 75 percent of the net sample returned a filled in questionnaire either on paper or on-line. The response rate varies from 62–82 percent where hotels and restaurants have the lowest response rate and financial services the highest. Tables 1 and 2 show the number of enterprises in the net sample, the number of responses and response rates by division of activity and enterprise size.



Table 1. Response rate by economic activity 2003

Economic	activity	N		Response rate
ISAT 95		Net sample	answers	<u>%</u>
	Total	1,243	934	75
15-37	Manufacturing	399	323	81
45	Construction	128	91	71
50-52	Trade	303	218	72
55	Hotels and restaurants	136	84	62
60-64	Communication, transport	68	47	69
65-67	Banking, financial services	39	32	82
70-74	Miscellaneous specialised services	163	132	81
921-922	Culture etc. ¹	7	7	100

¹ Motion picture and video activities with radio and television activities.

Table 2. Response rate by enterprise size 2003

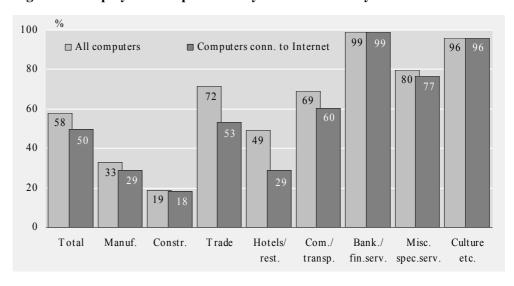
Number of employees	Net sample	Number of answers	Response rate %
Total	1,243	934	75
10–19	595	415	70
20–49	413	316	77
50–99	114	99	87
100+	121	104	86

Use of IC technology

60 percent of all employees use computers

Computers are used in almost all enterprises with 10 employees or more, or 99 percent at the time of the survey. Almost 60 percent of all employees used computers at least once a week and around half of all employees used computers connected to the Internet. Use of computers is most common among employees in the financial sector (99 percent) followed by employees in cultural activities (96 percent) (see figure 1).

Figure 1. Employees' computer use by economic activity 2003





Use of computers and of computers connected to the Internet is more common within larger enterprises with 100+ employees than among the smaller ones (see figure 2).

Figure 2. Employees' computer use by enterprises' size class 2003

Use of Intranet, Extranet and LAN

Around 36 percent of all enterprises use Intranet, 30 percent use Extranet and a half of the enterprises uses Local Area Network or LAN. The prevalence of Intranet and Extranet is highest among enterprises in the financial sector while the prevalence of LAN is highest among enterprises in cultural activities or 100 percent (see figure 3).

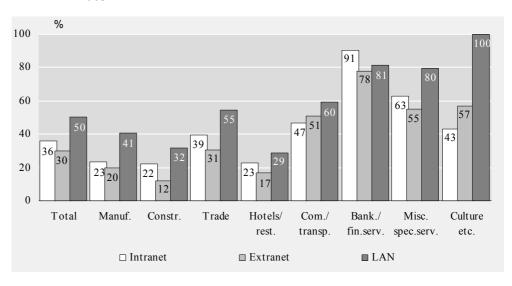


Figure 3. Enterprises with Intranet, Extranet and LAN by economic activity 2003

It is more common for larger enterprises to use Intranet, Extranet and LAN than the smaller ones. 28 percent of the smallest enterprises (10–19 employees) used Intranet, 22 percent of them used Extranet and around 40 percent of them used LAN at the time of the survey, while 61 percent of the largest enterprises (100+ employees) used Intranet, 59 percent used Extranet and 78 percent used LAN (see figure 4).

100 80 60 61 59 40 48 45 35 20 28 2.7 22 0 100+ 10-19 20-49 50-99 ☐ Intranet ■ Extranet ■ LAN

Figure 4. Enterprises with Intranet, Extranet and LAN by size class 2003

IT systems for managing orders and purchases

Enterprises with special IT systems for managing orders or purchases were 34 percent of all responding enterprises. The largest share of enterprises with such IT systems of any kind is found in trade (59 percent), manufacturing (35 percent) and communication/transport (32 percent) (see figure 5).

