Europaudvalget 2025
KOM (2025) 0290 - SWD-dokument
Offentligt

EUROPEAN
COMMISSION

Brussels, 16.6.2025
SWD(2025) 294 final

PART 15/27

# 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**

{COM(2025) 290 final} - {SWD(2025) 290 final} - {SWD(2025) 291 final} -
{SWD(2025) 292 final} - {SWD(2025) 293 final} - {SWD(2025) 295 final}

European Commission

# DIGITAL DECADE 2025
# COUNTRY REPORTS

## Italy

# Italy

Contents


Executive summary ..... 1
A competitive, sovereign and resilient EU based on technological leadership ..... 5
Building technological leadership: digital infrastructure and technologies ..... 5
Connectivity infrastructure ..... 6
Semiconductors ..... 8
Edge nodes ..... 10
Quantum technologies ..... 10
Supporting EU-wide digital ecosystems and scaling up innovative enterprises ..... 12
SMEs with at least basic digital intensity ..... 12
Take up of cloud/AI/data analytics ..... 13
Unicorns, scale-ups and start-ups ..... 15
Strengthening Cybersecurity & Resilience ..... 16
Protecting and empowering EU people and society ..... 18
Empowering people and bringing the digital transformation closer to their needs ..... 18
Equipping people with digital skills ..... 18
Key digital public services and solutions – trusted, user-friendly, and accessible to all ..... 22
Building a safe and human centric digital environment and preserving our democracy ..... 25
Leveraging digital transformation for a smart greening ..... 26
Annex I – National roadmap analysis ..... 28
Annex II – Factsheet on multi-country projects (MCPs) and funding ..... 30
Annex III – Digital Rights and Principles ..... 31

# Executive summary

**Italy has made remarkable progress in enhancing digital infrastructure and digital public services, but continues to face challenges in AI adoption and startup growth, while maintaining a leading role in strategic technologies like quantum and semiconductors. Italy shows a substantial level of ambition in its contribution to the Digital Decade, having set 14 national targets, 79% of which aligned with the EU 2030 targets. The country is following its trajectories very well with 100% of them being on track (considering the 2024 trajectories defined for 7 key performance indicators (KPIs) out of 8 analysed). Italy addressed 69% of the 13 recommendations issued by the Commission in 2024 by making some changes through new measures.**

In 2024, Italy made advances in developing its digital infrastructure, particularly through increased fibre-to-the-premises (FTTP) coverage, and progressively achieved significant results in the digitalisation of public services and in the area of eHealth. However, the country continues to lag behind in the adoption of advanced digital technologies such as artificial intelligence and its ecosystem for innovative start-ups and scale-ups remains relatively underdeveloped. On the other hand, Italy holds a leading position in strategic technologies, having launched a Quantum strategy and actively working on a semiconductors strategy, highlighting a commitment to gain technological leadership.

| Digital Decade KPI (1) | Italy | | | | EU | | Digital Decade target by 2030 | |
|---|---|---|---|---|---|---|---|---|
| | DESI 2024 (year 2023) | DESI 2025 (year 2024) | Annual progress | National trajectory 2024 (3) | DESI 2025 | Annual progress | IT | EU |
| Fixed Very High Capacity Network (VHCN) coverage | 59.6% | 70.7% | 18.6% | 66.0% | 82.5% | 4.9% | 100.0% | 100% |
| Fibre to the Premises (FTTP) coverage | 59.6% | 70.7% | 18.6% | 66.0% | 69.2% | 8.4% | 100.0% | - |
| Overall 5G coverage | 99.5% | 99.5% | 0.0% | 99.6% | 94.3% | 5.9% | 100.0% | 100% |
| Edge Nodes (estimate) | 74 | 152 | 105.4% | 158 | 2257 | 90.5% | 946 | 10000 |
| SMEs with at least a basic level of digital intensity (2) | - | 70.2% | 0.2% | - | 72.9% | 2.8% | 90.0% | 90% |
| Cloud | 55.1% | - | - | - | - | - | 74.0% | 75% |
| Artificial Intelligence | 5.1% | 8.2% | 62.4% | 8.0% | 13.5% | 67.2% | 60.0% | 75% |
| Data analytics | 26.6% | - | - | - | - | - | 60.0% | 75% |
| AI or Cloud or Data analytics | 63.1% | - | - | - | - | - | - | 75% |
| Unicorns | 8 | 9 | 12.5% | 2 | 286 | 4.4% | 16 | 500 |
| At least basic digital skills | 45.8% | - | - | - | - | - | 80.1% | 80% |
| ICT specialists | 4.1% | 4.0% | -2.4% | - | 5.0% | 4.2% | 8.4% | ~10% |
| eID scheme notification | | Yes | | | | | | |
| Digital public services for citizens | 68.3 | 83.6 | 22.4% | 69.0 | 82.3 | 3.6% | 100.0 | 100 |
| Digital public services for businesses | 76.3 | 80.9 | 6.1% | 78.0 | 86.2 | 0.9% | 100.0 | 100 |
| Access to e-Health records | 82.7 | 84.1 | 1.7% | 74.0 | 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, that is comparable with the DII value from DESI 2023 (referring to year 2022) for the calculation of the annual progress. It is not comparable to the national trajectory that is based on version 3 of the index.
(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 on 'the Digital Decade' 2025**, 73% of Italian citizens consider that the digitalisation of daily public and private services is making their lives easier. 90% consider it important to counter and mitigate the issue of fake news and disinformation online, and regarding

competitiveness, 90% consider it important to ensure that European companies can grow and become 'European Champions' able to compete globally.

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

Italy has made notable progress in fiber-to-the-premises (FTTP), increasing coverage by 11 percentage points between 2023 and 2024 and reaching the EU average. The country also holds a strong position in the digitalization of small and medium enterprises (SMEs), with most achieving at least a basic level of digital intensity. However, despite increased adoption of artificial intelligence and being on track with the national trajectory set, Italy still falls behind in this area. The start-up ecosystem remains underdeveloped, with only nine unicorns — an increase of just one compared to last year — which does not reflect the size of the Italian economy. The recent announcement of a quantum strategy is expected to significantly drive further progress in this sector. Alongside this, ongoing efforts to develop a semiconductors strategy reflect Italy's dedication to further strengthening its position in these areas. Several initiatives are also in progress to enhance the country's cybersecurity capabilities, including the strengthening of monitoring, analysis and response capabilities, and skills development.

## Protecting and empowering EU people and society

Italy is confronted with issues concerning digital skills, with gaps affecting in particular people with lower education levels but extending also to young people – a primary target of the national Recovery and Resilience Plan (RRP) measures in this area. Italy is also faced with a low share of ICT specialists in total employment, which stood at 4% in 2024, below the EU's 5%. The digitalisation of public services has advanced significantly, with the progressive implementation of key measures and efforts to increase interoperability and usability (e.g. better user experience, adoption of PagoPA and the IO app, deployment of the National Digital Data Platform - PDND). In the framework of the EU Digital Identity Wallet, the country has also initiated the development of its IT-Wallet, with the first pilots made available to the public through the app IO, where users could access and use some initial documents (e.g. driving licence). Furthermore, Italy is working to boost citizens' basic digital skills through initiatives such as the network of digital facilitation services and digital civic service (both supported by the RRP), combat disinformation, enhance media literacy, and ensure online safety, particularly for minors.

## Leveraging digital transformation for a smart greening

Green and digital priorities have received increased attention, in part due to the RRP and its RePowerEU chapter. In 2024, impulse was given to the implementation of 'Transition 5.0', aiming to accelerate the industry transition to an energy-efficient, sustainable, and renewable-based production model. However, the available data shows a modest take-up of the measure.

## National digital decade strategic roadmap

Italy submitted an adjustment, containing five additional measures and revised trajectories. Stakeholders were consulted. It addresses a substantial number of the roadmap recommendations issued in 2024. All targets align with the EU level goals for 2030, except for the adoption of AI and data analytics, where the country aims for 60% adoption (instead of 75%) by 2030. The roadmap is very comprehensive, and the focus is on improving digital skills, ICT specialists and digital public services. Some areas, such as unicorns and uptake of AI, lack targeted measures. Overall, the Italian roadmap is

composed of 67 measures with a budget of EUR 62.3 billion, equivalent to 2.84% of gross domestic product (GDP).

## Funding & projects for digital

Italy allocates 26% of its total recovery and resilience plan to digital (EUR 46.8 billion)[1]. In addition, under cohesion policy, EUR 4.9 billion, representing 11% of the country's total cohesion policy funding, is dedicated to advancing Italy's digital transformation[2]. Italy is a member of the three established European Digital Infrastructure Consortia (EDICs): the Alliance for Language Technologies EDIC, the Local Digital Twins towards the CitiVERSE EDIC and of the EUROPEUM EDIC. Italy is directly participating in the IPCEI on Microelectronics and Communication Technologies (IPCEI-ME/CT) and in the IPCEI on Next Generation Cloud Infrastructure and Services (IPCEI-CIS). Italy is also a participating state of the EuroHPC Joint Undertaking (JU) and of the Chips JU.

