

Key indicators of the telecommunication/ICT sector

The third World Telecommunication/ICT indicators meeting (Geneva, January 2003)¹ adopted the following key indicators.

Please address any questions or comments to indicators@itu.int.

	ITU code ²	Indicator	Definition
1	112	Main telephone lines in operation	A main line is a telephone line connecting the subscriber's terminal equipment to the public switched network and which has a dedicated port in the telephone exchange equipment. This term is synonymous with the term <i>main station</i> or <i>Direct Exchange Line (DEL)</i> that are commonly used in telecommunication documents. It may not be the same as an access line or a subscriber. Some countries include the number of ISDN channels; if so, this should be specified in a note.
2	117	Total capacity of local public switching exchanges	The total capacity of public switching exchanges corresponds to the maximum number of main lines that can be connected. This number includes, therefore, main lines already connected and main lines available for future connection, including those used for the technical operation of the exchange (test numbers). The measure should be the actual capacity of the system rather than the theoretical potential when the system is upgraded or if compression technology is employed.
3	1142	Percent of main lines connected to digital exchanges	This percentage is obtained by dividing the number of main lines connected to digital telephone exchanges by the total number of main lines. This indicator does not measure the percentage of exchanges which are digital, the percentage of inter-exchange lines which are digital or the percentage of digital network termination points. Respondents should indicate whether the main lines included in the definition represent only those in operation or the total capacity.
4	116	Percent of main lines which are residential	This percentage is obtained by dividing the number of main lines serving households (i.e., lines which are not used for business, government or other professional purposes or as public telephone stations) by the total number of main lines. Respondents should indicate the definition of households that is being applied.
5	1162	Percent of main lines in urban areas	This percentage is obtained by dividing the number of main lines in urban areas by the total number of main lines in the country. The definition of urban used by the country should be supplied.
6	1163	Number of localities with telephone service	Localities are cities, towns and villages in a country. This indicator reflects the number of localities that have telephone service. To enhance usefulness, the total number of localities should be provided as well as the population of localities covered by telephone service.
7	1112	Public payphones	Total number of all types of public telephones, including coin and card operated and public telephones in call offices. Public phones installed in private places should also be included, as should mobile public telephones. All public telephones regardless of capability (e.g., local calls or national only) should be counted. Where the national definition of "payphone" differs from that above (e.g., by excluding pay phones in private places) then respondents should indicate their own definition.

¹ <http://www.itu.int/ITU-D/ict/WICT02/index.html>

² Code used by the International Telecommunication Union (ITU) to identify the indicator. This code appears in ITU questionnaires.

	ITU code ²	Indicator	Definition
8	271	Cellular mobile telephone subscribers	Refers to users of portable telephones subscribing to an automatic public mobile telephone service that provides access to the Public Switched Telephone Network (PSTN) using cellular technology. This can include analogue and digital cellular systems but should not include non-cellular systems. Subscribers to public mobile data services or radio paging services should not be included. If this service has a name, please indicate in a note as well as the year the service commenced operation.
8.1	271p	Cellular mobile subscribers: prepaid	Total number of mobile cellular subscribers using prepaid cards. These are subscribers that rather than paying a fixed monthly subscription fee, choose to purchase blocks of usage time. Only prepaid subscribers that have used the system within a reasonable period of time should be included. This period (e.g., 3 months) should be indicated in a note.
9	2712	Digital cellular mobile subscribers	Total number of subscribers to digital cellular systems (e.g., GSM, D/AMPS (TDMA), CDMA).
10	271m	Mobile Internet subscribers	Due to the recent introduction of this service, this indicator is being developed. Comments are welcome. Possibilities include to measure the number of subscribers actively using a mobile browser (e.g., Wireless Access Protocol, WAP) or to measure the number of users subscribing to a high-speed mobile data service (e.g., General Packet Radio Service (GPRS)).
11.1	271land	Percent coverage of mobile cellular network (land area)	Mobile cellular coverage of the land area in percent. This is calculated by dividing the land area covered by a mobile cellular signal by the total land area.
11.2	271pop	Percent coverage of mobile cellular network (population)	Mobile cellular coverage of population in percent. Note that this is not the same as the mobile subscription density or penetration. The mobile population coverage measures the percentage of inhabitants that are within range of a mobile cellular signal whether or not they are subscribers. This is calculated by dividing the number of inhabitants within range of a mobile cellular signal by the total population.
12	311	Telex subscriber lines	A telex subscriber line is a line connecting the subscriber's terminal equipment to the public telex network and which has a dedicated port in the telex exchange equipment.
13	412	Private leased circuits	Refer to a two-way link for the exclusive use of a subscriber regardless of the way it is used by the subscriber (e.g., switched subscriber or non-switched, or voice or data). Private circuits also referred to as leased lines, can be either national or international in scope. In reporting this indicator, only the number of lines should be included, not the number of network termination points.
14	413	Total subscribers to public data networks	The number of subscribers to public data networks such as packet-switched networks, circuit-switched networks and dial-up data networks. Countries should specify in a note which networks they are including.
15	4213	Internet subscribers	The number of Internet subscribers including dial-up, leased and broadband. A distinction should be made between paying and free subscribers in countries where there are no Internet access subscription charges. It would also be useful to list only active subscribers.
15.1	4213cab	Cable modem Internet subscribers	Internet subscribers using modems attached to cable television networks. Speed should be greater than 128kbps in at least one direction.
15.2	4213dsl	DSL Internet subscribers	Internet subscribers using Digital Subscriber Line (DSL) technology. Speed should be greater than 128kbps in at least one direction.

