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#### COMMISSION STAFF WORKING DOCUMENT

**Digital Decade 2025 country reports** 

Accompanying the document

Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee and the Committee of the Regions

State of the Digital Decade 2025: Keep building the EU's sovereignty and digital future

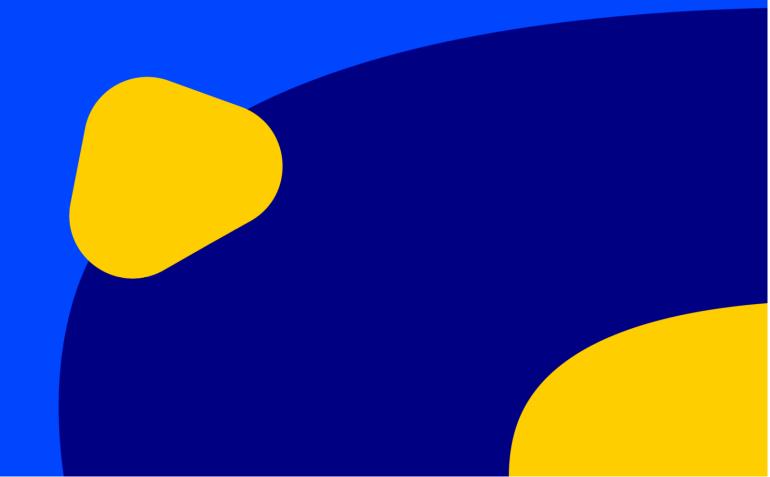
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# **DIGITAL DECADE 2025**COUNTRY REPORTS

**Hungary** 



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## **Executive summary**

Hungary boasts a very good digital infrastructure, but it still lags behind in the digitalisation of businesses despite recent progress, while access to e-Health records is above the EU average. Hungary shows a moderate level of ambition in its contribution to the Digital Decade having set 14 national targets, 43% of which are fully aligned with the EU 2030 targets. The country is following its trajectories well with 75% of them being on track (on the basis of the 2024 trajectories defined for all 8 KPIs analysed). Hungary addressed 13% of the 16 recommendations issued by the Commission in 2024 by making some changes through new measures.

In 2024, Hungary continued to make progress increasing broadband connectivity, expanding basic 5G coverage, and driving digitalisation in SMEs, in particular the adoption of cloud. However, significant challenges persist in the area of digital skills, especially in the adoption of advanced technologies such as AI by Hungarian enterprises. Hungary's digital policies are focused on improving digitalising key public services and boosting digital skills.

	Hungary				EU		Digital Decade target by 2030	
Digital Decade KPI <sup>(1)</sup>	DESI 2024 (year 2023)	DESI 2025 (year 2024)	Annual progress	National trajectory 2024 (3)	DESI 2025	Annual progress	ни	EU
Fixed Very High Capacity Network (VHCN) coverage	84.1%	86.0%	2.2%	86.0%	82.5%	4.9%	97.0%	100%
Fibre to the Premises (FTTP) coverage	76.2%	79.9%	4.9%	80.0%	69.2%	8.4%	95.0%	-
Overall 5G coverage	83.7%	85.6%	2.3%	70.0%	94.3%	5.9%	99.0%	100%
Edge Nodes (estimate)	8	16	100.0%	16	2257	90.5%	82	10000
SMEs with at least a basic level of digital intensity (2)	-	57.4%	5.4%	-	72.9%	2.8%	89.0%	90%
Cloud	37.1%	39.8%	7.2%	-	-	-	75.0%	75%
Artificial Intelligence	3.7%	7.4%	101.4%	7.5%	13.5%	67.2%	24.0%	75%
Data analytics	53.2%	-	-	-	-	-	75.0%	75%
Al or Cloud or Data analytics	65.6%	-	-	-	-	-	-	75%
Unicorns	0	0		-	286	4.4%	2	500
At least basic digital skills	58.9%	-	-	-	-	-	70.0%	80%
ICT specialists	4.2%	4.5%	7.1%	4.9%	5.0%	4.2%	8.3%	~10%
eID scheme notification		No						
Digital public services for citizens	73.4	77.7	5.9%	76.8	82.3	3.6%	96.3	100
Digital public services for businesses	74.9	80.0	6.9%	80.6	86.2	0.9%	97.2	100
Access to e-Health records	86.0	86.0	0.0%	94.3	82.7	4.5%	100.0	100

<sup>(1)</sup> See the methodological note for the description of the indicators and other metrics  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

(3) National trajectory value if present in the national roadmap and if the indicator was measured in DESI2025 (year 2024)

According to the 2025 special Eurobarometer on the Digital Decade, 81% of Hungarians consider that the digitalisation of daily public and private services is making their lives easier. On the action of the public authorities, 91% consider it important to counter and mitigate the issue of fake news and disinformation online. And on competitiveness, 90% consider it important to ensure that European companies can grow and become 'European Champions' capable of competing globally.

<sup>(2)</sup> DESI 2025 reports the version 4 of the Digital Intensity Index, that is comparable with the DII value from DESI 2023 (referring to year 2022) for the calculation of the annual progress. It is not comparable to the national trajectory that is based on version 3 of the index.

# A competitive, sovereign, and resilient EU based on technological leadership

Hungary is equipped with solid digital infrastructures and continued to progress on deployment. It should, however, focus more on the deployment of AI technologies. On infrastructures, Hungary is above the EU average for very high capacity networks (VHCN) and is also very close to the EU's average for 5G coverage. Despite the continued increase in the take-up of advanced technologies, most businesses, in particular SMEs, are not yet reaping all the benefits, due to a lack of digital skills. This in turn has a negative impact on the competitiveness of the economy. A new measure has been added to the updated national roadmap, focusing on the digitalisation of SMEs. Although Hungarian employees are less aware of their ICT security-related obligations compared to the EU average, enterprises in the country tend to experience less incidents related to cyberattacks. However, the recent hacking of Hungary's defence procurement agency (VBÜ) by foreign hackers, shows that Hungary could be victim to similar attacks in the future.

#### Protecting and empowering EU people and society

Hungary is focusing on further increasing at least basic digital skills among 16-74 year-olds, aiming to reach 70% by the end of the decade, driven by demographic impacts, public policy measures and projects. Although the new target is lower than the overall EU target, it is 10 percentage points higher than the commitment in the previous version of the Hungarian roadmap and is considered to be feasible within the scope of the existing measures. In terms of ICT specialists, Hungary is making progress, getting closer to the EU average. Hungary also plans to focus on improving gender convergence and the proportion of ICT graduates, in which Hungary is currently ahead of the EU average. Hungary has not yet notified an e-ID scheme to the Commission under the eIDAS regulation. The country plans to do so in the second half of 2025. This could also help to improve the currently stagnating indicator for eHealth and the slowly growing indicators for digital public services for citizens and for businesses.

## Leveraging digital transformation for a smart greening

Although, none of the measures planned in Hungary's national roadmap are specifically aimed at the green transition, they can contribute indirectly to the uptake of greener technologies due to the nature of digitalisation. Hungary also contributed with a best practice within the Green IT cluster of the Digital Decade's Best Practice Accelerator: all-year waste heat reuse solution of the country's Hungary's largest supercomputer, Komondor.

