

**STRICTLY CONFIDENTIAL**

SURVEY ON ICT USAGE AND E-COMMERCE IN ENTERPRISES 2012

	FOR OFFICIAL USE ONLY	
	S/N	<input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/>
	Legal Status	<input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/>
	Enterprise Size	<input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/>
	NACE Rev 2	<input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/>

GENERAL INFORMATION:

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 **January 2012**, 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 **STRICTLY CONFIDENTIAL**. Your responses will be used solely for statistical purposes.

G. Chr. Georgiou
Director
Statistical Service

9 January, 2012

Module A: Use of computers and computer networks ⁽¹⁾											
A1. Did your enterprise use computers, in January 2012? Computers include Personal Computers, nettops ⁽²⁾ , portable computers (e.g. laptops, notebooks, netbooks), other portable devices like Smartphones, Personal Digital Assistants (PDA) ⁽³⁾ .	Yes <input type="checkbox"/>	No <input type="checkbox"/> → Go to X1									
A2. Please answer (a) or (b) a) How many persons employed used computers at least once a week, in January 2012? If you can't provide this value, b) An estimate of the percentage of the number of persons employed who used computers at least once a week, in January 2012.	<div style="border: 1px solid black; width: 150px; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 150px; height: 20px; margin-bottom: 5px;"></div> %										
A3. In January 2012, did your enterprise provide to the persons employed remote access to the enterprise's e-mail⁽⁴⁾ system, documents or applications (via fixed, mobile or wireless connection⁽⁵⁾ to the Internet⁽⁶⁾)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>									
A4. Did your enterprise employ ICT/IT specialists, in January 2012? Definition 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.	Yes <input type="checkbox"/>	No <input type="checkbox"/>									
A5. Did your enterprise recruit or try to recruit personnel for jobs requiring ICT/IT specialist skills, during 2011?	Yes <input type="checkbox"/>	No <input type="checkbox"/> → Go to A7									
A6. Did your enterprise have hard-to-fill vacancies for jobs requiring ICT/IT specialist skills, during 2011?	Yes <input type="checkbox"/>	No <input type="checkbox"/>									
A7. Did your enterprise provide training to develop or upgrade ICT related skills of your personnel, during 2011?	<table border="1" style="width: 100%;"> <thead> <tr> <th></th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td> a) Training for ICT/IT specialists Tick No if your enterprise didn't employ ICT/IT specialists during 2011 </td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>b) Training for other persons employed</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>			Yes	No	a) Training for ICT/IT specialists Tick No if your enterprise didn't employ ICT/IT specialists during 2011	<input type="checkbox"/>	<input type="checkbox"/>	b) Training for other persons employed	<input type="checkbox"/>	<input type="checkbox"/>
	Yes	No									
a) Training for ICT/IT specialists Tick No if your enterprise didn't employ ICT/IT specialists during 2011	<input type="checkbox"/>	<input type="checkbox"/>									
b) Training for other persons employed	<input type="checkbox"/>	<input type="checkbox"/>									

(Scope: enterprises with computers)

