Eurostat model for a Community Survey on ICT Usage and e-Commerce in Enterprises 2006

(Model Questionnaire Version 3.1)

EUROSTAT MODEL FOR A COMMUNITY SURVEY ON ICT USAGE AND E-COMMERCE IN ENTERPRISES
2006
General outline of the survey

Sampling unit: Enterprise.

Scope / Target Population:

Economic activity:
Enterprises classified in the following categories of NACE-Rev.1:
- Section D – *"Manufacturing"*;
- Section F – *"Construction"*;
- Section G – *"Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods"*;
- Groups 55.1 and 55.2 – *"Hotels"* and *"Camping sites and other provision of short-stay accommodation"*;
- Section I – *"Transport, storage and communication"*;
- Section K – *"Real estate, renting and business activities"*;
- Groups 92.1 and 92.2 – *"Motion picture and video activities"* and *"Radio and television activities"*.

Optional:
- Section E – *"Electricity, gas and water supply"*;
- Groups from 55.3 to 55.5 inclusive;
- Groups from 92.3 to 92.7 inclusive; and
- Division 93 – *"Other service activities"*.

Enterprise size:
Enterprises with 10 or more persons employed;
Optional: enterprises with number of persons employed between 1 and 9.

Geographic scope:
Enterprises located in any part of the territory of the Country.

Reference period: Year 2005 for the % of sales/orders data and where specified.
January 2006 for the other data.

Survey period: First quarter 2006.

Layout of questionnaire: The layout of the national questionnaire should be defined by the country. However, countries should follow the order of the list of variable enclosed, if possible. The background information (Module X) should be placed at the end of the questionnaire. This information can be obtained in 3 different ways: from national registers, from Structural Business Statistics or collected directly with the ICT usage survey. Every effort should be made to obtain them from the most recent SBS survey. Countries can include additional questions.

Sample size, stratification: The sampling design and the resulting sample size should be appropriate for obtaining accurate, reliable and representative results on the variables and items in the model questionnaire. At least those listed in the implementing measures.
This objective should be achieved for the overall proportions as well as for the proportions for the different breakdowns of the population defined below: NACE, size class and geographic. NACE breakdown and enterprise size class breakdown are not required to be cross-tabulated.
This requirement aims at ensuring the collection of a complete dataset – without empty, confidential or unreliable cells - for these indicators.

NACE breakdown:

Data should be broken down by the following NACE aggregates:

1	DA+DB+DC+DD+DE
2	DF+DG+DH
3	DI+DJ
4	DK+DL+DM+DN
5	45
6	50
7	51
8	52
9	55.1+55.2
10	60+61+62+63
11	64
12	72
13	70+71+73+74
14	92.1+92.2

Optional:

17	22
18	40+41
19	55.3+55.4+55.5
20	92.3 to 92.7
21	93

Size class breakdown:

Data should be broken down by the following size classes of the number of persons employed:

1	10 or more
2	10 - 49 (small enterprises)
3	50 - 249 (medium enterprises)
4	250 or more (large enterprises)

Optional:

5	1-4
6	5-9

Geographic breakdown:

Data should be broken down by the following regional groups:

1	objective 1 regions
2	non-objective 1 regions

Note: See glossary for the list of objective-1 regions in each country.

Weighting of results:

Results should in general be weighted by number of enterprises.

Turnover/Purchases weighting should be also used for turnover/orders related questions (Turnover: C4, C5, C6, D4; Purchases: C2, D2: if possible purchases weighting, otherwise turnover weighting).

Weighting by the Number of Persons Employed should be also applied for questions A2, A3, B2 and for % using the Internet, % using broadband, % using xDSL, % using a website or homepage, % purchasing via the Internet, % receiving orders via the Internet, % receiving orders via the Internet or other computer mediated networks.

