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PART 5/27

#### 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

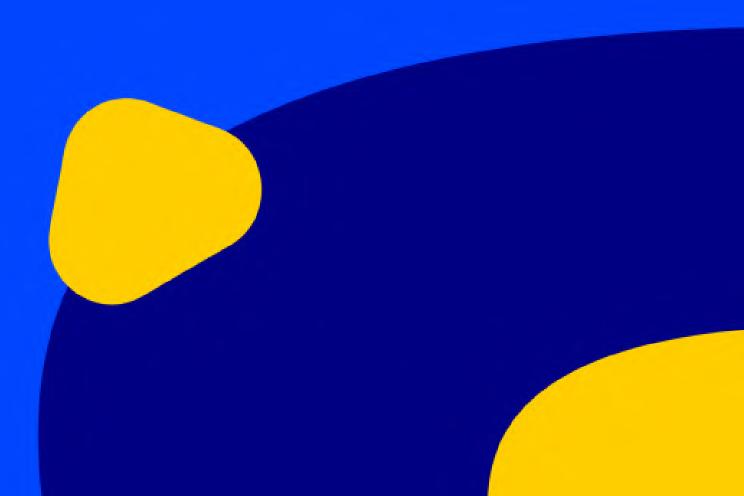
State of the Digital Decade 2025: Keep building the EU's sovereignty and digital future

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# **DIGITAL DECADE 2025** COUNTRY REPORTS

Cyprus



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# **Executive summary**

Cyprus has made remarkable progress in gigabit connectivity infrastructure but continues to face challenges in closing the digital skills gap between different population segments. Nonetheless, the country can count on a relatively good share of ICT specialists in employment.

Cyprus shows a substantial level of ambition in its contribution to the Digital Decade having set 14 national targets, 86% of which are aligned with the EU 2030 targets. The country is following its trajectories very well with 100% of them being on track (based on the 2024 trajectories defined for 8 KPIs out of 8 analysed). Cyprus addressed 63% of the 11 recommendations issued by the Commission in 2024, either by implementing significant policy changes (36%) or making some changes (27%) through new measures.

In 2024, the adoption of Artificial Intelligence (AI) by enterprises shows significant progress while remaining subpar. An AI taskforce has recently been tasked with formulating recommendations for a national strategy to harness the growth potential of AI. In addition, last year, Cyprus adopted a new national strategy for research and innovation (2024-2026), aimed at positioning the country as a regional hub for entrepreneurship and high-tech innovation. With regards to the digitalisation of public services for citizens, while progress was made last year, the pace of change is not yet sufficient to reach the EU average. Nonetheless, Cyprus remains on track according to its national trajectory. The digital transformation of the public sector continues to be a priority, with several measures added to the revised roadmap, including a measure to improve access to e-health records.

	Cyprus				EU		Digital Decade target by 2030	
Digital Decade KPI (1)	DESI 2024 (year 2023)	DESI 2025 (year 2024)	Annual progress	National trajectory 2024 (3)	DESI 2025	Annual progress	СҮ	EU
Fixed Very High Capacity Network (VHCN) coverage	77.1%	89.1%	15.5%	72.0%	82.5%	4.9%	100.0%	100%
Fibre to the Premises (FTTP) coverage	77.1%	89.1%	15.5%	71.2%	69.2%	8.4%	100.0%	-
Overall 5G coverage	100.0%	100.0%	0.0%	100.0%	94.3%	5.9%	100.0%	100%
Edge Nodes (estimate)	5	9	80.0%	-	2257	90.5%	10	10000
SMEs with at least a basic level of digital intensity (2)	-	74.3%	3.0%	-	72.9%	2.8%	90.1%	90%
Cloud	45.5%	-	-	-	-	-	75.0%	75%
Artificial Intelligence	4.7%	7.9%	69.2%	8.0%	13.5%	67.2%	75.0%	75%
Data analytics	33.5%	-	-	-	-	-	75.0%	75%
Al or Cloud or Data analytics	58.0%	-	-	-	-	-	-	75%
Unicorns	3	3	0.0%	-	286	4.4%	5	500
At least basic digital skills	49.5%	-	-	-	-	-	80.0%	80%
ICT specialists	5.6%	5.0%	-10.7%	5.2%	5.0%	4.2%	10.0%	~10%
eID scheme notification		Yes						
Digital public services for citizens	74.0	77.6	5.0%	71.5	82.3	3.6%	100.0	100
Digital public services for businesses	86.1	86.0	-0.1%	89.8	86.2	0.9%	100.0	100
Access to e-Health records	68.1	75.4	10.7%	74.1	82.7	4.5%	100.0	100

(1) See the methodological note for the description of the indicators and other metrics

(2) DESI 2025 reports the version 4 of the Digital Intensity Index, which 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 is based on version 3 of the index.

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

According to the Special Eurobarometer 'Digital Decade 2025', 81% of Cypriot citizens 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, 87% consider it important to ensure that European companies can grow and become 'European Champions' capable of competing globally.

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

Cyprus demonstrates strong performance in all connectivity indicators, with outstanding results in gigabit coverage (VHCN and FTTP), as well as in overall 5G coverage. The share of small and mediumsize enterprises (SMEs) having at least a basic level of digital intensity is progressing quite well, slightly faster than the EU average. Enterprises are also increasingly making use of AI technologies, but uptake remains relatively low compared to the EU. The AI taskforce, recently appointed to promote the wider adoption and use of Artificial Intelligence (AI) in Cyprus, will focus on reinforcing research and development, innovation, and practical applications for economic growth. The country can also rely on a very vibrant startup ecosystem, which is growing fast. Cybersecurity is another of Cyprus's priority areas, with a new measure added in the roadmap to reinforce the country's capacity to respond to growing threats and support SMEs and startups in managing cybersecurity risks. In parallel, Cyprus is working with other EU countries to set up a coalition that addresses the cybersecurity skills shortage in the EU.

#### Protecting and empowering EU people and society

Cyprus faces a challenge in terms of digital skills, with only 49.46% of the population having at least a basic level of digital skills, with significant gaps between education levels and age groups. The revised roadmap upgraded a measure aimed at developing of digital skills through customised training for specific groups. In 2024, the share of ICT specialists in employment decreased slightly to 5.0% compared to 5.6% in 2023, although it is still at the EU average. Meanwhile, the digitalisation of public services for citizens has made progress but remains below the EU average, and online public services for businesses are stagnating. Access to e-health records, while improving, remains below the EU average. Nonetheless, the revised roadmap demonstrates Cyprus's commitment to leveraging digital health technologies with three additional measures aimed at improving e-health records.

#### Leveraging digital transformation for a smart greening

Cyprus is developing a broad strategy for smart cities where digital technologies will play a major role in minimising environmental impact. The national digital strategy also acknowledges the importance of reducing the environmental footprint of the digital sector. Furthermore, the Cyprus' Smart Specialisation Strategy 2030 explicitly recognises the critical role of digital technologies in supporting the green transition, promoting the development of energy-efficient digital solutions and infrastructures. However, the adjustment of the roadmap does not fully reflect the adoption of an overall approach for twinning the digital and green transition.

#### National digital decade strategic roadmap

Cyprus submitted an updated national Digital Decade roadmap on 13 January 2025, with 11 additional measures, 6 revised measures and an adjusted trajectory for ICT specialists that aligns with the EU 2030 target. Two missing targets and trajectories have been added for unicorns and edge nodes, completing the set of 14 national targets and trajectories. Except for unicorns, all targets are aligned

with the EU's level goals for 2030. The adjustment also includes reporting on the consultation of stakeholders. Overall, it addresses a substantial number of roadmap recommendations issued in 2024. The revised roadmap is composed of 62 measures with a budget of EUR 988.4 million, comprising EUR 738.4 million from public funds (equivalent to 2.21% of GDP). Although it sets out measures for most of the targets, there is room to further consolidate action in some areas, such as basic digital skills and the digitalisation of public services for businesses.

As Cyprus's 2020-2025 Digital Strategy comes to an end in 2025, a new comprehensive strategy (2026-2030) will be developed in line with EU wide strategic goals. It will focus notably on accelerating the digital transformation across four key pillars — digital skills, digital infrastructure, digitalisation of businesses, and digital public services — while integrating horizontal priorities such as artificial intelligence, interoperability, and data governance. It is expected to support the Digital Decade's goals, reduce the administrative burden and boost competitiveness.