- 3 -

B6. Did the Website or Home Page have any of the following facilities, in January 2012?		Yes	No
a)	Online ordering or reservation or booking, e.g. shopping cart	<input type="checkbox"/>	<input type="checkbox"/>
b)	A privacy policy statement, a privacy seal or certification related to website safety	<input type="checkbox"/>	<input type="checkbox"/>
c)	Product catalogues or price lists	<input type="checkbox"/>	<input type="checkbox"/>
d)	Order tracking available on line	<input type="checkbox"/>	<input type="checkbox"/>
e)	Possibility for visitors to customise or design the products	<input type="checkbox"/>	<input type="checkbox"/>
f)	Personalised content in the website for regular/repeated visitors	<input type="checkbox"/>	<input type="checkbox"/>
g)	Advertisement of open job positions or online job application	<input type="checkbox"/>	<input type="checkbox"/>
<p>Public authorities refer to both public services and administration activities, e.g. tax, customs, business registration, social security, public health, environment or commune administrations.</p> <p>Public authorities can be at local, regional or national level. (e.g. Inland Revenue, Customs and Excise and VAT Services, Social Insurance Services, Department of Road Transport, Department of Registrar of Companies etc)</p>			
B7. During 2011, did your enterprise use the Internet for interaction with public authorities to: (excluding any interaction via e-mails)		Yes	No
a)	Obtain information ⁽²²⁾ from public authorities websites or home pages	<input type="checkbox"/>	<input type="checkbox"/>
b)	Obtain forms from public authorities' websites or home pages e.g. tax declaration	<input type="checkbox"/>	<input type="checkbox"/>
c)	Return filled in forms electronically, e.g. forms for customs or VAT declaration	<input type="checkbox"/>	<input type="checkbox"/>
d)	Treat the following administrative procedure completely electronically without the need for paper work (including payment, if required), e.g. declaration, registration, authorisation request	<input type="checkbox"/>	<input type="checkbox"/>
	d1) Declaration of VAT	<input type="checkbox"/>	<input type="checkbox"/>
	d2) Declaration of social contributions	<input type="checkbox"/>	<input type="checkbox"/>
<p>Public electronic Procurement⁽²³⁾ refers to the use of the Internet by enterprises to offer goods or services to public authorities at national level or in other EU countries. The eProcurement process is based on a number of stages from the notification process (online availability of procurement notices and tender specifications) through tendering, awarding, to payment.</p> <p>eTendering⁽²⁴⁾ is the stage of an eProcurement process dealing with the preparation and submission of tenders or proposals online; this includes bids submitted through open, restricted, or negotiated procedures, as well as Framework Agreements and Dynamic Purchasing Systems (DPS⁽²⁵⁾).</p> <p>Submission of bids by e-mail is excluded.</p>			
B8. During 2011, did your enterprise use the Internet for accessing tender documents and specifications in electronic procurement systems of public authorities?		Yes	No
		<input type="checkbox"/>	<input type="checkbox"/>
B9. During 2011, did your enterprise use the Internet for offering goods or services in public authorities' electronic procurement systems (eTendering)?		Yes	No
a)	in Cyprus	<input type="checkbox"/>	<input type="checkbox"/>
b)	in other EU countries	<input type="checkbox"/>	<input type="checkbox"/>

Mobile connection to the Internet for business use (Scope: enterprises with access to the Internet)		
<p>Enterprises in the scope of the following questions are those that provide to the persons employed portable devices that allow a mobile connection to the Internet for business use, and pay for all or at least up to a limit, the subscription and the use costs.</p> <ul style="list-style-type: none"> - A mobile connection to the Internet means the usage of portable devices connecting to the Internet through mobile telephone networks. - Portable devices that allow a mobile connection to the Internet refer to: <ul style="list-style-type: none"> - Portable computers (e.g. notebook, netbook, laptop, Ultra Mobile PC-UMPC, tablet PC etc) - Other portable devices like Smartphone, PDA phone 		
B10. In January 2012, did your enterprise provide to the persons employed portable devices that allowed a mobile connection to the Internet for business use? Tick 'No' if the devices allowed Internet connection only via wireless networks and not via mobile telephone networks (e.g. portable computers or other portable devices like Smartphone, PDA phone)	Yes <input type="checkbox"/>	No <input type="checkbox"/> → Go to B14
B11. Did your enterprise provide to the persons employed any of the following portable devices that allowed a mobile connection to the Internet for business use?	Yes	No
a) Portable computers (e.g. Notebook, netbook, laptop, Ultra Mobile PC-UMPC, tablet PC etc)	<input type="checkbox"/>	<input type="checkbox"/>
b) Other portable devices like Smartphone, PDA phone	<input type="checkbox"/>	<input type="checkbox"/>
B12. Please answer (a) or (b) a) How many persons employed were provided with a portable device that allowed a mobile connection to the Internet for business use, in January 2012? (e.g. portable computers or other portable devices like Smartphone, PDA phone) If you can't provide this value, b) An estimate of the percentage of the total number of persons employed who were provided with a portable device that allowed a mobile connection to the Internet for business use, in January 2012.	<div> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> </div> <div> <input type="text"/> <input type="text"/> <input type="text"/> % </div>	
B13. In January 2012, did your enterprise provide the persons employed with portable devices that allowed a mobile connection to the Internet for business use to:	Yes	No
a) Access publicly available information on the Internet	<input type="checkbox"/>	<input type="checkbox"/>
b) Access the enterprise's e-mail system	<input type="checkbox"/>	<input type="checkbox"/>
c) Access and modify documents of the enterprise	<input type="checkbox"/>	<input type="checkbox"/>
d) Use dedicated business software applications, e.g. for orders or sales management, ERP ⁽²⁶⁾ related applications etc	<input type="checkbox"/>	<input type="checkbox"/>
B14. In January 2012, did the following obstacles limit or prevent your enterprise from using a mobile connection to the Internet?	Yes	No
a) Connectivity problems to mobile telephone networks for accessing the Internet	<input type="checkbox"/>	<input type="checkbox"/>
b) High costs for the subscription or use of the Internet	<input type="checkbox"/>	<input type="checkbox"/>
c) Security related risks (disclosure, destruction or corruption of data)	<input type="checkbox"/>	<input type="checkbox"/>
d) Technical obstacles or high costs for integrating mobile connection to the Internet in the enterprise's business software applications (e.g. incompatibility problems)	<input type="checkbox"/>	<input type="checkbox"/>
e) Other obstacles (e.g. adaptability of employees to new working practices, lack of skills or knowledge, contractual or legal barriers)	<input type="checkbox"/>	<input type="checkbox"/>
f) Limited or no need for a mobile connection to the Internet for business use	<input type="checkbox"/>	