Italy has contributed to the Best Practice Accelerator[3] by sharing three best practices in the frame of the Digital Skills cluster (network of digital facilitation services, the digital civic service and fund for *Repubblica Digitale*).

## Digital Rights and Principles

According to a support study, Italy has been one of the most active Member States in implementing the **European Declaration on Digital Rights and Principles**, with over 100 initiatives overall and 12 new initiatives launched in 2024. Italy is most active in the area of digital education, training and skills. Less activity has been identified with regards to protection and empowerment of children and young people in the digital environment. Measures in the area of putting people at the centre of the digital transformation appear to have most impact on the ground, in contrast to those addressing safety, security and empowerment.

**Recommendations**

- **Artificial Intelligence***:* Step up efforts to acquire a leadership position in the area of AI, also leveraging the existing centres of expertise and capabilities, including in the area of supercomputing.
- **Innovation ecosystems:** Boost innovation in the area of digital technologies by enhancing the national ecosystem, from research/university to technology transfer centres, start-ups and scale-ups, and considering targeted incentives for key strategic sectors.
- **SMEs and Advanced technologies take-up**: Support the efforts to build a strong network of technology transfer services, maintaining a nationwide presence, increasing the emphasis on key technologies like AI.
- **Basic digital skills**: Strengthen training opportunities and support services for all population groups, reinforce education on digital skills in schools and incentivise reskilling and upskilling for workers.

[1] 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.
[2] 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.
[3] 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.

- **ICT Specialists**: Expand ICT higher education and align it with labour market needs, promote women's participation in ICT education and careers, and introduce measures to attract and retain ICT professionals.
- **Cybersecurity***:* Improve cybersecurity priorities in view of evolving threats, building capacity in both enterprises and public administrations.
- **Connectivity:** Continue the efforts to deploy connectivity infrastructure, particularly FTTP, across the whole country and including in sparsely populated areas, and consider using take up as a driver for deployment.
- **Digital Public Services**: Maintain momentum in deploying digital public services, focusing on simplification and take-up by users.

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

**Italy has significant strengths in key sectors such as semiconductors and quantum technologies, which present crucial opportunities also in the context of overall EU competitiveness and strategic autonomy.**

The country has made substantial progress in enhancing its connectivity infrastructure, including with the expansion of Fibre to the Premises (FTTP) across the country, and outperforms when it comes to 5G coverage. A majority of small and medium-sized enterprises (SMEs) report at least a basic level of digital intensity, and there has been a surge in the adoption of AI technologies although uptake (especially among SMEs) is still limited.

Challenges persist, however, in achieving widespread digital integration across the economy and in fostering a robust environment for innovation and start-ups. This is reflected in Italy's relatively low number of unicorns, indicating a need for improved support and access to capital for innovative companies and scale-ups.

**These gaps are coupled with a stagnating ICT sector and sluggish investment in innovation.** The Italian ICT sector contributed only 3.21% to the gross value added in 2022, down from 3.34% in 2019 and below the EU average of 5.46%, highlighting its limited impact on the national economy. Additionally, research and development (R&D) expenditure in the ICT sector accounted for 15.38% of total business R&D spending, and ICT R&D personnel comprising 18.23% of the total. Both these figures experienced slight declines between 2021 and 2022[4].

In 2024, the government launched the green paper '*Made in Italy 2030*', which outlines the country's new industrial strategy for the next decade in view of the digital, ecological, and geopolitical transitions. It sets 15 strategic goals focused on boosting competitiveness, closing regional economic gaps, enhancing employment, and promoting innovation in sectors like space, maritime, and low-cost energy. To achieve this, the strategy emphasises the promotion of integrated production chains, encouraging collaboration between enterprises, facilitating technology transfer, and improving access to substantial capital. A key component of this strategy is integrating digital transformation into industrial processes, recognising that addressing Italy's lag in digital adoption is crucial for enhancing the competitiveness of its enterprises.

To strengthen its technological sovereignty, at the beginning of 2025 Italy also published the national strategy on quantum and the national strategy for virtual and augmented realities placing itself among the leading countries at European level in the definition of applied multi-sector policies.

## Building technological leadership: digital infrastructure and technologies

According to the 2025 Eurobarometer[5], 88% of Italian people think that building efficient and secure digital infrastructures and data processing facilities should be a priority for the public authorities.

[4] 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.
[5] Special Eurobarometer 566 on 'the Digital Decade' 2025: https://digital-strategy.ec.europa.eu/en/news-redirect/883227

# Italy

Italy made progress in rolling out connectivity infrastructures and can count on a good position in strategic sectors like semiconductors and quantum technologies.

## Connectivity infrastructure

**Italy's coverage of Very High Capacity Networks (VHCN) and FTTP reached 70.73% (the 2030 national target is 100%) after increasing by +18.6% in 2024. It surpassed the EU average for FTTP (69.24%), although it is still below the overall EU VHCN coverage (82.49%). The country is on track according to its national trajectory**. For households in sparsely populated areas, coverage in 2024 was 36.79%. It should be considered that only a small number of sparsely populated areas are also white areas, while the majority of locations are in areas covered by investment plans. However, actual coverage is still well below the EU averages (61.89% for VHCN and 58.78% for FTTP).

According to national data, the increase in coverage has been evenly distributed across white areas (+32.8%), grey areas (+31.1%) and black areas (+35.2%) [6]. Moreover, additional data collected at the national level shows that, in 2024, 59% of SMEs were covered by fibre networks, marking a significant increase compared to 49% in 2023, and confirming progress in business connectivity as well [7].

**Overall 5G coverage stood at 99.49% in 2024 (2030 national target is 100%). Being close to 100%, this value remained stable compared to last year, and it is still above the EU's 94.35%**. **The country is on track according to its national trajectory**. Coverage in sparsely populated areas showed a slight improvement, reaching 99.1% in 2024, and also in this case was above the EU's 79.57%.

**5G coverage in the 3.4-3.8 GHz band, considered strategic for advanced 5G performance, is well above the EU average.** Italy's total coverage in these bands rose from 88.29% in 2023 to 93.25% in 2024, standing above the EU's 67.72%. For households in sparsely populated areas, Italy's coverage increased from 68.94% in 2023 to 74.36% in 2024, well above the EU's 26.19%. These results can also be attributed to the timely assignment of 5G pioneer bands in Italy, which enabled operators to start deployment earlier than in other counties, as well as specific coverage obligations attached to the rights of use of the awarded frequences. Indeed, in 2025, Italy's 5G pioneer bands spectrum assignment was 93.33%, compared to the EU's 74.63%.

**Italy performs well also in the broadband take-up indicators.** In 2024, Italy's share of fixed broadband subscriptions at 100 Mbps or higher was 75.23%, above the EU's 71.88%. For fixed broadband subscriptions at 1 Gbps or higher, Italy's performance was also good. In 2024, 25.18% of Italian fixed broadband subscriptions were at this speed, outpacing the EU's 22.25%. This was the result of a sustained growth rate of 31.4%. Regarding 5G SIM cards, Italy's share of the population was 30.56% in 2024, still below the EU's 35.56%.

### *VHCN and FTTP*

**In its roadmap, Italy set the VHCN/FTTP target at 100%** with the completion date moved to 2030 in the roadmap adjustment.

**Under the 2023-2026 Broadband Plan (*Piano Banda Ultra-Larga*, BUL), Italy has initiated the implementation of several measures, to enhance connectivity for the 2026 Winter Olympic Games**

[6] Data from the National Regulatory Authority (Autorità per le Garanzie nelle Comunicazioni, AGCOM). The classification into 'white', 'grey', and 'black' areas refers to the scheme defined by the European Commission, based on operators' declarations collected and processed by Infratel during the 2021 public consultation, which allowed each address to be assigned a specific category.

[7] Broadband Map, Dashboard Connettività delle PMI. The analysis is based on a sample of 165 490 enterprises – representing approximately 75% of the total estimated by ISTAT (around 220 000 units in the same size range) – selected based on georeferenced data made available through precise address matching.

**and to test hybrid/satellite solutions among other things**. Besides constructing a public backhaul network (see box with the recommendation below), these measures include the deployment of connectivity infrastructure along the Milan-Cortina corridor and enhanced connectivity for hospitals and medical stations in the area of the 2026 Winter Olympic Games, with the overall goal of improving the management of logistics and safety.

Under the umbrella of the BUL 2023-2026, Italy has also launched hybrid/satellite connectivity trials in Lombardy, backed by EUR 5 million from the Innovation Fund. The trial is aimed at testing the use of space-based networks to provide satellite backhaul capacity in synergy with terrestrial networks, and developing integrated connectivity solutions. The trial launched in Lombardy will provide information on feasibility, costs, implementation timelines, sustainability, and performance, with a view to possible large-scale future applications.

Additionally, twelve minor islands will be connected to the mainland through fibre networks, with interventions that will complement other similar measures in the context of the national Recovery and Resilience Plan (RRP).

**Specific measures aim to enhance coordination and simplify the issuing of permits.** This includes strengthening the National Federated Infrastructure Information System (SINFI) to improve the collection, validation, and accessibility of infrastructure data, ensuring interoperability with public administrations. A total investment of EUR 62 million is dedicated to streamlining the management of network permits, simplifying coordination between entities, and integrating SINFI into the National Digital Data Platform.

