

File No.: 5.27.006.024.001

**CONFIDENTIAL** 

#### STATISTICAL SERVICE 1444 NICOSIA

#### SURVEY ON ICT USAGE AND E-COMMERCE IN ENTERPRISES 2017

FOR OFFIC	AL USE ONLY	
S/N		
Legal Status		
Enterprise Size		
NACE		

#### **GENERAL INFORMATION:**

- 1. The aim of the survey is to collect data about the use of information and communication technologies by the enterprises, the use of computers, the employment of ICT specialists, the access and use of the Internet and Social Media, the use of cloud computing services, the sharing of Information electronically within the enterprise, the sharing of Supply Chain Management electronically, invoicing, use of RFID technologies and e-commerce. 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 an appointment in order to fill in 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 the survey period (2017), 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 **CONFIDENTIAL.** Your responses will be used solely for statistical purposes.

G. Chr. Georgiou Director Statistical Service

MODULE A: Use of Computers		
Does your enterprise use computers?  Computers include Personal Computers, portable computers (e.g. laptops, notebooks, netbooks), tablets, other portable devices like Smartphones.	Yes	<b>No</b>
Please answer (a) or (b):  a) How many persons employed use computers for business purposes?  or  b) Indicate an estimate of the percentage of the total number of		
persons employed who use computers for business purposes.		%
MODULE B: ICT specialists and skills		
(Scope: enterprises with computers)		
Does your enterprise employ ICT specialists?  ICT specialists are employees for whom ICT is the main job. For example, to develop, operate or maintain ICT systems or applications.	Yes	No
Did your enterprise provide any type of training to develop ICT		
related skins of the persons employed, during 2016?	Yes	No
a) Training for ICT specialists  Tick No if your enterprise didn't employ ICT specialists during 2016		
b) Training for other persons employed		
Did your enterprise recruit or try to recruit ICT specialists, during	Yes	No
2010:		
		$\rightarrow$ Go to B5
During 2016, did your enterprise have vacancies for ICT specialists that were difficult to fill?	Yes	No
	Does your enterprise use computers?  Computers include Personal Computers, portable computers (e.g. laptops, notebooks, netbooks), tablets, other portable devices like Smartphones.  Please answer (a) or (b):  a) How many persons employed use computers for business purposes?  or  b) Indicate an estimate of the percentage of the total number of persons employed who use computers for business purposes.  MODULE B: ICT specialists and skills  (Scope: enterprises with computers)  Does your enterprise employ ICT specialists?  ICT specialists are employees for whom ICT is the main job. For example, to develop, operate or maintain ICT systems or applications.  Did your enterprise provide any type of training to develop ICT related skills of the persons employed, during 2016?  a) Training for ICT specialists  Tick No if your enterprise didn't employ ICT specialists during 2016  b) Training for other persons employed  Did your enterprise recruit or try to recruit ICT specialists, during 2016?	Does your enterprise use computers?  Computers include Personal Computers, portable computers (e.g. laptops, notebooks, netbooks), tablets, other portable devices like Smartphones.  Please answer (a) or (b):  a) How many persons employed use computers for business purposes?  or  b) Indicate an estimate of the percentage of the total number of persons employed who use computers for business purposes.  MODULE B: ICT specialists and skills (Scope: enterprises with computers)  Does your enterprise employ ICT specialists? ICT specialists are employees for whom ICT is the main job. For example, to develop, operate or maintain ICT systems or applications.  Did your enterprise provide any type of training to develop ICT related skills of the persons employed, during 2016?  Yes  a) Training for ICT specialists Tick No if your enterprise didn't employ ICT specialists during 2016  b) Training for other persons employed  Did your enterprise recruit or try to recruit ICT specialists, during 2016?  During 2016, did your enterprise have vacancies for ICT specialists  Yes