Module C: Sending / Receiving of messages ⁽²⁷⁾ suitable for automatic processing to / from systems outside the enterprise EDI (Scope: enterprises with Computers)																	
Electronic transmission of data ⁽²⁰⁾ suitable for automatic processing - often called Electronic Data Interchange (EDI) - means: -sending and/or receiving of messages(e.g. orders, invoices, payment transactions, product descriptions, transport documents, tax declarations) -in an agreed or standard format which allows their automatic processing, e.g. EDI ⁽²⁸⁾ , EDIFACT, ODETTE ⁽²⁹⁾ , TRADACOMS, XML ⁽³⁰⁾ , xCBL ⁽³¹⁾ , cXML, ebXML - to or from other enterprises, public authorities or financial institutions - without the individual message being typed manually - via any computer network																	
C1. In January 2012, did your enterprise send or receive electronically such information in a format that allowed its automatic processing?	Yes <input type="checkbox"/>	No <input type="checkbox"/> → Go to D1															
C2. Did your enterprise send or receive electronically such information for the following purposes?	<table border="1"> <tr> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td>a) Sending payment instructions to financial institutions</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>b) Sending or receiving product information (e.g. catalogues, price lists)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>c) Sending or receiving transport documents (e.g. consignment notes)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>d) Sending or receiving data to/from public authorities (e.g. tax returns, statistical data, import or export declarations)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>			Yes	No	a) Sending payment instructions to financial institutions	<input type="checkbox"/>	<input type="checkbox"/>	b) Sending or receiving product information (e.g. catalogues, price lists)	<input type="checkbox"/>	<input type="checkbox"/>	c) Sending or receiving transport documents (e.g. consignment notes)	<input type="checkbox"/>	<input type="checkbox"/>	d) Sending or receiving data to/from public authorities (e.g. tax returns, statistical data, import or export declarations)	<input type="checkbox"/>	<input type="checkbox"/>
	Yes	No															
a) Sending payment instructions to financial institutions	<input type="checkbox"/>	<input type="checkbox"/>															
b) Sending or receiving product information (e.g. catalogues, price lists)	<input type="checkbox"/>	<input type="checkbox"/>															
c) Sending or receiving transport documents (e.g. consignment notes)	<input type="checkbox"/>	<input type="checkbox"/>															
d) Sending or receiving data to/from public authorities (e.g. tax returns, statistical data, import or export declarations)	<input type="checkbox"/>	<input type="checkbox"/>															