Treatment of non-response/'Do not know':	**Unit non-response:** The non-respondent units should be assumed to resemble those who have responded to the survey and be treated as non-selected units. For this, the weighting or the grossing up factors should be adjusted: the design weight N_h / n_h is replaced by N_h / m_h where N_h is the size of stratum h, n_h is the sample size in stratum h and m_h is the number of respondents in stratum h. **Item non-response:** Logical corrections should be made, when information can be deducted from other variables, and priority given to further contacts with enterprises to collect the missing information. For the categorical variables (e.g. the YES/NO questions), respondents with item non response or 'do not know' should not be imputed with values from respondents who answered the question. Numerical variables shouldn't also be imputed with the exception of C5 (breakdown of Internet sales by type of client) and C6 (breakdown of Internet sales by destination). The imputation of these two variables should take into account, at least, the breakdowns by size class and NACE in the tabulated results.
Tabulation of results:	For the categorical variables, estimates should be made for the total number of enterprises for each response category, broken down by the NACE categories and size classes specified above. For the quantitative variables (turnover, purchases and number of persons employed), when collected in absolute or percentage terms (and not in percentage classes), estimates should be made for the total values in absolute terms, broken down by the NACE categories and size classes specified above.
Data transmission:	Results are to be sent to Eurostat following the transmission format described in another Eurostat document.

EUROSTAT MODEL FOR A COMMUNITY SURVEY ON ICT USAGE AND E-COMMERCE IN ENTERPRISES
2006
Model Questionnaire (Version 3 of 18 March 2005)

(Questions relating to the ancient eEurope 2005 Benchmarking Indicators are marked with an asterisk *)

	Module A: General information about ICT systems			

A1.	**Did your enterprise use computers, during January 2006?** (Filter question)	Yes	No → Go to X1	

A2*.	**How many persons employed used computers at least once a week, during January 2006?**	_(Number)_	
	If you can't provide this value, **Please indicate an estimate of the percentage of the number of persons employed used computers at least once a week, during January 2006.**	⎕⎕⎕ %	

A3*.	**Did your enterprise have persons employed who regularly work part of their time (half a day per week or more) away from the enterprise's regular work site while having access to the enterprise's computer system, during January 2006?** (filter question)	Yes	No → Go to A5

		Yes	No
A4.	**Did any of those persons access the enterprise's computer system from the following places, during January 2006?**		
	a) From home		
	b) From customers or other external business partners' premises		
	c) From other geographically dispersed locations of the same enterprise or enterprise group		
	d) During business travel, e.g. from hotel, airport etc		

A5.	**Did your enterprise have difficulties in recruiting personnel with ICT skills (from basic to professional), during 2005?** (Filter question)	Yes	No → Go to A7	Didn't need to recruit → Go to A7

		Yes	No	Type of skills not needed
A6.	**Did your enterprise face the following problems when trying to recruit personnel, during 2005?**			
	a) Personnel with required skills in the use of ICT applications not available or not entirely suitable			
	b) ICT specialists with the required skills not available or not entirely suitable			
	c) High remuneration costs of ICT specialists			

		Yes	No
A7*.	**Did your enterprise have the following information and communication technologies, during January 2006?**		
	a) Wireless LAN		
	b) Wire based LAN		
	c) Intranet		
	d) Extranet		

A8.	**Did your enterprise have IT systems to manage the placing or receipt of orders, during January 2006?** (Filter question)	Yes	No → Go to A10

		Yes	No
A9*.	**Did your enterprise's IT systems for managing orders link automatically with any of the following IT systems, during January 2006?**		
	a) Internal system for re-ordering replacement supplies		
	b) Invoicing and payment systems		
	c) Your system for managing production, logistics or service operations		
	d) Your suppliers' business systems (for suppliers outside your enterprise group)		
	e) Your customers' business systems (for customers outside your enterprise group)		

A10.	In your communication with customers and other enterprises, to what extent has your enterprise substituted traditional postal mail (e.g. for sending invoices, direct mail, etc.) by electronic means of communication (Intranet, Extranet, Internet, e-mail messages), in the last 5 years?	
	(tick only one)	
	i) No substitution (overall postal mail was not reduced because of electronic means of communication)	
	ii) Minor substitution (electronic means are now used instead of post mail in a few situations, but postal mail is still the most important)	
	iii) Significant substitution (electronic became the main mean of business communication)	
	iv) Most or all substituted (postal mail was used before, but it's rarely used nowadays)	
	v) Non-applicable (postal mail was never a relevant mean of communication for the enterprise)	

Module B: Use of Internet

(asking enterprises with ICT)

B1*.	Did your enterprise have access to Internet, during January 2006? (Filter question)	Yes	No → Go to D1