В5.	of your enterprise in 2016:	employees incl. those employed in parent or affiliate enterprises	Mainly external supplier	Not applicable
	a) Maintenance of ICT infrastructure (servers, computers, printers, networks)			
	b) Support for office software (e.g. word processors, spreadsheets, etc.)			
	c) Development of business management software/systems (e.g. ERP <sup>(13)</sup> - Enterprise Resource planning used to manage resources by sharing information among different functional areas such as accounting, planning, production, marketing; CRM <sup>(5)</sup> software application for managing information about customers; Human Resources information management, databases)			
	d) Support for business management software/systems (e.g. ERP, CRM, HR, databases)			
	e) Development of web solutions (e.g. websites, e-commerce solutions)			
	f) Support for web solutions (e.g. websites, e-commerce solutions)			
	g) Security and data <sup>(6)</sup> protection (e.g. security testing, security software)			
C1.	(Scope: enterprises with computers)  Does your enterprise have access to the Internet (16)?		Yes	<b>No</b>
C2.	Please answer (a) or (b):  a) How many persons employed use computers with access to the business purposes?	Internet for		
	or b) Indicate an estimate of the percentage of the total number of person who use computers with access to the Internet for business purposes			%
	Computers include Personal Computers, portable computers (notebooks, netbooks), tablets, other portable devices like Smartphones.	e.g. laptops,		
	Use of a fixed broadband connection to the Internet for business	purposes		ı
С3.	Does your enterprise use DSL <sup>(7)</sup> or any other type of fixed broadband of the Internet? (e.g. ADSL, SDSL, VDSL, fiber optics technology (Itechnology (CableNet), satellite (Nova) etc.)		Yes	<b>No</b> ☐  → Go to C6
C4.	What is the maximum contracted download speed of the fastest fixed Ir	iternet connecti	ion of your ente	rprise?
	a) Less than 2 Mbit/s			
	b) At least 2 Mbit/s but less than 10 Mbit/s			
	c) At least 10 Mbit/s but less than 30 Mbit/s		<u>L</u>	<u></u>
	d) At least 30 Mbit/s but less than 100 Mbit/s		<u>L</u> 	<u></u>
	e) At least 100 Mbit/s			<u> </u>
C5.	Is the speed of your fixed connection(s) to the internet usually suffi actual needs of the enterprise?	cient for the	Yes	No

	Use of a mobile connection to the Internet for business purposes		
	A mobile connection to the Internet means the usage of portable devices connectelephone networks for business purposes. Enterprises provide portable device limit, the subscription and the use costs.	~	
<b>C6.</b>	Does your enterprise use a mobile broadband connection to the	Yes	No
	Internet via a portable device using mobile telephone networks (at least $3G^{(1)}$ )?		
	e.g. via portable computers or other portable devices such as Smartphones		
С7.	a) How many persons employed use a <u>portable device</u> provided by the enterprise, that allows Internet connection via mobile telephone networks, for business purposes?  (e.g. portable computers, tablets or other portable devices like Smartphones)		
	b) Indicate an estimate of the percentage of the total number of persons employed who use a <u>portable device</u> provided by the enterprise, that allows Internet connection via mobile telephone networks, for business purposes.		%
	Use of a Website		
C8.	Does your enterprise have a Website <sup>(27)</sup> ?	Yes	<b>No</b> ☐  → Go to C10
C8.		Yes	
	Does your enterprise have a Website <sup>(27)</sup> ? <u>If yes, give the address of your website:</u>	Yes	
C8.	Does your enterprise have a Website <sup>(27)</sup> ?	Yes	
	Does your enterprise have a Website <sup>(27)</sup> ? <u>If yes, give the address of your website:</u>		→ Go to C10
	Does your enterprise have a Website <sup>(27)</sup> ?  If yes, give the address of your website:  Does the Website of your enterprise have any of the following?		→ Go to C10
	Does your enterprise have a Website <sup>(27)</sup> ?  If yes, give the address of your website:  Does the Website of your enterprise have any of the following?  a) Description of goods or services, price lists		→ Go to C10
	Does your enterprise have a Website (27)?  If yes, give the address of your website:  Does the Website of your enterprise have any of the following?  a) Description of goods or services, price lists  b) Online ordering or reservation or booking (e.g. shopping cart)		→ Go to C10
	Does your enterprise have a Website (27)?  If yes, give the address of your website:  Does the Website of your enterprise have any of the following?  a) Description of goods or services, price lists  b) Online ordering or reservation or booking (e.g. shopping cart)  c) Possibility for visitors to customise or design online goods or services		→ Go to C10