	ITU code ²	Indicator	Definition
16	4212	Internet users	The number of Internet users. A growing number of countries are measuring this through regular surveys. Surveys usually indicate a percentage of the population for a certain age group (e.g., 15-74 years old). The total number of Internet users in this age group should be supplied and not the percentage of Internet users in this age group multiplied by the entire population. In situations where surveys are not available, an estimate can be derived based on the number of subscribers. The methodology used should be supplied, including reference to the frequency of use (e.g., in the last month).
16.1	4212f	Percent female Internet users	Share of females in the total number of Internet users. This is calculated by dividing the number of female Internet users by the total number of Internet users.
16.2	4212%f	Female Internet users as percent of female population	Share of female Internet users in the total number of females. This is calculated by dividing the number of female Internet users by the total number of females.
17	423	Public Internet access facilities	The number of facilities providing Internet access to the public. These can be Internet cafes and public facilities such as telecentres or libraries. Schools should not be included unless the general public can also use the facilities. ³
18	424	PWLAN locations	The number of Public Wireless Local Area Network locations (i.e., <i>hotspots</i>). PWLANs are based on the IEEE 802.1b standard, commonly referred to as WiFi.
19	28	ISDN subscribers	The number of subscribers to the Integrated Services Digital Network (ISDN). This can be separated by basic rate interface service (i.e., 2B+D, ITU-T Rec. I.420) and primary rate.
19.1	281	Basic rate ISDN subscribers	The number of subscribers to the basic rate interface service.
19.2	282	Primary rate ISDN subscribers	The number of subscribers to the primary rate interface service.
20	123	Waiting list for main lines	Un-met applications for connection to the Public Switched Telephone Network (PSTN) that have had to be held over owing to a lack of technical facilities (equipment, lines, etc.). It should be specified what is the normal period for responding to requests for a new line (for instance, no more than two weeks from the date of the request). If necessary, use the data of the largest operator measured by number of main lines.
21	143	Faults per 100 main lines per year	The total number of reported faults to main telephone lines for the year. Countries should specify whether faults due to faulty terminal equipment on the customer's premises are included in the indicator or not. Faults, which are not the direct responsibility of the public telecommunications operator, should probably be excluded. This is calculated by dividing the total number of reported telephone faults <i>for the year</i> by the total number of main lines in operation and multiplying by 100. If necessary, use the data of the largest operator measured by number of main lines.
22	141	Percent of telephone faults cleared by next working day	Percentage of PSTN faults reported that have been corrected by the end of the next working day. (i.e., not including non-working days (e.g., weekends, holidays)). If necessary, use the data of the largest operator measured by number of main lines.
23	1311m	Local telephone traffic (minutes)	Local telephone traffic consists of effective (completed) fixed telephone line traffic exchanged within the local charging area in which the calling station is situated. This is the area within which one subscriber can call another on payment of the local charge (if applicable). This indicator should be reported in the number of minutes. If the indicator is reported in calls or meter units (pulses), then an appropriate conversion figure to minutes of traffic should be supplied.

