Agenda



Welcome and Introduction •

Presentation of the questionnaire to collect country data on HH indicators

Q&A and Interactive Discussion

Closing remarks

- Objectives, Expected outcomes, Agenda
 Overview of the questionnaire and survey metadata
- Guidelines for uploading questionnaire files
- Guidelines for calculating ICT skills
- Questions...? About the survey design, best practices, etc.
- Share your good practices!

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Summary & Key takeaways





Technical Webinar on Indicators on ICT access and use by households and individuals Clinic on submitting the ITU household questionnaire 27 March 2025

Overview of questionnaire, submission of contact information and survey metadata

Viviana Umpierrez, Statistician International Telecommunication Union (ITU) ICT Data and Analytics Division



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How to measure ICTs?

Demand-side data

Source: National Statistical Offices



Supply-side data

Telecom operators Source: Regulators/ Ministries



- Core ICT indicators approved by the UN Statistical Comission

Key aspects of the Household questionnaire





Household Data Collection Schedule 2025



Questionnaire Overview





Includes indicators related to the Sustainable Development Goals



Contact Information



• Contact information is important because it <u>is the only way</u> the ITU can reach the country regarding ICT household-related queries.



Survey Information





General Survey Information

- Metadata is important to be completed at the highest level of detail to ensure transparency, quality, and to enable coherent analysis and meaningful comparisons of the country's progress over time.





Survey Information



Survey type: Data collected through what type of survey? ICT standalone survey or as a module in another survey or census?

Collection technique: How do enumerators record responses? Key indicator for understanding potential survey limitations and changes affecting comparability over time.

Sampling unit: Are both households and individuals sampled?

Frequency of survey: Is the survey conducted annually? Less frequently? Essential to understand data collection trends, policy priorities

Selection of the person replying to the individual level ICT questions: Randomly selected? Head of household replied for all? Important to identify possible differences among countries



Detailed Survey Information



Sampling frame: the basis for sample extraction. like a household register or census, noting inaccuracies like undercoverage and duplication.

Sampling design: includes stratification, stages, coverage, and criteria like geographic scope and household characteristics. Indicate if strata are subnational.

Response rate: the percentage of units that responded, broken down by unit type, main variables (e.g., Internet access), and major disaggregations (e.g., gender, urban/rural, age groups).

Non-response treatment: indicate if imputations were made for non-response, including all treatments, e.g., imputation rules for units and items/variables.

Weighting methods: includes any final benchmarking/post-stratification against independent estimates

Non-sampling errors: covers actions to minimize these errors and known biases (e.g., non-response, frame errors, questionnaire bias)



Detailed Survey Information



Sampling size (design): number of statistical units included in the sample design.

Sampling size (effective): number of statistical units effectively included in the sample, if different from the design sample.

In-scope households: Describe the target population characteristics (e.g., all households, households with members aged 15-74), especially any major scope or coverage limitations.

In-scope individuals for individual level ICT questions: contains three questions: (1) Minimum age of in-scope individuals; (2) Maximum age of in-scope individuals (leave blank if no maximum); and (3) Other relevant information on in-scope individuals.

Reference period for individual-level ICT questions: Specify the number of recent months used as a reference. Leave blank if no reference period is used. If the reference period varies by question, provide details in the notes for the corresponding indicators.



In summary for the Survey metadata

- It is essential to provide the survey information in the most complete manner possible.
- Contact information is important because it <u>is the only way</u> the ITU can reach the country regarding ICT household-related queries.
- Survey metadata is important to be completed at the <u>highest level of detail</u> to ensure transparency, quality, and to enable coherent analysis and meaningful comparisons of the country's progress over time.



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Questionnaire upload

Nathan Menton, Statistician International Telecommunication Union (ITU) ICT Data and Analytics Division





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Data submission

New questionnaire schedule

- **Detailed questionnaire** can be submitted in March or September
- Short questionnaire is discontinued

Questionnaire overview

- All data from same household survey
- Provide numbers of households or individuals NOT percentage shares
- Reference period: last three months
- Notes are required where definitions differ from ITU recommendations
- Except for data disaggregated by age (sheet 2b in the Excel), notes are not required regarding age-scope