% 100 80 60 59 40 34 34 32 29 20 19 19 19 16 0 Total Manuf. Constr. Trade Hotels/ Com./ Bank./ Misc. Culture rest. transp. fin.serv. spec.serv. etc.

Figure 5. Enterprises with IT systems for managing orders/purchases by economic activity 2003

Use of special IT systems for managing orders and purchases is more common in larger enterprises than smaller ones. Almost two out of every three enterprises with 100+ employees used such IT systems, while 27 percent of enterprises with less than twenty employees made use of it (see figure 6).

100
80
60
40
20
10–19
20–49
50–99
100+

Figure 6. Enterprises with IT systems for managing orders/purchases by enterprises' size class 2003

Internal system for reordering replacement supplies is the most common

Of those enterprises having special IT systems for managing orders or purchases 86 percent linked this system with their internal system for reordering replacement supplies, 76 percent had automatic links to their system for managing production or service operations, 38 percent had automatic links to the enterprise's logistics systems and 29 percent had automatic links to the enterprise's invoicing and payment systems. A share of 25 percent of the enterprises had their IT systems for managing orders or purchases linked automatically to the enterprise's marketing operations and one out of every five enterprises had automatic links with their suppliers' business systems, and the same percent had automatic links to their customers' business systems (see figure 7).

20 ☐ Customers' business systems 20 ☐ Suppliers' business systems 25 ☐ Marketing operations ■ Logistics systems 38 ■ System for manag.prod.or service operations ■ Invoicing/payment system ■ Internal syst.for reord.replacement supplies 0 100 20 40 60 80

Figure 7. Types of automatic links with other IT-systems 2003

Percent of enterprises with IT systems for managing orders or purchases.

Internet access

97 percent have access to the Internet

Internet access is very common among Icelandic enterprises. 97 percent of all enterprises had access to the Internet at the time of the survey in spring 2003. There are no major differences between the various activity sectors. The prevalence of Internet access is highest among enterprises in the financial sector and cultural activities (100 percent) while it is lowest among hotels and restaurants (93 percent). It is more common for larger enterprises to have Internet access. Every enterprise with 100+ employees had access to the Internet, while 98 percent of enterprises with 50–99 employees and the same percent of enterprises with 20–49 employees had access to the Internet in 2003. The prevalence of Internet access was lowest among enterprises with 10–19 employees or 95 percent.

Types of Internet connections

Of enterprises with connection to the Internet 5 percent had wireless connections, 10 percent used analogue modems and 13 percent used ISDN connections. A little over one fifth enterprise used broadband or other similiar connections with transfer speed at minimum 2 Mb/sec. The most common Internet connections were ADSL, SDSL or other types of xDSL connections with transfer speed up to 2 Mb/sec. Around 64 percent of enterprises with access to the Internet used such types of Internet connections in 2003 (see figure 8).

% □ "High speed" Internet connection (i.e. 81 xDSL or broadband) ☐ Broadband or other conn. ≥2mb/sek 22 □ ADSL, SDSL or xDSL <2mb/sek 64 □ ISDN 13 ■ Analogue modem ■ Wireless connection 20 40 100 60 80

Figure 8. Type of Internet connection 2003

Percent of enterprises with access to the Internet.

"High speed" Internet connections

The prevalence of "high speed" Internet connections¹ is very high among Icelandic enterprises. 81 percent of enterprises with access to the Internet used "high speed" Internet connections in 2003. Of those, 78 percent had ADSL and 26 percent had broadband connections. The difference between sectors is not very large considering "high speed" Internet connections as a whole. On the other hand there is a huge difference between sectors when it comes to the prevalence of different kinds of "high speed" Internet connections. The smallest share of enterprises with broadband connections is in construction and hotels and restaurants. On the other hand the highest penetration of xDSL connections. The financial sector has the highest penetration of broadband connections, where the vast majority has broadband or other kinds of connections with transfer speed 2Mb/sec or more (see figure 9).

¹ "High speed" Internet connections means ADSL or other faster connections.