B2*.	How many persons employed used computers connected to the World Wide Web at least once a week, during January 2006? If you can't provide this value, **Please indicate an estimate of the percentage of the number of persons employed used computers connected to the World Wide Web at least once a week, during January 2006.**	_(Number)_ ⌷⌷⌷⌷ %

B3*.	Did your enterprise have the following types of external connection to the Internet, during January 2006?	Yes	No
	a) Traditional Modem (dial-up access over normal telephone line)		
	b) ISDN connection		
	c) DSL (xDSL, ADSL, SDSL etc) connection		
	d) Other fixed internet connection (e.g. cable, leased line (e.g. E1 or E3 at level 1 and ATM at level 2), Frame Relay, Metro-Ethernet, PLC - Powerline comunication, etc.)		
	e) Mobile connection (e.g. e.g. analogue mobile phone, GSM, GPRS, UMTS, EDGE, CDMA2000 1xEVDO)		

B4.	What was the maximum speed for download contractually provided to your fastest Internet connection, as of January 2006?	
	(tick only one)	
	i) Below 144 Kb/s	
	ii) 144 Kb/s or more and less than 2 Mb/s	
	iii) 2 Mb/s or more	

B5*.	Did your enterprise use the Internet for the following purposes, during January 2006?		
	(as consumer of Internet services)	Yes	No
	a) Banking and financial services		
	b) Training and education		
	c) Market monitoring (e.g. prices)		
	d) Receiving digital goods or services		
	e) Obtaining after-sales service		

B6*.	Did your enterprise use the Internet for interaction with public authorities, during 2005? (Filter question)	Yes	No → Go to B8

B7*.	Did your enterprise interact with public authorities in the following ways, during 2005?		
		Yes	No
	a) For obtaining information		
	b) For obtaining forms, e.g. tax forms		
	c) For returning filled in forms, e.g. provision of statistical information to public authorities		
	d) Submitted a proposal in an electronic tender system (e-procurement)		

B8*.	Did your enterprise have a Web Site / Home Page, during January 2006? (Filter question)	Yes	No → Go to B10

B9.	Did the Web Site of your enterprise provide the following facilities, during January 2006?		
	(your enterprise <u>as provider</u> of Internet services)	Yes	No
	a) Marketing the enterprise's products		
	b) Facilitating access to product catalogues and price lists		
	c) Providing after sales support		

B10*.	Did your enterprise use the following internal security facilities, during January 2006?		
		Yes	No
	a) Virus checking or protection software		
	b) Firewalls (software or hardware)		
	c) Secure servers (support secured protocols such as shttp)		
	d) Off-site data backup		

B11*.	Was it possible to communicate with your enterprise using the following security facilities, during January 2006?		
		Yes	No
	a) Electronic digital signature as customer's authentication mechanism		
	b) Other authentication mechanism (e.g. PIN code)		
	c) Data encryption for confidentiality		

B12*.	Did your enterprise encounter ICT related security problems during 2005 (e.g. computer virus, worms or trojan attack, unauthorised external access to the computer system), that resulted in a loss of information or working time?	Yes	No

Module C: e-commerce via Internet		
(asking enterprises with Internet access)		
Orders placed via Internet (Purchases)		

C1*.	Did your enterprise order products/services via the Internet, during 2005 (excluding manually typed e-mails)? (Filter question)	Yes	No → Go to C3

C2*.	Please indicate for 2005 the percentage of the Internet orders in relation to the total purchases (in monetary terms, excluding VAT).	Less than 1%
		1% or more and less than 5%
		5% or more and less than 10%
		10% or more and less than 25%
	Alternative Question:	25% or more
	Please state the value of the purchases resulted from orders placed via Internet (in monetary terms, excluding VAT), in 2005.	*(National Currency)*
	If you can't provide this value, **Please indicate an estimate of the percentage of the total purchases resulted from orders placed via Internet, in 2005.**	%

Orders received via Internet (Sales)		

C3*.	Did your enterprise receive orders via the internet, during 2005 (excluding manually typed e-mails)? (Filter question)	Yes	No → Go to D1

C4*.	Please state the value of the turnover resulted from orders received via Internet (in monetary terms, excluding VAT), in 2005.	*(National Currency)*
	If you can't provide this value, **Please indicate an estimate of the percentage of the total turnover resulted from orders received via Internet, in 2005.**	%