### National digital decade strategic roadmap

Hungary submitted a fully revised national Digital Decade roadmap on 16 May 2025, containing two additional measures and revised trajectories. It includes reporting on the consultation of stakeholders. It addresses a substantial number of roadmap recommendations issued in 2024. The updated roadmap has raised the national targets for fixed VHCN and at least basic digital skills and has provided a target value for fibre-to-the-promises (FTTP) coverage; however, these national targets are still below the EU-level targets set for 2030. Additionally, Hungary has increased the 2030 targets for Cloud and Data analytics to align them with the EU goals for 2030. The target set for the adoption of AI technologies continues to be significantly below the EU level target (75%), as Hungary aims at a 24% adoption rate by 2030. The revised roadmap continues to prioritise digital skills and digital

infrastructure. It contains of 44 measures with a budget of EUR 2.489 billion, comprising EUR 1.822 billion from public budgets (equivalent to 0.88% of GDP), with the EU being the major contributor towards the public budget. It still covers all objectives of the Digital Decade such as those relating to the competitiveness, sovereignty, leadership, and resilience, including cybersecurity.

#### Funding & projects for digital

Hungary allocates 29% of its total recovery and resilience plan to digital (EUR 1.7 billion)<sup>1</sup>. In addition, under cohesion policy, EUR 2.6 billion, representing 12% of the country's total cohesion policy funding, is dedicated to advancing Hungary's digital transformation<sup>2</sup>. Hungary is a member of the Alliance for Language Technologies European Digital Infrastructure Consortium (EDIC). Hungary is directly participating in the Important Project of Common European Interest on Next Generation Cloud Infrastructure and Services (IPCEI-CIS). Hungarian bodies are indirect and associated partners in the IPCEI on Microelectronics and Communication Technologies (IPCEI-ME/CT). Hungary is a participating state of the EuroHPC Joint Undertaking (JU) and of the Chips JU.

Hungary has contributed to the Best Practice Accelerator<sup>3</sup>, submitting three best practices, one in each of the Digital Skills, the Business Uptake and the Green IT clusters.

#### **Digital Rights and Principles**

According to a support study, Hungary has been relatively active in implementing the <u>European Declaration on Digital Rights and Principles</u>, with 71 initiatives overall and 2 new initiatives launched in 2024. Hungary is most active in the area of digital education, training and skills. Less activity has been identified with regards to interactions with algorithms and artificial intelligence systems. Measures in the area of putting people at the centre of the digital transformation appear to have most impact on the ground, in contrast to those addressing sustainability.

#### **Recommendations**

- **Digitalisation of SMEs:** Continue efforts through new support programmes and incentives to accelerate the digital transformation of SMEs, no matter what their size, and increase resources for existing schemes.
- **ICT specialists and advanced skills:** Closely monitor implementation of existing measures to boost the number of ICT specialists in the shorter term and continue measures to increase the percentage of women in ICT careers; increase efforts to reduce the cybersecurity skills gap.
- e-ID: Notify an e-ID scheme under the eIDAS Regulation to the Commission.
- Advanced technologies take-up: Support the adoption of advanced digital technologies (with a
  particular attention to AI and cloud) by enterprises via the creation of local ecosystems that
  enables technologies and best practices to be spread across the whole business sector.

<sup>&</sup>lt;sup>1</sup> The share of financial allocations that contribute to digital objectives has been calculated using Annex VII to the Recovery and Resilience Facility Regulation. Last data update: 16 May 2025.

<sup>&</sup>lt;sup>2</sup> This amount includes all investment specifically aimed at or substantially contributing to digital transformation in the 2021-2027 Cohesion policy programming period. The source funds are the European Regional Development Fund, the Cohesion Fund, the European Social Fund Plus, and the Just Transition Fund.

<sup>&</sup>lt;sup>3</sup> The Best Practice Accelerator (BPA) is a platform that enables Member States to share successful measures and challenges encountered in their efforts to meet their Digital Decade targets and objectives. Best practices are made available to Member States via the BPA Repository and showcased in regular workshops, currently focused on three thematic clusters: Digital Skills, Green IT, and the Uptake of Digital Technologies.

- Basic digital skills: Accelerate the country's efforts to bridge the digital divide by developing and
  investing in inclusion policies that focus on vulnerable groups, such as those with lower levels of
  formal education and those living in rural areas.
- **Cybersecurity:** Continue efforts to address evolving threats, particularly for enterprises and administration.
- **Digital public services:** Speed up the digitalisation of public services for citizens and businesses.
- e-Health: Make the data type of medical images available to citizens through the country's online access service, expand the availability of health data by onboarding public and private geriatric nursing homes, strengthen the authentication method for logging in to the online access service by using a notified or pre-notified eID scheme and ensure that all access modes comply with web accessibility guidelines.
- **Smart greening:** Support digital players to accelerate the transition of their network infrastructure to greener, less energy intensive solutions.

# A competitive, sovereign and resilient EU based on technological leadership

Hungary is equipped with strong digital infrastructures and is making good progress on deployment and on digitalising its businesses. Despite the recent increase in the take up of cloud and data analytics technologies, most businesses, in particular SMEs, are not yet reaping all the benefits of these digital technologies. This is due to a lack of digital skills, which has a negative impact on the competitiveness of the economy.

The Hungarian ICT sector represented 5.48% of the gross value added in 2022 <sup>4</sup>. This was smaller than the 2021 value, but slightly higher than the EU average of 5.46%. R&D in the ICT sector represented 15.12 % of total R&D expenditure by businesses and the number of R&D personnel in the sector made up 19.08% of total R&D personnel.

Hungary's digital economy and society index shows mixed results. While Hungary leads the EU in VHCN and FTTP coverage for all households and those in sparsely populated areas, it lags behind in overall 5G coverage and 5G spectrum assignment. Hungary's growth rates for VHCN, FTTP, and overall 5G coverage are lower than the EU's, but it outperforms the EU's growth rates for 5G coverage in the 3.4-3.8 GHz band.

According to the 2025 Eurobarometer<sup>5</sup>, 90% of Hungarian people think that building efficient and secure digital infrastructures and data processing facilities should be a priority for the public authorities.

#### Building technological leadership: digital infrastructure and technologies

Hungary' continued its progress in the roll-out of connectivity infrastructure and the country is on track to reach the targets set for both fibre and 5G networks. However, these targets set are slightly below the EU-level ones as, according to Hungary, the EU-level targets for 2030 cannot realistically be met.

#### Connectivity infrastructure

Hungary's VHCN coverage is 86% (2030 national target: 97%), after growth of 2.2% in 2024, and stands above the EU average of 82.49%. However, its annual growth rate is lower than the EU"s 4.9%. For households in sparsely populated areas, Hungary's coverage is also higher than the EU"s, at 75.9% in 2024, compared to the EU"s 61.89%. The annual growth rate of 8.3% is also lower than the EU"s 11.3%

Hungary's FTTP coverage is 79.86% (2030 national target: 95%), after growth of 4.9% in 2024, and stands far above the EU average of 69.24%. However, the growth rate of 4.9% is lower than the EU"s 8.4%. For households in sparsely populated areas, Hungary's FTTP coverage was 68.54% in 2024, above the EU"s 58.78%. The annual growth rate of 6.0% is lower than the EU"s 11.9%. The country provided a trajectory for FTTP coverage in the updated roadmap.

