<u>**STRICTLY CONFIDENTIAL**</u>

SURVEY ON ICT USAGE AND E-COMMERCE IN ENTERPRISES 2007

	FOR OFFICIAL USE ONLY	
	S/N	⌊_⌊_⌊_⌊_⌋
	Legal Status	⌊_⌊_⌋
	Enterprise Size	⌊_⌋
	NACE	⌊_⌊_⌊_⌊_⌊_⌋

<u>GENERAL INFORMATION:</u>

1. The aim of the survey is to collect data on ICT usage, Internet usage and electronic commerce in enterprises. These data are necessary for the implementation of policy programmes of both the Government and the Private Sector.

2. All requested information must be supplied by the **IT manager of the enterprise**. Regarding the enterprise's background information (Module X), these should be provided by the General Manager or by the Accountant or by any other person responsible.

3. An authorised employee of the Statistical Service will contact the IT manager of the enterprise by phone in order to arrange a visit for the completion of the questionnaire.

4. Definitions of the terms used in the questionnaire can be found in the glossary attached.

5. The reference period for the data is <u>**January 2007**</u>, unless the question refers to other specific period.

6. The collection of data is carried out in accordance with the Statistics Law 15(I)/2000. The Statistical Service is bound by the Statistics Law to treat all information obtained as <u>**STRICTLY CONFIDENTIAL**</u>. Your responses will be used solely for statistical purposes.

P. Philippides
Director
Statistical Service

12 January, 2007.

Module A: General information about ICT systems		

	Yes	**No**
A1. Did your enterprise use computers, during January 2007?	☐	☐
		→ Go to X

A2. How many persons employed used computers at least once a week, during January 2007?		�
If you can't provide this value,		
Please indicate an estimate of the percentage of the number of persons employed used computers at least once a week, during January 2007.		� %

A3. Did your enterprise have the following information and communication technologies, during January 2007?

	Yes	**No**
a) Wireless LAN [1]	☐	☐
b) Wire based LAN [1]	☐	☐
c) Intranet [2]	☐	☐
d) Extranet [3]	☐	☐

	Yes	**No**
A4. Did your enterprise have in use, in January 2007, any software application to manage the placing and/or receipt of orders?	☐	☐
		→ Go to A6

A5. Did that software application to manage orders link automatically with any of the following, as of January 2007?

	Yes	**No**
a) Internal system for re-ordering replacement supplies	☐	☐
b) Invoicing and payment systems	☐	☐
c) Your system for managing production, logistics or service operations	☐	☐
d) Your suppliers' business systems (for suppliers outside your enterprise group)	☐	☐
e) Your customers' business systems (for customers outside your enterprise group)	☐	☐

	Yes	**No**	**Don´t know**
A6. Did your enterprise have in use, in January 2007, an ERP [4] software package to share information on sales and purchases with other internal functional areas (for example, finance, planning, marketing, etc.)?	☐	☐	☐

A7. Did your enterprise have in use, in January 2007, any software application for managing information about clients (so called CRM [5]) that allows it to:

	Yes	**No**
a) Capture, store and make available to other business functions the information about its clients?	☐	☐
b) Make analysis of the information about clients for marketing purposes (setting prices, make sales promotion, choose distribution channels, etc.)?	☐	☐

		Yes	No
A8.	Did your enterprise have in use, in January 2007, third party free or open source [6] operating systems, such as Linux ? (i.e. with its source code available, no copyright cost, and the possibility to modify and/or (re)distribute it)	☐	☐
A9.	Was your enterprise, in January 2007, <u>sending</u> e-invoices [7] in a digital format which allows its automatic processing?	☐	☐
A10.	Was your enterprise, in January 2007, <u>receiving</u> e-invoices in a digital format which allows its automatic processing?	☐	☐
A11.	Was your enterprise, in January 2007, using a digital signature [8] in any message sent, i.e. using encryption methods that assure the authenticity and integrity of the message (uniquely linked to and capable of identifying the signatory and where any subsequent change to the message is detectable)?	☐	☐

Module B: Use of Internet [9]
(asking enterprises with ICT)

		Yes	No
B1.	Did your enterprise have access to Internet, during January 2007?	☐	☐ → Go to D1

B2.	How many persons employed used computers connected to the World Wide Web at least once a week, during January 2007?	�_⎮_⎮_⎮_⎮_⎮_⎯
	If you can't provide this value,	
	Please indicate an estimate of the percentage of the number of persons employed used computers connected to the World Wide Web at least once a week, during January 2007.	⎮_⎮_⎮_⎯ %

B3. Did your enterprise have the following types of external connection to the Internet, during January 2007?