C5.	Please provide a percentage breakdown of all Internet sales in 2005, by type of client. (estimates in percentage of the monetary values)				
	a) B2B (Sales to other enterprises) and B2G (Sales to public authorities)				%
	b) B2C (Sales to private consumers)				%
	c) TOTAL	1	0	0	%
C6.	Please provide a percentage breakdown of all Internet sales in 2005, by destination. (estimates in percentage of the monetary values)				
	a) Own country				%
	b) Other EU countries				%
	c) Rest of the world				%
	d) TOTAL	1	0	0	%

C7*.	Did your enterprise sell any products to other enterprises via a presence on specialised Internet market places, during 2005?	Yes	No

Module D: E-commerce via external computer networks other than Internet
(asking enterprises with ICT)
Orders placed via external computer networks other than Internet (Purchases)

D1*.	Did your enterprise order products/services via external computer networks other than Internet, during 2005? (Filter question)	Yes	No → Go to D3

D2.	Please indicate for 2005 the percentage of the orders placed or transmitted via computer networks other than Internet, in relation to the total purchases (in monetary terms, excluding VAT).	Less than 1%
		1% or more and less than 25%
		25% or more and less than 50%
		50% or more and less than 75%
	Alternative Question:	75% or more
	Please state the value of the purchases resulted from orders placed via computer networks other than Internet (in monetary terms, excluding VAT), in 2005.	*(National Currency)*
	If you can't provide this value, **Please indicate an estimate of the percentage of the total purchases resulted from orders placed via computer networks other than Internet, in 2005.**	%

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

D3*.	Did your enterprise receive orders via external computer networks other than Internet, during 2005? (Filter question)	Yes	No → Go to X1

D4*.	**Please state the value of the turnover resulted from orders received via computer networks other than Internet (in monetary terms, excluding VAT), in 2005.**	*(National Currency)*
	If you can't provide this value, **Please indicate an estimate of the percentage of the total turnover resulted from orders received via computer networks other than Internet, in 2005.**	%

Module X: Background information
(X1-X5) available in some countries from SBS and thus not to be included; latest available information should be provided
X1.	Main economic activity of the enterprise, during 2005
X2.	Average number of persons employed, during 2005
X3.	Total purchases of goods and services (in value terms, excluding VAT), for 2005
X4.	Total turnover (in value terms, excluding VAT), for 2005
X5.	Location (Objective 1/ non-Objective 1 region), in 2005

Alternative dispute resolution mechanism (ADR)	Out-of-court dispute settlement process such as mediation, conciliation, arbitration. The aim is to contribute to fostering consumer confidence without unnecessarily burdening business. In particular relevant for cross-border electronic commerce.
B2B	Business-to-Business transactions conducted over IP based networks and over other computer-mediated networks.
B2C	Transactions conducted between Business and private Consumer over IP based networks and over other computer-mediated networks.
Broadband	No generally accepted definition of broadband can be given. Common definitions refer to either: a) the connection speeds measured in kbps or mbps (in at least the downstream direction) or bandwidth measured by the amount of digital bits that one can transmit per second, measured in kbps or mbps; b) the type of connection, of which the following provide broadband access: xDSL (ADSL, SDSL, etc), Cable TV network (cable modem), UMTS (mobile phone), or other (e.g. satellite, fixed wireless); c) the content that is provided with the examples of high definition movie trailers, short films, flash animation, three dimensional video games, video on demand, internet radio, streaming video, video conferencing and so on.
Computer-mediated networks other than Internet	Minitel or interactive telephone systems
Digital products or services	Goods/services that can be ordered and delivered directly to a computer over the Internet, e.g. music, videos, games, computer software, online newspapers, consulting services, etc.
DSL (Digital Subscriber Line)	A high-bandwidth (broadband), local loop technology to carry data at high speeds over traditional (copper) telephone lines.
xDSL, ADSL etc.	DSL technologies designed to increase bandwidth over standard copper telephone wires; includes ADSL (Asymmetric Digital Subscriber Line) etc.
Electronic commerce (e-commerce)	Transactions conducted over Internet Protocol-based networks and over other computer-mediated networks. The goods and services are ordered over those networks, but the payment and the ultimate delivery of the good or service may be conducted on or off-line. Orders received via telephone, facsimile, or manually typed e-mails are not counted as electronic commerce.
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.