**The landscape of electronic communication markets is going through significant changes, with some consolidation on the market**, such as the merger between Fastweb and Vodafone Italia, and the network separation of the incumbent TIM, with the network now belonging to Fibercop.

While the deployment of fibre is increasing, **the migration process is slow, and the copper switch-off plan for the moment is limited to the primary network**.

**2024 recommendation:** 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.

**Italy made some efforts to address the recommendation through new policy actions in 2024**:

In 2024, Italy recorded significant progress in FTTP coverage, with an increase of 11 percentage points between 2023 and 2024.

A good part of this progress can be attributed to the implementation of the RRP measures, which are moving towards completion. However, while the implementation of RRP measures–such as Connected Schools, Connected Healthcare, and Connected Minor Islands–is progressing as planned or ahead of schedule, at the end of January 2025, Italia 1 Giga had reached only 43% of the target (about 1.5 million addresses connected out of a target of 3.4 million to be reached by June 2026). The delays particularly affected the deployment of connectivity networks for scattered households, where progress was 23% (about 105 000 houses reached out of 450 000 targeted).

Moreover, in 2024, Italy concluded the mapping of backhaul of mobile network base stations, the first of its kind in the country. This was a preliminary action to the public initiative of enhancing fixed networks, announced in the 'Italian Strategy for Ultra-Broadband 2023-2026'. The results formed

the basis for defining the project to build a public backhauling network, for which the call for tenders is currently being published. A fixed network mapping was launched in 2025 and requires operators to report on the state of fixed coverage for approximately 35.5 million addresses.

### *5G*

**In its roadmap, Italy set the VHCN/FTTP target at 100%,** with the completion date moved to 2030 in its roadmap adjustment. This target has almost been achieved and the data observed confirms a solid growth trend and positive developments in both technological capacity and territorial distribution, with progressive expansion of access to high-performance networks even in less densely populated areas.

**In 2024, operators continued deployment across different bands.** While data collection is ongoing, progress was observed in deploying the 700 MHz frequencies, for which the objective is to cover 99.4% of the population by 2026, including municipalities in the digital divide and all the main transportation routes by 2025. In the 3.6-3.8 GHz bands, coverage targets were achieved, including coverage of municipalities with less than 5 000 residents. The 3.4-3.6 GHz bands (still partly occupied by the defence sector) are currently used for 5G services. The lower part of the 2.6 GHz band (24.25-26.5 GHz) is now used by Wireless Local Loop FDD systems (with some portions still allocated to the defence sector). Regulatory action is ongoing to assign also such frequencies for 5G (a proceeding has been initiated with decision n. 258/24/CONS), integrating the upper part of the 26 GHz already assigned in 2018.

**The increase in electromagnetic emission limits adopted in 2024 is facilitating network roll-out and improving transmission speeds**. The government is also monitoring actual usage by operators that requested higher limits at specific sites.

**2024 recommendation on connectivity infrastructure**: 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.

**Italy made some efforts to address the recommendation through new policy actions in 2024**.

Incentives for the development of stand-alone 5G services have been introduced through a public call targeting vertical sectors such as ports, universities, healthcare, and agritech, aiming to strengthen demand for specialised services and support the development of the core network. Funding and experimentation details are yet to be defined.

Moreover, the Houses of Emerging Technologies (CTEs) continued their activities of promoting innovative projects using next generation networks and enabling technologies like 5G. According to latest data, and the CTEs developed 375 use cases, in the sectors of mobility (11% of the use cases), smart cities (21%), Industry 4.0 (13%), smart services (42%), autonomous driving/drones (8%), and secure networks and new generation communications (5%). Funding will end in 2025, although potential extensions are under consideration.

## Semiconductors

**Semiconductors remain a clear priority in Italy's investment strategy and the key measures are progressing.** While no new measures were presented in the roadmap adjustment this year, the

government is working on a semiconductors strategy and progress was made in implementing strategic measures.

**In 2024, the government successfully launched the incentive scheme for enterprises to strengthen manufacturing capacity in the semiconductors supply chain.** Leveraging the Microprocessor Fund launched in 2023, a funding window – '**Sportello Semiconduttori**' [8] – kicked off in 2024 for the award of development contracts, i.e. **incentives to enterprises for large industrial development projects** [9]. Aligning with the objectives of the EU Chips Act, the incentives support projects in introducing distinctive capabilities in Italy in manufacturing semiconductors or producing key equipment or components for the European supply chain. By March 2025, **seven investment programmes had been submitted**, amounting to EUR 8 billion in potential investments, with EUR 3.8 billion of requested incentives, exceeding the initial capacity of the fund.

**There was progress in supporting important and strategic investments in the semiconductor industry**. In particular, approved measures under EU State aid rules will support Silicon Box, a firm specialised in advanced chiplet packaging capabilities (with EUR 1.3 billion in State aid) [10] and STMicroelectronics, for the construction and operation of an integrated chip manufacturing plant for Silicon Carbide ('SiC') power devices, focused on high-power electronic devices with applications in electric vehicles, fast-charging stations, and renewable energy sectors (about EUR 2 billion in State aid) [11]. Under the Chips Act, Italy is also supporting the pilot line for wide band gap semiconductors, dedicated to advancing research on materials for high-power electronics, particularly for the automotive and aerospace industries.

**Finally, also in the context of the G7, Italy has actively participated in global discussions on semiconductor policies**, facilitating the exchange on topics such as energy efficiency, international talent exchange, trustworthiness and reliability principles [12].

Italy is also directly participating in the IPCEI on Microelectronics and Communication Technologies (IPCEI-ME/CT), with support from the RPP.

**Overall, Italy's efforts in semiconductor production have played a key role in strengthening the potential of the EU's sovereignty and ensuring a secure supply.** Italy remains a key player in Europe's semiconductor industry, driven by leading enterprises and specialised SMEs, while policies to support this sector have been strengthened in recent years.

| |
|---|
| **2024 recommendation:** Continue the efforts in the semiconductors sector […] |
| **Italy made some efforts to address the recommendation through new policy actions in 2024**: The measures and actions described above underscore Italy's commitment to strengthening its semiconductor ecosystem. |

[8] Contratti di sviluppo - Nuovo sportello semiconduttori | Incentivi.
[9] Projects with eligible costs of no less than EUR 20 million, carried out by one or more companies. The support includes non-repayable loans and subsidised loans.
[10] Approved by the European Commission on 18 December 2024. Decision in course of publication.
[11] https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_24_2994/IP_24_2994_EN.pdf.
[12] More specifically, reference is made to: 1. the creation of a G7 Point of Contact Group (POC) to facilitate information exchange on industrial research, sustainable production, anti-competitive practices, and supply chain coordination. Future discussions will prioritise chip energy efficiency and international talent exchange, aligning with the G7's Trustworthiness and Reliability Principles; 2. participation in the OECD Semiconductor Informal Exchange Network (SIEN) and the European Semiconductor Board, reinforcing Italy's role in global semiconductor governance.

## Edge nodes

**According to the Edge Node Observatory, Italy is estimated to have deployed a total of 152 edge nodes by 2024, a progression of +105.4% since 2023.**

**In 2024, Italy launched field trials with Edge Cloud Computing (ECC) Platforms** [13], which supports the experimental development and adoption of solutions leveraging ECC technology. The initiative specifically aims to assess the advantages of deploying ECC platforms within telecom operators' access networks. Following the public call, four proposals were submitted by consortia comprising universities, telecom operators, IT infrastructure providers, consulting firms, broadcasting companies, and cybersecurity specialists [14]. The evaluation of these proposals is now underway, with total funding of EUR 4 million allocated for the initiative.

| |
|---|
| **2024 recommendation:** 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. |
| **Italy made some efforts to address the recommendation through new policy actions in 2024**: Notably, it published the call for projects for the experimentation of ECC platforms, with the aim of financing up to four field trials (see above). |

## Quantum technologies

**2025 marked a pivotal step for Italy, which published the draft of its first national quantum strategy** [15], outlining a set of actions to strengthen the country's position in quantum technology [16], with a strong focus on creating a solid industrial ecosystem and involving the private sector. As the document highlights, while Italy has strong academic expertise, it lags behind global leaders when it comes to funding, industrial adoption, and the possibility for start-ups to scale up and compete internationally. Public funding, driven by the Recovery and Resilience Facility (RRF), has played a key role in launching initiatives and stimulating private sector involvement. However, its scale (EUR 227.4 million between 2021 and 2024, most of which from the RRF) has remained limited and lower than the funding allocated by other countries such as Germany and France. Moreover, private investment remains limited: venture capital investment in Italian quantum start-ups amounted to just EUR 12.5 million between 2023 and 2024, very low compared to the funding received by firms in the US and other EU countries. Against this background, the draft strategy outlines recommendations to reinforce the national quantum ecosystem. Among other things, it proposes measures to improve the coordination of investments, technology transfer, public-private partnerships, industry engagement and commercialisation, and international collaboration – particularly by strengthening ties with European Union initiatives. The national strategy also highlights the important role of some of the

[13] Part of the Broadband Plan (BUL) 2023-2026.