	Use of Social Media <sup>(23)</sup>				
	Enterprises <u>using</u> social media are considered those that have a user profile, an account or a user license depending on the requirements and the type of the social media.				
C10.	C10. Does your enterprise use any of the following social media? (not solely used for paid adverts)			No	
	n) Social net (e.g. Facel	works book, Linkedin, Xing, Viadeo, Yammer, etc.)			
	-	's blog or microblogs er, Present.ly, etc.)			
	*	a content sharing websites ube, Flickr, Picasa, SlideShare, etc.)			
	l) Wiki base	d knowledge sharing tools			
C11.	C11. Does your enterprise use any of the above mentioned social media to:			No	
	(For enterprises using at least one of C10 (a) - (d))				
	_	he enterprise's image or market products (e.g. advertising or products, etc.)			
	o) Obtain or	respond to <u>customer</u> opinions, reviews, questions			
	c) Involve <u>cu</u>	stomers in development or innovation of goods or services			
		e with <u>business</u> <u>partners</u> (e.g. suppliers, etc.) or <u>other</u> ons (e.g. public authorities, non governmental organisations,			
	e) Recruit en	nployees			
	Exchange	views, opinions or knowledge within the enterprise			

	MODULE D: Use of cloud computing services		
	(Scope: enterprises with access to the Internet)		
	<b>Cloud computing</b> refers to <b>ICT services</b> that are used <b>over the Internet</b> to access software, computing power, storage capacity etc.; where the services have all of the following <b>characteristics:</b>		
	<ul> <li>- are delivered from servers of service providers</li> <li>- can be easily scaled up or down (e.g. number of users or change of storage capacit</li> <li>- can be used on-demand by the user, at least after the initial set up (without human provider)</li> </ul>	•	he service
	- are <b>paid</b> for, either per user, by capacity used, or they are pre-paid		
	Cloud computing may include connections via Virtual Private Networks (VPN)		
D1.	Does your enterprise buy any cloud computing services used over the Internet?  (Please refer to the definition of cloud computing above, exclude free of charge services)	Yes	<b>No</b>
D2.	Does your enterprise buy any of the following cloud computing services used over the Internet?		
	(Please refer to the definition of cloud computing above, $\underline{\text{exclude}}$ $\underline{\text{free}}$ $\underline{\text{of}}$ $\underline{\text{charge}}$ $\underline{\text{services}}$ )	Yes	No
	a) E-mail (e.g. Email Enterprise, Microsoft Exchange Online / Office 365, etc.) (as a cloud computing service)		
	b) Office software <sup>(20)</sup> (e.g. word processors, spreadsheets (e.g. Microsoft Office Cloud), etc.)) (as a cloud computing service)		
	c) Hosting the enterprise's database(s) (e.g. Enterprise DB, LongJump, Elustra, etc.) (as a cloud computing service)		
	d) Storage of files (e.g. Dropbox, Amazon S3, EMC Mozy, Acronis Online, Diino, etc.) (as a cloud computing service)		
	e) Finance or accounting software applications (e.g. StepStone, Hubwoo, SAP Business ByDesign, etc.) (as a cloud computing service)		
	f) Customer Relationship Management (CRM <sup>(5)</sup> , software application for managing information about customers (e.g. Salesforce.com, Oracle CRM on Demand, etc.)) (as a cloud computing service)		
	g) Computing power to run the enterprise's own software (e.g. Amazon EC2, Flexiscale, Joyent, etc.) (as a cloud computing service)		
D3.	Does your enterprise buy any cloud computing services delivered from:		
	(Please refer to the definition of cloud computing above, <u>exclude free of charge services</u> )	Yes	No
	a) Shared servers of service providers		
	b) Servers of service providers exclusively reserved for your enterprise		

	MODULE E: Sharing of information electronically within the enterprise (Scope: enterprises with Computers)			
	An ERP <sup>(13)</sup> (Enterprise Resource Planning) is a software package used to manage resources by sharing information <sup>(15)</sup> among different functional areas (e.g. accounting, planning, production, marketing, etc.)			
E1.	Does your enterprise use an ERP software package?	Yes	No	
	$\text{CRM}^{(5)}$ (Customer Relationship Management) refers to any software information about customers	re application	for managing	
E2.	Does your enterprise use CRM software to manage:	Yes	No	
	a) The collection, storing and making available information about customers to various business functions			
	b) The analysis of information about customers for marketing purposes (e.g. setting prices, sales promotion, choosing distribution channels, etc.)			
	MODULE F: Sharing Supply Chain Management Information electronically			
	(Scope: enterprises with Computers)  Sharing information electronically on Supply Chain Management of information with suppliers and/or customers about the availability, production goods or services.  This information may be exchanged via websites, networks or other means excludes manually typed e-mail messages <sup>(12)</sup> .	, development and	d distribution of	
F1.	Does your enterprise share supply chain management information electronically with other enterprises either, suppliers or customers?  (e.g. information on inventory levels, production plans, planning or progress in the provision of services, demand forecasts or progress of deliveries, etc.)	Yes	<b>No</b>	
F2.	How does your enterprise share supply chain management information electronically with other enterprises?	Yes	No	
	a) Via websites (yours, those of your business partners) or web portals			
	b) Via electronic transmission suitable for automated processing (e.g. EDI-type <sup>(8)</sup> systems, XML <sup>(30)</sup> , EDIFACT, etc.)			

