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STATISTICAL SERVICE
1444 NICOSIA

CONFIDENTIAL

SURVEY ON ICT USAGE AND E-COMMERCE IN ENTERPRISES 2018

	FOR OFFICIAL 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, the use of cloud computing services, the use of 3D printing technologies, the use of robotics, big data analysis, invoicing, and e-commerce. These data are necessary for the implementation of policy programmes of both the Goverment 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 appoitment 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 (2018), 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.

S. Karagiorgis
Director
Statistical Service

January, 2018

MODULE A: Use of Computers

A1.	**Does your enterprise use computers?** Computers include Personal Computers, portable computers (e.g. laptops, notebooks, netbooks), tablets, other portable devices like Smartphones.	**Yes** ☐	**No** ☐ → Go to X1
A2.	**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)

B1.	**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** ☐
B2.	**Did your enterprise provide any type of training to develop ICT related skills of the persons employed, during 2017?**	**Yes**	**No**
	a) Training for ICT specialists Tick No if your enterprise didn't employ ICT specialists during 2017	☐	☐
	b) Training for other persons employed	☐	☐
B3.	**Did your enterprise recruit or try to recruit ICT specialists, during 2017?**	**Yes** ☐	**No** ☐ → Go to B5
B4.	**During 2017, did your enterprise have vacancies for ICT specialists that were difficult to fill?**	**Yes** ☐	**No** ☐

B5. Please indicate who mainly performed the following ICT functions of your enterprise in 2017:	Mainly own 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[13] - Enterprise Resource planning used to manage resources by sharing information among different functional areas such as accounting, planning, production, marketing; CRM[6] 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 protection (e.g. security testing, security software)	☐	☐	☐

MODULE C: Access and use of the Internet

(Scope: enterprises with computers)

C1. Does your enterprise have access to the Internet[15]?	Yes	No
	☐	☐ → Go to E1

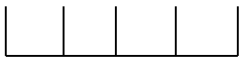
C2. Please answer (a) or (b):

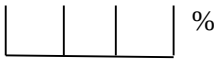
a) How many persons employed use computers with access to the Internet for business purposes?

or

b) Indicate an estimate of the percentage of the total number of persons employed who use computers with access to the Internet for business purposes.

Computers include Personal Computers, portable computers (e.g. laptops, notebooks, netbooks), tablets, other portable devices like Smartphones.





Use of a fixed broadband connection to the Internet for business purposes

C3. Does your enterprise use any type of fixed connection to the Internet? (e.g. ADSL, SDSL, VDSL, fiber optics technology (FTTH), cable technology (CableNet), satellite (Nova) etc.)	Yes	No
	☐	☐ → Go to C5

C4. What is the maximum contracted download speed of the fastest fixed Internet connection of your enterprise?

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	☐
d) At least 30 Mbit/s but less than 100 Mbit/s	☐
e) At least 100 Mbit/s	☐

Use of a mobile connection to the Internet for business purposes

A mobile connection to the Internet means the usage of portable devices connecting to the Internet through mobile telephone networks for business purposes. Enterprises provide portable devices and pay for all or at least up to a limit, the subscription and the use costs.

		Yes	No
C5.	**Does your enterprise provide portable devices that allow a mobile connection to the Internet using mobile telephone networks, for business purposes ?** e.g. via portable computers or other portable devices such as Smartphones	☐	☐ → Go to C8

C6.	**a) How many persons employed use a portable device 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) or **b) Indicate an estimate of the percentage of the total number of persons employed who use a portable device provided by the enterprise, that allows Internet connection via mobile telephone networks, for business purposes.**	☐☐☐☐ ☐☐☐ %

		Yes	No
C7.	**Does your enterprise provide portable devices that allow mobile connection to the internet using mobile telephone networks, for business use to:**		
	a) access the enterprise's e-mail[12] system	☐	☐
	b) access and modify enterprise's documents	☐	☐
	c) use dedicated business software applications? (e.g. for orders or sales management, ERP (Enterprise Resource Planning) related applications etc.)	☐	☐

Use of a Website

		Yes	No
C8.	**Does your enterprise have a Website[25]?**	☐	☐ → Go to C10

If yes, give the address of your website:

……

		Yes	No
C9.	**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	☐	☐
	d) Tracking or status of orders placed	☐	☐
	e) Personalised content in the website for regular/recurrent visitors	☐	☐
	f) Links or references to the enterprise's social media[21] profiles	☐	☐