	Yes	No
a) Traditional Modem [10] (dial-up access over normal telephone line)	☐	☐
b) ISDN [11] connection	☐	☐
c) DSL [12] (xDSL [13], ADSL, SDSL etc) connection	☐	☐
d) Other fixed Internet connection (e.g. cable, leased line (e.g. E1 or E3 at level 1 and ATM at level 2), Frame Relay, Metro-Ethernet, PLC – Powerline communication, etc)	☐	☐
e) Mobile connection (analogue mobile phone, GSM, GPRS, UMTS, EDGE, CDMA2000 1xEVDO)	☐	☐

B4.	Did your enterprise use the Internet for the following purposes, during January 2007? (**as consumer** of Internet services)	Yes	No
	a) Banking and financial services	☐	☐
	b) Training and education	☐	☐
	c) Market monitoring (e.g. prices)	☐	☐

B5.	Did your enterprise use the Internet for interaction with public authorities, during 2006?	Yes ☐	No ☐ → Go to B7

B6.	Did your enterprise interact with public authorities in the following ways, during 2006?	Yes	No
	a) For obtaining information	☐	☐
	b) For obtaining forms, e.g. tax forms	☐	☐
	c) For returning filled in forms, e.g. provision of statistical information to public authorities	☐	☐
	d) Submitted a proposal in an electronic tender system (e-procurement)	☐	☐

B7.	Did your enterprise have a Web Site [14] / Home page, during January 2007?	Yes ☐	No ☐ → Go to C1

If yes, give the address of your website:

B8.	Did the Web Site of your enterprise provide the following facilities, during January 2007? (your enterprise **as provider** of Internet services)	Yes	No
	a) Marketing the enterprise's products	☐	☐
	b) Facilitating access to product catalogues and price lists	☐	☐
	c) Providing after sales support	☐	☐

Module C: e-commerce [15] via Internet		
(asking enterprises with Internet access)		

Orders placed via Internet (Purchases)		

	Yes	**No**
C1. Did your enterprise order products / services via the Internet, during 2006? (excluding manually typed e-mails [16])	☐	☐ →Go to C3

C2. Please indicate for 2006 the percentage of the Internet orders in relation to the total purchases (in monetary terms, excluding VAT).	
	Less than 1% ☐
	1% or more and less than 5% ☐
	5% or more and less than 10% ☐
	10% or more and less than 25% ☐
Alternative Question:	25% or more ☐
Please state the value of the purchases resulted from orders placed via Internet (in monetary terms, excluding VAT), in 2006. If you can't provide this value, **Please indicate an estimate of the percentage of the total purchases resulted from orders placed via Internet, in 2006.**	C£ ⊔⊔⊔⊔⊔⊔⊔⊔⊔⊔ ⊔⊔⊔ %

Orders received via Internet (Sales)		

	Yes	**No**
C3. Did your enterprise receive orders via the internet, during 2006? (excluding manually typed e-mails)	☐	☐ → Go to D1

C4. Please state the value of the turnover resulted from orders via Internet in monetary terms, excluding VAT), in 2006. If you can't provide this value, **Please indicate an estimate of the percentage of the total turnover resulted from orders received via Internet, in 2006.**	C£ ⊔⊔⊔⊔⊔⊔⊔⊔⊔⊔ ⊔⊔⊔ %

	Yes	**No**
C5. Was your enterprise using a secure protocol, such as SSL (Secure Socket Layer) [17] and TLS (Transpot Layer Security) [17], for the reception of orders via Internet, in January 2007?	☐	☐