Questionnaire is in English - translations available on ITU website



Data requested

Household core indicators

- 23 core household indicators
- Most comprised of multiple sub-questions

Disaggregations

- Household level: Urban/rural, household composition
- Individual level: Urban/rural, age, educational attainment, labour force status, occupation, each also disaggregated by gender

ICT skills

- **NEW** ICT skill levels by skill area and overall
- No new questions required, existing microdata can be used
- ITU household questionnaire restructured

https://www.itu.int/en/ITU-D/Statistics/Pages/publications/manual.aspx



Survey Completion

QUESTIONNAIRE UPLOAD

The ITU ICT Household Long Questionnaire requests data on detailed ICT indicators. <u>Please indicate the</u> <u>number of households or individuals rather than percentage shares for each indicator</u>. The reference pe for all indicators in this questionnaire is the **last 3 months**.

100%

You may add any metadata regarding the data points in the Notes, e.g. anything relating to differing definitions, methodology, or time periods. Notes are not needed where definitions are the same as those the <u>Manual for measuring ICT access and use by households and individuals</u>. Notes related to the in-sco ages are also not needed as this information has already been captured in the earlier responses to the survey information section of the questionnaire. Please note that questions related to ICT skills have been revised from the 2020 Manual according to recent EGH recommendations.

Data can be submitted in either of the following options:

• Using the following downloadable questionnaire: <u>ITU Households Questionnaire 2025</u>. **NOTE: If you choose this option the downloadable questionnaire** <u>MUST</u> **be used to provide data**.

Questionnaire results

Tabular Excel format

- Data must be submitted using the downloadable questionnaire (or version from <u>ITU website</u>)
- Benefits: Simple way to view and review data
- Disadvantages: Can be time-consuming to complete

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	The nur	bers included here should be population estimates (i.e. weighted sampling values).					The numb	ers incl
	For def	nitions and further information on the indicators see the ITU Manual for Measuring ICT A	E E	or defin	itions and f	urther in	formation of	on the
						Geno	ler	
	No.	Indicators	All individ	luals				
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			Value	Note	Value	Note	Value	Note
		TOTAL TARGET POPULATION						
	TOTAL T	IRC (NUMBER OF IN-SCOPE INDIVIDUALS):						
	HH5	Number of individuals who used a computer (from any location) in the last three months						
COMPUTER		Desktop						
COMPUTER		Laptop (portable) computer						
		Tablet (or similar handheld computer)						

International Telecommunit Union

22 23 24 Questionnaire on Information and Communication Technology (ICT) Access and Use by Households and Individuals

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Questionnaire results

Tabular Excel format

- Worksheets for each disaggregation household/individual data also in separate worksheets
- Note definitions in a separate sheet note code to be used across sheets in Note column
- Validation macro available
 - Checks that shares of totals are not greater than 100%
 - Checks that sums of disaggregations are not greater than totals



• Using a csv format. You may download a template with example data, the codebook, and an example of how ICT skill levels should be calculated through the below links.

- <u>CSV file</u> (template)
- Code description
- ICT skills calculations (example)

The csv file should contain data under the following headings:

Code ID	Country	DataYear	Value	Notes
CodelD (from code	Country name	Year of data	Numeric value (totals not	Text describing differing definitions,
description file)	Country name	Year of data	percentages)	methodology, or time periods.

Questionnaire results

Flat file submission

- Alternative simple submission option via csv - requires only simple mapping of country indicator codes to ITU codes
- Five headings required are provided in a template (Note: use CodeID not Code)
- **Benefits**: One-time mapping simplifies future submissions
- **Disadvantages**: Cannot visually confirm mapping is correct or detect logical errors
 - *Future plans*: Online tool for countries to self-validate data submissions

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						Geographic	composition (children		Age		n Labour force	
le → [↑] Code	22_HHCRural_HHCN	1210	Basecode HHU422	 Basecode Descri Number of individu 	ption Tindicat als who used a computer (from any HH5	 designation Rural 	under 15) Total	Gender Male	group Total	 Ievel Total 	status Total	Occupation * Total
5942 HHU4	22_HHCRural_HHCF	emale	HHU422		als who used a computer (from any HH5 als who used a computer (from any HH5	Rural	Total	Female	Total	Total	Total	Total
5943 HHU4	212_HHTotalIndividu	al	HHU4212		als who used the internet (from any HH7	Total	Total	Total	Total	Total	Total	Total
	212_HHCMale 212_HHCFemale		HHU4212 HHU4212		als who used the internet (from any HH7 als who used the internet (from any HH7	Total Total	Total Total	Male Female	Total Total	Total Total	Total Total	Total Total
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71 72 6	1004	CountryX	2022	10000	This is a note	Total	Total	Male	Total	Total	Total	Total
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Flat file format

