Report on the State of the Digital Decade 2024

Annex - Short Country Report 2024

Italy

Executive summary

Italy has untapped potential to the European Union's (EU) Digital Decade objectives and targets, in view of a successful digitalisation that fosters competitiveness, resilience, sovereignty, European values and climate action.

In 2023, Italy made progress in the area of e-government, in particular in e-health and key digital public services for businesses and continued to advance on gigabit networks roll-out. However, despite some progress, particularly important **challenges persist** in digital skills, while Italian enterprises lag behind in the adoption of advanced technologies such as AI.

In recent years, also building on the Recovery and Resilience Plan, Italy **put in place significant efforts for the digital transformation of the country**, intensifying initiatives to digitalise the public administration, support the digitalisation of enterprises and improve digital skills across the country. Additionally, Italy can count on a robust foundation in areas as such as semiconductors, edge computing and quantum, which are key for the **country's position and technological leadership**.

According to the **Special Eurobarometer 'Digital Decade 2024'**[1], 71% of the Italians consider that the digitalisation of daily public and private services is making their life easier (73% in the EU), a figure that needs to be improved by bringing all citizens on board.

Participating in **joint efforts with other EU Member States** also remains crucial. Currently, Italy is involved in nine **European Digital Infrastructure Consortia** (EDICs) already set up or in the making[2], and in the Important Projects of Common European Interest (IPCEI) in the area of cloud infrastructure and services and microelectronics.

Italy allocates 25.6% of its total Recovery and Resilience Plan to digital (EUR 47 billion)[3], which **represents a significant opportunity but remains insufficient to fully reach the Digital Decade targets and requires strong focus on implementation and** alignment with the various existing strategic plans. Under Cohesion Policy, an additional EUR 5.5 billion (13% of the country's total Cohesion Policy funding) is allocated to the country's digital transformation[4].

[1] Special Eurobarometer 551 on 'the Digital Decade' 2024: https://digital-strategy.ec.europa.eu/en/news-redirect/833351
[2] Information updated on 31 May 2024.
[3] The share of financial allocations that contribute to digital objectives has been calculated using Annex VII to the Recovery and Resilience Facility Regulation.
[4] 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.

Digital Decade KPI [1]	Italy			EU		Digital Decade target by 2030	
	DESI 2023	DESI 2024	Annual progress	DESI 2024 (year 2023)	Annual progress	**IT**	**EU**
Fixed Very High-Capacity Network (VHCN)	53.7%	59.6%	11.0%	78.8%	7.4%	100%	100%
Fibre to the Premises (FTTP) coverage[2]	53.7%	59.6%	11.0%	64.0%	13.5%	100%	-
Overall 5G coverage	99.7%	99.5%	-0.2%[3]	89.3%	9.8%	100%	100%
Semiconductors		NA					
Edge Nodes		77		1 186		946	10 000
SMEs with at least a basic level of digital intensity	60.3%	60.7%	0.3%	57.7%	2.6%	90%	90%
Cloud	51.9%	55.1%	3.0%	38.9%	7.0%	74%	75%
Artificial Intelligence	6.2%	5.0%	-	8.0%	2.6%	60%	75%
Data analytics	NA	26.6%	NA	33.2%	NA	60%	75%
AI or Cloud or Data analytics	NA	63.1%	NA	54.6%	NA		75%
Unicorns		7		263		16	500
At least basic digital skills	45.6%	45.8%	0.2%	55.6%	1.5%	74.6%	80%
ICT specialists	3.9%	4.1%	5.1%	4.8%	4.3%	7.3%	~10%
e ID scheme notification		Yes					
Digital public services for citizens	67.9	68.3	0.5%	79.4	3.1%	100	100
Digital public services for businesses	74.7	76.3	2.1%	85.4	2.0%	100	100
Access to e-Health records	71.3	82.7	15.9%	79.1	10.6%	100	100

[1] See the methodological note for the description of the indicators and other descriptive metrics
[2] The indicator on VHCN coverage and the indicator on FTTP coverage coincide.
[3] The variation does not reflect a change in coverage, but it is the consequence of small refinements in criteria adopted to estimate the coverage.
[4] The variation between the two years is not considered statistically significant but in line with the stagnation of this indicator.