<sup>&</sup>lt;sup>4</sup> Most of the indicators mentioned in the country report are explained in the DESI 2025 Methodological Note accompanying the State of the Digital Decade report 2025

<sup>&</sup>lt;sup>5</sup> Special Eurobarometer 566 on 'the Digital Decade' 2025: <a href="https://digital-strategy.ec.europa.eu/en/news-redirect/883227">https://digital-strategy.ec.europa.eu/en/news-redirect/883227</a>

Hungary's 5G coverage is 85.6% (2030 national target: 99%), after growth of 2.3% in 2024, and is below the EU average (94.35%). The country is ahead of its national trajectory for 2024. The growth rate of 2.3% is lower than the EU''s 6.0%. For households in rural areas, Hungary's 5G coverage was 57.9% in 2024, below the EU''s 79.57%. The annual growth rate for this indicator was 0.7%, significantly lower than the EU's 11.9%. Hungary's 5G coverage in the 3.4–3.8 GHz band for all households was 53.4% in 2024, lower than the EU's 67.72%. The annual growth rate of 41.6% is higher than the EU's 32.6%. On 5G spectrum, Hungary's assignment of harmonized spectrum in 5G pioneer bands was 59.17% in 2025 (same value as 2024), below the EU's 74.63%.

In Hungary, fixed broadband take-up indicators are excellent, but the mobile ones are below the EU average. In 2023, 84.07% of fixed broadband subscriptions in Hungary were at speeds of 100 Mbps or higher, surpassing the EU's 65.9%. This figure rose to 88.36% in 2024, still ahead of the EU's 71.88%. However, the growth rate between 2023 and 2024 for this indicator in Hungary was 5.1%, which is lower than the EU's 9.1%, which is due to the fact that Hungary is ahead in terms of the development curve. For subscriptions at speeds of 1 Gbps or higher, Hungary is also ahead of the EU average. In 2024, Hungary's share reached 39.81%, while the EU's was 22.25%. However, Hungary's annual growth rate of 7.0% lagged behind the EU's 20.5%. The share of the population using 5G SIM cards in Hungary was 7.41% in 2023, lower than the EU's 21.7%. By 2024, this share increased to 20.79%, still below the EU's 35.56%. But Hungary's annual growth rate in this area was 180.6%, outperforming the EU's 63.9%.

#### **VHCN** and FTTP

As part of the updated roadmap submitted in 2025, Hungary increased its VHCN target to 97% and provided a target of 95% FTTP coverage with a completion date by 2030. The country is on track according to its national trajectory and given the latest figures and pace of roll-out, both targets seem realistic. These goals are expected to be achieved mainly through service providers' commitments and, where development would not be commercially viable, around 400 000 endpoints could be covered through state-funded programmes that are part of the measures in Hungary's roadmap. Cohesion policy, through the European Regional Development Fund (ERDF) contributes with 207,5 million EUR to broadband development, including 5G. All three major telecom operators in Hungary have already signed a strategic agreement with the government, committing to coverage targets set out in the National Digitalisation Strategy.

One of the incumbent operators, Magyar Telekom has already started to switch-off its copper network. The switch-off process is progressing on the basis of batches of municipalities that are already covered with fibre, but it has not set a target date for completion. Across the country, a massive migration to fibre subscriptions can be observed, which has been made possible by the widespread availability of the service. Operators are competing on infrastructure coverage as the first one covering an area with fibre usually gains a competitive advantage among consumers.

#### 5G

Following the roadmap adjustment, Hungary's 5G target remains at 99% with a completion date by 2030, as set out in the initial roadmap submitted in 2023. The country is on track according to its national trajectory and given the latest good figures and pace of roll-out, the target seems realistic.

The three operators continue to deploy 5G sites, but they follow different strategies on the use of the 3.6 GHz, the 700-800 MHz and 1.8-2.1 GHz bands.

**2024 recommendations on connectivity infrastructure**: (i) Sustain and increase efforts to ensure full gigabit and 5G coverage, in line with the EU level of ambition. (ii) Ensure sufficient access of new players to spectrum for innovative business-to-business (B2B) and business-to-consumer (B2C) applications and encourage operators to speed up the deployment of 5G stand-alone core networks.

In 2024, Hungary continued the implementation of existing measures but did not take any new measures. Despite Yettel switching to a 5G stand-alone service, the biggest barrier to the rollout remains the lack of available end-user devices. Due to the lack of demand from consumers, manufacturers are not bringing new devices to the market.

#### Semiconductors

Hungary does not currently have a significant domestic industry for semiconductor production. However, in future revisions of the Hungarian roadmap, the domestic commitment may change in the light of future market events.

#### Edge nodes

According to the Edge Node Observatory, Hungary is estimated to have deployed a total of 16 edge nodes by 2024, up by 100% from 2023. This is in line with the trajectory in Hungary's updated roadmap. However, Hungary maintains the position that it is not currently possible to determine the realistic number of edge nodes required to reach sufficiently low latency.

#### Quantum technologies

Hungary is involved in the preparation of the EuroHPC quantum computer development (EuroHPC Levente tender) and the national quantum communication network (QCIHungary). The QCIHungary project is laying the foundations for a national quantum communication infrastructure in Hungary, with the aim of contributing to the development of a wider pan-European quantum network. As part of the initiative, Hungary is implementing and testing a Quantum Key Distribution (QKD) system between Budapest and three cities in different directions from it (Győr, Nagykanizsa and Szeged), which will establish cross-border relations with Austria, Slovakia, Slovenia, Croatia and Romania. In addition, a metropolitan quantum network is being developed and tested in Budapest. One measure remains in the updated roadmap of Hungary, which strives to build a quantum computer by 2027 to support Hungarian education, R&D and industrial activities. The new supercomputer, Komondor, which was launched in 2023, is already operating at full capacity.

## Supporting EU-wide digital ecosystems and scaling up innovative enterprises

#### SMEs with at least basic digital intensity

In Hungary, 57.44% of SMEs had at least a basic level of digital intensity (2030 national target 89%) after average growth 5.4% annually between 2022 and 2024. Despite this growth, however, Hungary remained well below the EU average of 72.91%. The digitalisation of Hungarian SMEs is showing a positive trend but still lagging behind EU peers. Looking specifically at the top digitalised SMEs, only 22.24% of SMEs in Hungary reached a high or very high level of digital intensity, falling significantly short of the EU average of 32.66%. Overall, Hungary made progress in the digital intensity of its SMEs, but there is still room for improvement, particularly in advanced digital intensity. The data shows that Hungary's SMEs require stronger support to close the digital gap with the EU and reach the Digital Decade targets.

As part of the Digital Decade Best Practice Accelerator, Hungary has put in place a self-assessment tool for SMEs to measure their digital intensity as part of the Technology Uptake cluster. The tool aims to support reaching Digital Decade targets as companies applying for certain public programmes are expected to reach at least basic digital intensity by the end of their projects and those already at a basic level are expected to increase their intensity level by at least 1 point in line with Digital Intensity Index indicator criteria, which typically involves the adoption of an advanced technology. This digital intensity assessment method can be easily replicated by other EU Member States as the assessment is based on widely accepted indicators (Digital Intensity Index - DII) used by Eurostat. This ensures compatibility with EU-wide digitalisation strategies, with a methodology that is data-driven, transparent, and structured, making it adaptable to different national digital transformation programmes. While maintaining the core assessment criteria, Member States can modify specific indicators based on local industry needs and technological priorities.