- Code description file provides a guide to mapping national indicator codes to ITU codes
- Mapping can be done in R, Python or other database tools
- Sample mapping framework
 - Questions or indicators mapped to
 Basecode (~170 unique basecodes)
 - Mapping socio-economic questions to socio-economic columns (e.g. Gender, Age group) or directly to suffixes (e.g. _HHCMale, _HHC15to24)

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Guidelines for calculating ICT skill levels

Nehal DESAI, Statistical Assistant International Telecommunication Union (ITU) ICT Data and Analytics Division







How to calculate the ICT SKILLS aggregates for individuals

1. Skill levels assessed by five skill areas

2. Skills levels converted to overall skill indicator



5 skills areas that form digital competence





Digital Skills Toolkit



Information and data literacy

Verifying the truthfulness of information found online

Finding information about goods or services

Accessing news or books in a digital format

Finding health information

Communication and collaboration

Sending content in messages

Making calls (telephoning over the Internet/VoIP)

Participating on social networking platforms

Taking part in consultations via the Internet to define civic or social issues

Digital content creation

Editing text documents, spreadsheets or presentations using digital tools

Duplicating or moving data, information and content in digital environments

Creating content combining different digital media

Using spreadsheet software

Programming or coding in digital environments

Safety

Taking security measures to protect devices and online accounts

Taking measures to protect privacy on your device, account or app

Problem solving

Connecting new devices

Installing software or apps

Using Internet or mobile banking

Doing an online course or accessing online learning material

Purchasing or ordering goods or services

1. Skills levels assessed by five skill areas





Method of aggregation

Skill levels assessed for each individual by skill area

Based on number of activities within skill

Skill level	# of activities
None	0
Basic	1
Above basic	> 1

- Not assessed in skill areas where fewer than two activities collected
- Weighted **equally** within each skill area

Benefits

- More diverse activities included → More comprehensive measure of ICT skills
- **Direct measurement** of the share of **individuals** with different levels of skills
- Requires no additional data collection (additional activities already in core list of ICT indicators)

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В	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	1.50		1	1	1 1	1		B B	В	В	В
С	1	0	0	1	1	0	0	1	1	0	0	1	0	1	0	1	0	0	1	1	1.25		2	2 2	2 1	3	1	AB AB	3 AB	В	AB
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Total Share	5.83 65%	3.08 34%		2.25 25%	4.5 50%	1.25 14%	1.75 19%	4.25 47%	4.5 50%	1.75 19%	1 11%	2.25 25%	0 0%	5.08 56%	1 11%	4.08 45%	1.75 19%	1.5 17%	2.25 25%	3 33%											

Criteria 2:	None	Basic	Above basic
Citteria 2.	0 activities	1 activity	More than 1 activity

	Raw data													Sur sco			aw			ores ted t	o lev	vels J				
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Raw scores converted to levels

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Person	INFO	SOM	CONT	SAFE	PROB	INFO	SOM	CONT	SAFE	PROB
A	4	3	4	2	4	 AB	AB	AB	AB	AB
B	1	1	1	1	1	В	В	В	В	В
С	2	2	2	1	3	AB	AB	AB	В	AB
D	2	3	2	0	2	AB	AB	AB	Ν	AB
E	2	0	0	1	1	 AB	Ν	Ν	В	В
F	0	1	0	0	1	N	В	Ν	Ν	В
G	0	1	0	0	0	Ν	В	Ν	Ν	Ν
Н	0	0	0	0	0	Ν	Ν	Ν	Ν	Ν

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Criteria 2:	None	Basic	Above basic
Citteria 2.	0 activities	1 activity	More than 1 activity