#### Funding & projects for digital

Cyprus allocates 25% of its total recovery and resilience plan to digital (EUR 274 million)<sup>1</sup>. In addition, under cohesion policy, EUR 113 million, representing 12% of the country's total cohesion policy funding, is dedicated to advancing Cyprus' digital transformation<sup>2</sup>.Cyprus is a member of the EUROPEUM-EDIC on blockchain. It is also a participating state of the EuroHPC Joint Undertaking (JU) and of the Chips JU.

Cyprus is not yet active in contributing to the Digital Decade's Best Practice Accelerator<sup>3</sup>, but participated in the workshops organised in the different clusters.

#### Digital rights and principles

According to a support study, Cyprus has been relatively active in implementing the <u>European</u> <u>Declaration on Digital Rights and Principles</u>, with 42 initiatives overall and 3 new initiatives launched in 2024. Cyprus is mostly active in digital education, training and skills, while less activity has been identified with regards to the interactions with algorithms and artificial intelligence systems. Measures to put people at the centre of the digital transformation appear to have most impact on the ground, in contrast to those addressing freedom of choice.

<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.

#### **Recommendations**

- **Basic digital skills**: Strengthen and expand targeted initiatives to enhance digital literacy among vulnerable groups. Provide accessible and tailored training programmes, and targeted awareness raising actions to bridge the digital gap.
- **Digital public services**: Accelerate the implementation of the digital transformation strategy for the public sector, prioritising seamless and inclusive access to digital services for all citizens.
- Adoption of AI by businesses: Sustain the efforts, with a special attention to SMEs' uptake of AI, in the design of the AI strategy.
- Access to e-health records: Ensure a comprehensive approach and swift implementation of ongoing projects to allow access to e-health records.
- **Smart greening**: Enhance efforts to develop an integrated approach for the digital and green transition, specifically to improve the energy efficiency of digital infrastructure, and to accelerate the deployment of digital solutions to reduce the carbon footprint in other sectors.

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

**Cyprus's significant achievement in the deployment of gigabit connectivity infrastructure is a crucial asset for digital transition and economic growth**. Since 2022, the country also benefits from 5G coverage in 100% of populated areas. The Department of Electronic Communications of the Deputy Ministry of Research, Innovation and Digital Policy (DMRID) continues to implement digital transformation reforms and investments, which constitutes a governmental priority to leverage the innovation and digital potential of the country.

A new National Strategy for R&I (2024-2026) has been developed to promote Cyprus as a regional hub for research and innovation entrepreneurship. In particular, it will include state-of-the-art digital technologies such as high-performance computing, cybersecurity and quantum technologies to develop solutions for agriculture, water management and smart cities. Cyprus also established a national Artificial Intelligence (AI) Taskforce to address the challenges and opportunities represented by this cutting-edge technology to enhance the economy, ensure competitiveness, and improve the quality of life for citizens.

In 2021, the R&D expenditure of businesses in the ICT sector represented 66.74% in Cyprus, the highest share by far among EU countries. At 55.91% the proportion of R&D personnel in the ICT sector is also the highest in the EU. However, this needs to be put in perspective: with the R&D expenditure relative to GDP, which in 2023 was at 0.68% for Cyprus among the lowest in the EU<sup>4</sup>. Despite this, the 2024 European Innovation Scoreboard ranks Cyprus as a 'strong Innovator' for the third consecutive year, underscoring the country's effective innovation ecosystem and capacity to achieve innovation outcomes.

**Cyprus' start-up ecosystem is very dynamic and is experiencing rapid expansion**. Its performance helped to draw attention to Cyprus as an emerging place for innovation and entrepreneurship. According to the <u>Global Startup Ecosystem Index</u>, the Cypriot ecosystem is the fastest-growing EU start-up hub:, it now has more than 400 start-ups, five times more than in 2020.

With growing demand and sovereignty becoming central to the digital transition, the deployment of a new submarine cable passing by Cyprus is of strategic importance. The BlueMed submarine cable will reinforce the country's backbone digital infrastructure, connecting Cyprus with several countries bordering the Mediterranean and beyond. Another challenge that Cyprus is addressing is the increasing prevalence of AI. According to the Digital Decade Eurobarometer 2025<sup>5</sup>, 91% of respondents in Cyprus consider 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

Cyprus's gigabit connectivity infrastructure roll-out is clearly accelerating with a very positive outlook to achieve the target 2030. Cyprus demonstrates strong performance in all connectivity indicators, with notable achievements in gigabit coverage (VHCN and FTTP), and in overall 5G coverage. However,

<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: <u>https://digital-strategy.ec.europa.eu/en/news-redirect/883227</u>

the country is lagging behind the EU in 5G coverage in the 3.4-3.8 GHz band which is necessary for advanced applications requiring a wide spectrum bandwidth, and in the assignment of 5G pioneer bands.

#### Connectivity infrastructure

**Cyprus's very high-capacity network (VHCN) coverage surged to 89.05% in 2024 outpacing the EU average of 82.49%.** In 2023, the percentage of households covered by fixed VHCN was 77.07%, showing a growth rate of 15.5% in one year, significantly higher than the EU's 4.9%. For households in sparsely populated areas, Cyprus's coverage was 55.70% in 2023, marginally above the EU's 55.59%, but in 2024 it grew significantly to 78.10%, faster than the EU average of 61.89%. The growth rate for Cyprus was 40.2%, compared to the EU's 11.3%.

**Cyprus's fibre to the premises (FTTP) coverage of 89.05% is like VHCN, significantly surpassing the EU's 69.24% in 2024.** In 2023, coverage was at 77.07% representing a growth rate of 15.5% and outperforming the EU's 8.4%. For households in sparsely populated areas, Cyprus's coverage also dramatically increased from 55.7% in 2023 to 78.1% in 2024, significantly higher than the EU's 58.78%, showing a growth rate of 40.2% compared to the EU's 11.9%.

**Overall, internet take-up is high in Cyprus (94.92%), slightly above the EU average (94.09%).** The share of fixed broadband subscriptions of at least 100 Mbps services (76.67%) exceeded the EU average (71.88%) in 2024, representing a growth rate of 20.5% far ahead of the EU's 9.1%. For fixed broadband subscriptions with speeds of 1 Gbps or more, Cyprus was lagging behind the EU average. In 2024, only 3.32% of subscriptions were at this speed, compared to the EU's 22.25%.

**Cyprus had already reached the 2030 target of 100% 5G coverage in 2022, while the EU average stood at 94.35% in 2024.**Cyprus 5G coverage in the 3.4-3.8 GHz band did not increase in Cyprus between 2023 and 2024 - it remained at 35.00% for all households - while the EU average increased from 51.06% in 2023 to 67.72% in 2024, representing a growth rate of 32.6 %. For households in sparsely populated areas, Cyprus's coverage remained at 28.00% in 2024, still higher than the EU's (26.19%), despite its sustained growth rate of 65.1%.

**Cyprus's assignment of 5G pioneer bands was 66.67% in both 2024 and 2025, below the EU's 73.4% and 74.63% respectively**. Cyprus's assignment of 5G pioneer bands remained unchanged between 2024 and 2025, during which EU's growth was 1.7%.

#### VHCN and FTTP

**Cyprus remains committed to its national target to reach 100% gigabit connectivity coverage by 2030. The country is on track according to its national trajectories.** The latest figure in 2024 (89.05%) is even above the forecast made by Cyprus for that year in its national trajectories for both VHCN and FTTP.

The implementation of the broad investment project for deploying VHCN in underserved areas is advancing very well. The first target of at least 10 000 premises covered was reached in March 2025. By the end of 2025, significant progress in coverage is expected across all 3 intervention areas, with full rollout scheduled for completion by mid 2026. A small share of households may remain unserved due to their location in particularly remote or geographically challenging zones, where infrastructure is generally limited. Any residual gaps will be covered through 5G FWA (100Mbps) deployment, achieving 100% coverage across all populated areas. The other major investment project supported by

the recovery and resilience plan (RRP) to incentivise the uptake of VHCN services (voucher scheme) will also contribute to digital inclusion by providing people with affordable access to secure and fast connectivity. Already 70 000 households have benefited from the scheme. The aim is to reach 82 000 households including in remote and rural areas by mid-2025. These projects coupled with planned reforms to facilitate and accelerate investments in VHCN as set out in the initial roadmap, are contributing to tangible results.