Module D: E-commerce via external computer networks <u>other than</u> Internet [18]

(asking enterprises with ICT)

Orders placed via external computer networks other than Internet (Purchases)

		Yes	No
D1.	**Did your enterprise order products / services via external computer networks other than Internet, during 2006?**	☐	☐ → Go to D3

D2.	**Please indicate for 2006 the percentage of the orders placed or transmitted via computer networks other than Internet, in relation to the total purchases (in monetary terms, excluding VAT).** Alternative Question:	Less than 1% ☐
		1% or more and less than 25% ☐
		25% or more and less than 50% ☐
		50% or more and less than 75% ☐
		75% or more ☐

	Please state the value of the purchases resulted from orders placed via computer networks other than Internet (in monetary terms, excluding VAT), in 2006. If you can't provide this value, **Please indicate an estimate of the percentage of the total purchases resulted from orders placed via computer networks other than Internet, in 2006.**	C£ |_|_|_|_|_|_|_|_| |_|_|_| %

Orders received via external computer networks other than Internet (Sales)

		Yes	No
D3.	**Did your enterprise receive orders via external computer networks other than Internet, during 2006?**	☐	☐ → Go to E1

D4.	**Please state the value of the turnover resulted from orders received via computer networks other than Internet (in monetary terms, excluding VAT), in 2006.** If you can't provide this value, **Please indicate an estimate of the percentage of the total turnover resulted from orders received via computer networks other than Internet, in 2006.**	C£ |_|_|_|_|_|_|_|_| |_|_|_| %

	Module E: e-Skills [19]		
E1.	**Did your enterprise employ ICT/IT specialists [20], in January 2007?**	**Yes** ☐	**No** ☐ →Go to E3
E2.	**How many ICT/IT specialists were employed by your enterprise, during January 2007?** If you can't provide this value, **Please indicate an estimate of the percentage of the number of ICT/IT specialists in relation to the total number of persons employed, during January 2007.**	⎸⎸⎸⎸⎸ ⎸⎸⎸⎸ %	
E3.	**Did your enterprise recruit or try to recruit personnel for jobs requiring ICT specialist skills, during 2006?**	**Yes** ☐	**No** ☐ →Go to E6
E4.	**Did your enterprise have hard-to-fill vacancies for jobs requiring ICT specialist skills, during 2006?**	**Yes** ☐	**No** ☐ →Go to E6

E5.	**What do you believe were the main reasons of having hard-to-fill vacancies for jobs requiring ICT specialist skills, during 2006?**	**Yes**	**No**
	a) Lack or too low number of applicants with ICT specialist skills	☐	☐
	b) Lack of ICT related qualifications from education and/or training	☐	☐
	c) Lack of work experience in the field of ICT	☐	☐
	d) Salary requests too high	☐	☐
	e) Other	☐	☐

E6.	**Did your enterprise recruit or try to recruit personnel for jobs requiring skills in the use of ICT [21], during 2006?**	**Yes** ☐	**No** ☐ →Go to E8
E7.	**Did your enterprise have hard-to-fill vacancies due to applicants' lack of skills in the use of ICT, during 2006?**	**Yes** ☐	**No** ☐

E8.	**Did your enterprise provide training to develop or upgrade ICT related skills of your personnel, during 2006?**	**Yes**	**No**
	a) Training for ICT/IT specialists	☐	☐
	b) Training for users of ICT	☐	☐

E9.	**Were any ICT functions requiring ICT/IT specialists performed by external suppliers [22] (fully or partly), during 2006?**	**Yes** ☐	**No** ☐

		Yes, by foreign affiliates established by the enterprise	Yes, by other foreign enterprises	No
E10.	**Were any ICT functions requiring ICT/IT specialists performed by suppliers <u>in a foreign country</u> (23) (fully or partly), during 2006?**	☐	☐	☐ → Go to E13