National digital decade strategic roadmap

With respect to **Italy's** contribution to the Digital Decade reflected in its roadmap, it is demonstrating **a very high ambition** and, based on this document, intends to devote **significant effort** to achieve the Digital Decade objectives and targets. However, **the formal adoption and publication of the roadmap at the national level,** which is crucial for the country to fully commit towards these ambitions, **is still pending**.

The roadmap provides a **complete overview**, covering **all targets to 2030**. While targets are generally ambitious and in line with the EU targets, those on basic digital skills and ICT specialists and on the uptake of Artificial Intelligence (AI) and data analytics remain below the EU levels, reflecting only the measures currently in place. The roadmap outlines a total of over **60 policy measures with a budget of over EUR 32 billion (about 1.6% of GDP)**. Accent is on improving digital skills, ICT specialists and digital public services. However, some areas, including unicorns and uptake of AI, lack targeted measures. A more comprehensive approach could be taken regarding the country's position in key technology areas, such as semiconductors and quantum.

Recommendations for the roadmap

Italy should, when submitting adjustments to its national roadmap in accordance with Article 8(3) of the Digital Decade Policy Programme (DDPP) Decision:

- **TARGETS:** (i) Provide a trajectory for the target on unicorns; (ii) Consider aligning the level of ambition of targets for basic digital skills, ICT specialists and technologies take up (AI, cloud, data analytics) to the EU's target.
- **MEASURES:** (i) Strengthen and/or better tailor the measures contributing to targets that are the most difficult to achieve, especially for **skills, ICT specialists, take up of AI and big data analytics**; (ii) Specify the measures that support the **target on unicorns**; (iii) Consider providing a more comprehensive analysis and overview of the measures and strategies for **semiconductors and quantum**; (iv) Review the **budget** description of all measures, ensuring completeness and accuracy; (v) Provide more information on the i**mplementation of digital rights and principles** (and Digital Decade general objectives), including what national measures contribute to it.
- **CONSULTATION:** Organize a consultation process on the roadmap, according to the national rules, and report on it.

Digital rights and principles

The Special Eurobarometer 'Digital Decade 2024' reveals that, in Italy, 49% of the population believes the EU protects their digital rights well, and while it marks a 6-point decline from the previous year, still remains above the EU average of 45%. Confidence in digital privacy stands at 57%, also above the EU average. Concerns include the safety of digital environments for children, with 45% expressing worry, and 40% are concerned about control over personal data. Despite these concerns, 83% of Italians recognize the importance of digital technologies for accessing public services, and 81% for connecting with friends and family, highlighting a strong appreciation for digital advancements. The monitoring of the Declaration on Digital Rights and Principles shows that increasing the profile of the Declaration at national level and fostering better stakeholder engagement could help improve outcomes in the years to come[5].

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

The country is making progress in deploying connectivity networks, while advanced technologies such as edge, quantum and semiconductors are increasingly gaining attention. Sustaining this momentum should remain a priority in order to strengthen the country's capabilities and positioning. While Italy is advanced in general 5G coverage, continued and rapid progress to deploy fixed Very High-Capacity Networks (VHCN), and specifically fibre-to-the-premises networks (FTTP), is needed, next to increased efforts to link the connectivity infrastructure with cloud and edge computing capabilities. In addition, more efforts should be devoted to improving the Quality of Service of 5G networks and provide on a large scale the superior performance that is needed for advanced use cases, especially for business-to-business (B2B) communications.

The presence of key projects and centres of excellence in quantum capabilities could boost Italy's ambitions in the field, but the level of investment needs careful assessment. The semiconductor sector is gaining attention with growing investments, requiring a coherent vision and sustained efforts.

[5] See SWD 'Digital Decade in 2024: Implementation and perspective' with annexes, SWD(2024)260: https://digital-strategy.ec.europa.eu/en/news-redirect/833325, Annex 4.

The uptake of technologies is relatively high among Italian enterprises, including SMEs. However, major gaps remain in the use of AI and in the area of innovative and high-growth enterprises (unicorns). Scaling up enterprises in Italy remains difficult, hindered by a generally weak ecosystem and limited venture capital investments.