**2024 recommendation on connectivity infrastructure**: Maintain the pace of VHCN roll-out, with a special attention to reach the underserved areas.

Cyprus has fully addressed the recommendation, with the significant results in roll-out of fibre in 2024 confirming that the pace of VHCN roll-out is well on track. The implementation of the large investment measures, funded by the RRP and especially dedicated to roll-out of fibre in underserved areas, is progressing well.

**In 2024, the national telecom regulator (NRA) continued to implement symmetric market regulation.** This facilitates FTTH deployment by alternative operators. Regarding the slow progress in the uptake of fixed broadband subscriptions with speeds of 1 Gbps or more, a <u>consumer study of OCECPR</u> shows that 50% of consumers do not know their actual speed with pricing and network reliability being the most important reasons when choosing an ISP. As a result, consumers in Cyprus buy the entry speed, which is 200 Mbps, and don't actively purchase the upgrade.

**Regarding the switch-off of copper networks, the Operator holding significant market power (SMP) plans to switch off 80% of its network by 2028 and 100% by 2030**. The estimation is that about 15-18% of customers are still on copper networks. The NRA is not involved in the switching off process, other than collecting information on the progress by the SMP operators on a yearly basis according to the rules set in the market analysis in 2022. Customised campaigns targeting customers were carried out to encourage them to change to a fibre network. No fees are imposed on customers for migrating to a fibre network in an effort to motivate them and therefore accelerate the copper switch-off.

In 2024, the NRA entered into discussions with the DMRID on the future broadband strategy (2026-2030), and on establishing an action plan for the implementation of the Gigabit Infrastructure Act (GIA). Discussion includes, among other things, consideration on the involvement of local authorities regarding access to local lands and the granting of permits.

In December 2024, the decision that the BlueMed East submarine cable would land in Cyprus reinforced the resilience and security of the island's backbone connectivity infrastructure. Sparkle in partnership with the telecom incumbent in Cyprus, has been granted EUR 14.1 million by the <u>Connecting Europe Facility</u> programmes for the deployment of the BlueMed East cable in the eastern Mediterranean touching Greece (Crete) and Cyprus, thereby strengthening connectivity alongside the India-Middle-East-Europe Economic Corridor and putting the country on the map of the global digital communications gateway. It will contribute to responding to the growing demand for advanced Internet services and digital content in Cyprus.

The security of the submarine cables is a high priority for an island nation like Cyprus in line with the priority of the Commission. Cyprus is actively participating in the Submarine Cable Infrastructure Expert Group, composed of Member States and the EU Agency for Cybersecurity (ENISA). Cyprus also considers reinforcing the security of the submarine cables in the country's future crisis management plan, in line with NIS2 regulation.

#### 5G

Cyprus has already reached the EU 2030 5G coverage target, namely 100% of households covered by at least one 5G mobile network. The country is therefore on track according to its national trajectory.

**Regarding the remaining unassigned spectrum 26GHz band, the regulatory authority has authorised the use in pilot mode, after reassessing the existence of a demand from operators**. As the interest was limited, it was decided to grant authorisation to use this band in urban areas in experimental mode to those interested. The use and promotion by the operators will be monitored by the regulatory authority and, if deemed satisfactory, it will proceed with the auction of the 26GHz band.

**2024 recommendation on connectivity infrastructure**: (i) Regularly assess emerging market demand for the remaining unassigned spectrum in the 26GHz band; (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.

Cyprus has fully addressed the recommendation by re-assessing the 26GHz band market opportunities. Since there was only limited interest from market operators, it was decided to initially attribute it as a pilot licence to interested operators and monitor its use in order to decide whether to proceed to auction. On the 5G stand-alone, Cyprus made some efforts to address the recommendation through new policy actions. It plans to ask network operators to update their multi-vendor strategies when it comes to 5G, given the planned transfer to 5G-standalone cores.

**Regarding the security of 5G networks, a legal framework has been in force for some years in Cyprus for vertical sectors; the framework includes specific requirements concerning the 5G Toolbox.** In 2025, the Digital Security Authority (DSA) plans to launch an on-site audit to monitor the level of implementation of the 5G Toolbox. It will start with the telecoms sector to assess whether its plans meet its obligations.

The DSA and the OCECPR continue to work on the creation of an OPEN RAN lab as part of the EU project 5G-TACTIC on 5G networks cybersecurity and trust. After a testing and evaluation phase, it may serve as a regional lab, providing interested operators and other relevant parties with opportunities to acquire knowledge and insights into OPEN RAN as well as to gain knowledge and test specific security aspects for an OPEN RAN. The project is expected to be completed by December 2026.

#### Semiconductors

In the adjustment of its roadmap, Cyprus did not report additional development regarding semiconductors. But measures were in preparation in 2024 under the Chips for Europe Initiative to set up in Cyprus a competence centre, which will provide access to technical expertise and experimentation in the area of semiconductors and strengthen Cyprus's role in the European semiconductor ecosystem.

**2024 recommendation on semiconductors**: Draw up a strategy to support research and innovation to contribute to the European semiconductor ecosystem.

**No information available on measures taken to address the recommendation.** Although the new National Strategy for R&I (2024-2026) could have a spill-over effect on research and innovation related to semiconductors.

#### Edge nodes

According to the Edge Nodes Observatory Report, Cyprus is estimated to have deployed nine edge nodes by 2024, almost double the estimated five<sup>6</sup> in 2023. Cyprus emphasises that, in absence of direct survey inputs, this figure is based on extrapolated estimation generated through statistical modelling drawing on variables such as population, GDP, surface areas and investment data. It remains subject to updates as new data become available.

In its revised national roadmap, Cyprus added a target and trajectory of ten edge nodes deployed by 2030. The DMRID highlighted that this is an extrapolation, and that the projected trajectory between now and 2030 is a conservative outline considering the national advancement and the complexity of edge node deployment.

**2024 recommendation on edge nodes**: Continue to assess the market to develop measures or actions in the short term to contribute to the EU edge nodes target

In 2024, Cyprus continued to monitor the technological advancements in this field, but did not take any new policy actions. The DMRID follows the EU Observatory's work closely. Currently, the insights relating to Cyprus are based on extrapolated estimates, derived through statistical models that factor in various attributes including population density, GDP and surface area. It remains committed to supporting the EU's successful deployment of edge node infrastructure across the region and the broader data strategy.

#### Quantum technologies

Cyprus is currently developing the second phase of the Cyprus national high-performance computing (HPC) competence centre (NCC-CY) which will contribute to building research capacities in quantum technologies. Since 2020, it has operated a national HPC competence centre in the framework of the European High-Performance Computing Joint Undertaking (EuroHPC JU). The EuroCC2 project (2023-2025) focused on providing technical support to the Cypriot computational community, with a strong focus on training and industry.

In addition, the Cyprus Quantum Communication Infrastructure (CYQCI) project which started in 2023 will set the foundation for the connection with the EuroQCI network via satellite communication and the development of an optical ground station (OGS) in Cyprus.

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

Cyprus performed well achieving above-EU-average adoption rates in cloud computing and data analytics, though trailing behind in AI uptake. However, SMEs, which dominated the enterprise

<sup>&</sup>lt;sup>6</sup> The estimation for 2023 has been revised since the publication of the SDDR24.

landscape and contributed over half of the country's economic value added, lagged behind large enterprises in the uptake of advanced digital technology. In terms of basic digital intensity, SMEs in Cyprus progressed slightly above the EU average. In Cyprus, the start-up ecosystem is very dynamic and experiencing rapid expansion.

#### SMEs with at least basic digital intensity

In Cyprus, 3 out of 4 (74.29%) SMEs had at least a basic level of digital intensity in 2024, up from 70.05% in 2022<sup>7</sup>. With an annual growth rate of 3.0%, this positioned Cyprus slightly above the EU average of 72.91%. Notably, 37.21% of all SMEs have high or very high digital intensity, surpassing the EU average of 32.66%. Overall, this demonstrated steady improvement, particularly in advanced digital engagement of SMEs in Cyprus.

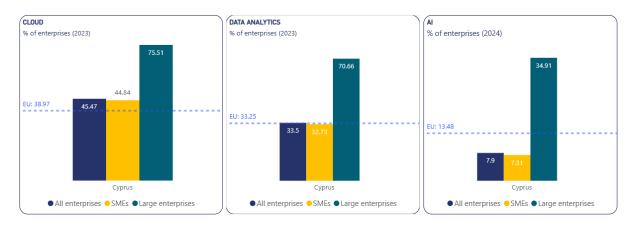
In 2022, SMEs in Cyprus produced 51.4% of the total value added in the economy, while large enterprises contributed 23.7%. SMEs with more than 10 employees constituted about 97.9% of the enterprises in the country, while large enterprises represented 2.1%.