Module D: Sharing electronically information on Supply Chain Management (Scope: enterprises with Computers)		
<p>Sharing electronically information on supply chain management means:</p> <ul style="list-style-type: none"> -exchanging all types of information with suppliers and/or customers in order to coordinate the availability and delivery of products or services to the final consumer -including information on demand forecasts, inventories, production, distribution or product development -via computer networks between computers of different enterprises -it can be from your enterprise to its suppliers/customers or the other way around. <p>This information may be exchanged via websites or other means of electronic data transfer, but it excludes manually typed e-mail messages.</p>		
D1. In January 2012, did your enterprise share information electronically on supply chain management with its suppliers or customers?	Yes <input type="checkbox"/>	No <input type="checkbox"/> → Go to E1
D2. Did your enterprise share the information electronically with its <u>suppliers</u>, in January 2012?		
	Yes	No
On Inventory levels, production plans, demand forecasts or progress of deliveries (i.e. distribution of raw materials or finished products)	<input type="checkbox"/>	<input type="checkbox"/>
D3. Did your enterprise share the information electronically with its <u>customers</u>, in January 2012?		
	Yes	No
On Inventory levels, production plans, demand forecasts or progress of deliveries (i.e. distribution of raw materials or finished products)	<input type="checkbox"/>	<input type="checkbox"/>
D4. Were the following methods used for the electronic exchange of this information, in January 2012?		
	Yes	No
a) Websites (yours, those of your business partners or web portals)	<input type="checkbox"/>	<input type="checkbox"/>
b) Electronic transmission allowing automatic processing methods (e.g. EDI-type systems, XML, EDIFACT, etc)	<input type="checkbox"/>	<input type="checkbox"/>

Module E: Automatic share of information within the enterprise		
(Scope: enterprises with Computers)		
Sharing information electronically and automatically between different functions of the enterprise means any of the following: <ul style="list-style-type: none"> - Using one single software application to support the different functions of the enterprise, e.g. ERP (Enterprise Resource planning) software; - Data linking between the software applications that support the different functions of the enterprise; - Using a common database or data warehouse accessed by the software applications that support the different functions of the enterprise; - Within this enterprise, sending or receiving electronically information that can be processed automatically. 		
E1. In January 2012, when your enterprise <u>received</u> a sales order (either electronically or not), was the relevant information about it shared electronically and automatically with the software used for the following functions?		
	Yes	No
a) Your management of inventory levels	<input type="checkbox"/>	<input type="checkbox"/>
b) Your accounting	<input type="checkbox"/>	<input type="checkbox"/>
c) Your production or services management	<input type="checkbox"/>	<input type="checkbox"/>
d) Your distribution management	<input type="checkbox"/>	<input type="checkbox"/>
E2. In January 2012, when your enterprise <u>sent</u> a purchase order (either electronically or not), was the relevant information about it shared electronically and automatically with the software used for the following functions?		
	Yes	No
a) Your management of inventory levels	<input type="checkbox"/>	<input type="checkbox"/>
b) Your accounting	<input type="checkbox"/>	<input type="checkbox"/>
E3. In January 2012, did your enterprise have in use an ERP⁽²⁶⁾ (enterprise resource planning) software package to share information between different functional areas (e.g. accounting, planning, production, marketing)?		
	Yes	No
	<input type="checkbox"/>	<input type="checkbox"/>
E4. In January 2012, did your enterprise have in use any software application for managing information about clients (so called-Customer Relationship Management – CRM⁽³²⁾ software) that allows it to:		
	Yes	No
a) Capture, store and make available to other business functions the information about its clients	<input type="checkbox"/>	<input type="checkbox"/>
b) Analyse the information about clients for marketing purposes (setting prices, making sales promotion, choosing distribution channels, etc)	<input type="checkbox"/>	<input type="checkbox"/>

Module F: e-Commerce⁽³³⁾

(Scope: enterprises with Computers)

An **e-Commerce transaction** is the sale or purchase of goods or services conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders. The goods or services are ordered by those methods, but the payment and the ultimate delivery of the goods or services do not have to be conducted online.

e-commerce transactions **exclude** orders made by manually typed e-mail messages.

e-Commerce Sales**Web Sales⁽³⁴⁾**

Web sales are sales made via an online (web shop) or via web forms⁽³⁵⁾ on your enterprise's website or extranet⁽³⁶⁾, regardless of how the web is accessed (computer, laptop, mobile phone).

F1. During 2011, did your enterprise receive orders for products or services placed via a website?
(excluding manually typed e-mails)

Yes☐**No**☐

→ Go to F3

F2. Please state for 2011 (answer (a) or (b)):

a) The value of the turnover resulting from orders received that were placed via your website (in monetary terms, excluding VAT).

If you can't provide this value

b) An estimate of the percentage of the total turnover resulting from orders received that were placed via a website?