Extranet

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

ICT Skills ^(New)

Two main types of e-skills can be distinguished:

ICT specialists skills: specifying, designing, developing, installing, operating, supporting, maintaining, managing, evaluating and researching ICT systems.

ICT users skills: apply systems to support own work, use of generic software tools and use of specialised tools supporting business functions within industry.

ISDN

Integrated Services Digital Network.

Internet

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

Intranet

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

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.

Mobile Internet services

Internet services available via a wireless terminal (Mobile phone, Personal Digital Assistant, PC device or custom terminal) and using Wireless Application Protocol (WAP) or General Packet Radio Service (GPRS). WAP is a protocol that makes it possible to adapt Internet formats to the characteristics of GSM handsets. GPRS is a packet-switched technology that makes it possible to send/receive blocks of data from/to a mobile phone.

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.

On-line payment

An on-line payment is an integrated ordering -payment transaction.

Specialised Internet market places

Web site where several enterprises are represented, which market a specific type of goods/services or aim at limited groups of customers.

Trustmarks

A label on a web site indicating that an organization agrees to comply with a number of best business practices, including redress mechanisms. Essentials of trustmarks are: Label, Code of Conduct/Principles, Enforcement, Redress. The aim is to win the trust of the consumer.

Web site

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

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.

Objective 1 regions [(Revised)]

"Objective 1" promotes the development and structural adjustment of regions whose development is lagging behind, i.e. whose average per capita GDP is below 75% of the European Union average.

The NUTS regions (statistical demarcation) eligible for support from the Structural Funds under Objective 1, including transitional or phasing-out Objective 1 regions which are marked in italic, are listed below.

Countries *entirely covered* **by Objective 1:**

Estonia (the whole country counts as one single region at NUTS2-level)

Greece

Ireland (Southern and Eastern under transitional support)

Latvia (the whole country counts as one single region at NUTS2-level)

Lithuania (the whole country counts as one single region at NUTS2-level)

Hungary

Malta (the whole country counts as one single region at NUTS2-level)

Poland

Portugal (Lisboa (NUTS 2) and Oeste, Médio Tejo and Lezíria do Tejo (NUTS 3) under transitional support)

Slovenia (the whole country counts as one single region at NUTS2-level)

Countries *partially covered* **by Objective 1:**

Belgium: *Hainaut*

Czech Republic: Střední Čechy, Jihozápad, Severozápad, Severovýchod, Jihovýchod, Střední Morava, Moravskoslezsko (i.e. the whole country except Praha)

Germany: Brandenburg Nord-Ost, Brandenburg Süd-West, Mecklenburg-Vorpommern, Chemnitz, Dresden, Leipzig, Dessau, Halle, Magdeburg, and Thüringen, *Berlin (part: former East Berlin)*

Spain: Galicia, Principado de Asturias, Castilla y Leon, Castilla-La Mancha, Extremadura, Comunidad Valenciana, Andalucía, Región de Murcia, Ceuta, Melilla and Canarias, *Cantabria*

France: Guadeloupe, Martinique, French Guyana and Réunion, *Corse, Nord - Pas-de-Calais (parts: arrondissements Avesnes, Douai, Valenciennes*

Italy: Campania, Puglia, Basilicata, Calabria, Sicilia and Sardegna, *Molise*

The Netherlands: *Flevoland*

Austria: Burgenland

Slovakia: Západné Slovensko, Stredné Slovensko, Východné Slovensko (i.e. the whole country except Bratislavsky kraj)

Finland: Itä-Suomi (all), Länsi-Suomi (part: northern part of Keski-Suomi), Pohjois-Suomi (parts: all of Lappi, part of Pohjois-Pohjanmaa, eastern part of Keski-Pohjanmaa)

Sweden: Norra Mellansverige (parts: northwestern part of Gävleborgs län, northern and western parts of Dalarnas län, northern part of Värmlands län), Mellersta Norrland (all, but coastal part is under the "Special Programme") and Övre Norrland (all, but coastal part is under the "Special Programme")

United Kingdom: South Yorkshire, West Wales and the Valleys, Cornwall and Isles of Scilly and Merseyside, *Highlands and Islands, Northern Ireland*

Countries with *no* **Objective 1 regions:**

Cyprus (the whole country counts as one single region at NUTS2-level)

Denmark (the whole country counts as one single region at NUTS2-level)

Luxembourg (the whole country counts as one single region at NUTS2-level)

The list of Objective 1 regions was published in O.J. L194 p. 53 of 27/07/1999, Annexes I and II (http://europa.eu.int/eur-lex/pri/en/oj/dat/1999/l_194/l_19419990727en00530057.pdf).