	MODULE G: Invoicing			
	(Scope: enterprises with Computers)			
	There are invoices in <b>paper form</b> and <b>electronic form</b> . Invoices in <b>electronic form</b> are of two types:			
	- eInvoices <sup>(10)</sup> in a standard structure suitable for automated processing.			
	(e.g. EDI <sup>(8)</sup> , UBL <sup>(24)</sup> , XML <sup>(30)</sup> ). They are exchanged either directly or via services	vice operators or	via an electronic	
	banking system.			
	- Invoices in electronic form not suitable for automated processing.			
	(e.g. e-mails, e-mail attachment as pdf, images in TIF, JPEG or other format)			
G1.	During 2016, did your enterprise issue/send any type of invoices, whether in electronic or in paper form, to:	Yes	No	
	a) other enterprises			
	b) public authorities			
	c) private consumers			
	If G1 has a) or b) answered with "Yes" then continue, else go to G3			
G2.	Of all invoices the enterprise issued / <u>sent</u> to other enterprises or public percentage <u>was isued / sent</u> as:	c authorities du	ring 2016, what	
	a) Invoices in electronic form, in a standard structure suitable for automated processing (eInvoices) (EDI (e.g. EDIFACT), XML (e.g. UBL).		%	
	b) Invoices in electronic form not suitable for automated processing (e.g. emails, e-mail attachment as pdf, images in TIF, JPEG or other format)		%	
	c) Invoices only in paper form		%	
	TOTAL	1 0	0 %	
G3.	Of all invoices the enterprise <u>received</u> during 2016, what percentage <u>was</u>	received as:		
	a) Invoices in electronic form, in a standard structure suitable for automated processing (eInvoices)     (EDI (e.g. EDIFACT), XML (e.g. UBL)		%	
	<ul> <li>Invoices in paper form or in electronic form not suitable for automated processing (e.g. emails, e-mail attachment as pdf, images in TIF, JPEG or other format)</li> </ul>		%	
	TOTAL	1 0	0 %	

	MODULE H: Use of Radio Frequency Identification (RFID) technologies					
	(Sc	ope: enterprises with Computers)				
The use of Radio Frequency identification technologies (RFID)						
	- refers to an automated identification method to store and remotely retrieve data using RFID tags or transponders,					
	- includes the use of Near Field Communication (NFC) connectivity standard					
	An RFID tag is a device that can be applied to or incorporated into a product or an object and transmits data via radiowaves.					
	NF	C enables communication between devices within short distance (approx.)	10 cm or less).			
H1.	Doo	Yes	No			
	a)	Person identification or access control				
	b)	As part of the production and service delivery process (e.g. monitoring and control of industrial production, supply chain and inventory tracking service, maintenance or asset management, etc.)				
	c)	For product identification after the production process theft control, counterfeiting, allergen information, etc.)				

#### **Module I: e-Commerce**

(Scope: enterprises with Computers)