³ It is intended to refine this indicator and extend its parameters by for example including the number of terminals available. For additional information see http://www.itu.int/ITU-D/ict/WICT02/doc/pdf/Doc11_E.pdf

	ITU code ²	Indicator	Definition
23.1	1313wm	Fixed to mobile traffic (minutes)	Total incoming minutes to mobile cellular subscribers from fixed network.
24	1312m	National trunk telephone traffic (minutes)	National trunk (toll) traffic consists of effective (completed) fixed national telephone traffic exchanged with a station outside the local charging area of the calling station. The indicator should be reported as the number of minutes of traffic.
25.1	132m	International outgoing telephone traffic (minutes)	This covers the effective (completed) traffic originating in a given country to destinations outside that country. The indicator should be reported in number of minutes of traffic.
25.2	132mi	International incoming telephone traffic (minutes)	Effective (completed) traffic originating outside the country with a destination inside the country. The indicator should be reported in number of minutes of traffic.
26.1	1311im	Dial-up Internet traffic (minutes)	The total volume in minutes of dial-up sessions over the public switched telephone network to access the Internet.
27	133wm	Outgoing mobile minutes	Total number of minutes made by mobile subscribers (including minutes to fixed and minutes to other mobile subscribers).
27.3	133sms	SMS	Number of mobile Short Message Service (SMS) sent.
28	22	International outgoing telegrams	The number of charged outgoing full rate telegrams originating in a given country with a destination outside the country. Should be measured as the number of telegrams rather than the number of words.
29	4214	International Internet Bandwidth (Mbps)	Total capacity of international Internet bandwidth in Mega Bits Per Second (Mbps). If capacity is asymmetric (i.e., more outgoing than incoming or more incoming than outgoing), provide the outgoing capacity.
30		Public data traffic (non-Internet)	Traffic from public data services such as X25 and frame-relay (but excluding Internet) measured in megabytes per second (Mbytes).
		Fixed telephone	
31.1	151	Connection fee for residential telephone service	Installation refers to the one-off charge involved in applying for basic telephone service. Where there are different charges for different exchange areas, the charge for the largest urban area should be used and specified in a note. Where there are different installation charges for residential and business consumers or for first and subsequent lines, these should be stated separately.
31.2	152	Monthly subscription for residential telephone service	Monthly subscription refers to the recurring fixed charge for subscribing to the PSTN. The charge should cover the rental of the line but not the rental of the terminal (e.g., telephone set) where the terminal equipment market is liberalized. Separate charges should be stated where appropriate, for residential and business subscribers or for first and subsequent lines. If the rental charge includes any allowance for free or reduced rate call units, this should be indicated. If there are different charges for different exchange areas, the largest urban area should be used and specified in a note.
31.3	153	Price of a 3-minute fixed telephone local call (peak rate)	Local call refers to the cost of a peak rate 3-minute call within the same exchange area using the subscriber's own terminal (i.e., not from a public telephone).
31.4	153o	Price of a 3-minute fixed telephone local call (off-peak rate)	Local call refers to the cost of an off-peak rate 3-minute call within the same exchange area using the subscriber's own terminal (i.e., not from a public telephone).
32		National call prices	This is the cost of a 3-minute direct dialed (i.e., without operator intervention) call within the country but outside the local exchange area. The rate should be supplied for peak rate time calls and off-peak (discount) rate calls (if applicable). The cost should be reported in national currency, with a statement on what taxes are applied.
33		International call prices	This is the cost of a 3-minute direct dialed (i.e., without operator intervention) call from a destination within the country to a destination outside the country. The rate should be supplied for peak rate time calls and off-peak (discount) rate calls (if applicable). The cost should be reported in national currency, with a statement on what taxes are applied.