[14] The call was published in October 2024 and closed on 31 January 2025 (Edge Cloud Computing: Prorogata la scadenza dell'avviso pubblico).

[15] The draft strategy was drawn up by a working group set up by the Ministry of University and Research and including several public administrations (Ministry of Enterprises and Made in Italy, National Agency for Cybersecurity, Department of Digital Transformation) and research centres. The drafting of the strategy was preceded by a consultation for the mapping of the industrial ecosystem. The draft strategy was published in February 2025 and subject to public consultation. The draft is available at this link: QIS_master_for_consultation.pdf.

[16] The strategy covers: Quantum Computing, Quantum Simulation, Quantum Communication, Quantum Metrology and Sensing, Engineering and Enabling Technologies, Fundamental Science and Quantum Mechanics.

Houses of Emerging Technologies which are working to systematize their skills and laboratories in order to develop innovative solutions and support experimentations in collaboration with local communities.

**Italy can count on significant capabilities in the field of quantum technology and is advancing in the implementation of measures to strengthen its quantum computing infrastructure and ecosystem.** Some of the measures are delivering results ahead of time. For example, a 24-qubit superconducting quantum computer was installed at the University of Naples in May 2024 [17], and two additional quantum computers will be operational by 2025, through the National Centre for HPC, Big Data, and Quantum Computing (ICSC)[18].

Italy is also among the six countries [19] chosen to host quantum systems under the EuroQCS initiative, with CINECA [20] leading efforts to deploy a 140-qubit neutral atom quantum simulator by 2026 and a 54-qubit superconducting digital quantum computer. Additionally, CINECA plays a key role in developing high-performance computing (HPC)-quantum software applications, acting as a Centre of Excellence.

Another key player in the Italian landscape is the National Centre for HPC, Big Data, and Quantum Computing or ICSC, mentioned above. This large partnership [21], supported by the RRF with EUR 320 million for 2022-2025, is strengthening the HPC, cloud and quantum infrastructure, and boosting private sector and international collaborations. The project will be supported and continued also after the end of the RRF implementation period.

**These initiatives are building a strong public-private quantum community**, contributing to advancing real-world quantum applications [22], pooling expertise, and supporting SMEs and start-ups by improving their access to resources. At the same time, these initiatives are laying a robust foundation for **Italy's quantum infrastructure, which will be integrated into a broader European network, and are crucial to strengthening the EU's position**.

| |
|---|
| **2024 recommendation:** […] Increase investments in quantum technologies also within the frame of EU initiatives and in view of contributing to the European Chips Act. |
| **Italy made some efforts to address the recommendation through new policy actions in 2024**: Regarding additional funding, the draft quantum strategy published in 2025 includes a strong focus on mobilising investments, including private investments. The scale of the investment will depend on the next steps in finalising and implementing the strategy. |

[17] https://agenda.supercomputing-icsc.it/event/5/overview.
[18] In November 2024 Eni's new high-performance computing (HPC) system, HPC6 was completed; ranked fifth globally and first in Europe, the system is designed with state-of-the-art energy efficiency standards.
[19] Along with CZ, DE, ES, FR and PL.
[20] CINECA is a consortium of publicly held entities which represents one of the largest computing centres in Italy.
[21] Including universities and research institutes and 14 enterprises.
[22] In this connection, another initiative that is worth mentioning is the EuroHPC Industrial-Grade Supercomputer, which will be managed by CINECA and will offer services to businesses, partially funded by the European programme and partially by the companies themselves.

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

### SMEs with at least basic digital intensity

**In Italy, 70.21% of SMEs had at least a basic level of digital intensity in 2024 (2030 national target 90%), after a progression of +0.2%, only slightly below the EU average.** In 2024, Italy stood at 70.21%, a slight increase from 69.9% in 2022 [23]. This placed Italy marginally below the EU average of 72.91%. Looking at the data in more detail, only 26.19% of SMEs in Italy achieved high or very high digital intensity, falling short of the EU average of 32.66%. As such, there is still room for improvement in the digital intensity levels of Italian SMEs, particularly as concerns advanced levels of digital intensity.

**Key Italian measures for technology adoption, like Transition 4.0 and the network of technology transfer centres, continued to record a high uptake.** The demand for Transition 4.0 exceeded the initial EUR 18 billion allocation. Between 2020 and 2021, around 170 000 companies benefited from its incentives, and participation in 2022 is expected to confirm this trend.

In a context of historically low investment in technology transfer and weak collaboration between universities and businesses, the RRF has played a key role in expanding the network of technology transfer services and improving coordination. Eight Competence Centres have been enhanced and Italy can count on 13 European Digital Innovation Hubs (EDIH), 23 hubs with the Seal of Excellence, and two Testing and Experimentation Facilities (TEF). Additionally, six Digital Innovation Poles provide services such as digital first assessment, orientation, support and promotion of enterprises.

Among other milestones in 2024, there is the activation of investment under the Strategic Technologies for Europe Platform (STEP), via the amendment of the National Research, Innovation, and Competitiveness Programme (RIC NP) 2021-2027, which supports initiatives for collaborative research [24].

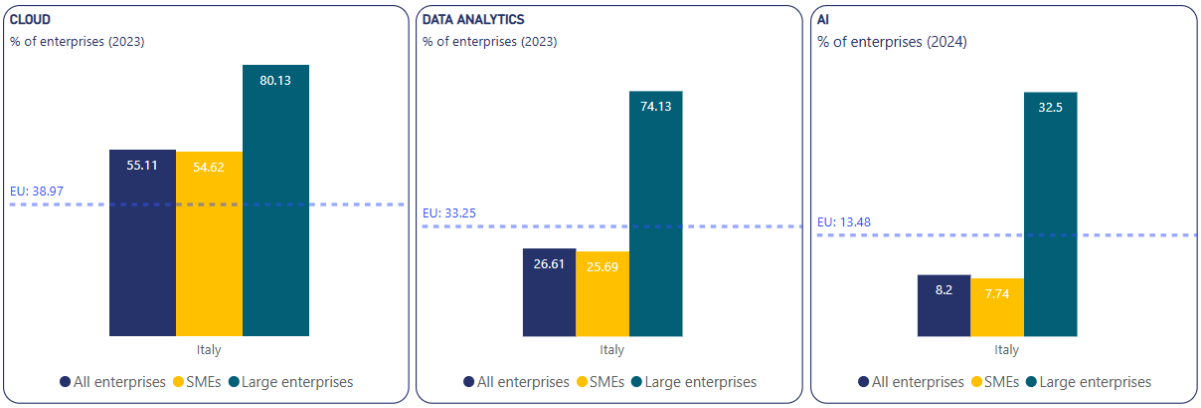
Looking ahead, it remains important to sustain these initiatives and maximise their impact, although it will be challenging to maintain the same level of investment beyond 2026 as RRF funding phases out.

| |
|---|
| **2024 recommendation:** 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. |
| **Italy made some efforts to address the recommendation through new policy actions in 2024**: Italy has continued implementing important measures, including the network of technology transfer centres, but maintaining the efforts over the long term remains crucial. |

[23] 2022 is the last comparable year that used a similar methodology for measuring the digital intensity of enterprises.
[24] Supported by the European Regional Development Fund (ERDF). Please see: The European Commission has approved the amendment to the RIC NP 21-27 to enable participation in the Strategic Technologies for Europe Platform ('STEP') | PN RIC 21-27.

# Italy

## Take up of cloud/AI/data analytics




**According to data collected in 2024, 8.2% of Italian firms adopted AI (2030 national target is 60%), after a significant progression of +62.4% in 2024, despite not reaching the EU average of 13.48%. The country is on track according to its national trajectory.** AI uptake among SMEs was slightly lower at 7.74%, whereas large enterprises had a higher rate, with 32.5% using AI. This corresponds to a gap of 24.76 percentage points between SMEs and large enterprises, which is significant but lower than the gap of 28.53 percentage points observed at EU level.

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

**In 2023, 55.11% of Italian firms had adopted cloud technologies (2030 national target is 74%), well above the EU average of 38.97%**. SMEs had an uptake of 54.62%, while large enterprises saw a significantly higher adoption rate of 80.13%. This resulted in a gap of 25.51 percentage points between SMEs and large enterprises in Italy, which was lower than the EU-level gap of 31.68.

**Data from 2023 showed that 26.61% of Italian firms adopted data analytics technologies (2030 national target is 60%), falling below the EU average of 33.25%**. Among these, 25.69% of SMEs used data analytics, whereas 74.13% of large enterprises used them (slightly less than 3 out of 4), illustrating a significant difference. This indicates a notable gap of 48.44 percentage points between SMEs and large enterprises, which exceeds the EU gap of 39.72 percentage points.

**When taking the three technologies together in 2023, 63.09% of enterprises in Italy engaged with either AI, cloud or data analytics technologies, well ahead of the EU-level average of 54.7%**. Uptake among SMEs was slightly lower at 62.56%, while large enterprises demonstrated a significantly higher adoption rate of 90.52% (over 9 out of 10). This indicates a percentage point difference of 27.96 in uptake between SMEs and large enterprises in Italy, which is lower than the EU-level gap of 32.97 percentage points.