% 100 99 91 80 86 79 78 60 59 50 40 20 23 4 0 Total Manuf. Constr. Trade Hotels/ Com./ Bank./ Culture Misc. fin.serv. rest. transp. spec.serv. etc. \square xDSL <2mb/sek ■ Broadband ≥2mb/sek

Figure 9. Type of "high speed" Internet connection by economic activity 2003

Percent of enterprises with "high speed" Internet connection.

It is more common among larger enterprises to have Internet connections with the highest transfer speed such as the broadband. Around 65 percent of the largest enterprises (100+ employees) with "high speed" Internet connections had broadband while only 17 percent of the smallest enterprises used it (see figure 10).

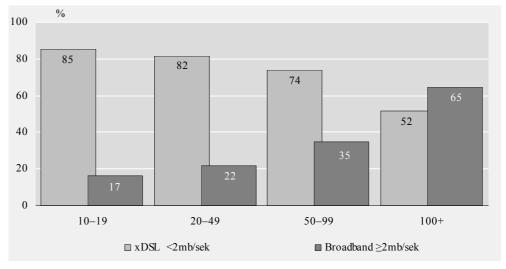


Figure 10. Type of "high speed" Internet connection by size class 2003

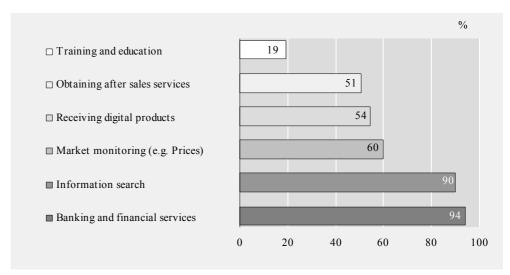
Percent of enterprises with "high speed" Internet connection.

Purpose of Internet use

Internet is used for banking and financial services

Around 94 percent of enterprises with access to the Internet use it for banking and financial services, 90 percent search for information on the Internet and 60 percent monitor the market through the Internet. A little over half of enterprises with Internet access receive digital products through the Internet, 51 percent use it for obtaining after sales services and 19 percent use the Internet for training and education of employees (see figure 11).

Figure 11. Purpose of Internet use 2003

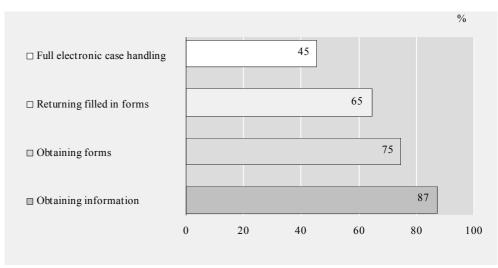


Percent of enterprises connected to the Internet.

Interaction with public authorities via Internet

Around 87 percent of enterprises with Internet access are obtaining information from public authorities' web sites, 75 percent use the Internet for obtaining official forms, 65 percent for returning filled in forms to public authorities and 45 percent use the Internet for full electronic case handling (see figure 12).

Figure 12. Purpose of Internet use 2003



Percent of enterprises connected to the Internet.

Web site

70 percent with a web site

Almost 70 percent of Icelandic enterprises have their own homepage/web site. The prevalence of web sites is higher among larger enterprises than among smaller ones. 59 percent of the enterprises with 10–19 employees had a web site during the time of survey in spring 2003 while almost all (97 percent) of the larger ones had one (see figure 13).

100 %

80

60

59

40

20

10–19

20–49

50–99

100+

Figure 13. Enterprises with their own web site by size class 2003

There are huge differences between sectors when it comes to the prevalence of web sites. The lowest share of enterprises with own web sites is to be found in the construction sector (51 percent) and the manufacturing sector (59 percent) whereas 92 percent of enterprises in miscellaneous specialised services and 100 percent of enterprises in the financial sector had their own web sites at the time of the survey (see figure 14).