Levels converted to Y/N

Person	INFO	coM	CONT	SAFE	PROB	Basic	Above basic	PRC	Above basic						
A	4	3	4	2	4	0	1	0	1	0	1	0	1	0	1
В	1	1	1	1	1	1	0	1	0	1	0	1	0	1	0
с	2	2	2	1	3	0	1	0	1	0	1	1	0	0	1
D	2	3	2	0	2	0	1	0	1	0	1	0	0	0	1
E	2	0	0	1	1	0	1	0	0	0	0	1	0	1	0
F	0	1	0	0	1	0	0	1	0	0	0	0	0	1	0
G	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
н	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Criteria 2:	None	Basic	Above basic			
Citteria 2.	0 activities	1 activity	More than 1 activity			

2. Skills levels converted to overall skill indicator



EGH recommendations

- EGH agreed that countries collecting data on the 5 skill areas should calculate overall digital skill levels for individuals
- Countries collecting data for only 3 or 4 of the skill areas encouraged to calculate overall skills levels for use at the national or local level

Category	Definition
Above basic skills	Above basic skills in all five areas
Basic skills	At least basic skills in all five areas - can be basic or above basic, but not all five at above basic
4 of 5	<i>Basic</i> or <i>above basic</i> in any four areas and no skills in one area (at least basic in four of five areas).
3 of 5	<i>Basic</i> or <i>above basic</i> in any three areas and no skills in two areas (at least basic in three of five areas).
2 of 5	<i>Basic</i> or <i>above basic</i> in any two area s and no skills in three areas (at least basic in two of five areas).
0-1 of 5	No skills in four or five area s (at least basic in one or fewer of five areas).

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Levels converted to Y/N

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	IN	0	CO	М	CO	NT	SA	FE	PR	OB				OVER	ALL		
Person	Basic	Above basic	Sampling weight	0-1 out of 5	2 out of 5	3 out of 5	4 out of 5	Basic	Above basic								
A	0	1	0	1	0	1	0	1	0	1	1.00	0	0	0	0	0	1
B	1	0	1	0	1	0	1	0	1	0	1.50	0	0	0	0	1	0
С	0	1	0	1	0	1	1	0	0	1	1.25	0	0	0	0	1	0
D	0	1	0	1	0	1	0	0	0	1	0.75	0	0	0	1	0	0
E	0	1	0	0	0	0	1	0	1	0	1.33	0	0	1	0	0	0
F	0	0	1	0	0	0	0	0	1	0	0.50	0	1	0	0	0	0
G	0	0	1	0	0	0	0	0	0	0	2.00	1	0	0	0	0	0
н	0	0	0	0	0	0	0	0	0	0	0.67	1	0	0	0	0	0
Total	1.5	4.3	4.0	3.0	1.5	3.0	4.1	1.0	3.3	3.0		2.7	0.5	1.3	0.8	2.8	1.0
Share	17%	48%	44%	33%	17%	33%	45%	11%	37%	33%		30%	6%	15%	8%	31%	11%

Criteria 2:	None	Basic	Above basic			
Citteria 2.	0 activities	1 activity	More than 1 activity			

When you have finished preparing these data, please upload your questionnaire or csv file using the button below.

Drop files or click here to upload

Please provide the survey year for which data are provided in this questionnaire and then select Save and continue.

If you would like to submit data for an additional year(s) please contact ITU (indicators@itu.int).

Survey year



	Do you expect to have new of	updated data on ICI acces	s and use by househo	lds and individuals that can be s
	in September 2025? <u>If you se</u>		,	
	O Yes			
	O No			
2	O Unsure			
	You have uploaded:			
	File name	File size (bytes)	Survey year	
	ITU_Households_Questionnaire_2025.xls	7009792	2023	

If you feel comfortable about the answers you have provided, please select Submit to finish the questionnaire.

Questionnaire submission

Submitting questionnaire

- Drag and drop completed file csv or tablular
 Excel Survey year must be entered
- If respondents do not expect new or updated data they will not be contacted in September
- Confirmation of uploaded file and data year provided prior to submitting questionnaire
- Automated thank you message with all responses sent post-submission
- ITU to follow up if any clarification needed

Thank you for your attention!

For questions and feedback: indicators@itu.int

For more information on the revised ICT skills indicators: <u>https://www.itu.int/en/ITU-</u> <u>D/Statistics/Documents/publications/manual/ITU_HHManual_ICTskills_rev2025.pdf</u>

Report of the EGH subgroup available here: <u>https://www.itu.int/itu-d/meetings/egh2024/wp-</u> <u>content/uploads/sites/28/2024/09/EGH2024_ICTSkillsReport.pdf</u>