Hungary still aims to have 89% of SMEs achieving basic level of digital intensity, which is slightly below the EU target for 2030. On the digitalisation of businesses, the updated roadmap sets out ambitious measures to ensure that the 2030 target will be reached, including a new measure called 'Develop the internet presence of local micro and small enterprises'. This new development programme - 'Every company should have its own website' - aiming at the development of the internet presence of the Hungarian micro and small enterprises. It is funded fully by the national budget and was launched at the end of 2024 with the involvement of Hungarian telecommunication and IT service providers.

**2024 recommendation on the digitalisation of SMEs**: Continue its efforts through initiating new supporting programmes and incentives- to support the digital transformation of SMEs and increase resources for existing schemes, including a focus on cloud adoption by SMEs.

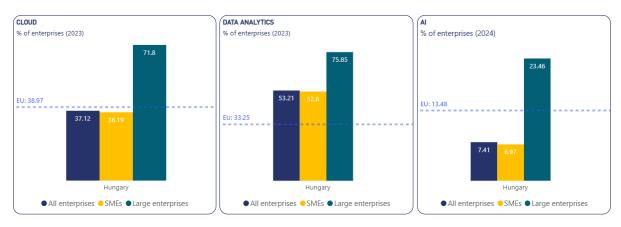
Hungary made some efforts to address the recommendation through new policy actions in 2024. To tackle the low digitalisation level of SMEs, Hungary set out a new measure 'Develop the internet presence of local micro and small enterprises', aiming to improve of the internet presence of Hungarian micro and small enterprises.

In 2024, five EDIHs were operating in Hungary, all funded under the Digital Europe Programme. These are the Agricultural European Digital Innovation Hub (AEDIH), the Artificial Intelligence European Digital Innovation Hub Hungary (AIEH), the Hungarian Data EDIH, the DigitalTech EDIH and the Establishing High Performance Computing European Digital Innovation Hub in Hungary (HPC EDIH HU).<sup>6</sup>

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<sup>&</sup>lt;sup>6</sup> The European Digital Innovation Hubs (EDIH) Network is the driving force behind Europe's digitalisation. EDIHs work as one-stop shops throughout all EU regions. <u>EDIH Catalogue | European Digital Innovation Hubs Network</u>

#### Take up of cloud/AI/data analytics



In 2024, 7.41% of Hungarian enterprises adopted AI (2030 national target is 24%) after growth of 101.4% in a year, doubling the 2023 value. Although this 101.4% growth rate is much higher than the EU level growth rate (67.2%), AI adoption in Hungarian enterprises is significantly below the EU average of 13.48%. SMEs had an AI uptake rate of 6.97%, whereas large enterprises had a higher rate of 23.46%. This resulted in a gap of 16.49 percentage points (pps) between SMEs and large enterprises, which was lower than the EU gap of 28.53 pps.

Adoption of cloud, data analytics, and the three technologies together were not measured in 2024.

In 2023, 37.12% of Hungarian firms adopted cloud technologies (2030 national target is 75%), which is being close to the EU average of 38.97%. However, SMEs exhibited a lower adoption rate of 36.19%, whereas 71.8% of large enterprises adopted advanced cloud services. This resulted in a gap of 35.61 pps in uptake between SMEs and large enterprises in Hungary, higher than the EU gap of 31.68 pps.

Data from 2023 showed that 53.21% of Hungarian firms adopted data analytics technologies (2030 national target is 75%), well above the EU average of 33.25%. 52.6% of SMEs adopted data analytics, but the uptake was considerably higher among large enterprises at 75.85%. There is a difference of 23.25 pps in uptake between SMEs and large enterprises, lower than the EU gap of 39.72 pps.

In 2023, when taking the three technologies together in 2023, 65.63% of enterprises in Hungary used either AI, cloud, or data analytics technologies, well ahead of the EU average of 54.7%. The uptake among SMEs was slightly lower than the national average, at 64.92%, while large enterprises had a markedly higher rate of 92.24%. There is a difference of 27.32 pps in uptake between SMEs and large enterprises in Hungary, which is lower than the EU gap of 32.97 pps.

Indicators on the adoption of cloud computing, data analytics, and AI technologies in Hungary showed mixed performance relative to EU averages, with a strong uptake of data analytics, a moderate levels of cloud adoption, and low uptake of AI. Large enterprises consistently reported significantly higher adoption levels across all technologies compared to SMEs. Despite SMEs making up the vast majority of enterprises in Hungary, their contribution to economic value added remains substantially lower than that of large enterprises. These findings highlight the need for targeted measures to bridge the digitalisation gap and boost the competitiveness of SMEs.

In its adjusted roadmap, based on the current rate of progress Hungary revised the national targets and trajectories for both cloud uptake and data analytics uptake, in order to reach the EU-level targets. The adjustment comes with updated trajectories for each technology. Following trends in recent data published in the last Digital Decade report, Hungary increased the cloud services adoption

target from 60% to 75%, and the data analytics target from 30% to 75%. The country did not change the target for AI adoption, which is 24%.

#### Cloud

In 2024, Hungary continued the implementation of existing measures but did not take any new measures. The implementation of the IPCEI-CIS in Hungary is progressing as planned. It will be possible to assess dissemination activities at a later stage. According to a study commissioned by IVSZ (Alliance of Digital Enterprises) titled Cloud Computing in Hungary: Economic Impact Study June 2024, companies in the logistics and warehousing sector are the most likely to use cloud services, while agriculture and mining are the least likely. The most significant barriers to technology in Hungary are lack of skills, lack of understanding, security concerns, budgetary constraints, regulatory obstacles and contractual obligations. According to the study's calculation, Hungarian companies using cloud services have an annual revenue per employee of nearly EUR 6 000 more than their competitors not using such services. Using this result, they examined the macroeconomic impact of cloud adoption over the next 10 years: a further increase in cloud usage in that period could add an average of 1.7%-2.7% to Hungary's GDP annually (as a percentage of the 2023 baseline).

#### Data Analytics

In Hungary, Act CI of 2023 on the system for the utilisation of national data assets and certain related services was adopted in December 2023, and entered into force in 2024. The legislation is a milestone in terms of the development of the data-based economy, as it institutionalizes those data utilization support services that aim to create safe, legal and controlled conditions for secondary data use (data reuse). The data utilisation support services provided by the National Data Asset Management Agency expand the data analysis opportunities available to businesses. Thereby the system not only supports state decision-making, but also contributes to increasing the competitiveness of enterprises, the responsible and targeted utilization of data assets, and the sustainable development of the digital economy.

#### Artificial Intelligence

The country is on track according to its national trajectory, but despite the strong progress over the last year, the adoption of AI among Hungarian enterprises remains limited and difficult especially for SMEs. Recent surveys highlight that one of the main barriers to AI adoption among micro and small enterprises is the lack of the necessary digital skills. The Hungarian government is currently updating its AI Strategy, originally developed in 2020 and it planned to be available by Q2 2025.