**Cyprus's national target for SMEs' digital intensity is 90.1% in line with the EU target for 2030 of 90%.** The country continues to implement the 'Digital Upgrade of Enterprises' programme, which is partially funded by the RRP and partially by the 2021-2027 THALIA programme (total budget EUR 30 million). In total, the two first calls received 915 proposals. A third call was launched early 2025 with a budget of EUR 14 million, including savings form the first call. The programme is open to existing SMEs wanting to invest in digital upgrading (including e-commerce) and new SMEs planning to invest in e-commerce, online stores or uptake of advanced digital technologies, such as AI, blockchain, cloud computing and big data.

The European Digital Innovation Hub (EDIH) DiGiNN is the sole EDIH running in Cyprus and a strategic partner for the digital transformation of enterprises. Co-funded by the DMRID, it acts as a coordinated group of 16 organisations from academia, research, business and technology industry and aims to provide Cypriot businesses with a one-stop-shop for their digitisation journey: coaching and mentoring by reputable experts, access to the most advanced infrastructure and facilities, help with finding investments, networking and access to innovation ecosystems. The Hub's experience on the ground, being in contact with businesses and their needs, will also be of benefit in terms of the design of policies geared towards digital transformation of businesses. A mid-term review took place in early 2025, and the results are awaited. One issue already identified in the process of SMEs' digital transition is that enterprises in Cyprus are very small in size. It is difficult to convince them to commit to their digital transformation when they face challenges such as limited resources and investment capacities.

<sup>&</sup>lt;sup>7</sup> 2022 is the last comparable year that used a similar methodology for measuring the digital intensity of enterprises.

Take up of cloud/AI/data analytics



According to new data collected in 2024, 7.9% of enterprises in Cyprus were using AI technology in 2024, revealing a relatively low uptake compared to the EU average of 13.48%. Nonetheless, Cyprus experienced significant growth in uptake of AI (69.16%) compared to 2023 (34.5%). More specifically, in 2024 uptake among SMEs was 7.31%, while large enterprises had a higher usage rate of 34.91%. Hence, the gap between SMEs and large enterprises in Cyprus was 27.6 percentage points, in line with the EU gap.

The adoption of cloud, data analytics and the indicator measuring the three technologies together (AI, cloud and data analytics) have not been measured in 2024. But looking into the adoption rate by size of enterprises provides some additional information.

**Cloud uptake in Cyprus reached 45.47% in 2023, surpassing the EU average of 38.97%.** More specifically, SMEs had an adoption rate of 44.84%, while large enterprises exhibited a higher rate of 75.51% (3 out of 4). This reflects a difference of 30.67 percentage points between SMEs and large enterprises in Cyprus, which aligns with the EU gap.

As regards data analytics, according to the latest available data, 33.5% of enterprises in Cyprus performed data analytics in 2023, slightly above the EU average of 33.25%. More specifically, SMEs showed lower uptake at 32.73%, while 70.66% of large enterprises used data analytics. This reflects a gap of 37.93 percentage points between SMEs and large enterprises, which aligns with the EU gap.

When measuring the three technologies together, according to the latest available data from 2023, 57.98% of enterprises in Cyprus used AI technologies, sophisticated or intermediate cloud computing services, or data analytics, corresponding to a slightly higher uptake than the EU average of54.7%. More specifically, uptake among SMEs was slightly lower at 57.3%, while large enterprises exhibited a notably higher rate of 90.52% (more than 9 out of 10). This indicates a percentage point difference of 33.22 between SMEs and large enterprises in Cyprus, which is in line with the EU gap.

#### <u>Cloud</u>

**Cyprus's national target is in line with the EU's 2030 target (75%).** There is no specific update to report beyond what is included in the section above.

#### • Data Analytics

**Cyprus's national target is in line with the EU's 2030 target (75%).** There is no specific update to report beyond what is included in the section above.

#### <u>Artificial Intelligence</u>

**Cyprus national target is in line with the EU 2030 target (75%). The country is on track according to its national trajectory.** Although it presents a relatively low uptake of AI by businesses (7.90%) compared to the EU average (13.48%) in 2024, its growth rate in one year is significant and encouraging. Furthermore, Cyprus ranks 35<sup>th</sup> out of 174 countries in the <u>IMF AI Preparedness Index</u> which provides an insight into the country's readiness to leverage AI for economic growth.

In January 2025, Cyprus appointed an AI Taskforce to shape the national AI strategy to leverage the potential of AI for growth. The AI Taskforce, chaired by the Chief Scientist for Research, Innovation and Technology, will provide recommendations on practical applications of AI to the benefit of the economy and the public sector. The AI Taskforce comprises AI experts from academia and industry. It will also make recommendations on how to strengthen the AI research and innovation ecosystem.

To leverage the local technology ecosystem and the existing capacities, a funding programme (EUR 5 million) will be set up to allow companies to join forces with the public sector to develop innovative AI solutions to enhance public services. The programme is currently under development in collaboration with the Research and Innovation Foundation (RIF) and in consultation with other ministries and government authorities.

Cyprus also plans to be part of the EU AI ecosystem to foster business innovation in this field by encouraging the participation of start-ups and businesses in the Greek AI factory, Pharos. The collaboration will provide stakeholders in Cyprus with end-to-end user support, from upskilling and data provisioning to AI model training and fostering business innovation.

**Cyprus performed well, achieving above-EU-average adoption rates in cloud computing and data analytics, though trailing behind in AI uptake.** However, SMEs, which dominated the enterprise landscape and contributed over half of the country's economic value added, lagged behind large enterprises in digital transformation. Addressing this disparity is essential for strengthening the competitiveness and productivity of smaller enterprises within the Cypriot economy.

**2024 recommendation on cloud/AI/data analytics:** Consider if additional targeted measures for facilitating the adoption of AI by enterprises, in particular SMEs, would be necessary to reach the target by 2030.

**Cyprus made some efforts to address the recommendation through new policy actions in 2024.** Cyprus started the process of updating its national AI strategy to enhance the potential for growth linked to the adoption of AI by enterprises and the public sector. It also plans to establish a funding programme dedicated to innovative AI solutions to address challenges faced by the ministries and enhance public services (as described above).

In its revised roadmap, Cyprus added a substantial budget for advanced digital technology with its membership contribution (EUR 450 000) to the European Digital Infrastructure Consortium (EDIC) EUROPEUM on blockchain of which it is a founding member. By responding to the expression of interest to participate in various EDICs, Cyprus expects to benefit from reinforcing its cooperation with other Member States in advanced digital technologies and to develop robust infrastructure and services essential for digital growth. The country is also exploring AI-related EDICs for cooperation with other Member States.

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

At the beginning of 2025, Cyprus had three unicorns<sup>8</sup> unchanged from 2024. In its revised national roadmap, Cyprus added a trajectory and a target of five unicorns by 2030.

**Cyprus's start-up ecosystem continued to grow fast in 2024, having five times more start-ups than in 2020**. It was considered the EU's fastest-growing start-up ecosystem by the StartupBlink Index in 2024, especially in the fintech and gaming sectors.

The venture capital (VC) company managing Cyprus's first equity fund started operating at the end of 2024 to boost access to finance for start-ups and scale-ups. With the support of the RRP, it represents an important step for the start-up ecosystem and for investments in pre-seed and seed-stage start-ups as access to finance remains challenging for them. The initial capital is EUR 27.5 million.

The 'Cyprus Startup Visa' scheme has been renewed until December 2026. It supports the establishment of new innovative start-ups from non-EU countries in Cyprus, or the move of high-growth potential start-ups to Cyprus. It contributes to the aim of strengthening the innovation and entrepreneurial ecosystem of the country. Additionally, in the first quarter of 2025, the updated legal framework on the establishment and operation of spin-off companies by public academic institutions, was submitted to the Cypriot Parliament.