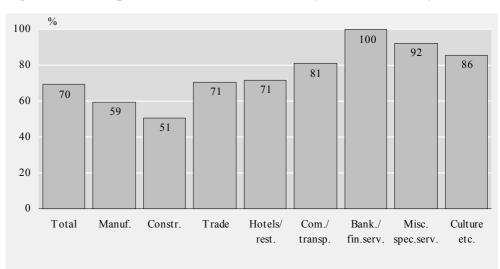


Figure 14. Enterprises with their own web site by economic activity 2003

Purpose of the homepage

93 percent of enterprises having own web site use it for marketing the enterprise's products. 58 percent use the web site for facilitating access to product catalogues and price lists. A little over one third of the enterprises provides after sales support through their web site and every one in five enterprises delivers digital products via the web site. 19 percent use the web site for giving access to customised pages for repeat clients and only 3 percent provide mobile Internet services through the web site (see figure 15).

Providing mobile Internet services

Customised page for repeat client

Delivering digitial products

Providing after sales support

Product catalogues and price lists

Marketing

93

0 20 40 60 80 100

Figure 15. Facilities of the web site 2003

Percent of enterprises with own web site.

E-commerce

Sales via Internet

Around 21 percent of all enterprises sold products or services via the Internet in 2002. Internet sales were most common in the financial sector (59 percent), by hotels and restaurants (42 percent) and by enterprises in communication/transport (40 percent) (see figure 16).

Purcahses via Internet

Around 37 percent of all enterprises ordered or purchased goods or services via the Internet in 2002. Purchases made through the Internet were most common within enterprises in the financial sector (75 percent), enterprises in cultural activities (71 percent) and within enterprises in miscellaneous specialised services (64 percent) (see figure 16).

Use of EDI

In 2002 17 percent of all enterprises used EDI for sales or purchases. Use of EDI was most common among enterprises in the trading sector (39 percent) and among enterprises in cultural activities (29 percent) (see figure 16).

100 80 60 40 40 13 27 20 0 Total Manuf Constr Trade Hotels/ Com./ Bank. Misc. Culture fin.serv. spec.serv. rest. transp. etc. □ Sales via Internet □ Purchases via Internet ■ Use of EDI

Figure 16. E-commerce by economic activity 2002

Percent of all enterprises.

It is more common for larger enterprises to sell or buy through the Internet as well as to use EDI. While 16 percent of the smallest enterprises sold products via the Internet in 2002, a little over one third of the largest enterprises did so. 27 percent of the enterprises with less than 20 employees ordered or purchased goods or services via Internet in 2002 while 64 percent of enterprises with 100+ employees did so. One out of every ten enterprises with 10–19 employees used EDI in 2002 while 46 percent of the largest enterprises made use of it (see figure 17).

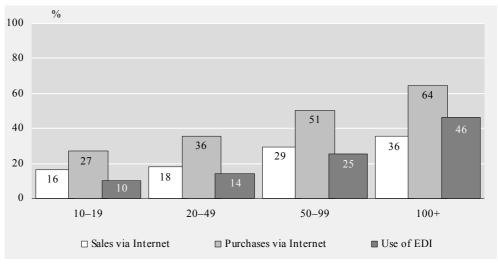


Figure 17. E-commerce by number of employees 2002

Percent of all enterprises.

Sales via the Internet representing at least 1 percent of total turnover As stated before one out of every five enterprises received orders via the Internet in 2002. When asked about what proportion of total turnover revenues from those orders represented in 2002, only 9 percent of all enterprises had Internet sales representing at least 1 percent of total turnover.

Having Internet sales representing at least 1 percent of total turnover in 2002 was most common for hotels and restaurants (28 percent), enterprises in communication/transport (20 percent), in the financial sector (18 percent) and for enterprises in miscellaneous specialised services (16 percent) (see figure 18).

100 80 60 40 42 40 20 20 6 14 0 0 0 Total Manuf. Constr. Trade Hotels/ Com./ Bank./ Misc. Culture fin.serv. spec.serv. rest. transp. etc. ■ Sales via Internet 2002 ■ Sales via Internet ≥1% of total turnover 2002

Figure 18. Sales via Internet 2002

Percent of all enterprises.