#### Unicorns, scale-ups and start-ups

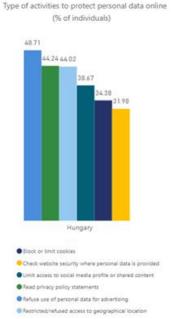
At the beginning of 2025, Hungary had no unicorns (2030 national target of two). There are no measures planned on unicorns in Hungary's updated roadmap. As there are two potential future unicorns have been identified in Hungary, the national target seems achievable.

### Strengthening Cybersecurity & Resilience

In Hungary, about 3 out of 4 people have a basic level of digital safety skills. 74.81% of individuals reported taking at least one action (see the six types of digital safety actions in the graph's legend) to protect their personal data online in 2023, slightly above the EU average of 69.55%. More specifically,

1 out of 2 (46.43%) individuals are considered as having above basic digital safety skills (i.e. engaging in three actions). The most common action taken by individuals was refusing the use of personal data for advertising purposes, with 48.71% of individuals taking this step. Checking if websites that request personal data were secure was the least frequent action, reported by only 31.98%.

Hungarian enterprises tend to experience less incidents related to cyberattacks but employees are less aware of their ICT security related obligations compared to the EU. The number of enterprises that experienced ICT security incidents (e.g. ransomware attacks, denial of service attacks) leading to the unavailability of ICT services slightly decreased in Hungary, from 2.63% in 2022 to 2.45% in 2024. It remains below the EU average (3.43%). Hungarian enterprises are also less prone to incidents related to hardware or software failures (7.77%) than their EU peers (17.97%). 84.75% of enterprises deployed some ICT security measures (below the EU average of 92.76%) but only 47.94% of enterprises made their employees aware



of their obligations when facing ICT security-related issues, significantly below the EU average (59.97%). Hungary's defence procurement agency (VBÜ) was attacked by foreign hackers in November 2024, which shows that the Hungarian government is already the target of specialised international groups, targeting high-value, sensitive information.

Hungary progressed in the roll out of the secure Internet Protocol version 6 (IPv6) for end users. On the deployment of secure internet standards, Hungary is above the EU average in the roll-out of IPv6 for the end users (47%, EU average: 36%) and is below the EU average on the server side (7%, against 17% for the EU). IPv6 is an important protocol as it ensures the scalability, stability, and security of the internet. The deployment of this new version is increasingly urgent, as traditional IPv4 addresses have been long depleted. Domain Name System Security Extensions (DNSSEC) is also an important standard to be rolled out as it introduces security features to DNS. In Hungary, the DNSSEC validation rate (i.e. checks on the authenticity of responses sent by name servers to clients, using a digital signature technology) is 11% (Q3 2024), significantly below the EU average of 47%.

According to the Digital Decade Eurobarometer 2025, 80% of Hungarian citizens think that an improved cybersecurity, better protection of online data and safety of digital technologies would facilitate their daily use of digital technologies.

Hungary reported that it has implemented the provisions of the NIS2 Directive in <u>Act LXIX of 2024 on the Cybersecurity of Hungary</u> and related lower-level legislation.

# Protecting and empowering EU people and society

## Empowering people and bringing the digital transformation closer to their needs

Hungary's digital skills landscape shows mixed results. Despite recent progress, Hungary continues to face digital skills gaps, leaving parts of the population more vulnerable to online risks and less equipped to benefit from digital transformation. These skills shortages hinder Hungary's potential for innovation and competitiveness. However, the country has made strong progress in digital public services and is a frontrunner in developing e-Health solutions.

According to the 2025 Eurobarometer, 88% of Hungarian people think that accessing public services online will be important for their daily life in 2030. Concerning human support to help access and use digital technologies and services, 79% consider it would improve their daily use of digital technologies, and 90% think public authorities should consider it important to ensure that people receive proper human support to help them adapt to the changes in their lives brought about by digital technologies and services.

#### Equipping people with digital skills

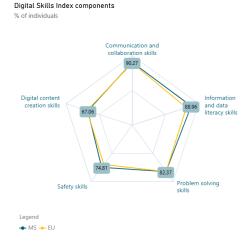
#### Basic digital skills

According to data from 2023, 58.89% of the Hungarian population had basic digital skills (2030 national target 70%), standing above the EU average of 55.56%. While there is no new data for 2024, a breakdown by demographic factors provides for some of insights.

- Gender gap: The gender gap in Hungary is relatively small, with 59.65% of men and 58.16% of
  women having at least a basic level of digital skills, resulting in a gap of 1.49 pps. This is less
  than the EU average (2.23pps), suggesting a more balanced digital skillset between men and
  women in Hungary.
- Education level: Educational attainment appears to be significantly correlated to digital skills. In Hungary, 83.48% of those with higher education levels have at least a basic level of digital skills, surpassing the EU average (79.83%). However, those with no or low levels of formal education are at a disadvantage, with only 33.36% having at least a basic level of digital skills. This means a gap of 25.53 pps from the national average, which is higher than the EU gap (21.95pp).
- Living areas: Residents of rural areas in Hungary have lower digital skills, at 48.11%, which is just above the EU average for rural areas (47.50%). The gap between rural areas and the national average (10.78pps) is more substantial than the EU average (8.06pps), indicating a significant digital divide.
- Age groups: Young Hungarians aged 16 to 24 are the most digitally skilled, with a 76.86% proficiency rate, higher than the EU average (69.98%). Those aged 65-74 are the least digitally skilled at 28.43%, on par with the EU average for that age group.

• Digital Skills Index components: Hungary performs well in the Digital Skills Index competencies, with scores above the EU average in three out of five areas. The country's strongest area is communication and collaboration skills at 90.27%. However, it falls slightly short in digital content creation skills, with a score of 67.06%, and in safety skills, with a score of 74,81%, just below the EU average.

In summary, Hungary's overall digital skills are good, with a particularly strong showing among the young people and those with higher education. The challenges lie in reducing the digital divide between urban and rural areas



and improving the skills of those with lower levels of formal education or being unemployed. With targeted efforts in these areas, Hungary could further improve its standing in digital skills.

As part of the Digital Decade Best Practice Accelerator, Hungary has implemented the EDU&FUN Digital Experience Centre as an example of how innovative, experiential education methods can support the development of digital skills, thus contributing to the Digital Decade's objectives. The best practices of the EDU&FUN Centre focus in particular on the development of labour market skills and innovation in digital education. The aim of the Centre's programmes is to provide an interactive and experiential learning environment to empower students, teachers and parents, to use ICT tools with confidence. The measure can be successfully adapted and replicated in other Member States, as it is based on a flexible and modular educational model that can be easily adapted to specific local needs.

Hungary raised its target of 70% for the population's basic digital skills, which is considered achievable with the existing measures in place. However, it is below the EU's 2030 target. As there are no new measures in the roadmap adjustment, the 2024 Digital Decade report conclusions still apply: the current rate of progress calls for efforts to be intensified to reach this target.

**2024 recommendation on basic digital skills:** Accelerate its efforts to bridge the digital divide through developing and investing in inclusion policies focusing on vulnerable groups, such as the low-skilled, the unemployed, people over 55, persons with disabilities and the Roma.