**Italy has a number of measures in place contributing to the adoption of advanced technologies by enterprises.** In addition to the measures described above and some private initiatives [25], which contribute to these results, the Italian roadmap includes various measures to support the adoption and development of advanced digital technologies by enterprises: from the Houses of Emerging Technologies[26], to the Fund for the development of artificial intelligence, blockchain and Internet of Things technologies and applications[27], and to participation in EU-level cooperation projects,

[25] To name one, Fastweb + Vodafone and CINECA have announced a strategic agreement to support businesses in the development and deployment of applications based on Generative Artificial Intelligence (Gen AI).
[26] Centres for technology transfer and experimentation (portalecte.mimit.gov.it).
[27] With an endowment of EUR 45 million.

particularly through the Chips Joint Undertaking (JU) and EuroHPC[28]. Italy has also achieved significant recognition within the framework of the European programme for creating the first AI Factories, as IT4LIA has been chosen as one of the AI Factories in Europe[29].

- **Cloud**

Italy is one of the participants in the Important Project of Common European Interest (IPCEI) Cloud Infrastructure and Services, and implementation is progressing as planned. In 2024, there was progress on allocating the grant to beneficiaries. In Italy, the IPCEI involves both companies and research institutions, reaching a broad ecosystem.

The implementation of the IPCEI-CIS in Italy is progressing as planned.

- **Data Analytics**

There is no specific update to report beyond what has already been included in other sections.

- **Artificial Intelligence**

**Despite the strong progress over the last year, the adoption of AI among Italian enterprises remains limited and difficult especially for SMEs**. Recent surveys highlight three main barriers to AI adoption among micro and small enterprises: technological and operational challenges, business know-how limitations, and investment capacity constraints. Many businesses struggle with inadequate internal structures, lack of infrastructure, and difficulty finding reliable technology providers. Additionally, a lack of digital culture within management, and employee adaptation to AI technologies pose significant challenges. High investment costs, limited government support, and financing difficulties also hinder AI integration[30].

However, there is an increasing interest in this topic. The 2025 Eurobarometer shows that 87% of Italian people think that public authorities should prioritise shaping the development of Artificial Intelligence and other digital technologies to ensure that they respect our rights and values.

**During 2024, Italy launched new initiatives dedicated to the adoption of AI, also building on HPC capabilities and resources.** A major initiative started in 2024 is the IT4LIA AI Factory[31], which will represent the evolution of Leonardo (a pre-exascale EuroHPC supercomputer hosted by CINECA and in the top 10 of the most powerful supercomputers in the world) and will develop a top class AI-optimised supercomputer. The Factory will provide sector-specific and horizontal services to increase AI uptake, supporting start-ups, SMEs and key sectors of the Italian economy, such as agribusiness, cybersecurity, earth sciences and manufacturing.

Another important initiative is the AI4Industry Foundation[32] in Turin, which kicked off in May 2024 as a national AI centre and which, among other resources, will leverage an on-premise HPC cluster and the Leonardo HPC system. These efforts seek to bridge the gap between AI providers – researchers,

[28] The support for the Chips JU and EuroHPC, originally funded by the NRRP, is now funded by the Complementary National Plan, and aims to complete 32 Innovation Agreements.
[29] It will provide a world-class AI infrastructure and a cohesive ecosystem to bring together researchers, developers, start-ups and SMEs to bridge the gap between AI providers and potential users, such as public administration, students, academia, SMEs and industry.
[30] G7 Report on Driving Factors and challenges of AI adoption and development among companies, especially micro and small enterprises (FINAL_REPORT_AI_MSMEs_Ministerial_10_Oct_2024-1.pdf). The considerations reported above are specific to the Italian context and the result of a survey among Italian enterprises.
[31] IT4LIA AI Factory: A New Pillar for Artificial Intelligence in Europe | HPC Cineca.
[32] AI4I.it.

start-ups, and developers – and potential users across industry and public administration. Italy is also actively participating in EU-wide AI testing and experimentation networks[33].

**In July 2024, the government published the new AI strategy, emphasising safe, ethical, and inclusive AI development**. This strategy includes concrete actions to support AI adoption among enterprises, such as facilitating AI integration in SMEs, fostering AI start-ups, and establishing industry-focused AI development labs[34].

**Overall, AI is gaining attention in Italy**, particularly following the country's presidency of the G7. Recent initiatives demonstrate Italy's **commitment to progress in this area, also leveraging its strengths in the field of HPC. However, sustained efforts and targeted interventions are still needed** to boost development and deployment of AI solutions, particularly among SMEs.

| |
|---|
| **2024 recommendation:** Strengthen measures targeted at the adoption of technologies by enterprises, with particular attention to AI and taking into account the barriers and drivers specific to the national context. |
| **Italy made some efforts to address the recommendation through new policy actions in 2024**: There were some new initiatives launched in 2024 (see above). However, it remains important to keep the focus high and put in place initiatives that can reach all enterprises and address the specific needs and barriers. It is also crucial to reflect on initiatives that can allow the country to acquire leadership in the area of AI. |

## Unicorns, scale-ups and start-ups

**At the beginning of 2025, Italy had 9 unicorns (2030 national target of 16), which is 1 more than last year (+12.5%).**

**In Italy, private sector R&D and Venture Capital (VC) investment remain low, especially in the ICT sector.** Using data from the 2024 EU Industrial R&D Investment Scoreboard, Italian firms accounted for only 2.3% of total R&D expenditure by the 322 European companies ranked among the top 2 000 global R&D investors. Of the Italian companies in this group, none operate in digital industries such as software, computer services, or technology hardware[35]. Moreover, VC investment in the ICT sector remained significantly below the EU average in 2023, with just 15% of VC funding allocated to deep tech (compared to 28% in France and 20% in Germany)[36].

**Regulatory barriers hinder the expansion and competitiveness of Italy's VC market.** For example, Italy's bankruptcy laws impose severe penalties on entrepreneurs if they fail, discouraging risk-taking. There is also room for streamlining and making more attractive the systems of incentives for start-ups and innovative SMEs, the process for establishing VC funds and investing in start-ups, the regulations incentivising new entrants and secondary markets.

[33] Sectorial AI Testing and Experimentation Facilities under the Digital Europe Programme | Shaping Europe's digital future
[34] IA in Italia, boom di investimenti tech ma PMI al palo: le mosse del Governo - Agenda Digitale.
[35] European Semester, country report 2025, using data from the 2024 EU Industrial R&D Investment Scoreboard (data refers to 2023), JRC Publications Repository - The 2024 EU Industrial R&D Investment Scoreboard.
[36] European Semester, country report 2025. Data based on: Dealroom, The European Deep Tech Report 2023, The European Deep Tech Report 2023 | Dealroom.co. Data refers to the period 2018-2023.

**Italy did not add any new measures related to unicorns in its roadmap**. It continued implementing the dedicated programmes, such as the **Smart&Start Italia programme**[37], with funds managed by Cassa Depositi e Prestiti (CDP), including EUR 400 million for the digital transition, targeting technologies such as Artificial Intelligence, cloud, health, Industry 4.0, cybersecurity, fintech and blockchain.

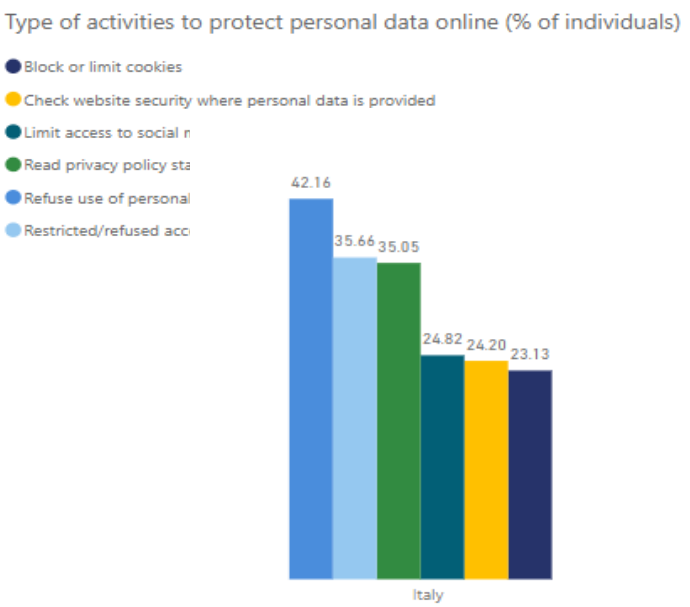
In 2024, an important development was the action taken under national Competition Law, approved in December 2024, where targeted amendments were introduced to increase financial support for start-ups, including an enhanced role for pension funds in the VC market[38].

**2024 recommendation:** 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.

**In 2024, Italy continued the implementation of existing measures but did not take any new measure:** the above-mentioned measure under national Competition Law to support start-ups and VC represented an important development. However, the need remains for an overall reflection on whether additional and tailored actions are necessary.