To support this vibrant ecosystem, the DMRID has developed the new National Strategy for R&I (2024-2026) with the aim of amplifying the positive influence of R&I activities and elevating Cyprus's role as a regional hub for research and innovation entrepreneurship and high-tech. A primary goal of the R&I Strategy is to contribute to economic growth, enhancing the competitiveness of the economy, and making Cyprus an attractive destination for investment and business on the international stage. Furthermore, it emphasises building a critical mass of research capacity in priority areas identified by the Smart Specialisation Strategy 2030, including digital technologies – especially high-performance computing, cybersecurity, and quantum technologies - with a particular emphasis on developing solutions for agriculture, water management, and smart cities.

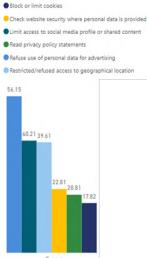
#### Strengthening Cybersecurity & Resilience

In Cyprus, just under 2 out of 3 (65.26%) individuals engaged in actions to protect their data online, which is slightly below the EU average of 69.55%. More specifically, 35.98% of individuals performed three or more precautionary measures (and therefore could be considered as having above basic digital safety skills). Refusing the use of personal data for advertising purposes was the most common measure (56.15%), while changing browser settings to limit cookies was the least frequent (17.82%).

<sup>&</sup>lt;sup>8</sup> Source: Dealroom (January 2025)

Enterprises in Cyprus tend to experience fewer incidents related to cyberattacks, but employees are less aware of their ICT security-related obligations compared to the EU average. The number of enterprises that experienced ICT security incidents leading to unavailability of ICT services due to attacks from outside (e.g. ransomware, denial of services attacks) decreased significantly in Cyprus from 4.59% in 2022 to 2.79% in 2024. It is well below the EU average (3.43%). The percentage of enterprises that experienced ICT security-related incidents leading to unavailability of ICT services due to hardware or software failures (9.12%) is also much lower than the EU average (17.97%). In terms of ICT security measures used, 96.35% of enterprises in Cyprus deployed some measures, well above the EU average of 92.76%. However, only 51.62% of

Type of activities to protect personal data online (% of individuals)



enterprises made their employees aware of their obligations in ICT security-related issues, significantly below the EU average of 59.97%.

The adoption of new internet standards to ensure the scalability, stability and security of the internet presents a mixed picture in Cyprus. Only 1% of internet hosts in Cyprus had deployed the latest version of the Internet's main communication protocol version 6 (IPv6) for end users by Q3/2024. This is significantly lower than the EU average of 36%. The protection of servers at 4% is also much lower in Cyprus than the EU average (17%), although IPv6 is an important protocol to ensure the scalability, stability and security of the internet. However, the adoption of Domain Name System Security Extensions (DNSSEC) to protect the integrity of the Domain Name System (DNS) internet infrastructure and ensure the interoperability and security of the global cyberspace is high in Cyprus (74%), significantly above the EU average (47%).

DMRID is currently providing cybersecurity training for public sector employees, delivered both through face-to-face sessions and self-paced online courses.

In its revised roadmap, Cyprus added a measure to increase its capacity to respond to the growing cybersecurity threat with the creation of the National Cyber security Coordination Centre of the Republic of Cyprus (NCC-CY). The N4CY project for the establishment of the NCC-CY concluded in December 2024. The centre aims to concentrate and better coordinate research, technology and industrial development investments and take advantage of the European Union's funding opportunities in the field of cyber security. During this time, a EUR 1 million-scheme to support SMEs in cybersecurity was completed (19 applications were eligible out of 39 in total). Subsequently, in January 2025, the N4CY2 project was launched jointly by the DSA, the Research and Innovation Fund and the DMRID. The objective is to further develop the cybersecurity capacity of SMEs, start-ups, the tourism sector and entities falling under the NIS2 Directive. (total budget of EUR 7.67 million co-funded by the Digital Europe Programme and Cyprus).

In view of the transposition into national legislation of the NIS2 Directive by Cyprus on the 25<sup>th</sup> of April 2025 DSA is launching training seminars to enhance cybersecurity skills and awareness campaigns targeting both citizens and businesses. These initiatives aim to reduce vulnerabilities and mitigate the financial and operational impact of cyber threats in the future. It also started cybersecurity maturity checks in 2024 in view of the entry into force of the NIS2 Directive. According to the Digital Decade Eurobarometer 2025, 89% of the respondents in Cyprus think that an improved cybersecurity, better

protection of online data and safety of digital technologies would facilitate their daily use of digital technologies.

In the healthcare sector where cybersecurity is critical, Cyprus has conducted a national risk assessment in the health sector with the purpose of identifying ICT systems whose compromise could significantly impact the well-being of Cypriot citizens at a national level. Based on the findings of this assessment, the Digital Security Authority (DSA) will take appropriate measures and provide targeted support through its national cybersecurity strategy. These measures will aim to strengthen the resilience of healthcare-related digital infrastructure, ensure continuity of essential health services, and protect sensitive medical and personal data. Furthermore, as part of its ongoing efforts to enhance cybersecurity maturity in the sector, the DSA is also planning to host the ENISA e-Health Security Conference and organise a national cybersecurity exercise for the healthcare sector in 2026.

To address the cybersecurity skills shortage in the EU, Cyprus is working on the creation of a Cybersecurity Skills Coalition in collaboration with other Member States to create an EDIC. The objective is to boost capacity building and resilience for public authorities, industries, and SMEs across EU Member States.

# Protecting and empowering EU people and society

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

Increasing the number of people having at least basic digital skills represents a challenge in Cyprus, although several programmes are offered. Customised programmes are designed for specific groups in collaboration with various organisations as part of the National Action Plan for Digital Skills 2021-2025. Activities cover a wide range of the population and some of them specifically targeting vulnerable groups. Upgrading basic digital among the population is a critical enabler of digital inclusion, which in turn is e essential for ensuring fair access to online public services. According to the 2025 Eurobarometer, 86% of the respondents in Cyprus think that accessing public services online will be important for their daily life by 2030. The umbrella initiative 'Digital Citizen' has been designed to empower citizens. It contains a comprehensive suite of digital tools and user-centric solutions, with emphasis on service delivery, accessibility and seamless interaction between citizens and government services. To enhance online services availability and accelerate their use by the citizens, Cyprus offering 100 000 e-IDs to Cypriot citizens. Cyprus is also advancing its national Electronic Health Record (EHR) system to enhance healthcare services and facilitate seamless access to medical information. Regarding ICT specialists, while Cyprus is at the EU average, the data shows a slight decrease in ICT specialists as a percentage of total employment.

#### Equipping people with digital skills

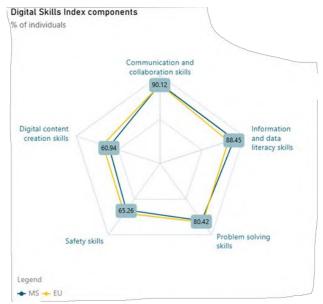
#### Basic Digital Skills

In 2023, Cyprus was below the EU average of 55.56% with only 49.46% of individuals holding at least basic digital skills. Despite the absence of new data for 2024, looking at demographic segments provides some additional information about people's digital proficiency:

- **Gender Gap:** Interestingly, 47.89% of men and 50.95% of women are equipped with at least basic digital skills, leading to a gap of 3.06 percentage points in favour of women. This is the opposite of what is usually observed in the EU with an average gap of 2.23 in favour of men.
- Education Level: Education level is a strong indicator of digital skills in Cyprus. 73.58% of those with higher education have at least basic digital skills, which is still below the EU average. The gap is stark for those with low or no formal education, where only 16.19% have at least basic digital skills, creating a substantial 33.27 percentage points difference compared to the national average, much larger than the same gap at EU level (21.95 percentage points).
- Living Areas: In Cyprus, the digital divide between the different living areas (48.96% for rural areas and 53.45% for towns and suburbs) is proportionally smaller than in the EU. However, the city dwellers have a low proportion of at least basic digital skills at 47.54%, compared to the EU average of 62.55%).
- Age Groups: The country's youth, aged 16 to 24, are the most digitally skilled at 71.82%, marginally above the EU average (69.98%). In contrast, those aged 65 to 74 have very low digital skills at 11.12%, significantly below the EU average for their age bracket (28.19%).

**Digital Skills Index components:** Cyprus outperforms the EU average in 2 out of 5 areas of the Digital Skills Index. Its best showing is in communication and collaboration skills, with a score of 90.12%, followed by information and data literacy skills with a score of 88.45%. However, the country faces challenges in digital content creation skills, where it scores 60.94%, well below the EU average of 68.28%.

