

COMMISSION IMPLEMENTING DECISION (EU) 2023/1353**of 30 June 2023****setting out key performance indicators to measure the progress towards the digital targets established by Article 4(1) of Decision (EU) 2022/2481 of the European Parliament and of the Council**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Decision (EU) 2022/2481 of the European Parliament and of the Council of 14 December 2022 establishing the Digital Decade Policy Programme 2030 ⁽¹⁾, and in particular Article 5(1) thereof,

Whereas:

- (1) In accordance with Article 5(1) of the Decision (EU) 2022/2481, key performance indicators (KPIs) are to be used to monitor progress of the Union against the digital targets set out in Article 4 of that Decision. The same KPIs should be used to measure the underlying trends at national level. The indicators in the Digital Economy and Society Index (DESI), as defined in Article 2, point (1), of Decision (EU) 2022/2481, should include the KPIs set out in this decision. The process used in DESI to define indicators and collect data should be limited by this Decision.
- (2) The KPIs set out in this Decision reflect the best possible measurements of the progress towards the digital targets set out in Article 4 of Decision (EU) 2022/2481 at the moment of this act's adoption. Further analysis and verification of data collection mechanisms are necessary to assess whether in the future these KPIs should be modified to reflect the targets in a more comprehensive manner. In particular, one of the connectivity targets set out in Article 4(1), point (2)(a) of Decision (EU) 2022/2481 aims at ensuring that all populated areas are covered by a next-generation wireless high-speed network with at least 5G equivalent performance in accordance with the principle of technology neutrality. The related KPI in this Decision allow for the monitoring of progress towards such coverage considering 5G networks. The Commission acknowledges that such a KPI would not enable to track entirely the progress made by Member States towards the target using technologies other than 5G. The KPI has indeed been developed by the Commission on the basis of the data available at the moment of adoption of this Decision. To address this issue the Commission is undertaking further analysis to refine the measurement framework for connectivity and to define a measurable KPI that would make it possible to identify other 'next-generation wireless-high-speed networks' with at least such 5G equivalent performance, including in cooperation with the Body of European Regulators for Electronic Communications (BEREC). Moreover, further work is necessary to define KPIs that could reflect more comprehensively the targets set out in Article 4(1), points (2)(a), (2)(b) and (2)(c) of Decision (EU) 2022/2481, regarding gigabit connectivity, the production, in accordance with Union law on environmental sustainability, of cutting-edge semiconductors and climate-neutral highly secure edge nodes. The work on the KPI measuring gigabit connectivity will be undertaken in cooperation with BEREC.
- (3) The KPIs will also need to be adjusted or modified, when necessary, in view of technological developments, or socioeconomic changes, as well as to reflect possible changes of the targets set out in Article 4 of the Decision (EU) 2022/2481.
- (4) The measures provided for in this Decision are in accordance with the opinion of the Digital Decade Committee established by Article 23(1) of Decision (EU) 2022/2481,

HAS ADOPTED THIS DECISION:

*Article 1***Subject matter**

This Decision sets out the key performance indicators (KPIs) based on which the Member States and the Commission shall measure the progress towards the digital targets established by Article 4(1) of Decision (EU) 2022/2481.

⁽¹⁾ OJ L 323, 19.12.2022, p. 4.

*Article 2***Key Performance Indicators**

1. The following KPIs shall be used to measure the progress towards the digital targets set out in Article 4(1) of Decision (EU) 2022/2481:

- (1) At least basic digital skills, measured as the percentage of individuals aged between 16 and 74 years old disaggregated by sex with “basic” or “above basic” digital skills in each of the following five dimensions: information, communication, problem solving, digital content creation and safety skills. It is measured based on the activities that individuals carried out during the previous three months ⁽²⁾; and gender convergence, measured as the percentage of women and men among those individuals with “basic” or “above basic” digital skills.
- (2) ICT specialists, measured as the number of individuals aged 15-74 who are employed as ICT specialists; and gender convergence, measured as the percentage of women and men among those individuals employed as ICT specialists. In accordance with the ISCO-08 ⁽³⁾ code classification, ICT specialists are workers who have the ability to develop, operate and maintain ICT systems, and for whom ICT constitutes the main part of their job, including but not limited to ICT service managers, ICT professionals, ICT technicians, ICT installers and servicers.
- (3) Gigabit connectivity, measured as the percentage of households covered by fixed Very High-Capacity Networks (VHCN). The technologies considered are those currently able to deliver gigabit connectivity, namely Fibre to the Premises and Cable DOCSIS ⁽⁴⁾ 3.1. ⁽⁵⁾ The evolution of the Fibre to the Premises coverage will also be monitored separately and taken into consideration when interpreting VHCN coverage data.
- (4) 5G coverage, measured as the percentage of populated areas covered by at least one 5G network regardless of the spectrum band used.
- (5) Semiconductors, measured as value generated, in terms of revenues, by semiconductor activities in the Union, in all stages of the value chain, with respect to the global market value. For the first year, reporting will be done on the basis of those activities in Europe.
- (6) Edge nodes, measured as the number of compute nodes providing latencies below 20 milliseconds; such as an individual server or other set of connected computing resources, operated as part of an edge computing infrastructure, typically residing within an edge data centre operating at the infrastructure edge, and therefore physically closer to its intended users than a cloud node in a centralised data centre.
- (7) Quantum computing measured as the number of operational quantum computers or quantum simulators, including accelerators of High Performance Computing supercomputers, deployed and accessible to the user communities.
- (8) Cloud computing, measured as the percentage of enterprises using at least one of the following cloud computing services: finance or accounting software applications, enterprise resource planning (ERP) software applications, customer relationship management (CRM) software applications, security software applications, hosting the enterprise's database(s), and computing platform providing a hosted environment for application development, testing or deployment ⁽⁶⁾.