**e-Commerce**<sup>(11)</sup> 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 payment and the 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			
	In the	following questions please report separately for web sales and E	DI-type sales	
		sales (22) ales are sales made via an online store (web shop) or via web forms (26) or ps" (2).	on a website <sup>(27)</sup> o	or extranet <sup>(14)</sup> or
I1.	placed	g 2016, did your enterprise <u>receive</u> orders for goods or services I via a website or "apps"? ding manually typed e-mails)	Yes	<b>No</b>
<b>I2.</b>	Please	state for 2016 (answer (a) or (b)):	€	
	w	The value of the turnover resulting from orders <u>received</u> that vere placed via a website or "apps" (in monetary terms, excluding VAT)		
	If	you can't provide this value,		
	re	ndicate an estimate of the percentage of the total turnover esulting from orders <u>received</u> that were placed via a website or apps"		%
13.	receive	eprovide a percentage breakdown of the turnover from orders ed that were placed via a website or "apps" in 2016 by type of ner (estimates in percentage of the monetary values, excluding VAT)		
	a) <b>B</b>	2C (Sales to private consumers)		%
	b) <b>B</b>	2B (Sales to other enterprises) and B2G (Sales to public authorities)		%
	c) T	OTAL	1 0	0 %
I4.		g 2016, via which websites or "apps" did your enterprise receive s for goods and services:	Yes	No
		ia your enterprise's website or "apps"? ncluding those of parent or affiliate enterprises, extranets)		
	eı	ia an e-commerce marketplace website or "apps" used by several nterprises for trading products? (e.g. Booking, eBay, Amazon, amazon Business, Alibaba, Rakuten, etc.)		

	The following question ( I5 ) should only be answered if both I4 a go to I6	and I4 b) = "Y	es'' otherwise
15.	What was the percentage breakdown of the turnover from orders received via website or "apps" in 2016 from the following: (estimates in percentage of the monetary values, excluding VAT)  If you cannot provide the exact percentages an approximation will suffice.		
	<ul> <li>a) via your enterprise's website or "apps"?</li> <li>(including those of parent or affiliate enterprises, extranets)</li> </ul>		%
	b) via an e-commerce marketplace website or "apps" used by several enterprises for trading products? (e.g. Booking, eBay, Amazon,		%
	c) TOTAL	1 0	0 %
<b>I6.</b>	During 2016, did your enterprise receive orders placed via a website or "apps" by customers located in the following geographic areas?	Yes	No
	a) In Cyprus		
	b) Other EU countries		
	c) Rest of the world		
	The following question ( I7 ) should only be answered if at leas responses in question I6, a) , b) or c) are answered		ve possible
I7.	What was the percentage breakdown of the turnover from orders received that were placed via a website or "apps" in 2016 by customers located in the following geographic areas?		
	a) In Cyprus		%
	b) Other EU countries		%
	c) Rest of the world		%
	d) TOTAL	1 0	0 %
	The following question (I8) should only be answered if I6 b) =	"Yes" otherwi	se go to I9
<b>I8.</b>	During 2016, did your enterprise experience any of the following difficulties when selling to other EU countries via a website or "apps"?	Yes	No
	a) High costs of delivering or returning products when selling to other EU countries		
	<ul> <li>Difficulties related to resolving complaints and disputes when selling to other EU countries</li> </ul>		
	c) Adapting product labelling for sales to other EU countries		
	d) Lack of knowledge of foreign languages for communicating with customers in other EU countries		
	e) Restrictions from your business partners to sell to certain EU countries		

	EDI-type sales		
	<b>EDI-type sales</b> <sup>(8)</sup> are sales made via EDI-type messages (EDI: Electronic Dat - in an agreed or standard format suitable for automated processing (e.g. EDII - without the individual messages being typed manually		-
19.	During 2016, did your enterprise <u>receive</u> orders for goods or services placed via EDI-type messages?	Yes	<b>No</b>
I10.	Please state for 2016 (answer (a) or (b)):	€	
	a) The value of the turnover resulting from orders <u>received</u> that were placed via EDI-type messages (in monetary terms, excluding VAT)		
	If you can't provide this value,  b) Indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via EDI-type messages		%
I11.	During 2016, did your enterprise receive orders placed via a website or "apps" by customers located in the following geographic areas?	Yes	No
	a) In Cyprus		
	b) Other EU countries		
	c) Rest of the world		