In summary, Cyprus's digital skills landscape presents a mixed picture. While there is a gender gap in favour of women and a strong showing amongst young people, the overall proficiency is below the EU average. Notably, there is a significant opportunity for improvement in



elevating the digital skills of those with lower education levels and the elderly, as well as enhancing areas like digital content creation to close the gap with EU standards.

Cyprus's national target for its population to have at least basic digital skills by 2030 is in line with the EU's 2030 target (80%). In its revised roadmap, Cyprus significantly upgraded a measure for the development of digital skills putting emphasis on designing customised trainings for specific groups. In 2024, it also continues to implement measures initially included in the roadmap.

**2024 recommendation on basic digital skills:** Consider, based on the current moderate results, strengthening the strategy for developing the population's basic digital skills, especially by training people over 55.

**Cyprus made some efforts to address the recommendation through new policy actions in 2024**. The measure 'Promotion of Digital Skills by Cyprus Productivity Centre (CPC)' included in the initial roadmap (with a budget of EUR 300 000) has been considerably upgraded for the 2024-2026 period with an additional budget of EUR 1.75 million from the RRP. Since 2024 the CPC has been collaborating with the Human Resource Development Authority (HRDA) for the implementation of customised programmes: Free Digital Skills -Programmes for people over 55; Digital Skills Programmes for All; Programmes in non-urban/mountainous and remote areas; Programmes leading to ICDL certification. By the end of 2024, 4 745 people had been trained, with a target of 5 300 by the end of 2025.

To address the digital divide and promote trainings on digital skills for vulnerable groups, the CPC also plans to provide digital equipment and upgrade facilities for digital learning and skills. This support is directed among others to elderly care homes to enable more courses in digital skills based on the current population needs. The HRDA continued to implement measures included in the initial roadmap to strengthen the digital skills of 20 210 employed and unemployed persons.

#### ICT specialists

In Cyprus ICT specialists account for 5.0% of total employment, matching the EU average in 2024. The country is on track according to its national trajectory even though this percentage is down falling a negative growth rate compared to the previous year. In 2023, the percentage of ICT specialists as a

share of total employment surpassed the EU average (5.6% for Cyprus compared to 4.8% for the EU average).

The share of women ICT specialists in Cyprus remained stable (23.6% in 2023 and 23.7% in 2024), and higher than the EU average in both years (19.4% and 19.5%). However, the growth rate of 0.4% is slightly lower than the EU's 0.5%.

**Cyprus has a higher percentage of enterprises offering ICT training compared to the EU average.** In 2022, 28.36% of Cypriot enterprises with 10 or more employees provided ICT training, exceeding the EU's 22.37%. This trend continued in 2024, with 29.94% of Cypriot enterprises offering ICT training, compared to the EU's 22.29%. The annual growth rate for Cyprus (+2.7%) outpaced the EU's negative growth rate (-0.2%).

In terms of demand from the labour market, Eurostat experimental statistics based on web scraping show that in Cyprus, the profiles of 'software and applications developers and analysts' are the most sought after, representing 48.0% of online job advertisements for ICT specialists (58.0% at EU level). Two types of profile are significantly more in demand in Cyprus than in the EU: 'information and communications technology service managers' (12.6% of online job advertisements for ICT specialists, while the EU average is 3.8%) and 'telecommunications and broadcasting technicians' (4.8% while the EU average is 1.7%). The profile of 'information and communications technology operations and user support technicians' (10.8% of online job ads) is also slightly above the EU average (10.4%).

In its revised roadmap, Cyprus updated its 2030 target to be in line with the EU's 2030 target of ICT specialists accounting for 10% of total employment. An assessment is currently being carried out on the pilot programme that was launched in 2024 in collaboration with the business sector to upskill unemployed people with a STEM background so that they may continue their career path in ICT-related jobs. No additional measures have been added in the revised roadmap. Given limited resources, more emphasis has been put on increasing basic digital skills of the population with targeted training to identified needs. Priority is also given to assess the needs and opportunities offered on the labour market by the ICT sector to encourage students to follow high-potential studies. Furthermore, the pilot programme, launched in 2023 in collaboration with the business sector for upskilling unemployed people with a STEM background to continue their career path in ICT related jobs, is currently under evaluation.

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

For digital public services for citizens, Cyprus scored at 77.63 in 2024, up from 73.96 in 2023, and although its growth rate (5.0%) outpaced the EU's 3.6%, it remained below the EU average of 82.32 in 2024. The country is on track according to its national trajectory. In the cross-border digital public services, the country scored 71.9 in 2024, above the EU's 71.28. In 2023, Cyprus's score of 72.74 was also above the EU's 68.37. However, compared to 2023, Cyprus's growth rate was negative in 2024 (- 1.1%) while the EU experienced a positive average growth rate (+4.3%).

For digital public services for businesses, Cyprus's score was 86.07 in 2023 - above the EU's 85.42, but decreased slightly to 86.01 in 2024 - below the EU average of 86.23. The country is on track according to its national trajectory, yet the growth rate (- 0.1%) reflects stagnation. The EU average progressed slightly (0.9%). The reason is that one newly measured SDGR-related services (Single Digital Gateway regulation) was not found online, lowering the average score. For cross-border digital public services for businesses, Cyprus scored 77.86 in 2023, above the EU's 73.13, but dropped to 75.35 in

2024, still above the EU's 73.76. Although, Cyprus's growth rate was negative in 2024 (- 3.2%) while the EU's average experienced positive growth rate (+0.9%).

For access to e-health records, Cyprus presents a score of 75.44 in 2024 below the EU average of 82.70. The country is on track compared to its national trajectory. It presents a higher growth rate (10.7%) than the EU (4.5%).

That said, in 2024 the percentage of people having used websites or apps of Cypriot public authorities in the last 12 months (79.32%) remained above the EU average (74.71%).

#### e-ID

In December 2023, the National Scheme IDME.cy was notified under the eIDAS regulation with 'assurance level high'. At the beginning of 2025, Cyprus government decided to proceed to the acquisition of 100 000 e-IDs to be offered to Cypriot citizens over the age of 18. The first 30 000 e-IDs will be provided free of charge to citizens on a first-come, first-served basis, and for the remaining 70,000 e-IDs, the Government will cover a significant portion of the cost.

**The adoption of e-ID use will enable access to services,** such as (i) access to government systems through the 'CY Login' mechanism, using e-ID as an alternative login method; (ii) integration of an electronic signature into information systems, such as the new 'Ippodamos' system for urban planning and housing and building permits; (iii) a selection of not fully digitalized services, to be electronically submitted to governmental departments, transitioning away from paper-based processes.

Three entities from Cyprus are participating in a large pilot project for the implementation of the EU Digital Identity Wallet. In 2024, the project 'MyHealthPath' involving 31 partners across 15 Member States started developing a digital platform to test practical use cases and user centred requirements into innovative technical solutions and services in the context of the implementation of the EUDI Wallet. In addition, three entities from Cyprus continues to participate in POTENTIAL, the large-scale pilot consortium on the EU Digital Identity Wallet (reported in last year's report).

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

Cyprus still aims to reach a score of 100 for the digitalisation of public services for citizens and businesses. The revised roadmap includes three additional measures to reinforce the strategy of digitalisation of public services under the broad 'Digital Citizen' initiative focused on delivering digital tools and user-centric solutions:

- **Development of the 'Digital Citizen' mobile application**. Citizens can create, store and verify their digital documents, which hold equal legal validity to paper documents. These digital documents are suitable for any official or legal use within the Cypriot territory. The objective is to foster user-friendly government-citizen interactions, while simplifying bureaucratic processes, with a focus on convenience, security and efficiency. The application was launched in December 2024 and will continue to evolve with a focus on improving services and introducing new features.
- Enhanced and redesigned single government portal (gov.cy). The transformation of the public administration's online presence through a unified digital portal is continuously being enhanced and re-designed to meet users' needs. At the end of February 2025, it had 400 services online, with the aim being to reach 500 services by the end of 2025.

• Integration of a Digital AI Assistant in the single government portal (gov.cy), featuring generative AI functionalities. A pilot will start in December 2024 with social insurance services, which is an area frequently generating questions from users. Further topics are being added gradually.

**2024 recommendation on digital public services:** Consider focused measures, after further analysis of the e-government benchmarking methodology, to ensure that the benchmarking results reflect the current status of the country's digital public services.