⁽²⁾ Defined following the Eurostat methodology reflecting the revised Digital Competence Framework (DIGCOMP 2.0), as also set out in the Commission Implementing Regulation (EU) 2022/1399 of 1 August 2022 specifying the technical items of the data set, establishing the technical formats for transmission of information and specifying the arrangements and content of the quality reports on the organisation of a sample survey in the use of information and communication technologies domain for the reference year 2023 in accordance with Regulation (EU) 2019/1700 of the European Parliament and of the Council.

⁽³⁾ International Standard Classification of Occupations 2008.

⁽⁴⁾ Data Over Cable Service Interface Specification

⁽⁵⁾ In addition to the analysis based on the KPIs, as defined in this Decision, Member States can present, in their national roadmaps, complementary data regarding fixed, wired and wireless technologies able to deliver gigabit connectivity.

⁽⁶⁾ As defined in Commission Implementing Regulation (EU) 2022/1344 of 1 August 2022 laying down the technical specifications of data requirements for the topic ‘ICT usage and e-commerce’ for the reference year 2023, and subsequent implementing regulations pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council (OJ L 202, 2.8.2022, p. 18), in particular Article 7(1) and Article 17(6) thereof.

- (9) Big data, measured as the percentage of enterprises analysing big data from any data source (internal or external) ⁽⁷⁾. As of the 2024 report, big data will be measured by the percentage of enterprises performing data analytics (internally or externally).
 - (10) Artificial intelligence, measured as the percentage of enterprises using at least one artificial intelligence technology ⁽⁸⁾.
 - (11) SMEs with at least a basic level of digital intensity, measured as the percentage of SMEs using at least 4 of 12 selected digital technologies ⁽⁹⁾.
 - (12) Unicorns, measured as the sum of unicorns referred to in Article 2, point (11)(a), of Decision (EU) 2022/2481 and those referred to in Article 2, point (11)(b), of that Decision.
 - (13) Online provision of key public services for citizens, measured as the share of administrative steps that can be done fully online for major life events. The following life events are considered: moving; transport; starting a small claims procedure; family; career; studying; health.
 - (14) Online provision of key public services for businesses, measured as the share of administrative steps needed to start a business and conduct regular business operations, which can be done fully online.
 - (15) Access to e-health records, measured as: (i) the nationwide availability of online access services for citizens to their electronic health records data (via a patient portal, or a patient mobile app) with additional measures in place that enable certain categories of people (e.g. guardians for children, people with disabilities, elderly) to also access their data, and (ii) the percentage of individuals that have the ability to obtain or make use of their own minimum set of health-related data currently stored in public and private electronic health-record (EHR) systems.
 - (16) Access to eID measured by two KPIs: (1) as the number of Member States that have notified at least one national eID scheme in accordance with Regulation (EU) No 910/2014 and (2) as the number of Member States that have provided access to secure privacy-enhancing eID via the European Digital Identity Wallet in accordance with the Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) No 910/2014 as regards establishing a framework for a European Digital Identity ⁽¹⁰⁾.
2. The KPIs set out in paragraphs 1 to 16 shall be based on data sources indicated in the Annex.
3. The KPIs set out in paragraphs 1 to 16 shall be included among the indicators monitored in the framework of the Digital Economy and Society Index (DESI).

Article 3

Entry into force

This Decision shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

⁽⁷⁾ As defined in the Commission Regulation (EU) 2019/1910 of 7 November 2019 implementing Regulation (EC) No 808/2004 of the European Parliament and of the Council concerning Community statistics on the information society for reference year 2020 (OJ L 296, 15.11.2019, p. 1), and subsequent implementing regulations pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council (OJ L 327, 17.12.2019, p. 1), in particular Article 7(1) and Article 17(6) thereof.

⁽⁸⁾ Idem 5.

⁽⁹⁾ As defined in the Commission Implementing Regulation (EU) 2021/1190 of 15 July 2021 laying down the technical specifications of data requirements for the topic 'ICT usage and e-commerce' for the reference year 2022, and subsequent implementing regulations pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council (OJ L 258, 20.7.2021, p. 28), in particular Article 7(1) and Article 17(6) thereof.

⁽¹⁰⁾ COM/2021/281 final.

Done at Brussels, 30 June 2023.

For the Commission
The President
Ursula VON DER LEYEN

ANNEX

Sources for data collection on the Key Performance Indicators

Basic Digital Skills	Eurostat – European Union Survey on the use of ICTs in Households and by Individuals
ICT specialists	Eurostat – Labour Force Survey
Gigabit connectivity	Commercial provider delivering a study for the Commission, on the basis of Member States' data, where available
5G coverage	Commercial provider delivering a study for the Commission, on the basis of Member States' data, where available
Semiconductors	Publicly available/subscription data provision
Edge nodes	Commercial provider delivering a study for the Commission
Quantum computing	Publicly available/subscription data provision
Cloud computing	Eurostat – European Union survey on ICT usage and e-commerce in enterprises
Big data	Eurostat – European Union survey on ICT usage and e-commerce in enterprises
Artificial Intelligence	Eurostat – European Union survey on ICT usage and e-commerce in enterprises
SMEs with at least a basic level of digital intensity SMEs	Eurostat – European Union survey on ICT usage and e-commerce in enterprises
Unicorns	Subscription data provision
Online provision of key public services for citizens and businesses	Commercial provider delivering a study for the Commission
Access to e- health records	Commercial provider delivering a study for the Commission
Access to eID	Commission services