		Yes	No
E11.	**Which ICT functions were performed by suppliers' ICT/IT specialists <u>in a foreign country</u>, during 2006?**		
	a) ICT management (includes e-business and ICT systems management)	☐	☐
	b) ICT development and implementation (includes business software development, programming, web development, database development, communication network development, systems integration and installation)	☐	☐
	c) ICT operations (includes technical support, user help and support, network administration, web administration, database administration)	☐	☐
	d) Other ICT functions	☐	☐

		Yes	No
E12.	**From which of the following geographical regions did your enterprise engage suppliers' ICT/IT specialists, during 2006?**		
	a) other EU Member States	☐	☐
	b) Non-EU Countries	☐	☐

		Yes	No
E13.	**Were any business functions requiring users of ICT performed by external suppliers (fully or partly), during 2006?**	☐	☐

		Yes, by foreign affiliates established by the enterprise	Yes, by other foreign enterprises	No
E14.	**Were any business functions requiring users of ICT performed by suppliers <u>in a foreign country</u> (fully or partly), during 2006?**	☐	☐	☐ →Go to X

		Yes	No
E15.	**Which business functions (non-ICT) were performed by suppliers' ICT users <u>in a foreign country</u>, during 2006?**		
	a) Sales and marketing, customer services	☐	☐
	b) Research and development, product design and engineering	☐	☐
	c) Other (non-ICT) business functions	☐	☐

		Yes	No
E16.	**Please indicate the geographical regions from where you engaged business services requiring ICT users, during 2006.**		
	a) other EU Member States	☐	☐
	b) Non-EU Countries	☐	☐

Module X: Background information

X1.	**Main economic activity of the enterprise, during 2006**	……………………………………………………..… ……………...………………………………….. ……………………………………………………
X2.	**Average number of persons employed, during 2006**	<table><tr><td> </td><td> </td><td> </td><td> </td></tr></table>
X3.	**Total orders of goods and services (in value terms, excluding VAT), for 2006**	**C£** | | | | | | | | | | |
X4.	**Total turnover (in value terms, excluding VAT), for 2006**	**C£** | | | | | | | | | | |

Module Z: General Information

Z1. **If you have any comments about the survey, please write down below:**

………

………

………

………

Z2.	**Name of the person who answered the questionnaire:**	
	Position in the enterprise:	
	Telephone:	
	Fax:	
	E-mail:	
Z3.	**Name of the person who completed the questionnaire:**	
	Signature:	
	Date:	

TO BE COMPLETED BY THE ENUMERATOR:

Z4.	**Completion of the questionnaire:**	
	a) The questionnaire is completed………………………………………………………………..	1
	b) The enterprise has closed…………………………………………………………………..	2
	c) The enterprise can not be located………………………………………………………….	3
	d) The enterprise refuses to cooperate………………………………………………………	4
	e) The enterprise was closed during the collection of the data………………………………	5
	f) Merge with another enterprise……………………………………………………………..	6
	g) Other reasons for no completion (please specify) …… …… …… …… ……	7

Glossary

(1) LAN (Local Area Network)

A network for communication between computers confined to a single building or in closely located group of buildings, permitting users to exchange data, share a common printer or master a common computer, etc.

(2) Intranet

An internal company communications network using Internet protocol allowing communications within an organisation.

(3) Extranet

A secure extension of an Intranet that allows external users to access some parts of an organisation's Intranet.

(4) ERP

Enterprise Resource Planning (ERP) consists of one or of a set of software applications that integrate information and processes across the several business functions of the enterprise. Typically ERP integrates planning, procurement, sales, marketing, customer relationship, finance and human resources.

ERP software can be customised or package software. These latter are single-vendor, enterprise wide, software packages, but they are built in a modular way allowing enterprises to customise the system to their specific activity implementing only some of those modules.

ERP systems typically have the following characteristics:
1. are designed for client server environment (traditional or web-based);
2. integrate the majority of a business's processes;
3. process a large majority of an organization's transactions;
4. use enterprise-wide database that stores each piece of data only once;
5. allow access to the data in real time.

(5) CRM

Customer Relationship Management (CRM) is a management methodology which places the customer at the centre of the business activity, based in an intensive use of information technologies to collect, integrate, process and analyse information related to the customers.