€
|_|_|_|_|_|_|_|_|_|_|

|_|_|_|_| %

EDI-type sales⁽³⁷⁾

EDI-type sales are sales made via EDI-type messages. EDI (electronic data interchange) is used here as a generic term for sending or receiving business information in an agreed format which allows its automatic processing (e.g. EDIFACT, UBL⁽³⁸⁾, XML).

F3. During 2011, did your enterprise receive orders for products or services placed via EDI-type messages?

Yes☐**No**☐

→ Go to F5

F4. Please state for 2011 (answer (a) or (b)):

a) The value of the turnover resulting from orders received that were placed via EDI-type messages. (in monetary terms, excluding VAT)

If you can't provide this value,

b) An estimate of the percentage of the total turnover resulting from orders received that were placed via EDI-type messages.

€
|_|_|_|_|_|_|_|_|_|_|

|_|_|_|_| %

E-Commerce Purchases												
<p>E-Commerce Purchases are purchases made via any of the following ways:</p> <ul style="list-style-type: none"> - via an online store (web shop) or via web forms on a website or an extranet of another enterprise, or - via EDI-type messages (EDI: Electronic Data Interchange) which means messages in an agreed or standard format allowing their automatic processing (e.g. EDIFACT, UBL, XML etc.) without the individual messages being typed manually 												
F5. During 2011, did your enterprise send orders for products or services via a website or EDI-type messages? (Excluding manually typed e-mails)	Yes <input type="checkbox"/>	No <input type="checkbox"/> → Go to X1										
F6. During 2011, did your enterprise place orders for products or services via a <u>website</u> ?	Yes <input type="checkbox"/>	No <input type="checkbox"/>										
F7. During 2011, did your entrprise place orders for products or services via <u>EDI-type messages</u> ?	Yes <input type="checkbox"/>	No <input type="checkbox"/>										
F8. Please state for 2011 (answer a, or b, or c)												
a) The percentage purchases resulted from orders that were sent electronically in relation to the total purchases' value. (in monetary terms, excluding VAT)	<div>Less than 1% <input type="checkbox"/></div> <div>1% or more and less than 5% <input type="checkbox"/></div> <div>5% or more and less than 10% <input type="checkbox"/></div> <div>10% or more and less than 25% <input type="checkbox"/></div> <div>25% or more and less than 50% <input type="checkbox"/></div> <div>50% or more and less than 75% <input type="checkbox"/></div> <div>75% or more <input type="checkbox"/></div>											
or												
b) The value of the purchases resulted from orders placed electronically. (in monetary terms, excluding VAT) If you can't provide this value	€ <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>											
c) An estimate of the percentage of the total purchases that resulted from orders placed electronically.	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td></td><td></td><td></td><td></td> </tr> </table> %											

Module X: Background information	
X1. Main economic activity of the enterprise, during 2011 (description)	<div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div>
X2. Average number of persons employed, during 2011	<div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>
X3. Total purchases of goods and services (in value terms, excluding VAT), for 2011	€ <div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>
X4. Total turnover (in value terms, excluding VAT), for 2011	€ <div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>

Module G: General Information	
G1. If you have any comments about the survey, please write down below:	
<div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div>	
G2.	Name of the person who answered the questionnaire:
	Position in the enterprise:
	Telephone:
	Fax:
	E-mail:
G3.	Name of the person who completed the questionnaire:
	Time needed to fill out this questionnaire:
	Signature:
	Date:

TO BE COMPLETED BY THE ENUMERATOR:

G4.	Completion of the questionnaire::	
	a) The questionnaire is completed.....	<div>1</div>
	b) The enterprise has closed.....	<div>2</div>
	c) The enterprise can not be located.....	<div>3</div>
	d) The enterprise refuses to cooperate.....	<div>4</div>
	e) The enterprise was closed during the collection of the data.....	<div>5</div>
	f) Merge with another enterprise.....	<div>6</div>
	g) Other reasons for no completion	<div>7</div>
	Please specify:	

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G5.	Name of the person who checked the questionnaire:
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GLOSSARY

