SDG Goal 4	**Quality education**
SDG Target 4.4	**By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship**
SDG Indicator 4.4.1	**Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill**
Time series	**Share of population with computer-related activities**

1. General information on the time series

- Date of national metadata: 18 February 2022
- National data: http://sdg-indikatoren.de/en/4-4-1/
- Definition: The time series measures the percentage of individuals who have been
  - copying or moving a file or folder at a computer
  - using copy or cut and paste tools to duplicate or move information on screen
  - using spreadsheet's advanced functions to organise and analyse data, such as sorting, filtering, using formulas or creating charts
  - connecting and installing new devices, e.g. a printer or a modem
  - installing software or applications (apps)
  - creating electronic presentations with presentation software (including text, images, sound, video or charts)
  - transferring files between a computer or other devices
  - writing code in a programming language.

  The period in which the activities indicated were carried out varies with the reporting year: Up to and including 2019, the questionnaire asked for activities in the last 12 month whereas from 2021 onwards, only the activities of the past three months are taken into account.
- Disaggregation: age group; activities

2. Comparison with global metadata

- Date of global metadata: August 2021
- Global metadata: https://unstats.un.org/sdgs/metadata/files/Metadata-04-04-01.pdf
- The time series is compliant with the global metadata. However, up to the reporting year 2021 the information is for the entire reporting year and not for the last three months as required by the metadata.

3. Data description

- The data is derived from Eurostat's annual model questionnaire on ICT (Information and Communication Technologies) usage in households and by individuals. As from 2021 the questionnaire is part of the microcensus. Due to the extensive methodological changes involved, a comparison of the content of the results for 2021 with previous years is only possible to a very limited extent (time series break).

  The microcensus is an inquiry directed to households, designed to obtain information on the labour market and related issues with a sample of 1%. The microcensus is designed as a multi-topic survey, integrating many different subject fields.
  The survey population includes: persons in private households and collective households at their main and secondary place of residence.
  The survey population does not include: members of foreign armed forces as well as foreign diplomatic representations with their family members. Persons without a place of residence (homeless people) have no chance of being covered in the microcensus.

4. Accessibility of source data

- Individuals' level of computer skills - Eurostat table [isoc_sk_cskl_i]: https://ec.europa.eu/eurostat/databrowser/view/isoc_sk_cskl_i/default/table?lang=en
- Individuals' level of computer skills (2021 onwards) - Eurostat table [isoc_sk_cskl_i21]: https://ec.europa.eu/eurostat/databrowser/view/isoc_sk_cskl_i21/default/table?lang=en

5. Metadata on source data

- Eurostat metadata on individuals' level of computer skills: https://ec.europa.eu/eurostat/cache/metadata/en/isoc_i_esms.htm

6. Timeliness and frequency

- Timeliness: t + 2 months
- Frequency: Irregular

7. Calculation method

- Unit of measurement: Percentage
- Calculation method:

$$\textbf{Share of population with computer - related activities}_{i,k} = \frac{\text{Persons in age group } i \text{ having performed activitie } k \text{ [number]}}{\text{Persons interviewed in age group } i \text{ [number]}} \cdot 100\,[\%]$$

$i \in$ {Total (16 to under 75 years); 16 to under 25 years; 25 to under 65 years}
$k \in$ {Copying or moving of files and folders;
Using copy or cut and paste tools to duplicate or move information on screen;
Writing code in a programming language;
Connecting and installing new devices, eg a printer or a modem;
Transferring files between computer and other devices;
Installing software or apps;
Creating electronic presentations with presentation software,
including e.g. images, sound, video or charts;
Using spreadsheet`s advanced functions to organize and analyze data,
such as sorting, filtering, using formulas, creating charts}