In 2024, Hungary continued the implementation of existing measures but did not take any new measures. Hungary continued to implement measures in its roadmap such as 'Digital Renewal OP Plus Priority 4 Digital skills', with some elements specifically targeted at disadvantaged people / vulnerable groups /disadvantaged groups including low-skilled and elder people, and continued the reinforcement of the digital training facilities available for teachers and students. However no new measure was proposed in the roadmap adjustment. Hungary also increased national funding for certain measures, replacing EU funding.

#### ICT specialists

In Hungary, ICT specialists accounted for 4.5% of total employment (2030 national target 8.3%), up by 7.1% from 2024 and stands below the EU average of 5.0%. The country is lagging behind its national trajectory of 4.9%. Hungary's growth rate was higher than the EU's (4.2% in 2024), showing that Hungary is making progress and getting closer to the EU average.

Progress on gender balance among ICT specialists and the provision of ICT training show concerning trends. The share of female ICT specialists in Hungary was 15.3% in 2023, lower than the EU's 19.4%. By 2024, this figure decreased slightly to 15.2%, while the EU's share increased to 19.5%. Hungary's - 0.7% growth rate of female ICT specialists between 2023 and 2024 lagged behind the EU's 0.5%. This suggests that Hungary is not effectively retaining or attracting female talent in the ICT sector. In 2022, the percentage of enterprises with 10 or more employees providing ICT training in Hungary was 18.19%, compared to the EU's 22.37%. By 2024, this figure rose to 18.9% in Hungary, while the EU's figure slightly decreased to 22.29%. Hungary's annual growth rate of 1.9% in this area outperformed the EU's rate of -0.2%.

In term of demand from the labour market, Eurostat experimental statistics based on web scraping show that the profiles of 'software and applications developers and analysts' are the most sought after in Hungary, representing 48.8% of online job advertisements for ICT specialists (58.0% at EU level). Three types of profiles are wanted more in Hungary than in the EU on average: 'Database and network professionals' (10.9% of online job advertisements for ICT specialists), 'Electronics and telecommunications installers and repairers' (16.3%), and 'Other information and communications technology specialists' (15%).

Hungary still aims to reach its target of having ICT specialists make up 8.3% of people in employment by 2030. Although no new measures were set out in Hungary's updated roadmap, based on the recent growth in this area, the target seems realistic.

**2024 recommendation on ICT specialists:** (i) Keep up their high rate of ICT graduates but focus more on attracting women to the study field; (ii) Monitor closely the implementation of existing measures to boost the number of ICT specialists in the shorter term and continue measures to increase the percentage of women in ICT careers; (iii) Increase efforts to reduce the cybersecurity skills gap.

In 2024, Hungary continued the implementation of existing measures but did not take any new measure.

Key digital public services and solutions – trusted, user-friendly, and accessible to all

For digital public services for citizens, Hungary scored 77.68 in 2024 (2030 national target of 96.3 out of 100), after growth of 5.9%, but is below the EU average of 82.32. The country is slightly above its national trajectory. In 2023, this score was 73.36, lagging behind the EU's 79.44. However, Hungary's growth rate of 5.9% outpaced the EU's 3.6%. For cross-border digital public services for citizens, Hungary's score was 52.38 in 2023 and 60.42 in 2024, both below the EU's 68.37 and 71.28, respectively, having a higher growth rate (15.3%) than the EU (4.3%). However, the share of people using government websites or apps is increasing year after year in Hungary, from 81.02% in 2022 to 84.46% in 2024, which was above the 2024 EU average of 74.71%.

For digital public services for business, Hungary scored 80.0 in 2024 (2030 national target of 97.2 out of 100), after growth of 6.9%, but is below the EU average of 86.23. The country is also slightly below its national trajectory. Hungary's total score was 74.86 in 2023 lower than the EU's 85.42. Hungary's growth rate of 6.9% between 2023 and 2024 was substantially higher than the EU's 0.9%. For cross-border digital public services for businesses, Hungary's score was 49.72 in 2023 and 60.0 in 2024, both below the EU's 73.13 and 73.76, respectively, having a higher growth rate (20.8%) than the EU (0.9%).

In terms of access to e-Health records, in 2024, Hungary scored 85.98, (2030 national target of 100). This was unchanged from 2023 but above the EU average of 82.7. The country is below its national

**trajectory.** This result confirms the good performance of Hungary in 2023, when the country had reached a score of 85.98 compared to the EU's 79.12.

e-ID

Hungary has not yet notified an e-ID scheme to the Commission under the eIDAS regulation; however, Hungary's roadmap still sets out a 2030 target of 100% in terms of access to e-ID. Hungary continued implementation of the seven measures presented in its national roadmap that will support the development of e-ID, with cohesion policy support. The measures will focus on the development of the new Digital Citizenship Mobile Application, which Hungary plans to use for the notification, planned for the second half of 2025.

Hungarian stakeholders are actively contributing to the development of the European Digital Identity Wallet (EUDI Wallet) by participating in three of the four large scale pilots working on various use cases: POTENTIAL, a consortium working on six key use cases (e.g. e-Prescriptions, bank account opening, SIM card registration); the EU Digital Wallet Consortium (EWC), focused on digital travel credentials; and Digital Credentials for Europe (DC4EU) focused on the educational and social security sectors<sup>7</sup>.

**2024 recommendation on e-ID:** Notify to the Commission an e-ID scheme under the eIDAS Regulation.

In 2024, Hungary continued the implementation of existing measures but did not take any new measures. Hungary is currently working on the documentation necessary for the notification, which is planned for the second half of 2025.

#### Digitalisation of public services for citizens and businesses

Hungary still aims at reaching a score of 96.3 for the digitalisation of public services for citizens and a score of 97.2 for the digitalisation of public services for businesses. The national targets were set slightly below the EU-goal of 100 due to legal constraints, as Hungarian law requires an individual's physical presence for certain procedures (e.g. company registration and modification). Currently, there are no plans to amend the relevant legislation in the near future.

**2024 recommendation on key digital public services:** Accelerate its efforts to digitalise public services for citizens and businesses.

In 2024, Hungary continued the implementation of existing measures but did not take any new measures. Hungary continued to implement measures set out in its roadmap including solutions that support cross-border services for cooperation between national registers and specialised systems and to connect to the Single Digital Gateway. However no new measures were proposed in the roadmap adjustment. Hungary also increased national funding for certain measures, replacing EU funding.

#### e-Health

Hungary's e-Health maturity score is the same as in 2023. The country is lagging behind compared to its national trajectory. Hungary still aims to score 100 for access to medical records, in line with the EU 2030 target. Although there was no progress last year, the target is realistic, and Hungary plans

<sup>&</sup>lt;sup>7</sup> Large scale pilots are test driving the specifications of EU Digital Identity Wallets in a wide range of use cases, before their roll-out in Member States. Learn more about who they are and the work they are doing: What are the Large Scale Pilot Projects - EU Digital Identity Wallet -

to already reach it by 2027 based on the trajectory. Moreover, in its roadmap adjustment, Hungary added a new measure supporting evidence-based government decisions and the use of available data, with a budget of EUR 18.2 million, from EU cohesion policy funding. In other developments, Hungary is expanding the features of its existing e-Health mobile application by adding a pharmacy search, screening information sheet, and a patient satisfaction survey.