- (1) **Internal computer network** An internal computer network is a group of at least two computers connected together using a telecommunication system for the purpose of communicating and sharing resources within an enterprise. It typically connects personal computers, workstations, printers, servers, and other devices. It is used usually for internal file exchange between connected users; intra business communications (internal e-mail, internal web based interface etc), shared access to devices (printers etc) and other applications (databases) or for joint business processes.
- 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) **Nettop** A nettop is a small size, low-wattage computer designed for basic tasks such as surfing the Internet, accessing web-based applications, document processing, audio/video playback etc. The hardware specifications and processing power are usually reduced and hence make nettops less appropriate for running complex or resource intensive applications
- Source: <http://en.wikipedia.org/wiki/Nettop>
- (3) **PDA** A Personal Digital Assistant (PDA) is a handheld device that combines computing, telephone/fax, Internet and networking features. A typical PDA can function as a cellular phone, fax sender, Web browser and personal organizer.
- Source: <http://www.webopedia.com/TERM/P/PDA.html>
- (4) **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.
- (5) **Wireless access** The use of wireless technologies such as radio-frequency, infrared, microwave, or other types of electromagnetic or acoustic waves, for the last internal link between users devices (such as computers, printers, etc) and a LAN backbone line(s) within the enterprise's working premises. It includes mainly Wi-fi and Bluetooth technologies
- (6) **Internet** The Internet is a global system of interconnected computer networks that use the standard Internet Protocol Suite (TCP/IP) to serve billions of users worldwide. It is a network of networks that consists of millions of private, public, academic, business, and government networks of local to global scope that are linked by a broad array of electronic and optical networking technologies. The Internet carries a vast array of information resources and services, most notably the inter-linked hypertext documents of the World Wide Web (WWW) and the infrastructure to support electronic mail.
- Source: <http://en.wikipedia.org/wiki/Internet>
- Relates to Internet Protocol based networks: www, Extranet over the Internet, EDI over the Internet, Internet-enabled mobile phones.
- (7) **DSL** Digital Subscriber Line (DSL) is a family of technologies that provides digital data transmission over the wires of a local telephone network. DSL is widely understood to mean Asymmetric Digital Subscriber Line (ADSL), the most commonly installed technical varieties of DSL. DSL service is delivered simultaneously with regular telephone on the same telephone line as it uses a higher frequency band that is separated by filtering.
- Source: <http://en.wikipedia.org/wiki/DSL>

- ⁽⁸⁾ **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.
- ⁽⁹⁾ **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. (MODEM: MODulator DEModulator)
- ⁽¹⁰⁾ **ISDN** Integrated Services Digital Network.
- ⁽¹¹⁾ **Mobile broadband** Mobile broadband (Mobile Internet) is the name used to describe various types of wireless high-speed Internet access through a portable modem, telephone or other device. (viz. 3G)
http://en.wikipedia.org/wiki/Mobile_broadband
- ⁽¹²⁾ **3G, 3rd Generation** 3G or 3rd Generation, is a family of standards for mobile telecommunications (W-CDMA, CDMA2000, etc) defined by the International Telecommunication Union (ITU). 3G standards' aim is to unify the world's mobile computing devices through a single, worldwide radio transmission standard. 3G devices allow simultaneous use of speech and data services and higher data rates. Cellular mobile services were initially offered using analogue radio technologies and these were considered as the first generation systems (1G). 2G technology replaced analogue radio networks with digital ones (2G networks) in the 1990's.
http://www.three-g.net/3g_standards.html
- ⁽¹³⁾ **UMTS** Universal Mobile Telecommunications System (UMTS) is one of the third-generation (3G) mobile telecommunications technologies being developed within the ITU's (International Telecommunication Union) IMT-2000 framework (International Mobile Telecommunications-2000). It is a realisation of a new generation of broadband multimedia mobile telecommunications technology.
- ⁽¹⁴⁾ **CDMA2000** Code Division Multiple Access is a channel access method utilized by various radio communication technologies. CDMA2000 refers to the mobile phone standards which use CDMA as an underlying channel access method and is an ITU approved 3G standard (3G, UMTS).
One of the basic concepts in data communication is the idea of allowing several transmitters to send information simultaneously over a single communication channel. This allows several users to share a bandwidth of different frequencies. This concept is called multiplexing. CDMA employs spread-spectrum technology and a special coding scheme (where each transmitter is assigned a code) to allow multiple users to be multiplexed over the same physical channel. By contrast, time division multiple access (TDMA) divides access by time, while frequency-division multiple access (FDMA) divides it by frequency. CDMA is a form of "spread-spectrum" signalling, since the modulated coded signal has a much higher data bandwidth than the data being communicated.
[Source: http://en.wikipedia.org/wiki/CDMA](http://en.wikipedia.org/wiki/CDMA)