Recommendations – Italy should:

- **CONNECTIVITY INFRASTRUCTURE**: (i) Continue to deploy FTTP ensuring a high growth rate and strengthen efforts to develop connectivity infrastructures coherently and jointly with cloud and edge computing capabilities exploiting the potential of the country's 5G network; (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.
- **SEMICONDUCTORS AND QUANTUM**: Continue the efforts in the semiconductors sector and increase investments in quantum technologies also within the frame of EU initiatives and in view of contributing to the European Chips Act.
- **CYBERSECURITY:** Continue the implementation of the 5G Cybersecurity Toolbox to ensure secure and resilient 5G networks.
- **AI/CLOUD/DATA ANALYTICS:**
    - (i) Strengthen measures targeted to the adoption of technologies by enterprises, with particular attention to AI and looking at the barriers and drivers specific to the national context.
    - (ii) Ensuring the broad uptake of the next generation of cloud infrastructure and services under development in the IPCEI-CIS by companies of all sizes, including by developing a country-specific dissemination strategy (complementing what has already been committed under IPCEI-CIS); contributing to the additional dissemination activities led by the Cloud IPCEI Exploitation Office.
- **UNICORNS:** Strengthen actions to sustain the ecosystem of start-ups and innovative enterprises, including boosting the availability of effective financial tools, initiatives to support the scale up of enterprises, in particular in strategic sectors, building synergies between research and industrial systems.

Protecting and empowering EU people and society

The country's major gaps remain in digital skills, impacting efforts to close the digital divides and hindering competitiveness. Despite the roadmap's focus and Italy's numerous recent initiatives, only 45.8% of people in Italy have at least basic digital skills and **the share of ICT specialists in employment remains limited, while demand by enterprises for these skills is surging.**

Italy performs well on the deployment of the Electronic Health Records and its action to strengthen access to key digital public services continued in 2023, but further efforts are needed. Italy has two certified eIDAS digital identity schemes and is contributing to the work for the deployment of the EU Digital Identity Wallet. The Electronic Health Record (EHR) has been introduced in all regions. However, the availability of digital public services for citizens was still below the EU average in 2023. The ongoing major e-government projects and investments are not yet showing their full impact.

Recommendations – Italy should:

- **BASIC DIGITAL SKILLS:** Increase efforts to boost digital skills across all target groups with tailored interventions, including by: (i) strengthening services to accompany citizens in the use of digital tools; (ii) expanding digital educational programmes in schools and increasing interest in STEM (Science Technology Engineering and Mathematics) and ICT disciplines; (iii) and incentivising reskilling and upskilling paths for workers.
- **ICT SPECIALISTS:** (i) Increase ICT programmes in higher education, including the strengthening of ITS Academies, in connection with the job market needs and in collaboration with industry; (ii) take specific measures to increase participation of women in ICT education and in the ICT careers; (iii) consider measures to attract and retain ICT specialists.
- **KEY DIGITAL PUBLIC SERVICES:** Continue efforts to digitalise public services, focusing on user-friendliness and interoperability to further increase simplification and re-use of information available to public administrations.
- **E-HEALTH:** (i) Increase the supply of health data by onboarding more categories of healthcare providers; (ii) build on existing legal provisions and implement access opportunities for legal guardians, authorised persons and disadvantaged groups; (iii) make all types of medical images available to citizens in a timely manner and in all regions through the online access service, including through mobile applications.

Leveraging digital transformation for a smart greening

The Recovery and Resilience Plan is boosting initiatives twinning the green and digital transition. The adoption of the 'Transition 5.0' plan, part of the REPowerEU chapter, promotes the transition of enterprises through investment to reduce their energy consumption. The plan also includes measures on advanced climate change monitoring and support for smart transport systems in three pilot cities. These efforts complement existing initiatives in urban energy management, strategic asset utilisation, and innovative public procurement.

Recommendations - Italy should:

- Continue and intensify the efforts to join up the twin green and digital transition, also leveraging advanced technologies and scaling up successful initiatives.
- Develop a coherent approach to twinning the digital and green transitions. First, promote improvements in energy and material efficiency of digital infrastructures, in particular data centres. 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.
- 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.

Italy