Other use of the Internet			
C10.	**Does your enterprise pay to advertise on the Internet?** (e.g. adverts on search engines, on social media, on other websites, etc.)	**Yes** ☐	**No** ☐ → Go to D1
C11.	**Does your enterprise pay to advertise on the internet using any of the following targeted advertising methods?**	**Yes**	**No**
	a) Based on webpages' content or keywords searched by users	☐	☐
	b) Based on the tracking of internet users' past activities or profile	☐	☐
	c) Based on the geolocation of internet users	☐	☐
	d) Any other method of targeted advertising on the internet not specified above	☐	☐

MODULE D: Use of cloud computing services

(Scope: enterprises with access to the Internet)

Cloud computing refers to **ICT services** that are used **over the Internet** to access software, computing power, storage capacity etc.; where the services have all of the following **characteristics:**

- are delivered from **servers** of service providers
- can be easily **scaled up or down** (e.g. number of users or change of storage capacity)
- can be used **on-demand by the user**, at least after the initial set up (without human interaction with the service provider)
- are **paid** for, either per user, by capacity used, or they are pre-paid

Cloud computing may include connections via Virtual Private Networks (VPN)

		Yes	No
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)**	☐	☐ → Go to E1

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, **exclude free of charge services)**	**Yes**	**No**
a)	E-mail (e.g. Email Enterprise, Microsoft Exchange Online / Office 365, etc.) (as a cloud computing service)	☐	☐
b)	Office software[17] (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[6], 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, **exclude free of charge services)**	**Yes**	**No**
a)	**Shared servers** of service providers	☐	☐
b)	**Servers** of service providers **exclusively reserved for your enterprise**	☐	☐

MODULE E: Use of 3D printing [1]

(Scope: enterprises with Computers)

Use of 3D printing aka additive layer manufacturing refers to the use of special printers either by the enterprise itself or the use of 3D printing services provided by other enterprises for the creation of three-dimensional physical objects using digital technology.

		Yes	No
E1.	**During 2017, did your enterprise use 3D printing:**		
	a) using your enterprise's 3D printers? Include use of rented or leased 3D printers.	☐	☐
	b) using printing services provided by other enterprises? Include printing services provided by parent or affiliate enterprises	☐	☐

The next question should be answered if either E1 a) or E1 b) are answered "Yes". If both E1 a) and b) are answered "No" then, Go to F1.

		Yes	No
E2.	**During 2017, did your enterprise use 3D printing for any of the following:**		
	a) Prototypes or models for sale.	☐	☐
	b) Prototypes or models for internal use.	☐	☐
	c) Goods for sale excluding prototypes or models. (e.g. moulds, tools, parts of goods, semi-finished goods, etc.)	☐	☐
	d) Goods to be used in your enterprise's production process excluding prototypes or models. (e.g. moulds, tools, parts of goods, semi-finished goods, etc.)	☐	☐

MODULE F: Use of robotics [19]

(Scope: enterprises with Computers)

• An industrial robot is an automatically controlled, reprogrammable, multipurpose manipulator programmable in three or more axes, which may be either fixed in place or mobile for use in industrial automation applications.
• A service robot is a machine that has a degree of autonomy and is able to operate in complex and dynamic environment that may require interaction with persons, objects or other devices, excluding its use in industrial automation applications.
Software robots (computer programs) and 3D printers are out of the scope of the following questions.

		Yes	No
F1.	**Does your enterprise use any of the following types of robots?**		
	a) Industrial robots (e.g. robotic welding, laser cutting, spray painting, etc.) (Please see the definition of industrial robots)	☐	☐
	b) Service robots (e.g. used for surveillance, cleaning, transportation, etc.) (Please see the definition of service robots)	☐	☐

If F1 b) = "Yes" then go to F2 else G1

		Yes	No
F2.	**Does your enterprise use service robots for any of the following?** (Please see the definition of service robots when considering the relevant tasks mentioned below)		
	a) Surveillance, security or inspection tasks (e.g. use of airborne drones, etc.)	☐	☐
	b) Transportation of people or goods (e.g. use of automated guided vehicle, etc.)	☐	☐
	c) Cleaning or waste disposal tasks	☐	☐
	d) Warehouse management systems (e.g. palletising, handling goods, etc.)	☐	☐
	e) Assembly works performed by service robots	☐	☐
	f) Robotic store clerk tasks	☐	☐
	g) Construction works or damage repair tasks	☐	☐

MODULE G: Big data analysis
(Scope: enterprises with Computers)

Big data are generated from activities that are carried out electronically and from machine-tomachine
Big data typically have characteristics such as:
Significant **volume** referring to vast amounts of data generated over time.
Variety referring to the different format of complex data, either structured or unstructured (e.g. text, video,
Velocity referring to the high speed at which data is generated, becomes available and changes over time.
Big data analysis refers to the use of techniques, technologies and software tools for analysing big data extracted from your own enterprise's data sources or other data sources.