## Strengthening Cybersecurity & Resilience

**In Italy, 59% of individuals engaged in at least one action to protect their personal data online in 2023, below the EU average of 69.55%.** However, only 34.75% of the population undertook three or more precautionary actions (and therefore could be considered as having above basic digital safety skills). The most frequently undertaken measure was refusing the use of personal data for advertising purposes, with 42.16% of individuals taking this action, while changing browser settings to prevent or limit cookies on any device was the least common, reported by 23.13%. Moreover, according to the Digital Decade Eurobarometer 2025, 82% of Italian citizens think that an improved cybersecurity, better protection of online data and safety of digital technologies would facilitate their




[37] This initiative supports start-ups (up to 60 months old) through subsidised loans, with partial conversion into non-repayable grants if third-party investors – such as VC firms, accelerators, business angels, or authorised fund managers – provide equity investment.

[38] Law No 193 of 16 December 2024.

daily use of digital technologies. It represents a significant increase of 8 percentage points compared to last year, reflecting the growing interest of the citizens in this aspect.

**Italian enterprises are keen to take cybersecurity measures.** The number of enterprises that experienced ICT security incidents leading to ICT services being unavailable due to an attack from the outside (e.g. ransomware attacks, denial of service attacks) was 3.13% in 2024, stable compared to 2022, and below the EU average (3.43%). Italian enterprises are also less prone than their peers in the EU to incidents related to hardware or software failures (12.86%, 17.97% in the EU). In terms of measures, 92.92% of enterprises deployed some ICT security measures (close to the EU average of 92.76%) and 62.67% of enterprises made their employees aware of their obligations in ICT security-related issues, above the EU average (59.97%).

On the deployment of secure internet standards, in Italy the roll-out of Internet Protocol version 6 (IPv6) for end users is low (14%, EU average: 36%). It is also low on the server side (6%, against 17% for the EU). IPv6 is an important protocol as it ensures the scalability, stability, and security of the internet. The deployment of this new version is increasingly urgent, as traditional IPv4 addresses have been long depleted. Domain Name System Security Extensions (DNSSEC) is also an important standard to be rolled out as it introduces security features to the domain name system (DNS). The DNSSEC validation rate (i.e. verification of the authenticity of responses sent by name servers to clients, using a digital signature technology) was 27% (Q3 2024), below the EU average of 47%.

**The number of incidents remained stable and impact limited.** According to data from the national cybersecurity agency (ACN), from January 2025, there was a decrease in the number of cybersecurity events, while the number of incidents remained relatively stable and consistent with the average for the six-month period. Central public administration, telecommunications, and technology were the most affected sectors. Hacktivism activities in Italy continued at a similar rate to previous months, with pro-Russian groups claiming responsibility for several distributed denial of service (DDoS) attacks, allegedly motivated by Italy's military support for Ukraine. However, the impact of these operations remained limited. This is in line with the strategy of these groups, which focus on, often vulnerable, secondary sites, with the primary goal of amplifying the media impact of the attacks.

**Many initiatives are underway to strengthen Italy's cybersecurity capabilities and skills.** To enhance the cyber resilience of public administrations, the ACN has launched financing initiatives supporting security event monitoring, analysis, and response capabilities. Under the RRP, 216 projects have been funded across 142 public entities, focusing on perimeter security, cyber risk monitoring capabilities, and incident response improvements.

**Another focus area is related to developing cybersecurity skills.** To address the ICT talent gap, the ACN has partnered with the Ministry of Education and the network of tertiary technical education institutions – International Talent Support (ITS) Foundation Network – to integrate cybersecurity training into technical and higher education. National competitions, scholarships, and incentives aim to foster talent, promote Science Technology Engineering and Mathematics (STEM) careers, and support workforce inclusion, including incentives for professionals returning from abroad. Specifically, the ACN is working alongside schools and universities to reduce the gender gap in ICT skills, to increase cyber awareness among the population, SMEs and other entities. The ACN is conducting these activities through collaboration with public and private entities in implementation of the provisions of the National Cybersecurity Strategy 2022-2026.

# Protecting and empowering EU people and society

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

Italy continues to face significant digital skills gaps, leaving parts of the population more vulnerable to online risks and less equipped to benefit from digital transformation. However, the country has made strong progress in digital public services and is a frontrunner in developing the EU Digital Identity Wallet, simplifying access for citizens and encouraging take-up of digital solutions.

Italy is also actively tackling disinformation, media literacy, and online safety – particularly for minors – through targeted campaigns, school-based education, and evolving regulation, including initiatives addressing fake news and influencer accountability.

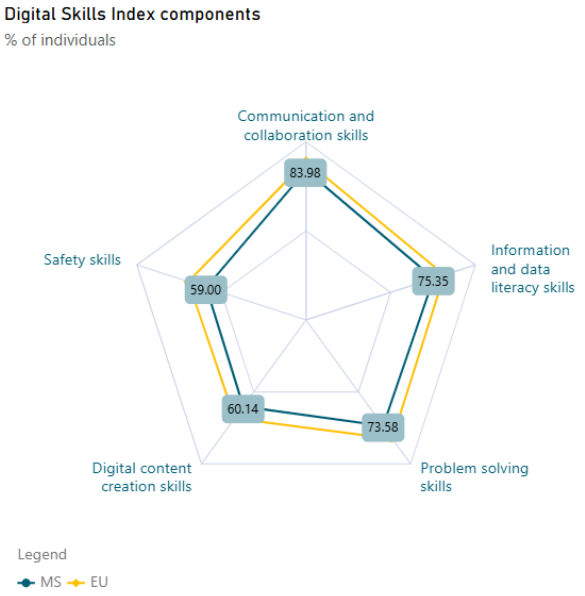
### Equipping people with digital skills

*Basic Digital Skills*

**In 2023, only 45.8% of people in Italy had at least basic digital skills (national target for 2030 is 80.1%), against an EU average of 55.6%. In the last two years, there has been no significant improvement overall (the value increased by only 0.2% annually compared to 2021)**. Some breakdowns show the national digital skills landscape.

- **Gender Gap:** The difference in digital skills between Italian men and women is noticeable, with 47.36% of men and 44.16% women having at least basic digital skills. The resulting 3.20 percentage point gap is slightly wider than the EU average (2.23 pp.), indicating a more significant disparity between genders in Italy. This gap, however, mainly concerns the older age groups: up to 59 years of age, there are no gender differences, while in the 60-64 years of age group men have an advantage of 4.3 percentage points.
- **Education Level:** A correlation between education and digital skills is widely confirmed. In Italy, 74.09% of those with higher education levels have at least basic digital skills, which is still less than the EU average (79.83%). Those with lower education levels are particularly disadvantaged, with only 22.57% having at least basic digital skills, i.e. a gap of 23.18 percentage points compared with the national average, just above the average gap for the EU (21.95 pp.).
- **Living Areas:** Rural Italians are less likely to have at least basic digital skills, with proficiency at 40.64%, which is below the EU average for rural areas (47.50%). The gap between rural residents and the national average is 5.11 percentage points, which is somewhat smaller than the EU average gap (8.06 pp.).

- **Age Groups:** Italian youth, specifically those aged 16 to 24, are the most digitally skilled group at 59.07%, yet this is still below the EU average (69.98%). 65 to 74-year-olds have the least digital skills at 19.33%, also falling short of the EU average (28.19%).
- **Digital Skills Index components:** Italy falls below the EU average in all five areas of the Digital Skills Index. Its best performance is in communication and collaboration skills at 83.98%, but even this score is below the EU average. The area needing the most improvement is safety skills, with a score of 59.00%, also below the EU norm.




Overall, Italy faces important challenges, with the gaps in gender and education levels being areas of particular concern, with significant room for growth.

**Italy set an ambitious target in its roadmap that, as part of the 2024 adjustment, was revised and increased to 80.1%, to be achieved by 2030.**

**In its roadmap adjustment, Italy also strengthened key measures for the improvement of basic digital skills, building on the actions started with the RRP and ensuring their continuation after 2026.** More specifically, the adjustment extends and reinforces the two main measures aimed at providing citizens with at least basic digital skills and helping them use digital services. These are: (i) the digital civic service (EUR 60 million), which, as of the beginning of 2025, involves more than 9 000 young volunteers, who, in turn, have implemented about 81 000 initiatives; and (ii) the network of digital facilitation services (EUR 135 million), with the opening of 3 000 facilitation services (*Punti Digitale Facile*) across the country in 2025, which supported about 660 000 people in using digital services. Both measures, together the with the Fund for 'Repubblica Digitale', were also presented by Italy in the context of the 'best practice accelerator', a platform that enables Member States to share successful measures and challenges encountered in their efforts to meet their Digital Decade targets and objectives. For more details, see the box below on implementing the 2024 recommendations.

This adjustment is supported by the reinforcement of Repubblica Digitale, another key initiative in the Italian landscape launched in 2019 and part of the European network of Digital Skills and Jobs Coalitions. As of the beginning of 2025, Repubblica Digitale had reached over 350 initiatives promoted by civil society, public administration and the private sector, most of them (241) targeting basic digital skills and digital citizenship. The new operational plan for 2025-2026 put EUR 100 million on the table for the two-year period, following a new Memorandum of Understanding signed between the government and the Association of Foundations and Savings Banks (Acri)[39].