On-line payments

More than half of enterprises doing internet-commerce paid on-line for purchases made over the Internet. Little less or 35 percent had received on-line payments for products or services sold via the Internet. On-line payments were most common in the cultural activities, where 80 percent of the enterprises had payed on-line and all of them had received on-line payments (see figure 19).

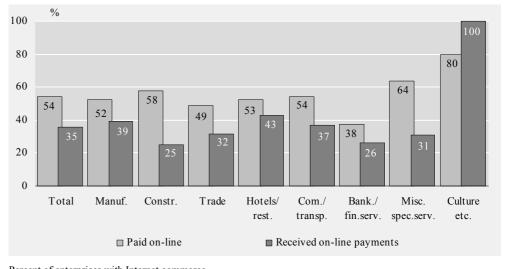


Figure 19. On-line payments for Internet commerce by field of activity 2002

Percent of enterprises with Internet commerce.

Breakdown of Internet sales

Enterprises with Internet sales representing at least 1 percent of total turnover sold more to end customers than to other enterprises (see figure 20).

B2B 42%
B2C 58%

Figure 20. Breakdown of Internet sales by customer type 2002

The vast majority of Internet sales was to other enterprises or customers in Iceland or 85 percent. 11 percent went to enterprises or customers in EU-countries and 4 percent to the rest of the world (see figure 21).

EU countries 11%
Rest of the world 4%

Figure 21. Breakdown of Internet sales by destination 2002

IT security

Security precautions

Enterprises with access to the Internet were asked about their security precautions. 81 percent had off-site data backup, 79 percent were subscribers to a security service and 73 percent limited access to IT equipments. Around 58 percent had firewalls, 54 percent had UPS (uninterruptable power supply) and half of the enterprises had secure servers. Only 6 percent of enterprises with access to the Internet used electronic digital signature as receivers of information, every one out of four used other authentication mechanisms such as PIN codes and 11 percent used encryption for confidentiality (see figure 22).

% ☐ Electr. digital signature □ Encryption 11 ☐ Oth. auth. mech. e.g. PIN code 27 50 □ Secure servers m UPS ■ Firewalls ■ Limited access to equipments ■ Subscr. to a security service ☐ Off-site data backup 0 20 40 60 80 100

Figure 22. Enterprises' security precautions 2003

Percent of enterprises with Internet access.

Security problems in 2002

Around 31 percent of enterprises with access to the Internet experienced some security problems in 2002. Computer virus attacks resulting in loss of information or working time was the most common (27 percent). 8 percent of enterprises with Internet access encountered unauthorised access to computer systems or data and only 1 percent experienced blackmail or threats to the enterprise data or software (see figure 23).

The vast majority of enterprises with access to the Internet or 81 percent had updated any of the enterprise's security facilities shortly for the prosecution of the survey (see figure 23).

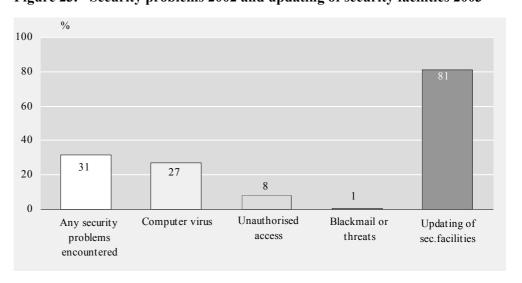


Figure 23. Security problems 2002 and updating of security facilities 2003

Percent of enterprises with Internet access.

Table 3. Enterprises' use of ICT by field of activity and enterprise size 2003

Percent	_						IT systems
						Own	for manag.
	Use of	Internet				web page/	order/
	computers	connection	Intranet	Extranet	LAN	home page	purchases
Takal	99	97	26	20	50	70	24
Total			36	30	50		34
Manufacturing	99	97	23	20	41	59	34
Construction	100	97	22	12	32	51	16
Trade	99	96	39	31	55	71	59
Motor trade	100	96	39	32	57	71	46
Wholesale trade	100	100	38	34	66	80	64
Retail trade	97	93	41	27	43	61	57
Hotels and restaurants	95	93	23	17	29	71	19
Communication, transport	100	98	47	51	60	81	32
Banking, financial services	100	100	91	78	81	100	19
Misc. specialised services	99	99	63	55	80	92	19
Culture etc.	100	100	43	57	100	86	29
Number of employees							
10–19	98	95	28	22	40	59	27
20–49	100	98	35	27	50	73	31
50–99	100	98	48	45	65	75	41
100+	100	100	61	59	78	97	64