One can distinguish between:

1. **Operational CRM** – Integration of the front office business processes that are in contact with the customer.

2. **Analytical CRM** – Analysis, through data mining, of the information available in the enterprise on its customers. This aims to gather in depth knowledge of the customer and how to answer to its needs.

(6) Free / Open Source

Open source software refers to computer software under an open source license. An open-source license is a copyright license for computer software that makes the source code available under terms that allow for modification and redistribution without having to pay the original author. Such licenses may have additional restrictions such as a requirement to preserve the name of the authors and the copyright statement within the code.

Related to the Open Source Definition is the Free Software definition by the Free Software Foundation, which attempts to capture what is required for a program license to qualify as being free-libre software. In practice, licenses meet the open source definition almost always also meet the Free software definition. All licenses reported to meet the free software definition as of 2005 also meet the open source definition.

(7) e-Invoice

An **e-invoice** is an invoice where all data is in digital format and it can be processed automatically. A distinctive feature of an e-invoice is automation. E-invoice will be transferred automatically in inter-company invoicing from the invoice issuer's or service provider's system directly into the recipient's financial or other application.

The transmission protocol might be XML, EDI or other similar format.

(8) e-Signature

An **e-signature** is some kind of electronic information attached to or associated with a contract or another message used as the legal equivalent to a written signature. **Electronic signature** is often used to mean either a signature imputed to a text via one or more of several electronic means, or cryptographic means to add non-repudiation and message integrity features to a document. **Digital signature** usually refers specifically to a cryptographic signature, either on a document, or on a lower-level data structure.

For either of them to be considered a signature they must have a legal value, otherwise they are just a piece of communication.

Some web pages and software EULAs claim that various electronic actions are legally binding signatures, and so are an instance of electronic signature. For example, a web page might announce that, by accessing the site at all, you have agreed to a certain set of terms and conditions. The legal status of such claims is uncertain.

An electronic signature can also be a digital signature if it uses cryptographic methods to assure both message integrity and authenticity. Because of the use of message integrity mechanisms, any changes to a digitally signed document will be readily detectable if tested for, and the attached signature cannot be taken as valid.

It is important to understand the cryptographic signatures are much more than an error checking technique akin to checksum algorithms, or even high reliability error detection and correction algorithms such as Reed-Solomon. These can offer no assurance that the text has not been tampered with, as all can be regenerated as needed by a tamperer. In addition, no message integrity protocols include error correction, for to do so would destroy the tampering detection feature.

Popular electronic signature standards include the OpenPGP standard supported by PGP and GnuPG, and some of the S/MIME standards (available in Microsoft Outlook). All current cryptographic digital signature schemes require that the recipient have a way to obtain the sender's public key with assurances of some kind that the public key and sender identity belong together, and message integrity measures (also digital signatures) which assure that neither the attestation nor the value of the public key can be surreptitiously changed. A secure channel is not required.

A digitally signed text may also be encrypted for protection during transmission, but this is not required when the digital signature has been properly carried out. Confidentiality requirements will be the guiding consideration.

(9) Internet

Relates to Internet Protocol based networks: www, Extranet over the Internet, EDI over the Internet, Internet-enabled mobile phones.

(10) Modem

Device that modulates outgoing digital signals from a computer or other digital device to analogue signals for a conventional copper twisted pair telephone line and demodulates the incoming analogue signal and converts it to a digital signal for the digital device.

(11) ISDN

Integrated Services Digital Network.

(12) DSL (Digital Subscriber Line)

A high-bandwidth (broadband), local loop technology to carry data at high speeds over traditional (copper) telephone lines.

Broadband

No generally accepted definition of broadband can be given. Common definitions refer to either: a) the connection speeds measured in kbps or mbps (in at least the downstream direction) or bandwidth measured by the amount of digital bits that one can transmit per second, measured in kbps or mbps; b) the type of connection, of which the following provide broadband access: xDSL (ADSL, SDSL, etc), Cable TV network (cable modem), UMTS (mobile phone), or other (e.g. satellite, fixed wireless); c) the content that is provided with the examples of high definition movie trailers, short films, flash animation, three dimensional video games, video on demand, internet radio, streaming video, video conferencing and so on.