	e-Commerce (11) purchases			
	e-Commerce purchases are purchases made via any of the following ways:			
	- via an online store (web shop) or via web forms on a website or an extranet of	of another enterpri	ise, via "apps",	
	or - via EDI-type messages (EDI: Electronic Data Interchange) which means me format suitable for automated processing (e.g. EDIFACT, UBL, XML etc.) being typed manually.	•		
	- Purchases of goods or services include the value of all goods and services purchased during the accounting period for resale or consumption in the production process, <u>excluding</u> capital goods the consumption of which is registered as consumption of fixed capital.			
I12.	During 2016, did your enterprise <u>place</u> orders for goods or services via a website, "apps" or EDI-type messages? (excluding manually typed e-mails)	Yes	<b>No</b>	
I13.	During 2016, did your enterprise <u>place</u> orders for goods or services via a <u>website or "apps"</u> ?	Yes	No	
I14.	During 2016, did your enterprise <u>place</u> orders for goods or services via <u>EDI-type messages</u> ?	Yes	No	
I15.	During 2016, was the value of the orders that your enterprise placed electronically <u>equal or more than 1%</u> of the total purchases' value? (in monetary terms, excluding VAT)	Yes	<b>No</b>	
I16.	In 2016, did your enterprise place orders via a website or "apps" or EDI-type massages to suppliers located in the following geographic areas?	Yes	No	
	a) In Cyprus			
	b) Other EU countries			
	c) Rest of the world			

	MODULE X: Background information			
X1.	Main economic activity of the enterprise, during 2016 (description)			
X2.	Average number of persons employed, during 2016			
Х3.	Total turnover (in value terms, excluding VAT), for 2016	€ 		
	MODULE J: General Information			
J1.	If you have any comments about the survey, please write down below:			
J2.	Name of the person who answered the questionnaire:			
	Position in the enterprise:			
	Telephone:			
	Fax:			
J3.	E-mail:  Name of the person who completed the questionnaire:			
00.	Time needed to fill out this questionnaire:			
	Signature:			
	•			

#### TO BE COMPLETED BY THE ENUMERATOR:

J4.	Completion of the questionnaire:			
	a) The questionnaire is completed.			
	b) The enterprise has closed			
	c) The enterprise can not be located			
	d) The enterprise refuses to cooperate.			
	e) The enterprise was closed during the collection of the data.			
	f) Merged with another enterprise.			
	g) Other reasons for no completion			
	Please specify:			
FOR OFFICIAL USE ONLY				
J5.	Name of the person who checked the questionnaire:			

#### SURVEY ON ICT USAGE AND E-COMMERCE IN ENTERPRISES 2016

#### **GLOSSARY**

#### 3G, 3rd Generation 4G, 4th 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 devices allow simultaneous use of speech and data services and higher data transmission 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.

4G is the fourth generation of cellular wireless standards. It is a successor of the 3G and 2G families of standards. The ITU-R organization specified the International Mobile Telecommunications Advanced requirements for 4G standards, setting peak speed requirements for 4G service at 100 Mbit/s for high mobility communication (such as from trains and cars) and 1 Gbit/s for low mobility communication (such as pedestrians and stationary users).

Source: http://en.wikipedia.org/wiki/; http://www.itu.int

#### 2 App(s)

A mobile app, short for mobile application or just app, is application software designed for a specific purpose (e.g. entertainment, shopping, etc.), downloaded and used on computers depending on their operating system. (e.g. portable devices such as tablets, Smartphones, etc.)

Further information: http://en.wikipedia.org/wiki/Mobile app;

Source: http://www.techopedia.com/definition/2953/mobile-application-mobile-app

#### **Business** process

A business process or business method is a collection of related, structured activities or tasks that produce a specific service or product (serve a particular goal) for a particular customer or customers. Business processes can be of three types: Management processes (e.g. corporate governance, strategic management), Operational processes (e.g. purchasing, manufacturing, marketing and sales etc.) and Supporting processes (e.g. accounting, recruitment, technical support etc.).

Source: http://en.wikipedia.org/wiki/Business process

**Counterfeiting** A counterfeit is an imitation, usually one that is made with the intent of fraudulently passing it off as genuine. Counterfeit products are often produced with the intent to take advantage of the established worth of the imitated product. The word counterfeit frequently describes both the forgeries of currency and documents, as well as the imitations of products or goods (e.g. clothing, software, pharmaceuticals, jeans, watches, electronics, etc.). Source: http://en.wikipedia.org/wiki/Counterfeiting

#### 10 e-Invoice

E-invoicing, comprises payment information exchanged between the parties – enterprises, public authorities involved in commercial transactions, transmitted via the Internet or other electronic means.

A structured e-invoice is an invoice where all data are in digital format and that can be processed automatically. A distinctive feature of a structured e-invoice is automation: a structured 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 e-invoice data could be structured according to the XML, EDI or other similar format.