	ITU code ²	Indicator	Definition
		Mobile cellular	
34.1	151c	Mobile cellular connection charge	The initial, one-time charge for a new subscription. Refundable deposits should not be counted. Although some operators waive the connection charge, this does not include the cost of the Subscriber Identify Module (SIM) card. The price of the SIM card should be included in the connection charge. It is preferable to use the connection charge for pre-paid service to enhance inter-country comparability. A note should indicate whether taxes are included (preferred) or not.
34.2	152c	Mobile cellular monthly subscription	The monthly subscription charge for mobile cellular service. Due to the variety of plans available in many countries, it is preferable to use pre-paid tariffs. In that case, the monthly subscription charge would be zero. However in some countries, a monthly air time charge is applied even for pre-paid service. If so, that amount should be used. A note should indicate whether taxes are included (preferred) or not. The note should also specify the amount of free monthly minutes included if applicable.
34.3	153c	Mobile cellular - price of 3 minute local call (peak)	The price of a <u>three</u> minute peak rate local call from a mobile cellular telephone. If operators charge different prices depending on who is being called (e.g., same mobile network, fixed network, another mobile network) these should be listed separately. In order to enhance inter-country comparability it is preferable to use pre-paid tariffs. A note should indicate whether taxes are included (preferred) or not.
34.4	153co	Mobile cellular - price of 3 minute local call (off-peak)	The price of a three minute off-peak rate local call from a mobile cellular telephone. If operators charge different prices depending on who is being called (e.g., same mobile network, fixed network, another mobile network) these should be listed separately. In order to enhance inter-country comparability it is preferable to use pre-paid tariffs. A note should indicate whether taxes are included (preferred) or not.
34.5	153sms	Mobile cellular – price of SMS	Price of sending a national Short Message Service (SMS) message from a mobile handset.
35		Leased line charges	Connection charge and monthly rental charge. Costs should be specified for different speeds (e.g., 2.4, 4.8, 9.6, 19.2, 56/64 kbit/s and 1.5/2.0 Mbit/s) and different distances
36		Data communication charges	Connection, monthly rental charge and call set-up charges for packet-switched data communication.
37		Internet charges	Connection, monthly rental and usage charges for Internet access service. This should be provided for both dial-up and broadband service (e.g., DSL and/or cable modem service). If additional charges are payable for telephone usage for dial-up use, this and the amount should be specified in a note. A note should indicate whether the subscription includes free hours and/or is flat-rate.
38	51	Full-time telecommunication staff	Full-time staff employed by telecommunication network operators in the country for the provision of public telecommunication services. Part-time staff should be expressed in terms of full-time staff equivalents. As far as possible, staff not working principally for the provision of telecommunications services (e.g., those working in postal services or broadcast operations) should be excluded.
38.1	51f	Female telecommunication staff	The number of full time telecommunication staff that are female.
38.2	51w	Mobile communications staff	Total number of staff employed by mobile cellular network operator. This refers to mobile operators building infrastructure and not staff employed by resellers.

	ITU code ²	Indicator	Definition
39	75	Total revenue from all telecom services	This is the total telecommunication revenue earned. This should exclude revenues from non-telecommunications services. Revenue (turnover) consists of telecommunication service earnings during the financial year under review. Revenue should not include monies received in respect of revenue earned during previous financial years, neither does it include monies received by way of loans from governments, or external investors, nor monies received from repayable subscribers' contributions or deposits.
40	71	Revenue from telephone service	Revenue received from fixed telephone connection, subscription and calls.
40.1	711	Income from telephone connection charges	Revenue received for connection (installation) of telephone service. This may include charges for transfer or cessation of service.
40.2	712	Income from telephone subscription charges	Revenues from recurring charges for subscription to the PSTN including equipment rentals where relevant.
40.3	7131	Income from local calls	Revenue from local calls.
40.4	7132	Income from national long distance calls	Revenue from national long distance calls.
40.5	7133	Income from international calls	This should include charges received from subscribers for placing outgoing calls, after deduction of the share of this income to be paid to other organizations for outgoing telecommunication traffic (operators of the incoming and possibility transit countries) and after inclusion of income received from foreign telephone operators for completing calls originating in a foreign country. Payments from and to foreign telecommunication operators should be listed separately.
41	731	Revenue from data transmission	Revenues from data services such as data communications (e.g., packet switching) and Internet access but not telegram or telex.
42	732	Revenue from leased circuits	Revenue from the provision of leased lines (circuits).
43	741	Revenue from mobile communications	Revenues from the provision of all types of mobile communications services such cellular, private trunked radio and radio paging.
44	74	Other revenue	Any other revenues not accounted for elsewhere for the provision of public telecommunication services. Responders should indicate in a note what are the main sources or "other" telecommunications revenues.
45		Value-added from telecommunications	Represents the revenue generated by telecommunication service sector out of which is paid wages and salaries, the cost of capital investment and financial charges, before arriving at a figure for profit.
			Investment
46	81	Annual investment in telecom	The annual investment for acquiring property and plant. The term investment means the expenditure associated with acquiring the ownership of property (including intellectual and non-tangible property such as computer software) and plant. These include expenditure on initial installations and on additions to existing installations where the usage is expected to be over an extended period of time. Also referred to as <i>capital expenditure</i> .
46.1	83	Telephone service investment	Annual investment on equipment for fixed telephone service.
46.2	841m	Mobile communication investment	Capital investment on equipment for mobile communication networks.