Regarding the education sector, the improvement of basic digital skills is implemented through the following RRP measures: School 4.0 (EUR 2.1 billion), Digital education and teacher training (EUR 800

[39] Approvato il Piano Strategico 2025-2026 – Fondo per la Repubblica Digitale.

million), New Skills and Languages-STEM (EUR 1.1 billion). These measures reach a total of 8.5 million citizens, including both students and teachers.

**2024 recommendation on 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.

**Italy made some efforts to address the recommendation through new policy actions in 2024:**

*Regarding point (i):*
The adjustment of the roadmap:

- extends the digital civic Service until 2030 (previous end date was 2026), with a target of 250 000 citizens trained per year.
- strengthens the network of digital facilitation services through two measures: one is based on launching competitive calls with the objective of training around 500 000 citizens and involving at least 1 200 Digital Facilitation Points; the other aims to continue the activities of the digital facilitation services after the end of the related RRP measure, training approximately 450 000 persons per year (with a forecast of 2 500 Digital Facilitation Points involved).
- adds a new horizontal measure which aims to extend and further develop the use of the e-learning platform and to train the facilitators and volunteers involved in the digital civil service and in the network of digital facilitation points. The platform is expected to evolve and expand the category and number of users.

*Regarding point (ii):*
In 2024, the implementation of existing measures, also supported by the RRP, continued (e.g. the platform for the digital education of teachers and trainers; the investment 'School 4.0', the national plan for digital school). According to 2024 data, 94% of schools are implementing projects for the development of digital skills.

*Regarding point (iii):*
In 2024, the implementation of existing measures for reskilling and upskilling continued (e.g. actions by the competence centres and the initiatives of Repubblica Digitale, which, at the beginning of 2025, included 76 initiatives to strengthen digital skills for businesses and the labour market, out of a total of more than 350 initiatives).
In connection with the reskilling and upskilling of public administrations, the Syllabus continues to be the key initiative in this area. In 2024/2025, training was extended to AI Literacy, included in the list of basic digital competences for public employees. The training was developed according to the guidelines for the adoption of AI in public administration (under consultation until March 2025).

### *ICT specialists*

**The share of ICT specialists compared to total employment in Italy stood at 4% in 2024 (national target for 2030 is 8.4%), against an EU average of 5%. There was no progress compared to 2023. The country did not provide a national trajectory point for 2024.** The percentage of female ICT specialists in Italy was 17.1%, still below the EU's 19.5%, but with a significant growth rate of 8.9%. The share of women among ICT specialists should be seen also in the context of a persisting low labour market

participation of women in Italy. The female employment rate was 56.5% in 2023 in Italy, one of the lowest values in the EU (70.2%); at the same time, the gender employment gap is nearly twice the EU average (19.5 percentage points vs 10.2 percentage points).

**In its roadmap, Italy set an ambitious target for 2030 of 8.4% (this target was increased in the roadmap adjustment).**

**The demand for digital professionals remains high and widespread across businesses in all sectors, with a growing emphasis on AI skills.**

In terms of demand from the labour market, Eurostat experimental statistics based on web scraping show that in Italy, like in the rest of the EU, the profiles of 'software and applications developers and analysts' are the most sought after, representing 48.8% of online job advertisements for ICT specialists (58.0% at EU level). This is followed by the profile 'Electronics and telecommunications installers and repairers', which in Italy represents 16.4% of online job advertisements (6.6% is the EU average).

According to the findings of the reports of the Observatory on Digital competences, the demand for ICT professionals in Italy increased steadily between 2019 and 2022 (from about 20 000 in early 2019 to about 60 000 in April 2023) [40]. This growth seemed to halt from 2023 to 2024, pointing to a stabilisation of the demand, except for AI-related skills which, instead, have seen continuous growth since early 2023. The demand concerns all industries, not only the ICT sector, and – despite reaching a stable point –remains high, and above the offer of ICT specialists on the job market [41].

Skills mismatches and shortages may be also further exacerbated by brain drain and the increasing number of graduates emigrating, which sharply increased from 28.5% in 2012 to 45.7% in 2021 [42].

**Reinforcing the academic offer remains a priority. Measures are ongoing to reinforce the non-academic tertiary education sector for the development of high-level technical skills.** The government has implemented a series of reforms to boost the vocationally oriented tertiary education system, reinforcing the links between secondary education and tertiary non-University Education (ITS academies), strengthening the involvement of the industry and focusing on internships and training on the job. For more details, see the box below on implementing the 2024 recommendations.

**2024 recommendation on 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.

**Italy made some efforts to address the recommendation through new policy actions in 2024**:

*Regarding point (i):*

- In 2024, the government established a new training pathway (*filiera formativa tecnologico-professionale 4+2)* [43] to equip students with technological skills aligned with the needs of the workforce and to facilitate the transition towards tertiary non-University education (ITS Academies). The programme, starting in the 2024/2025 school year as a national pilot, offers four-year technical and vocational secondary education courses, emphasising on-

[40] AICA, Anitec-Assinform, Assintel, Osservatorio sulle Competenze Digitali, 'ICT: Talenti Cercasi', December 2023.
[41] AICA, Anitec-Assinform, Assintel, Osservatorio sulle Competenze Digitali, 'Competenze Digitali: un'opportunità per il Paese', last update on January 2025.
[42] Eurofound, Role of human capital inequalities in social cohesion and convergence, 2024.
[43] Law n. 121 of 8 August 2024.

the-job training and STEM subjects, with industry experts involved in both curriculum design and teaching. After passing the final state exam, students can pursue university education, continue at an ITS Academy, or enter the workforce.

- Resources of EUR 35 million were planned for strengthening the ITS Academies between 2025 and 2026.
- The initiatives undertaken under Repubblica Digitale also target ICT specialists (at the beginning of 2025, Repubblica Digitale included 34 initiatives relating to ICT specialised skills, out of a total of more than 350 initiatives).

*Regarding point (ii):* the initiatives undertaken under Repubblica Digitale also specifically target girls in ICT.
*Regarding point (iii):* no specific new measures to report.

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

**Regarding digital public services for citizens, in 2024 Italy scored 83.57 (2030 national target of 100) after significant progress of +22.4%, above the EU average of 82.32. The country is on track according to its national trajectory.** The overall progress made by Italy is a remarkable achievement. In the cross-border category for digital public services for citizens, Italy started at 46.97 in 2023, below the EU's 68.37, but climbed to 72.71 in 2024, exceeding the EU's 71.28. Italy's growth rate of 54.8% in this area was substantially higher than the EU's 4.3%.

**Regarding digital public services for businesses, the score was 80.93 in 2024 (2030 national target of 100), showing good progress (+6.1%) but falling below the EU average of 86.23**. **The country is on track according to its national trajectory.** In the cross-border category for digital public services for businesses, Italy's score was 63.11 in 2024, below the EU's 73.76. Italy's growth rate of 9.0% was higher than the EU's 0.9%.

**In terms of access to e-Health records**, **in 2024 Italy scored 84.11 (2030 national target of 100), after progress of +1.7% and above the EU average of 82.7. The country is on track according to its national trajectory.** This result confirms the good performance of Italy as early as in 2023, when the country had already reached a score of 82.69 compared to the EU's 79.12.

Moreover, according to the 2025 Eurobarometer, 85% of Italian people think that accessing public services online will be important for their daily life in 2030. An equal percentage considers 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.

### *eID*

**Italy has two certified eIDAS digital identity schemes, SPID and CIE, which are widely adopted across the country**. The number of SPID and CIE credentials issued continues to grow. As of early 2025, the total number of SPID identities issued surpassed 40 million [44], while the number of CIE identities stands at 51 million [45]. Additionally, an increasing number of public administrations are integrating their services with SPID and CIE, with 18 800 public administrations supporting both systems.

**In its adjustment of the roadmap, Italy added the IT Wallet, an area of action where the country is making significant progress with the development of its Digital Identity Wallet (IT Wallet).** The Italian government has initiated the development of a national wallet, the IT Wallet, in line with the EU's

[44] Stato di avanzamento Trasformazione Digitale | Avanzamento Digitale AgID.
[45] Federazione erogatori servizi.

regulatory and technological framework and aimed at streamlining the country's digital identity ecosystem. This initiative seeks to simplify citizens' and businesses' access to services while ensuring secure storage of essential documents and full user control over personal data.

In preparation for the full deployment of the IT Wallet System, Italy launched 'Documenti su IO' in December 2024, a new feature within the IO app (the public services app). This feature enables citizens to store digital versions of key three documents: mobile driving licence, health insurance card and the European Disability Card.

Adoption numbers in the first three months following its general release (December 2024 – March 2025) are very positive, with 4.5 million users activating the service and 7.5 million digital documents in use.

**Italy is also actively contributing to developing the European Digital Identity Wallet (EUDI Wallet) by participating in all four large-scale pilots working on various use cases**: NOBID, focusing on a large-scale pilot for EU Digital Wallet payments; POTENTIAL, a consortium working on six key use cases (e.g. e-Prescriptions, bank account opening, SIM card registration); the EU Digital Wallet Consortium (EWC), focused on digital travel credentials; and Digital Credentials for Europe (DC4EU), focused on the educational and social security sectors [46].