The list of Objective 1 regions in the Member States who entered the EU in 2004 can be found

Type of the External Internet Connection (New)

By term an external connection it is meant the type of the (last mile) connection of the enterprise (e.g. enterprise's computer-mediated network) to the network of the Internet access 'service' provider 'ISP'.

"The last mile is the final leg of delivering communications connectivity to a resident or customer (enterprise)."

Type of external Internet connection:

a) Dial-up is a temporary connection to the Internet via an analogue (standard) modem and standard telephone line (Public switched telephone network PSTN), which requires that the modem dial a phone number when Internet access is needed (to dial the Internet service provider's node to establish a modem-to-modem link, which is then routed to the internet).

"Dial-up pertains to a telephone connection in a system of many lines shared by many users. A dial-up connection is established and maintained for limited time duration. A dial-up connection can be initiated manually or automatically by your computer's modem or other device. This once most common used type of the Internet connection is capable of carrying up to 56 kilobits per second (kbit/s) and is consider as typical example of the low capacity 'speed' connection (narowband)."

b) ISDN (Integrated Services Digital Network) connection is a temporary connection to the Internet using a type of circuit switched telephone network system (a set of CCITT/ITU standards), designed to allow digital (as opposed to analog) transmission of voice and data over ordinary telephone copper wires (enables digital transmission over the public switched telephone network), resulting in better quality and higher speeds, than available with analog systems.

"Enterprise that installs an ISDN adapter (in place of a telephone modem) receives up to 128 Kbps compared with the maximum 56 Kbps rate of an analog (standard) modem connection. ISDN services can simultaneously transmit voice, data and video. ISDN is also consider as the low capacity 'speed' connection (narowband)."

"It includes Basic Rate Interface (BRI) - consisting of two B channels, each with bandwidth of 64 kbit/s, and one D channel with a bandwitdth of 16 kbit/s."

"This category does not include Primary-Rate Interface, a type of ISDN service designed for larger organizations. PRI includes 23 B-channels (30 in Europe) and one D-Channel. PRI service is generally transmitted through a T-1 line (or an E1 line in Europe). This type of connection belongs under alternative e)."

c) Connection via low capacity 'speed' mobile phone networks is an access to the Internet using a long range wireless transmission of the mobile network technologies as High-Speed Circuit-Switched Data (HSCSD) or General Packet Radio Service (GPRS) that is sometimes called as 2,5 mobile generation technology (2,5 G).

Access to the Internet via mobile phone networks should be consider as low capacity 'speed' mobile connection (narowband) if it is being equal to, or greater than 256 kbit/s, as the sum of the capacity in both directions (download or upload).

However for the Enterprise survey definition based on the type of the "mobile Internet connection" is decisive factor for an identification if the particular Internet connection belongs to the low capacity 'speed'' connection. See following two examples:

HSCSD is a development of Circuit Switched Data, the original data transmission mechanism of the GSM mobile phone system. As with CSD channel allocation is done in circuit switched mode. The difference comes from the ability to use different coding methods and even multiple time slots to increase data throughput. HSCSD is a temporary mobile connection.

"2.5G is a stepping stone between 2G and 3G cellular (mobile) wireless technologies. The term "second and a half generation" is used to describe 2G-systems that have implemented a packet switched domain in addition to the circuit switched domain. While the terms "2G" and "3G" are officially defined, "2.5G" is not. It was invented for marketing purposes only. 2.5G provides some of the benefits of 3G (e.g. it is packet-switched) and can use some of the existing 2G infrastructure in GSM and CDMA networks. The most commonly known 2.5G technique is GPRS."

GPRS is a 2.5G mobile standard typically adopted by GSM operators as a migration step towards 3G (W-CDMA). GPRS is based on packet-switched technology enabling high-speed data transmission.

Examples of some most common spread standards of low capacity 'speed' mobile network connection and their bandwidth (can be different between the countries and also within the same country):

download   upload