**Cyprus fully addressed the recommendation by putting significant policy actions into place in 2024**. The revised roadmap includes three additional measures to reinforce the strategy of digitalisation of public services under the broad 'Digital Citizen' initiative focused on delivering digital tools and user-centric solutions.

#### e-Health

**Cyprus still aims at reaching a score of 100 for the access to electronic health records in line with the EU's 2030 target.** Cyprus focused on the expansion of the European Health Union (EHU) aims to enhance cohesion and efficiency in healthcare systems across the EU while addressing health challenges with collective strength. The expansion of the EHU involves aligning health policies, integrating National healthcare systems, and promoting digital health solutions to create a more unified and resilient EU-wide network. Three additional measures were added in the revised roadmap contributing to develop access to e-health patient data:

- Cyprus participates in the 'Enabling Patient Access to their Health Data' (PATHED) project. Composed of 17 partners in 11 Member States, the project aims to deploy and use in production the elements of the mobile app toolkit developed for patient access to their health data. The partners have expertise in the cross-border exchange of Patient Summaries and ePrescriptions and several skills acquired from developing and producing components of MyHealth@EU.
- Cyprus's entities participate in the 'eCAN' Joint Action aiming to bring the benefits of ehealth to all citizens and patients across EU Member States with a focus on cancer prevention and care. The objective is to harmonize telemedicine regulations and examining the effectiveness of teleconsultation and telemonitoring programmes in oncology. eCAN is assessing their role through three clinical trials for different cancer patient groups across 10 European countries.
- Cyprus is participating in the European Health Data Space (TEHDAS2) to harmonise the secondary use of health data by creating a common legal framework. 66 organisations and 29 European countries develop guidelines and technical specifications for common use by all Members States and the European Commission.

Some of the additional measures described under the digitalisation of public services will also contribute to boosting access to e-health records (e.g. the e-ID).

These developments underscore Cyprus's commitment to leveraging digital health technologies, although the implementation of some existing measures is delayed compared with the initial roadmap prevision. The launch of 'MyHealth@CY', the national eHealth mobile application is estimated to be available by May 2026 (originally to be deployed by December 2024).

However, the national e-Health Authority (NeHA) is advancing its National Electronic Health Record (EHR) system to enhance healthcare services and facilitate seamless access to medical information. This measure was initially in the roadmap. It aims to create a unified digital repository for citizens' health data. Currently, it is implementing training programs for healthcare providers on the use of the online platform for providing cross-border healthcare services to familiarize professionals with its tools and procedures, enabling them to provide services to patients from other EU Member States as well as Cypriot citizens, enhancing interoperability and quality of care through cross-border services.

In April 2025, Cyprus will join the EU's cross-border healthcare programme enabling its citizens to access their medical records and prescriptions from other participating EU countries. Cyprus is the 16<sup>th</sup> Member State to join. European citizens from those countries visiting Cyprus will also benefit from reciprocal rights.

According to the Digital Decade Eurobarometer 2025, 83% of the respondents in Cyprus 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) Enhance the authentication method for logging into the online access service by using a notified e-ID; (ii) Make the data types of medical images and hospital discharge reports available to citizens through the online access service; (iii) Ensure that the online access service complies to web accessibility guidelines.

**Cyprus has fully addressed the recommendation through new policy actions in 2024.** Three new measures were included in the roadmap (as described above). The integration of an enhanced authentication login method through the notified e-ID scheme is being evaluated and will be scheduled for future implementation. In parallel, the continuous addition of electronic medical records is planned, with patient information summaries expected to be made available in due course. The provision of these services through the gov.cy portal follows established standards and will ensure compliance with accessibility guidelines for all citizens.

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

The data on online participation in political and civic life shows significant growth recently in Cyprus. In 2024, 31.68% of people used digital tools to participate in democratic life, such as taking part in online consultations, voting on civic or political issues, or expressing opinions on civic or political issues on websites or in social media. This is far higher than the EU average (20.45%). It also shows a rapid upwards trend compared to 2022 (13.35%) which was below the EU average (17.59%).

At the same time the percentage of people encountering hostile and degrading online messages in Cyprus is slightly higher than in the rest of the EU. Data shows that in 2023, 35.07% of individuals encountered online messages that they considered hostile or degrading towards groups based on factors such as political views, LGBTIQ identities or religion, marginally above the EU average of 33.5%. Young people in the age group 16-24) reported higher exposure (42.94%) than adults in the age group 25-64 (37.27%). Men (34.81%) and women (35.32%) experienced very similar rates of exposure, suggesting a balanced impacts across genders.

**Regarding disinformation, the percentage of people who verified data, information and digital content is significantly lower than in the rest of the EU**. In 2023, 34.27% of individuals in Cyprus reported having encountered information or content on internet news sites or social media that they considered untrue or doubtful, substantially lower than the EU average of 49.25%. However, according to the survey, only 9.04% of these individuals verified its truthfulness, highlighting a very low level of engagement in assessing the reliability of the information encountered. Young people (16-24) (38.32%) reported very similar exposure to adults (25–64) (36.26%), with verification rates being practically the same at 9.77% for young people and 9.87% for adults. Males (33.92%) and females (34.59%) also reported very similar exposure rates, with verification rates following the same trend at 8.77% for males and 9.30% for females.

The data shows that while the country has a slightly higher prevalence of perceived hostile and degrading online messages compared to the EU average, a significantly lower proportion of individuals encountered potentially misleading information online. However, the data also suggests that Cypriots have not been actively engaging in verifying the accuracy of online content, with a very low proportion of individuals checking the truthfulness of information.

**Cyprus has a fact check centre which is member of the European Digital Media Observatory (EDMO) network**. <u>Fact-Check Cyprus</u> is a collaboration between people involved in the fight against disinformation from Cyprus and Greece. It joined the Social Informatics unit of the Cyprus University of Technology (CUT), a public academic institution, in November 2023. The objectives of the centre are to deconstruct fake news and educate people on digital and media literacy to effectively navigate the online world, distinguishing disinformation and fake news by applying critical thinking. According to the Digital Decade Eurobarometer 2025, people in Cyprus strongly think that the action of the public authorities is urgent to protect children online regarding the negative impact of social media on children's mental health (96% of respondents), cyberbullying and online harassment (94%) and to put in place age assurance mechanisms to restrict age-inappropriate content (96%).

Cyprus appointed its national authorities to supervise the protection of fundamental rights in relation to the use of high-risk AI systems. In November 2024, Cyprus notified the European Commission that it had appointed the Commissioner for Personal Data Protection, the Ombudsman and the Attorney General to monitor AI rights and to enforce compliance with human rights obligations in high-risk AI applications, as provided for in the AI Act. The 2025 Eurobarometer shows that 82% of respondents in Cyprus 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, in line with the EU average of 83%.

**Cyprus actively engages in international dialogues on digital rights.** In 2024, Cyprus co-hosted the regional conference 'Protecting Human Rights in the Digital Age and in Social Media'. Participants discussed the development of new technologies and AI and the challenges for the ombudsmen and mediators in the field of human rights protection.

# Leveraging digital transformation for a smart greening

According to the Digital Decade Eurobarometer 2025, 80% of the respondents in Cyprus consider digital technologies important to help fight climate change (above the EU average of 74%). 87% answered that ensuring that digital technologies serve the green transition should be an important action for the public authorities, also above the EU average of 80%.

**Cyprus is implementing its national plan for smart cities which put digital technologies at the core of the transformation.** It provides for the implementation of smart vertical solutions to mitigate the environmental impact based on digital technologies such as smart lighting, smart parking, and smart waste management and citizen app. The plan includes the adoption of necessary reforms and infrastructure to enable the creation of smart cities across the country, making them more resilient for the future. In 2025, Cyprus will be launching the project for the creation of the 'Cyprus Smart City Platform' and the above mentioned four vertical solutions.

Cyprus through its Smart Specialisation Strategy 2030 recognises the critical role of digital technologies in supporting the green transition, promoting the development of energy-efficient digital solutions and infrastructures. Specifically, it identifies 'digital technologies' as a priority area, with a focus on smart energy grids, energy management in buildings through IoT and AI, and the promotion of green data centres. The strategy also highlights the potential of the ICT sector to accelerate sustainable growth by diversifying its technological applications into low-tech sectors such as tourism and agriculture, contributing to their digital and environmental transformation. These efforts are supported through targeted funding instruments provided by the Research and Innovation Foundation.