		Yes	No
G1.	**During 2017, did your enterprise analyse big data from any of the following data sources?** (Please refer to the definition of big data above; include big data analysis conducted by external service providers)		
	a) Enterprise's own data from smart devices or sensors (e.g. Machine to Machine -M2M- communications, digital sensors, Radio frequency identification tags RFID, etc.) (in the context of big data)	☐	☐
	b) Geolocation data from the use of portable devices (e.g. portable devices using mobile telephone networks, wireless connections or GPS) (in the context of big data)	☐	☐
	c) Data generated from social media (e.g. social networks, blogs, multimedia content sharing websites, etc.) (in the context of big data)	☐	☐
	d) Other big data sources not specified above	☐	☐

If G1 has at least one positive answer then continue to G2, else go to H1.

		Yes	No
G2.	**During 2017, who performed big data analysis for your enterprise?**		
	a) **Enterprise's own employees** (incl. those employed in parent or affiliate enterprises)	☐	☐
	b) **External service provider**	☐	☐

MODULE H: Invoicing

(Scope: enterprises with Computers)

There are invoices in **paper form** and **electronic form**. Invoices in **electronic form** are of two types:

- **eInvoices**[10] in a standard structure **suitable for automated processing**.
(e.g. EDI[8], UBL[22], XML[28]). They are exchanged either directly or via service 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)

		Yes	No
H1.	**In 2017, did your enterprise send any of the following types of invoices:** Include also invoices sent via intermediaries, e.g. accountants, e-invoice service providers, etc.		
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	☐	☐

If H1(a) answered with "Yes", go to H2, otherwise go to H4

H2. Concerning e-Invoices: In 2017, out of all invoices your enterprise sent (in electronic or paper form) to private customers, other enterprises or public authorities, how many were e-invoices in a standard structure suitable for automated processing?

a)	Less than 10%	☐
b)	At least 10% but less than 25%	☐
c)	At least 25% but less than 50%	☐
d)	At least 50% but less than 75%	☐
e)	At least 75%	☐

H3.	**Concerning e-Invoices: In 2017, did your enterprise send e-invoices in a standard structure suitable for automated processing, to:**	**Yes**	**No**
	a) Other enterprises (B2B)	☐	☐
	b) Public authorities (B2G)	☐	☐
	c) Private consumers (B2C)	☐	☐
H4.	**In 2017, did your enterprise <u>receive</u> any of the following types of invoices:**	**Yes**	**No**
	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	☐	☐
	If H4(a) answered with "Yes", go to H5, otherwise go to I1		
H5.	**Concerning e-Invoices: In 2017, out of all invoices your enterprise received, how many were e-invoices in a <u>standard structure suitable for automated processing?</u>**		
	a) Less than 10%	☐	
	b) At least 10% but less than 25%	☐	
	c) At least 25% but less than 50%	☐	
	d) At least 50% but less than 75%	☐	
	e) At least 75%	☐	

Module I: e-Commerce

(Scope: enterprises with Computers)

e-Commerce[11] 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 EDI-type sales

Web sales[20]

Web sales are sales made via an online store (web shop) or via web forms[24] on a website [25] or extranet[14] or via"apps"[3].

		Yes	No
I1.	**During 2017, did your enterprise <u>receive</u> orders for goods or services placed via a website or "apps"? (excluding manually typed e-mails)**	☐	☐ → Go to I6

I2.	**Please state for 2017 (answer (a) or (b)):**	
	a) The value of the turnover resulting from orders <u>received</u> that were placed via a website or"apps" (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 <u>received</u> that were placed via a website or "apps"	☐☐☐ %

I3. Please provide a percentage breakdown of the turnover from orders <u>received</u> that were placed via a website or "apps" in 2017 by type of customer (estimates in percentage of the monetary values, excluding VAT)

a) **B2C** (Sales to private consumers)	☐☐☐ %
b) **B2B** (Sales to other enterprises) **and B2G** (Sales to public authorities)	☐☐☐ %
c) **TOTAL**	1 0 0 %