Table 4. Share of total number of employees using computer in their normal work routine¹ by field of activity and enterprise size 2003

Percent of all employees	All computers	Computers connected to the Internet
Total	58	50
Manufacturing	33	29
Construction	19	18
Trade	72	53
Motor trade	81	76
Wholesale trade	78	71
Retail trade	68	42
Hotels and restaurants	49	29
Communication, transport	69	60
Banking, financial services	99	99
Misc. specialised services	80	77
Culture etc.	96	96
Number of employees		
10–19	52	44
20–49	45	42
50–99	53	49
100+	64	53

¹At least once a week

Table 5. Automatic links with other IT-systems by field of activity and enterprise size 2003

Percent of enterprises	Int. system	Invoicing	System	Logistics			
with IT systems for managing	for reord.	and	for manag.	systems		Suppliers'	Customers'
orders or purchases	replacement	payment	prod. of	(incl.	Marketing	business	business
	supplies	systems	service op.	el. delivery)	operations	systems	systems
Total	86	29	76	38	25	20	20
Manufacturing	29	7	26	15	9	6	7
Construction	4	1	4	1	_	_	_
Trade	35	14	32	12	13	9	7
Motor trade	4	2	3	2	2	1	2
Wholesale trade	16	6	16	5	6	4	3
Retail trade	15	7	12	5	5	4	2
Hotels and restaurants	5	2	4	2	_	1	2
Communication, transport	4	2	3	2	_	1	1
Banking, financial services	2	1	1	1	1	1	1
Misc. specialised services	7	2	6	5	3	3	3
Culture etc.	-	_	_	_	_	_	_
Number of employees							
10–19	28	11	25	11	7	5	6
20–49	26	6	23	11	5	6	6
50–99	10	3	10	6	4	3	3
100+	21	9	19	11	9	6	5

Table 6. Type of Internet connection by field of activity and enterprise size 2003

Percent of enterprises	Wireless				Broadband	
connected to the Internet	connection			ADSL, SDSL	or other	"High speed
	(satellite,	Analogue		or xDSL	connection	Internet
	mobile phone)	modem	ISDN	<2Mb/sec	≥2Mb/sec	conn."
Total	5	10	13	64	22	81
Manufacturing	5	11	16	66	13	76
Construction	2	14	13	75	3	76
Trade	4	8	12	68	22	86
Motor trade	4	11	11	70	22	89
Wholesale trade	3	5	7	73	27	94
Retail trade	6	9	17	62	17	76
Hotels and restaurants	5	13	14	68	9	74
Communication, transport	17	13	20	67	24	87
Banking, financial services	_	_	3	22	78	97
Misc. specialised services	7	8	11	53	46	89
Culture etc.	14	14	_	43	43	86
Number of employees						
10–19	3	12	12	67	13	78
20–49	4	8	13	67	18	82
50–99	11	7	14	62	29	84
100+	13	11	19	46	58	89

¹ Enterprises with ADSL and/or other faster Internet connection

Table 7. Type of high speed Internet connection by field of activity and enterprise size 2003

Percent of enterprises with	ADSL, SDSL or	Broadband or other
high speed Internet connection ¹	$xDSL \le 2Mb/sec$	connection ≥2Mb/sec
Total	78	26
Manufacturing	86	17
Construction	99	4
Trade	79	26
Motor trade	79	25
Wholesale trade	78	28
Retail trade	81	22
Hotels and restaurants	91	12
Communication, transport	78	28
Banking, financial services	23	81
Misc. specialised services	59	52
Culture etc.	50	50
Number of employees		
10–19	85	17
20–49	82	22
50–99	74	35
100+	52	65