- (15) **EVDO (1xEVDO)** Evolution-Data Optimized or Evolution-Data only, abbreviated as EV-DO or EVDO and often EV, is a telecommunications standard for the wireless transmission of data through radio signals, typically for broadband Internet access. It uses multiplexing techniques including code division multiple access (CDMA) as well as time division multiple access (TDMA) to maximize both individual user's throughput and the overall system throughput. It is standardized by 3rd Generation Partnership Project 2 (3GPP2) as part of the CDMA2000 family of standards and has been adopted by many mobile phone service providers around the world – particularly those previously employing CDMA networks.
<http://en.wikipedia.org/wiki/1xEVDO>
- (16) **HSDPA** High-Speed Downlink Packet Access is an enhanced 3G (third generation) mobile telephony communications protocol in the High-Speed Packet Access (HSPA) family, also coined 3.5G, 3G+ or turbo 3G, which allows networks based on Universal Mobile Telecommunications System (UMTS) to have higher data transfer speeds and capacity.

[Source: http://en.wikipedia.org/wiki/HSDPA](http://en.wikipedia.org/wiki/HSDPA)
- (17) **GSM** Global System for Mobile Communications. GSM is a digital cellular technology used for transmitting mobile voice and data services. It is the most popular standard for mobile telephone systems in the world. GSM differs from its predecessor technologies in that both signaling and speech channels are digital, and thus GSM is considered a second generation (2G) mobile phone system.
[Source: http://en.wikipedia.org/wiki/GSM](http://en.wikipedia.org/wiki/GSM)
- (18) **GPRS** General Packet Radio Service is a very widely deployed wireless data service, available with most GSM networks. GPRS offers throughput rates of up to 40 kbit/s, so that users have a similar access speed to a dial-up modem, but with the convenience of being able to connect from almost anywhere.
[Source: http://www.gsmworld.com/technology/gprs.htm](http://www.gsmworld.com/technology/gprs.htm)
- (19) **EDGE** Enhanced Data rates for GSM technology represent further enhancements to GSM networks providing up to three times the data capacity of GPRS. EDGE networks rely on Time Division Multiple Access transmission (TDMA) and General Packet Radio Service (GPRS).
[Source: http://gsmworld.com/technology/edge.htm](http://gsmworld.com/technology/edge.htm)
- (20) **Data** Representation of facts, concepts, or instructions in a formalized manner suitable for communication, interpretation, or processing by humans or by automatic means. Any representations such as characters or analogue quantities to which meaning is or might be assigned.
[Source: http://www.its.bldrdoc.gov/projects/devglossary/_data.html](http://www.its.bldrdoc.gov/projects/devglossary/_data.html)
- (21) **Website** 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.
- (22) **Information** 1) Facts, data, or instructions in any medium or form.
2) The meaning that a human assigns to data by means of the known conventions used
[\[Source: http://www.its.bldrdoc.gov/projects/devglossary/_information.html\]](http://www.its.bldrdoc.gov/projects/devglossary/_information.html)
- (23) **Public Electronic Procurement eProcurement** Public electronic Procurement refers to the use of the Internet by enterprises to offer goods or services to public authorities at national level or in other EU countries. The eProcurement process is based on a number of stages from the notification process (online availability of procurement notices and tender specifications) through tendering, awarding, to payment.