The public administration provides collaboration tools for civil servants, aiming to minimise travelling costs, and lower carbon emissions. Although many concrete actions are in the making, the revised roadmap adjustment lacks a description of the approach for twinning the digital and green transition, notably for reducing the footprint of the digital sector.

In the telecoms sector, Cyprus's regulator, OCECPR, is monitoring the work of the Body of European Regulators for Electronic Communications (BEREC) on issues related to the green transition and sustainability. By monitoring guidelines and best practices developed at European level, it intends to ensure integration and alignment with EU-wide sustainability goals. In parallel, it is also engaging with telecoms providers to understand and assess the measures they are taking to reduce their environmental footprint and promote sustainable practices. Cyprus's telecoms operators are developing strategies for mitigating the footprint of digital infrastructure and devices, such as the electrification of base stations with solar panels, and recycling of devices.

In 2024, 27.69% of people in Cyprus considered energy efficiency to be an important characteristic when buying ICT devices, while the EU average was 19.35%. The eco-design of the device was even more important for 41.39% of consumers, well above the EU average (12.04%). However, price remains by far the most important criterion for buyers in Cyprus (87.84%) ahead of energy efficiency and eco-design. Cypriots are less likely to recycle their old desktop computer (9.99%) and laptop or tablet (7.59%) than the EU average (14.66% and 11.31% respectively), but a large majority of 73.52% either still use their old desktop computer or have never bought one, while the EU average is at 38.46%. The

same is observed for the old laptop or tablet: 48.49% of people either still use their old laptop or tablet or have never bought one, while the EU average is at 25.04%.

Regarding the awareness and preparedness of enterprises on the green aspects of their digital sector, 71.1% of enterprises of 10 or more employees considered the environmental impact of ICT services, or ICT equipment before selecting them, while the EU average is only 58.5%. The recycling of old equipment is also higher among enterprises in Cyprus (78.3%) than the EU average (77.4%).

**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 the methodology developed by the European Green Digital Coalition, in view of future policy development, as well as of attracting relevant financing.

**In 2024, Cyprus continued to implement existing measures but did not take any new measures.** The implementation of the Smart Specialisation Strategy and the Research and Innovation Foundation facilitate progress through tailored funding mechanisms to support green transition

# **Annex I – National roadmap analysis**

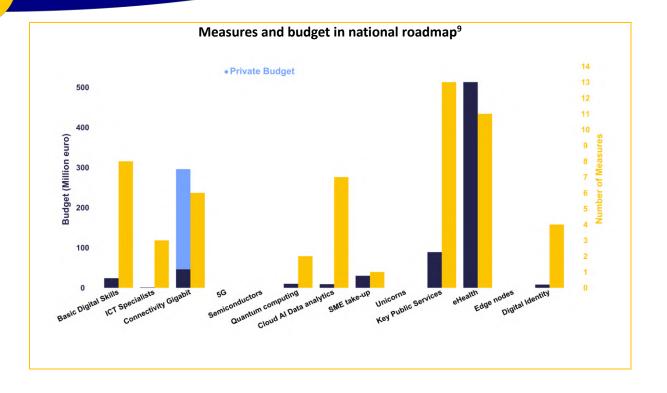
#### Cyprus's national Digital Decade strategic roadmap

Cyprus submitted an adjustment of its national roadmap on 13<sup>th</sup> January 2025. It includes 11 additional measures, six measures were revised, as well as one trajectory. Two targets and trajectories were added for unicorns and edge nodes. The adjustment aligns with the current Commission's priorities such as cybersecurity and increasing the efficiency of public services using digital technologies.

The revised roadmap addresses a substantial number of roadmap recommendations issued in 2024:

- *Provide a target and trajectory for unicorns and edge nodes*: the revised roadmap includes a target and a trajectory for edge nodes and unicorns. Cyprus also revised its national target for ICT specialists to align it with the EU's 2030 target of 10%.
- Review and strengthen measures to contribute to the targets that are the most challenging to reach, such as digital skills for all and business take-up of AI: Cyprus significantly upgraded a programme implemented by the Cyprus Productivity Centre (CPC) for the development of digital skills, putting emphasis on designing customised training programmes for specific vulnerable groups including individuals aged 55 and above. In the initial roadmap, the budget was EUR 300 000; the revised roadmap provides for an additional budget of EUR 1.75 million for 2024-2026 period with the support of the RRP. In terms of business take-up of AI, no additional measures have been included in the roadmap, but Cyprus is working on designing a national AI strategy to leverage the potential of AI for growth, and on a funding scheme for the provision of AI solutions.
- Provide more information on the implementation of the digital rights and principles (and Digital Decade general objectives), including what national measures contribute to it: while there has been no systematic contribution to the implementation of the digital rights and principles was not carried out, the revised roadmap includes additional information on some initiatives contributing directly to the implementation of digital rights and principles (e.g. Cyprus's involvement in international discussions on digital rights), and indirectly, such as the measures for digital skills helping to empower people and protect them online. Regarding the general objectives, while the adjustment of the roadmap includes a measure to boost cybersecurity capacity, the implementation of the objective of greening digital is has not been addressed.

Overall, Cyprus's revised roadmap reinforces the already mostly complete roadmap submitted in 2023. In total, the national roadmap includes 62 measures totalling EUR 988.4 million (equivalent to 2.96% of Cyprus's GDP). It remains high in ambition in terms of the targets set and the inclusion of additional measures demonstrates the commitment to reach the objectives and targets of the Digital Decade. At the same time, there is room to further consolidate the action in some areas, such as digital skills for all and digital public services for businesses. The stakeholders, included in the roadmap have been consulted.



<sup>&</sup>lt;sup>9</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**

Cyprus is a member of the EUROPEUM-EDIC on blockchain and an observer in the Alliance for Language Technologies EDIC. It is also working towards setting up an EDIC in the area of cybersecurity skills. Cyprus is a participating state of the EuroHPC Joint Undertaking (JU) and of the Chips JU.

Cyprus is not yet active in the Best Practice Accelerator.

#### EU funding for digital policies in Cyprus

Cyprus allocates 25% of its total recovery and resilience plan to digital (EUR 274 million)<sup>10</sup>. In addition, under cohesion policy, EUR 113 million (representing 12% of the country's total cohesion policy funding), is dedicated to advancing Cyprus' digital transformation<sup>11</sup>. According to JRC estimates, EUR 320 million directly contribute to achieving Digital Decade targets (of which EUR 254 million comes from the RRF and EUR 66 million from cohesion policy funding)<sup>12</sup>.

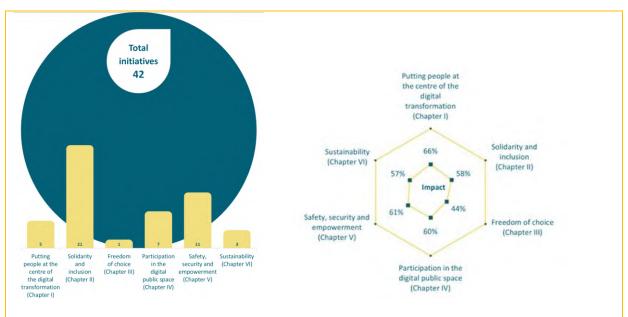
The largest investments in Cyprus's recovery and resilience plan (RRP) are dedicated to measures for the digitalisation of the public sector and public services (EUR 101 million), reinforced by support under the cohesion funds (EUR 33 million). In addition, investments to develop e-health records are also planned under the RRP and the cohesion funds. The RRP includes substantial investments dedicated to connectivity (EUR 45 million). Measures for the digitalisation of enterprises are planned in the RRP (EUR 11 million) and in the cohesion funds (EUR 5 million).

<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)

Cyprus has been relatively active in implementing digital rights and principles, with 42 initiatives overall and 3 new initiatives launched in 2024, showing limited progress towards its commitments. Cyprus is most active in the area of 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 Austria (mainly national government) and how these are perceived by citizens.

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

According to the Special Eurobarometer 'Digital Decade 2025', 45% of citizens in Cyprus think that the EU protects their digital rights well (a 2% increase since 2024). This is slightly above the EU average of 44%. Citizens are particularly confident about getting an affordable high-speed internet connection for everyone in the EU and getting easy online access to all key public services in the EU (59%, above the EU average of 57% and 58% respectively). They are most worried that their right to a safe digital environments and content for children and young people is not well protected (52%, above 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 <u>here</u>. For a more detailed country factsheet accompanying the study, click <u>here</u>.