		Yes	No
I4.	**During 2017, via which websites or "apps" did your enterprise receive orders for goods and services:**		
a)	via your enterprise's website or "apps"? (including those of parent or affiliate enterprises, extranets)	☐	☐
b)	via an e-commerce marketplace website or "apps" used by several enterprises 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) and I4 b) = "Yes" otherwise go to I6

I5. What was the percentage breakdown of the turnover from orders received via website or "apps" in 2017 from the following:

(estimates in percentage of the monetary values, excluding VAT)
If you cannot provide the exact percentages an approximation will suffice.

a)	via your enterprise's website or "apps"? (including those of parent or affiliate enterprises, extranets)	___ %
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 %

EDI-type sales

EDI-type sales[8] are sales made via EDI-type messages (EDI: Electronic Data interchange) meaning:
- in an agreed or standard format suitable for automated processing (e.g. EDIFACT, UBL, XML)
- without the individual messages being typed manually

I6. During 2017, did your enterprise receive orders for goods or services placed via EDI-type messages?

Yes ☐ **No** ☐ → Go to I8

I7. Please state for 2017 (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) Indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via EDI-type messages

___ %

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 another enterprise, via "apps",

or

- via EDI-type messages (EDI: Electronic Data Interchange) which means messages in an agreed or standard format suitable for automated processing (e.g. EDIFACT, UBL, XML etc.) without the individual messages 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, excluding capital goods the consumption of which is registered as consumption of fixed capital.

I8.	**During 2017, did your enterprise place orders for goods or services via a website, "apps" or EDI-type messages? (excluding manually typed e-mails)**	**Yes** ☐	**No** ☐ → Go to X1
I9.	**During 2017, did your enterprise place orders for goods or services via a website or "apps"?**	**Yes** ☐	**No** ☐
I10.	**During 2017, did your enterprise place orders for goods or services via EDI-type messages?**	**Yes** ☐	**No** ☐
I11.	**During 2017, was the value of the orders that your enterprise placed electronically equal or more than 1% of the total purchases' value? (in monetary terms, excluding VAT)**	**Yes** ☐	**No** ☐ → Go to X1

MODULE X: Background information	
X1. Main economic activity of the enterprise, during 2017 (description)	……..…… ……..…… ……..…… ……..……
X2. Average number of persons employed, during 2017	⌊ ⌋⌊ ⌋⌊ ⌋⌊ ⌋
X3. Total turnover (in value terms, excluding VAT), for 2017	**€** ⌊ ⌋⌊ ⌋⌊ ⌋⌊ ⌋⌊ ⌋⌊ ⌋⌊ ⌋⌊ ⌋⌊ ⌋

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:
	E-mail:
J3.	**Name of the person who completed the questionnaire:**
	Time needed to fill out this questionnaire:
	Signature:
	Date:

TO BE COMPLETED BY THE ENUMERATOR:

J4.	**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) Merged with another enterprise…… 6 g) Other reasons for no completion …… 7 Please specify: …… …… ……

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J5.	**Name of the person who checked the questionnaire:**

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GLOSSARY

1	**3D printing (Additive Layer Manuf. - ALM)**	Additive Layer Manufacturing (ALM) and 3D printing are equivalent terms for the same process. The latter is the popular term widely known while the former describes more precisely the process of joining materials to make physical objects from 3D model data, usually layer upon layer, as opposed to subtractive manufacturing methodologies such as CNC machining or milling (e.g. lathe) that uses a rotating milling cutter to remove material from a solid block of material.
2	**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
3	**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
4	**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
5	**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

6	**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.
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, EDI-type**	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
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.

15	**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.
16	**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.
17	**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.
18	**Online payment**	An online payment is an integrated ordering-payment transaction.
19	**Robots - Robotics**	According to their intended application, robots may be industrial or service robots. An industrial robot is an automatically controlled, reprogrammable, multipurpose manipulator programmable in three or more axes, which may be either fixed in place or mobile for use in industrial automation applications. A service robot is a machine that has a degree of autonomy and is able to operate in complex and dynamic environment that may require interaction with persons, objects or other devices, excluding its use in industrial automation applications.
20	**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

21 **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.

22	**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
23	**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
24	**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
25	**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.
26	**Wireless (access - connection)**	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.
27	**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.
28	**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/