Unstructured invoices in an electronic form are not suitable for automated processing (e.g. emails, e-mail attachment as pdf, images in TIF, JPEG or other format)

# 11 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

#### 12 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.

#### 13 **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.

#### 14 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.

#### 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 Data

Representation of facts, concepts, or instructions in a formalized manner suitable for communication, interpretation, or processing by humans or by automated 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

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 EDI, EDItype 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 suitable for automated processing.

Source: http://en.wikipedia.org/wiki/Electronic\_Data\_Interchange

9 **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 suitable for automated 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

#### 15 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 in their representation.

(Source: http://www.its.bldrdoc.gov/projects/devglossary/\_information.html)

#### 16 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.

#### 17 Marketplace(s) (e-commerce marketplaces)

The term "e-commerce marketplaces" refers to websites or apps used by several enterprises for trading products e.g. Booking, eBay, Amazon, Amazon Business, Alibaba, Rakuten, etc.). E-commerce marketplaces are different from e-commerce platforms. The latter provide scalable, self-made online solutions for business that would like to set up their own e-commerce website.

#### 18 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

### 19 **Mobile Broadband**

Mobile broadband (Mobile connection to the Internet over telephone networks) is the name used to describe various types of wireless high-speed Internet access through a portable modem, telephone or other device. (viz 3G)

Source: http://en.wikipedia.org/wiki/Mobile\_broadband

# 20 Office (automation) software

Office (automation) software is a generic type of software comprising (grouped together) usually a word processing package, a spreadsheet, presentations' software etc.

## 21 Online payment

An online payment is an integrated ordering-payment transaction.

22 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

23 Social Media In the context of the ICT usage survey, the central point of the social media is to establish and maintain social relationships within and around the enterprise. From that aspect we refer to the use of social media (as applications based on Internet technology or communication platforms) and the use of Web 2.0 technologies and tools for connecting, conversing and creating content online, with customers, suppliers, or other partners, or within the enterprise. It is not simply the use of Web 2.0 platform (although it is the enabling technology) but the use of social media implies the development of new forms of collaboration and information management within the enterprises as well as helping employees, customers and suppliers to collaborate, to innovate, to share, and to organize knowledge and experiences.

The following are the main social media communication platforms and tools for enterprises:

**Social networks or websites** are applications based on Internet technologies that enable users to connect by creating personal information profiles, share interest and/or activities, share ideas, invite others to have access to their profile and create communities of people with common interests.

**Blogs:** A blog is a website or a part of a website, that is updated frequently, either owned by individuals, interest groups of individuals or corporate (in the current context it is the blog of the enterprise and not other blogs to which employees contribute). An update (called an entry or a post) is usually quite short and readers can respond, share, comment or link to the entry online. Blogs can be used either within an enterprise (corporate blog) or for communicating with customers, business partners or other organisations.

Content communities offer the possibility of sharing media content between users. Photo and video services / Podcasting: A podcast (or non-streamed webcast) is a series of digital media files (either audio or video in various file format e.g. aiff, .wav, .midi etc for the former and .mov, .avi etc for the latter) that are released episodically. The mode of delivery differentiates podcasting from other means of accessing media files over the Internet, such as direct download, or streamed webcasting. Presentation sharing websites offer the possibility to share presentations, documents and professional videos over the Internet (share publicly or privately among colleagues, clients, intranets, networks etc). These websites offer the possibility to upload, update and access presentations and/or documents. Very often, presentation sharing websites are linked to blogs and other social networking services or websites.

**Microblogging** refers to the posting of very short updates about oneself. It is in contrast to long-form blogging, where there are usually at least a few hundred words. Microblog posts usually involve a few hundred characters or less. For example, in the context of microblogging services Tweets (Twitter) are text-based posts of up to 140 characters displayed on the user's profile page.

**Wiki**: A wiki is a website that allows the creation and editing of any number of interlinked web pages via a web browser using a simplified markup language or a WYSIWYG text editor. Wikis are typically powered by wiki software and are often used collaboratively by multiple users. Examples include community websites, corporate intranets, and knowledge management systems.

24 **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

25 Web e-Commerce Web (e-commerce) sales are sales made via an online store (web shop), via web forms on a website or extranet, or "apps" regardless of how the web is accessed (computer, laptop, mobile phone etc.)

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

26 Web form

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/Webform

27 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.

28 Wireless

The use of wireless technologies such as radio-frequency, infrared,

(access - connection)

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.

29 **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.

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/