¹ Enterprises with ADSL and/or other faster Internet connection

Table 8. Purpose of Internet use by field of activity and enterprise size 2003

Percent of enterprises			Banking			
connected to the Internet		Market	and	Receiving	Obtaining	
	Information	monitoring	financial	digital	after sales	Train. and
	search	(e.g. prices)	services	products	services	educations
Total	90	60	94	54	51	19
Manufacturing	92	57	93	47	49	11
Construction	82	47	98	47	41	8
Trade	90	63	94	56	54	20
Motor trade	89	67	96	63	56	41
Wholesale trade	93	66	97	61	63	26
Retail trade	87	60	90	49	45	9
Hotels and restaurants	81	51	91	41	27	6
Communication, transport	93	74	93	72	67	22
Banking, financial services	94	81	97	69	47	53
Misc. specialised services	95	63	97	70	61	43
Culture etc.	100	86	100	100	100	43
Number of employees						
10–19	88	54	94	51	45	14
20–49	90	58	94	49	51	16
50–99	95	68	98	74	65	32
100+	95	78	93	65	59	36

Table 9. Enterprises' interaction with public authorities via Internet by field of activity and enterprise size 2003

Percent of enterprises	For obtaining	For obtaining	For returning	For full el.
with connection to the Internet	infromation	forms	filled in forms	case handling
Total	87	75	65	45
Manufacturing	88	77	68	46
Construction	80	72	64	33
Trade	86	69	60	46
Motor trade	74	70	63	59
Wholesale trade	94	74	68	54
Retail trade	81	62	49	34
Hotels and restaurants	82	68	60	32
Communication, transport	93	74	61	50
Banking, financial services	97	84	72	31
Misc. specialised services	92	81	69	60
Culture etc.	100	86	71	71
Number of employees				
10–19	85	70	62	45
20–49	85	76	63	41
50–99	94	85	75	56
100+	95	80	72	50

Table 10. Facilities of the website by field of activity and enterprise size 2003

Percent of enterprises		Facilitate acc.				Providing
with own website	Marketing	to product	Cust. page	Delivering	Providing	mobile
	the	catalogues	for repeat	digital	after sales	Internet
	products	and price lists	clients	products	support	services
Total	93	58	19	20	35	3
Manufacturing	85	49	13	12	30	2
Construction	100	28	9	4	13	0
Trade	95	69	17	18	38	1
Motor trade	95	75	15	10	35	_
Wholesale trade	93	64	17	17	36	_
Retail trade	97	73	17	20	42	2
Hotels and restaurants	100	87	22	20	37	2
Communication, transport	89	74	26	39	55	5
Banking, financial services	100	81	44	47	50	25
Misc. specialised services	96	43	26	29	37	2
Culture etc.	100	100	50	67	67	_
Number of employees						
10–19	93	57	15	20	32	2
20–49	95	57	15	17	32	2
50–99	95	55	31	20	47	3
100+	85	67	32	28	42	7

Table 11. E-commerce by field of activity and enterprise size 2002

Percent of all enterprises		Sales via		Sales or
	Sales	Internet ≥1%	Purchases	purchases
	via Internet	of turnover	via Internet	via EDI
Total	21	9	37	17
Manufacturing	13	5	27	15
Construction	4	_	21	4
Trade	20	6	36	39
Motor trade	21	7	43	39
Wholesale trade	18	6	38	47
Retail trade	22	6	31	30
Hotels and restaurants	42	28	23	5
Communication, transport	40	20	51	19
Banking, financial services	59	18	75	16
Misc. specialised services	22	16	64	3
Culture etc.	14	_	71	29
Number of employees				
10–19	16	9	27	10
20-49	18	9	36	14
50–99	29	15	51	25
100+	36	6	64	46

Table 12. On-line payments for Internet commerce by field of activity and enterprise size 2002

Percent of enterprises	Paid on-line for	Received on-line
with e-commerce	purchases made via Int.	payments
	•	
Total	54	35
Manufacturing	52	39
Construction	58	25
Trade	49	32
Motor trade	42	33
Wholesale trade	56	29
Retail trade	43	33
Hotels and restaurants	53	43
Communication, transport	54	37
Banking, financial services	38	26
Misc. specialised services	64	31
Culture etc.	80	100
Number of employees		
10–19	63	38
20–49	58	28
50–99	46	38
100+	40	41