According to the 2025 Eurobarometer, 89% Hungarian people think that digital technologies will be important when accessing or receiving healthcare services (e.g., telemedicine, artificial intelligence for diagnosis diseases) during their daily life by 2030.

**2024 recommendation on e-Health:** (i) Make the data type of medical images available to citizens through the online access service. (ii) Enhance the authentication method for logging in to the online access service by using a (pre)notified e-ID. (iii) Ensure that the online access service complies to web accessibility guidelines.

Of the 13 data types investigated, only medical images are still unavailable to citizens. All categories of health care providers investigated, except public and private geriatric nursing homes, are connected and supplying data.

Hungary's e-Health mobile application is compliant with web accessibility guidelines; however, the online portal is not fully compliant (developments are ongoing and expected to be finalised in 2025). Another issue is the inability to authenticate with an eIDAS-compliant eID.

## Building a safe and human centric digital environment and preserving our democracy

In Hungary, online participation in political and civic life started to decline after 2023. In 2024, 19.0% of people used the internet to participate in consultations, to vote or to share opinions online. This share is below the EU average and decreased significantly compared to the previous year (29.95% in 2023), which runs counter to the trend at EU level (18.31% in 2023 and 20.45% in 2024).

Only 1 out of 4 Hungarian internet users declare checking the truthfulness of doubtful online information. In 2023, 51.35% of Hungarian people declared having encountered untrue or doubtful information or content on internet news sites or social media, above the EU average of 49.25%. Of these individuals, 26.27% checked the content's truthfulness, representing a modest level of critical evaluation among those who perceived such content as misleading. Young people (aged 16-24) (58.42%) and adults (aged 25-64) (53.66%) reported similar levels of exposure. Similarly, the rates of people checking such content was higher among young people (35.09%) than among adults (27.52%). Males (53.41%) and females (49.38%) reported similar exposure rates, but more males reported checking untrue or doubtful information (29.39%) than females (23.31%).

A high share of the Hungary population, especially young people, often encounter hostile and degrading messages online. Data shows that in 2023, 43.72% of individuals encountered such messages towards groups based on factors such as ethnicity or religion. This figure was significantly above the EU average of 33.5%. Young people aged 16-24 (49.93%) were slightly more exposed to such messages than adults aged 25-64 (45.55%), indicating a modest age-related gap. Males (44.75%) and females (42.73%) experienced nearly the same level of exposure.

According to the Digital Decade Eurobarometer 2025, 91% Hungarian people think it should be urgent the action of the public authorities to protect children online regarding the negative impact of social media on children's mental health, cyberbullying and online harassment and to put in place age

assurance mechanisms to restrict age-inappropriate content. The 2025 Eurobarometer also shows that 89% of Hungarian people think that public authorities should prioritise shaping the development of Artificial Intelligence and other digital technologies to ensure that they respect our rights and values. It is higher than the EU average (83%), reflecting the interest of the citizens at this respect.

# Leveraging digital transformation for a smart greening

None of the measures planned in Hungary's roadmap are specifically aimed at the green transition. However, Hungary still plans to leverage the digital transformation for smart greening as all the planned measures can contribute indirectly to the uptake of greener technologies due to the nature of digitalisation. In Hungary, **progress is slow in embracing the circular economy**. According to 2023 data, Hungary's circular material rate of 5.9% was substantially below the EU average (11.8%) and no convergence can be observed. A national circular economy strategy is under preparation to tackle open issues.

The Hungarian population recycles only a small amount of its ICT equipment. Hungarian people recycled their laptop and desktop devices (7.79% for laptops and tablets, 11.44% for desktops) less than the EU average (11.31% and 14.66%, respectively) but recycled their mobile phones more (11.98%, 10.93% for the EU). However, 25.50% of people considered energy efficiency as important when purchasing ICT devices (EU: 19.35%) and the eco-design of the device was also considered important by 12.63%, which is also above the EU average (12.04%). However, those two eco-friendly criteria take on less importance for the buyer than the price, performance, and the design of the ICT device.

As part of the Digital Decade Best Practice Accelerator, Hungary is implementing a sustainable cooling and all-year waste heat reuse solution for the country's largest supercomputer, Komondor. Direct to chip warm water cooling is a new paradigm in computing due to the excessive heat generated by the latest computing elements. In the data centre used for hosting Komondor, a cold water liquid based cooling system was installed in closed racks to increase cooling efficiency. However, high performance elements require more advanced cooling solutions, so Hungary decided to use warm liquid cooling for Komondor, and installed an adiabatic chiller solution into its data centre. The waste heat reuse use case is unique in the region, especially reusing waste heat from ICT elements using direct-to-chip warm liquid cooling technology.

According to the Digital Decade Eurobarometer 2025, 87% Hungarian people consider digital technologies important to help fight climate change (standing significantly above the EU average of 74%, despite showing a decrease of two percentage points since last year), while 85% of Hungarian respondents think that ensuring that digital technologies serve the green transition should be an important action for public authorities (above the EU average of 80%).

**2024 recommendation on green ICT:** (i) Develop a coherent approach to twinning the digital and green transitions. First, promote improvements in energy and material efficiency of digital infrastructures, in particular datacentres. Second, support the development and deployment of digital solutions that reduce the carbon footprint in other sectors, such as energy, transport, buildings, and agriculture, including the uptake of such solutions by SMEs.

- (ii) Monitor and quantify the emission reductions of the deployed digital solutions in line with the relevant EU guidance and with the support of the methodology developed by the European Green Digital Coalition, in view of future policy development, as well as of attracting relevant financing.
- (iii) Support digital players, including telecom service providers, to accelerate the transition of their network infrastructure to greener, less energy intensive solutions.

In 2024, Hungary continued the implementation of existing measures but did not take any new measures.

Although, none of the measures planned in Hungary's roadmap are specifically aimed at the green transition, they can contribute indirectly to the uptake of greener technologies due to the nature of digitalisation.

## Annex I - National roadmap adjustment

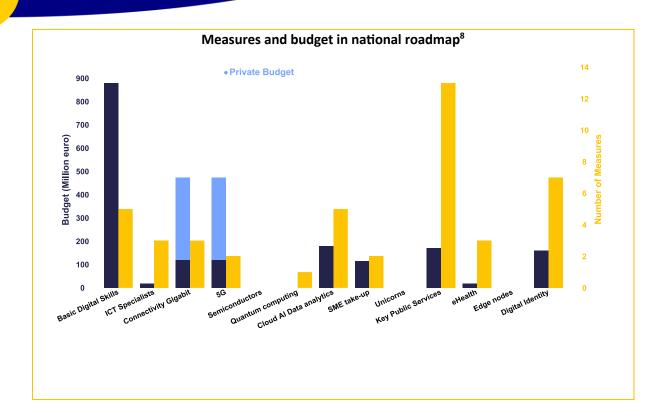
#### **Hungary's national Digital Decade strategic roadmap**

Hungary submitted a fully revised national Digital Decade roadmap on 16 May 2025, which contained two additional measures and revised trajectories. The revised roadmap continues to prioritise digital skills and digital infrastructure, and it includes reporting on the consultation of stakeholders. It still covers all objectives of the Digital Decade such as those relating to the green transition, competitiveness, sovereignty, leadership, resilience, and cybersecurity.