(13) xDSL

Digital Subscriber Line. DSL technologies are designed to increase bandwidth available over standard copper telephone wires. Includes IDSL, HDSL, SDSL, ADSL, RADSL, VDSL, DSL-Lite.

(14) Web site

Location on the World Wide Web identified by a Web address. Collection of Web files on a particular subject that includes a beginning file called a home page. Information is encoded with specific languages (Hypertext mark-up language (HTML), XML, Java) readable with a Web browser, like Netscape's Navigator or Microsoft's Internet Explorer.

(15) Electronic commerce (e-commerce)

Transactions conducted over Internet Protocol-based networks and over other computer-mediated networks. The goods and services are ordered over those networks, but the payment and the ultimate delivery of the good or service may be conducted on or off-line. Orders received via telephone, facsimile, or manually typed e-mails are not counted as electronic commerce.

(16) E-mail

Electronic transmission of messages, including text and attachments, from one computer to another located within or outside of the organisation. This includes electronic mail by Internet or other computer networks.

(17) SSL/TLS

Secure Sockets Layer (SSL) and Transport Layer Security (TLS) are cryptographic protocols which provide secure communications on the Internet. SSL provides endpoint authentication and communications privacy over the Internet using cryptography. In typical use, only the server is authenticated (i.e. its identity is ensured) while the client remains unauthenticated; mutual authentication requires PKI deployment to clients. The protocols allow client/server applications to communicate in a way designed to prevent eavesdropping, tampering, and message forgery.

(18) Computer-mediated networks other than Internet

Minitel or interactive telephone systems
Networks that are employed for communication between computers but that are not publicly accessible Wide Area Networks such as the Internet. They are usually proprietary networks made up of leased lines and can cover local and wide geographical areas. Examples are EDI over private networks, Minitel or interactive telephone systems.
They exclude all IP/Internet Protocol based networks (www, extranet, EDI over Internet, virtual private network over Internet, internet enabled mobile phones).

(19) e-Skills / ICT Skills

Two main types of e-skills can be distinguished:
-ICT specialists skills: specifying, designing, developing, installing, operating, supporting, maintaining, managing, evaluating and researching ICT systems.
-ICT users skills: apply systems to support own work, use of generic software tools and use of specialised tools supporting business functions within industry (see for more details below *ICT user skills*).

(20) ICT/IT Specialists

ICT specialists or IT specialists have the capability to specify, design, develop, install, operate, support, maintain, manage, evaluate and research ICT and ICT systems. ICT is the main job.

Related ISCO-88 classification codes:
1236 Computing services managers
2131 Computer systems designers, analysts and programmers
2139 Computing professionals not elsewhere classified
2144 Electronics and telecommunications engineers
3114 Electronics and telecommunications engineering technicians
3121 Computer assistants
3122 Computer equipment operators
3132 Broadcasting and telecommunications equipment operators

(21) ICT User Skills

Capabilities enabling the effective use of common, generic software tools (basic user skills) or advanced, often sector-specific, software tools (advanced user skills). ICT is an important tool for the job and is used to produce work output and/or is used intensively at work (in day-to-day activities)

(22) e-Skills / External Suppliers / (Outsourcing e-skills)

Other enterprises, includes also foreign enterprises/legal entities, associated or not associated to a group of enterprises.

(e-skills sourced from external suppliers address the phenomena of outsourcing, i.e. activities are contracted out to other enterprises in the same country or abroad.)

(23) e-Skills / Foreign Suppliers / Suppliers in a foreign country / (Offshoring e-skills)

Suppliers in a foreign country can be
1. foreign affiliates, usually legal entities, established by the enterprise (internal suppliers from abroad) or
2. other foreign enterprises (external suppliers from abroad).

(e-skills sourced from suppliers in a foreign country address the phenomena of offshoring. E-skills sourced from foreign affiliates address offshore insourcing. E-skills sourced from other foreign enterprises address offshore outsourcing.)