- (24) **eTendering** eTendering is the stage of an eProcurement process dealing with the preparation and submission of tenders or proposals online; this includes bids submitted through open, restricted, or negotiated procedures, as well as Framework Agreements and Dynamic Purchasing Systems (DPS).
- (25) **DPS** Dynamic Purchasing System. A completely electronic procedure which may be established by a contracting authority to purchase commonly used goods, works or services. It is limited in duration and open throughout its validity.
[Source: http://www.ogc.gov.uk/documents/Guide_dynamic_purchasing.pdf](http://www.ogc.gov.uk/documents/Guide_dynamic_purchasing.pdf)
- (26) **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.
- (27) **Message** Any thought or idea expressed briefly in a plain or secret language, prepared in a form suitable for transmission by any means of communication.
[Source: http://www.its.bldrdoc.gov/projects/devglossary/message.html](http://www.its.bldrdoc.gov/projects/devglossary/message.html)
- (28) **EDI** Electronic Data Interchange (EDI) refers to the structured transmission of data or documents between organizations or enterprises by electronic means. It also refers specifically to a family of standards (EDI-type) and EDI-type messages which can be automatically processed.
[Source: http://en.wikipedia.org/wiki/Electronic_Data_Interchange](http://en.wikipedia.org/wiki/Electronic_Data_Interchange)
- (29) **Odette (standards, organisation)** Odette International is an organisation, formed by the automotive industry for the automotive industry. It sets the standards for e-business communications, engineering data exchange and logistics management, which link the 4000 plus businesses in the European motor industry and their global trading partners.
[Source: http://www.odette.org/html/home.htm](http://www.odette.org/html/home.htm)
- (30) **XML** The Extensible Markup Language is a markup language for documents containing structured information. Structured information contains both content (words, pictures, etc.) and some indication of what role that content plays (for example, content in a section heading has a different meaning from content in a footnote, which means something different than content in a figure caption or content in a database table, etc.). Almost all documents have some structure. A markup language is a mechanism to identify structures in a document. The XML specification defines a standard way to add markup to documents.
[Source: http://www.xml.com/](http://www.xml.com/)

- (31) **xCBL** XML Common Business Library (xCBL) is the pre-eminent XML component library for business-to-business e-commerce.
Source: <http://www.xcbl.org/>
- (32) **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.
- (33) **Electronic commerce (e-commerce)** An e-commerce transaction is the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders. The goods or services are ordered by those methods, but the payment and the ultimate delivery of the goods or services do not have to be conducted online. An e-commerce transaction can be between enterprises, households, individuals, governments, and other public or private organisations. E-commerce comprises orders made in Web pages, extranet or EDI and excludes orders made by telephone calls, facsimile, or manually typed e-mail. The type is defined by the method of making the order
Source: OECD, DSTI/ICCP/IIS(2009)5/FINAL
- (34) **Sales via website (web sales)** A part of the e-commerce activities, sales via website (web application) are orders made in an online store or filled in and sent by an electronic form on the www or extranet. Web sales are distinguished from EDI sales. In particular, the type of e-commerce transaction is defined by the method of making the order. This approach should mitigate the interpretation problems where both types, EDI and Web, are used in the process. An example is a situation where an order is made by the customer through a web application but the information is transmitted to the seller as an EDI-message. Here the type of selling application is however web, EDI is only a business application to transmit information about the sale. Web-sales can be done by mobile phones using an Internet-browser.
Source: OECD, DSTI/ICCP/IIS(2009)5/FINAL
- (35) **Webform** A webform on a web page allows a user to enter data that is sent to a server for processing. Webforms resemble paper forms because Internet users fill out the forms using checkboxes, radio buttons, or text fields. For example, webforms can be used to enter shipping or credit card data to order a product or can be used to retrieve data.
Source: <http://en.wikipedia.org/wiki/>
- (36) **Extranet** A closed network that uses Internet protocols to securely share enterprise's information with suppliers, vendors, customers or other businesses partners. It can take the form of a secure extension of an Intranet that allows external users to access some parts of the enterprise's Intranet. It can also be a private part of the enterprise's website, where business partners can navigate after being authenticated in a login page.
- (*) **Intranet** An internal company communications network using Internet protocol allowing communications within an organisation.

⁽³⁷⁾ **EDI e-commerce**

Orders initiated with EDI. EDI (electronic data interchange) is an e-business tool for exchanging different kinds of business messages. EDI is here used as a generic term for sending or receiving business information in an agreed format which allows its automatic processing (e.g. EDIFACT, XML, etc.) and without the individual message being manually typed. “EDI e-commerce” is limited to EDI messages placing an order.

Source: OECD, DSTI/ICCP/IIS(2009)5/FINAL

⁽³⁸⁾ **UBL**

Universal Business Language (UBL) is a library of standard electronic XML business documents such as purchase orders and invoices. UBL was developed by an OASIS Technical Committee with participation from a variety of industry data standards organizations. UBL is designed to plug directly into existing business, legal, auditing, and records management practices. It is designed to eliminate the re-keying of data in existing fax- and paper-based business correspondence and provide an entry point into electronic commerce for small and medium-sized businesses.

Source: http://en.wikipedia.org/wiki/Universal_Business_Language