Table 13. Breakdown of Internet sales by field of activity and enterprise size 2002

Percent of enterprises with sales	B2B and B2C ¹		By destination			
via Internet at least 1% of turnover	B2B	B2C	Own country	EU countries	Rest of the world	
Total	42	58	85	11	4	
Manufacturing	65	35	54	22	24	
Construction	_	_	_	_	_	
Trade	52	48	97	1	1	
Motor trade	_	100	5	75	20	
Wholesale trade	100	_	100	_	_	
Retail trade	5	95	98	1	1	
Hotels and restaurants	70	30	30	63	6	
Communication, transport	42	58	70	21	9	
Banking, financial services	19	81	100	_	_	
Misc. specialised services	92	8	82	16	3	
Culture etc.	_	_	_	_	_	
Number of employees						
10–19	72	28	81	15	3	
20–49	72	28	65	26	9	
50–99	61	39	87	12	1	
100+	25	75	89	7	5	

¹B2B: Business to business; B2C: Business to customer.

Table 14. Security precausions by field of activity and enterprise size 2003

Percent of enterprises		UPS	Subs-				Electronic	Other	
with connection		(uninter-	cription				digital	authen-	Encryp-
to the Internet	Limited	ruptable	to a	Off-site			signature	tication	tion for
	access to	power	security	data	Secure	Fire-	(as	mech. (e.g.	confiden-
	equipments	supply)	service	backup	servers	walls	receiver)	PIN code)	tiality
Total	73	54	79	81	50	58	6	27	11
Manufacturing	68	55	75	76	46	49	4	25	6
Construction	68	26	72	80	33	35	0	17	0
Trade	77	64	82	85	50	61	6	28	10
Motor trade	81	59	74	85	37	52	4	19	7
Wholesale trade	78	71	88	93	56	70	9	34	9
Retail trade	75	58	78	78	47	54	3	25	11
Hotels and restaurants	65	23	72	65	41	49	3	14	0
Communication, transport	76	63	89	91	63	74	7	35	17
Banking, financial services	91	97	100	100	100	94	22	59	53
Misc. specialised services	77	60	88	88	63	79	11	37	23
Culture etc.	57	57	86	86	57	86	29	14	29
Number of employees									
10–19	69	41	75	78	41	52	5	22	5
20–49	68	53	78	77	47	53	3	23	7
50-99	79	79	88	92	63	70	8	37	20
100+	93	88	93	92	83	85	19	53	34

Table 15. Security problems encountered in 2002 by field of activity and enterprise size

Percent of enterprises		Computer		
with connection to the Internet	Any	virus attack	Unauthorised	Blackmails or
	security	resulting	access	threats to the
	probl.	in loss of	to computer	enterprise data
	encontered	inf./work time	system or data	or software
Total	31	27	8	1
Manufacturing	27	24	6	_
Construction	26	25	5	_
Trade	34	30	8	_
Motor trade	33	30	7	_
Wholesale trade	36	31	12	1
Retail trade	31	29	4	_
Hotels and restaurants	35	31	5	1
Communication, transport	30	26	9	2
Banking, financial services	44	28	22	3
Misc. specialised services	35	27	15	2
Culture etc.	57	57	_	-
Number of employees				
10–19	28	25	5	1
20–49	31	28	7	1
50-99	43	31	16	_
100+	36	27	14	_

Table 16. Updating of security facilities in last 3 months by field of activity and enterprise size 2003

Percent of enterprises	Updating of
with connection to Internet	security facilities
Total	81
Manufacturing	79
Construction	75
Trade	81
Motor trade	81
Wholesale trade	85
Retail trade	78
Hotels and restaurants	77
Communication, transport	78
Banking, financial services	97
Misc. specialised services	87
Culture etc.	86
Number of employees	
10–19	78
20–49	78
50–99	93
100+	89

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