The adjusted roadmap addresses a substantial number of roadmap recommendations issued in 2024, which are described below along with action taken by Hungary.

- Propose national target values and trajectories for edge nodes, and formalise the trajectory for FTTP. Based on the methodology provided by the European Commission and the second Edge Observatory report published in 2024, Hungary's assumed development path was indicated in the revised document together with an objective of deploying 82 edge nodes by 2030. However, Hungary maintains the position that it is not yet possible to determine how many edge nodes are realistically needed to achieve sufficiently low latency, given its relatively advanced domestic network infrastructure and current and expected user needs. Hungary also added a separate formal trajectory for FTTP, with a target of 95% coverage by 2030.
- Increase the VHCN target to be closer to the EU's target, given the country's good starting point and its current rate of progress. Based on the current rate of progress Hungary revised the trajectory of VHCN network development. The country considers it possible to increase the 2030 national target from 95% to 97% with the existing measures in place.
- Consider more ambitious targets for the cloud and data analytics technologies take-up by enterprises to be closer to the EU's targets, as the current performance of these indicators are already above the targets defined in the roadmap of Hungary. Based on the current rate of progress Hungary revised the trajectories for both cloud uptake and data analytics uptake and increased them both to 75%, which are the same as the EU's Digital Decade targets.
- Define a more ambitious target for digital skills closer to the EU's target, as the current national target is almost achieved according to the 2023 value. Based on the current rate of progress Hungary revised the trajectory for digital skills. The country considers it possible to increase the 2030 national target from 60% to 70% with the existing measures in place.
- Provide more information on the implementation of digital rights and principles (and Digital Decade general objectives), including what national measures contribute to it. Hungary provided more information on initiatives and their implementation during the second monitoring study of the Declaration on Digital Rights and Principles. The country states that most of the measures in the revised roadmap contribute to the values of the Declaration.

The revised roadmap has 44 measures, which are backed by a budget of EUR 2.489 billion, 1.2% of GDP.



<sup>&</sup>lt;sup>8</sup> When referring to national roadmaps, data used in this report are those declared by the Member States in their national roadmaps, on the basis of the Commission's guidance (C(2023) 4025 final). Data might reflect possible variations in reporting practices and methodological choices across Member States. No systematic assessment of the extent to which Member States followed the guidance was carried out.

# Annex II – Factsheet on multi-country projects (MCPs) and funding

#### Multi-country projects and best practices

Hungary is a member of the Alliance for Language Technologies EDIC, and is also working on setting up an EDIC in the area of connected public administration. Hungary is directly participating in the IPCEI on Next Generation Cloud Infrastructure and Services (IPCEI-CIS). Hungarian organisations are indirect and associated partners in the IPCEI on Microelectronics and Communication Technologies (IPCEI-ME/CT). Hungary is a participating state in the EuroHPC Joint Undertaking (JU) and the Chips JU.

Hungary has contributed to the Best Practice Accelerator<sup>9</sup> by sharing three best practices in the Technology Uptake cluster (KKV Digital – a self-assessment tool for measuring digital intensity for SME), the Digital Skills cluster (EDU&FUN Digital Experience Centre) and the Green and Digital cluster (Sustainable cooling of the Komondor HPC and all-year waste heat reuse).

#### **EU funding for digital policies in Hungary**

Hungary allocates 29% of its total recovery and resilience plan to digital (EUR 1.7 billion)<sup>10</sup>. In addition, under cohesion policy, EUR 2.6 billion (representing 12% of the country's total cohesion policy funding), is dedicated to advancing Hungary's digital transformation<sup>11</sup>. According to JRC estimates, EUR 2.9 billion directly contribute to achieving Digital Decade targets (of which EUR 1.2 billion comes from the RRF and EUR 1.7 billion from cohesion policy funding)<sup>12</sup>.

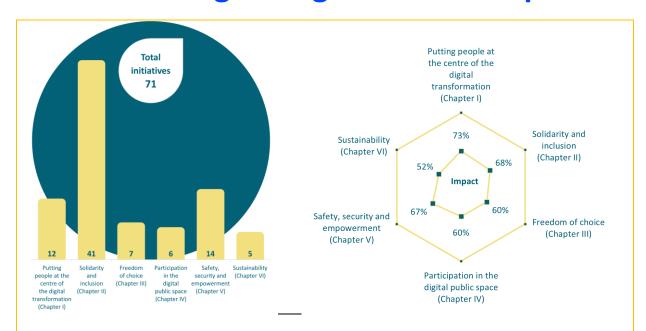
<sup>&</sup>lt;sup>9</sup> The Best Practice Accelerator (BPA) is a platform that enables Member States to share successful measures and challenges encountered in their efforts to meet their Digital Decade targets and objectives. Best practices are available to all Member States via the BPA Repository and showcased in regular workshops, currently focused on three thematic clusters: Digital Skills, Green IT, and the Uptake of Digital Technologies.

<sup>&</sup>lt;sup>10</sup> The share of financial allocations that contribute to digital objectives has been calculated using Annex VII to the Recovery and Resilience Facility Regulation. Last data update: 16 May 2025.

<sup>&</sup>lt;sup>11</sup> This amount includes all investment specifically aimed at or substantially contributing to digital transformation in the 2021-2027 Cohesion policy programming period. The source funds are the European Regional Development Fund, the Cohesion Fund, the European Social Fund Plus, and the Just Transition Fund.

<sup>&</sup>lt;sup>12</sup> Joint Research Centre, Nepelski, D. and Torrecillas, J. Mapping EU level funding instruments 2021-2027 to Digital Decade targets – 2025 update, Publications Office of the European Union, Luxembourg, 2025, JRC141966. Last data update: 10 March 2025.

## **Annex III – Digital Rights and Principles**<sup>13</sup>



#### **Activity on Digital Rights and Principles (figure 1)**

Hungary has been relatively active in implementing digital rights and principles, with 71 initiatives overall and 2 new initiatives launched in 2024, showing limited progress towards its commitments. Hungary is most active in Digital education, training and skills (II). There is room for improvement, especially with regards to Interactions with algorithms and artificial intelligence systems (III) where less activity has been identified.

#### **Impact of Digital Rights Initiatives (figure 2)**

Quantitative impact indicators, developed by the support study, illustrate the level of implementation of digital rights initiatives on the ground. Based on available data, they estimate the impact of measures implemented by key stakeholders in Hungary (mainly national government) and how these are perceived by citizens.

The indicators suggest that Hungary is most successful in implementing commitments related to Putting people at the centre of the digital transformation (I). Hungary should strengthen efforts in areas where the impact of digital rights initiatives appears to be limited, notably on Sustainability (VI).

According to the Special Eurobarometer 'Digital Decade 2025', 55% of citizens in Hungary think that the EU protects their digital rights well (a 5% decrease since 2024). This is above the EU average of 44%. Citizens are particularly confident about getting basic and advanced digital education, training and skills (67%, above the EU average of 60%). They are most worried that their right to a safe digital environment and content for children and young people is not well protected (38%, below the EU average of 48%).

<sup>&</sup>lt;sup>13</sup> Based on a study to support the Monitoring of the Implementation of the Declaration on Digital Rights and Principles, available <a href="https://example.com/here">here</a>. For a more detailed country factsheet accompanying the study, click <a href="https://example.com/here">here</a>.