*Digitalisation of public services for citizens and businesses*

**Italy made significant progress in ensuring availability of digital public services to citizens and businesses.**

**In its roadmap, Italy aims to reach the EU-level target of 100% of key digital public services available to citizens and businesses by 2030.** Italy did not add any new measures in its roadmap adjustment, but revised the progress of milestones and provided a higher level of detail for some activities. This approach is explained by the overall progress achieved in implementing the existing measures, and the comprehensive set of initiatives to digitalise the public administration and its services under the RRP. The implementation of key RRP measures (e.g. citizens' experience, digitalisation of central administrations, adoption of PagoPA and the IO app) is progressing as expected and efforts have been made to increase system interoperability and usability.

**Simplification and interoperability are at the heart of key measures in the area of e-Government taken by Italy.** A particularly important initiative in this regard is the National Digital Data Platform (PDND). The platform plays a crucial role in enhancing interoperability in public administration, specifically by connecting information systems and databases and ensuring compliance with the Once Only principle. The platform supports and is being integrated into a number of ecosystems, such as procurement, social security, population registries and education databases. To exchange data, each entity must complete the PDND enrolment process. Once registered, it can both provide its own e-Services – digital services granting data access – and use those offered by other entities. Since its launch in October 2022, the PDND has expanded significantly, with 7 900 entities onboarded, 11 000 e-Services published and over 480 million data exchange sessions conducted [47].

**On the sovereignty of the digital administration, a key measure is the National Strategic Hub** (Polo Strategico Nazionale or PSN), also part of the RRP and of the Digital Decade roadmap. The PSN is the infrastructure designed to ensure the **security and technological independence** of public administration data and services, by promoting the transition to **secure, reliable, and scalable cloud**

[46] What are the Large Scale Pilot Projects - EU Digital Identity Wallet.
[47] I numeri della PDND | PDND Interoperabilità.

**solutions**. As outlined in the **Italian Cloud Strategy**, the PSN builds on four data centres, **distributed** across four locations in Italy. The final target (supported by the RRP) is to migrate **12 464 local public administrations** to qualified cloud environments by Q2 2026. In Q3 2024, **4 083 local public administrations** were migrated (about 32%).

**2024 recommendation:** 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.

**Italy made some efforts to address the recommendation through new policy actions in 2024:** Progress is being made on the numerous and significant measures that are already in place and benefit from RRP support (see above/below).

*e-Health*

**In access to electronic health records, Italy maintained its lead in 2024 with a score of 84.11 against the EU's 82.7.**

Italy has worked to increase the availability of health data by integrating more categories of healthcare providers into the Electronic Health Record (EHR, or Fascicolo Sanitario Elettronico – FSE). Many documents are made available (laboratory reports, patient summaries, first aid reports, hospital discharge letters, radiology reports, specialists' reports), produced both within and outside the National Health Service (Sistema Sanitario Nazionale – SSN).

The Delegation Management Platform (DMP) will enable guardians, curators, support administrators, and those with parental responsibility to exercise their powers via national digital identity; the general availability of these functionalities will also apply to EHR online services. The Platform is planned to be completed by 30 June 2026.

**2024 recommendation:** (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.

**Italy made some efforts to address the recommendation through new policy actions in 2024:** Compared to last year, more data categories are made available for citizens in several regions, especially in Calabria, Molise, and Puglia. Specifically, data on allergies, current problems, medical devices/implants, procedures/operations, current/relevant past, and medical images increased in maturity.

Of the 13 data categories investigated in this study, 7 are available in a timely manner in all regions. Nonetheless, data on medical images is still not available in most of the regions.

In 2024, Liguria, Basilicata and Sardinia reported, for the first time, that they had a mobile application alongside their existing online portals. Only four regions have only an online portal. More regions are providing technical functionalities to assist disadvantaged groups.

While more categories of healthcare providers are supplying data in some regions, this number is still limited, affecting Italy's e-Health maturity.

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

**In Italy, online participation in political and civic life is relatively high**. In 2024, 25.77% of people used the internet to participate in consultations, to vote or share opinions online. This share is above the EU average, despite Italy's downward trend (while in the EU, this share was 17.59% in 2022 and increased to 20.45% in 2024).

**In 2023, only 1 out of 4 of Italian internet users declared that they checked the truthfulness of doubtful online information**. In 2023, 37.42% of Italian people declared that they had encountered untrue or doubtful information or content on internet news sites or social media. Of these individuals, 20.95% checked its truthfulness, demonstrating a modest level of critical evaluation among those who perceived such content as misleading. Moreover, this share declined compared to 2021, when it was 24.39%, and is below the EU average of 24.29%. Young people between 16 and 24 years of age emerged as those more likely to report having encountered untrue or doubtful information or content (46.19% vs 39.55% of adults between 25 and 64 years of age) and to check truthfulness (29.63% vs 21.81% of adults).

The latest report of the **Italian Digital Media Observatory (IDMO)** provides some insights on the most frequent topics subject to disinformation. It reports data from a total of 193 fact-checking articles issued in February 2025. Of these, 16 articles (8.2%) addressed misinformation related to the war in Ukraine, 16 (8.2%) focused on the pandemic, 8 (4.1%) on climate change, 16 (8.2%) on the European Union, 10 (5.1%) on immigration, 5 (2.5%) on the war in the Middle East, and 5 (2.5%) on gender or LGBTQ+ issues [48].

**Looking at policy responses, in May 2024, the Italian government launched a broad campaign entitled 'Liberati dalla disinformazione' ('Free Yourself from Disinformation')** to combat the spread of false information. This initiative aims to raise awareness about the dangers of disinformation and promote critical thinking among citizens. Additionally, efforts to increase media literacy in schools are ongoing, such as those under Italy's National Digital School Plan [49].

Furthermore, in December 2024, the Ministry of Education and Merit (Ministero dell'Istruzione e del Merito, MIM) and the Italian Communications Authority (AGCOM) signed a memorandum of understanding to **promote and develop digital and media literacy activities in schools**, particularly targeting lower and upper secondary education. This agreement includes integrating digital citizenship training into the civic education curriculum, with programmes such as the 'Patentino Digitale' ('Digital Licence') already active in regions such as Tuscany and Lazio, and set to expand to other regions in 2025 [50].

**These initiatives play an important role in supporting the implementation of EU campaigns and the enforcement of relevant legislation, such as the Digital Services Act (DSA)**. Article 53 of the DSA grants service recipients, as well as organisations acting on their behalf, the right to lodge complaints about alleged DSA violations by intermediary service providers. These complaints can be submitted to the Digital Services Coordinator (DSC) of the Member State where the recipients are located. In Italy, AGCOM serves as the DSC, overseeing the implementation and enforcement of the DSA. Since

[48] L'effetto Trump sulla disinformazione di febbraio - IDMO.
[49] Liberati Dalla Disinformazione – La nuova campagna della Farnesina per contrastare la diffusione delle false notizie. – Ambasciata d'Italia La Valletta.
[50] Protocollo di intesa tra il Ministero dell'Istruzione e del Merito e l'Autorità per le Garanzie nelle Comunicazioni | Agcom.

implementation, approximately ten complaints have been received, mainly concerning misleading advertising. Furthermore, in 2024, AGCOM adopted two important regulations concerning, respectively, the procedure for awarding trusted flaggers, according to Article 22 DSA, and the procedure for certifying out-of-court dispute settlement bodies, derived from Article 21 DSA. Since the adoption of these regulations, AGCOM has awarded the status of trusted flaggers to several entities and designated one out-of-court dispute settlement body.

Finally, **regarding the protection of minors**, Italy has implemented obligations for electronic communication service providers and device manufacturers to ensure the availability of parental control applications. Service providers must offer these applications to the public, while device manufacturers are required to enable their pre-installed activation. Cases of attempted violations are increasing, with most linked to the use of anonymisers to by-pass the restrictions.

In October 2024, AGCOM adopted a draft regulation outlining technical and procedural standards for verifying users' age [51]. This is currently being consulted to ensure compatibility with EU regulation, particularly concerning the 'mini-wallet'. Moreover, in the context of deploying the IT Wallet (discussed under the eID section above), one of the use cases being considered is age verification. This work is being done in coordination with the structures/work groups established at the EU level.

Acting on these issues is perceived as very important by Italian citizens. According to the Digital Decade Eurobarometer 2025, Italian people 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 (93% of Italian people), cyberbullying and online harassment (93%) and to put in place age assurance mechanisms to restrict age-inappropriate content (95%).

# Leveraging digital transformation for a smart greening

**The RRP, including its RePowerEU chapter, has driven forward numerous projects leveraging digital technologies to support the green transition.** These initiatives also integrate digital technologies to enhance their impact, while reflecting the country's strong industrial base – for example, by focusing on helping enterprises adapt to the transition.

**The Italian population recycles only a small part of its ICT equipment**. In general, Italian people recycled their electronic devices less than the EU average. 6.55% of Italians recycle their laptops and tablets and 10.11% recycle their desktops, against an EU average of 11.31% and 14.66%, respectively. 10.04% recycled their mobile phones, broadly in line with the EU average of 10.93%.

According to the Digital Decade Eurobarometer 2025, 82% of Italian respondents think that ensuring that digital technologies serve the green transition should be an important action for public authorities.

**In its adjustment, Italy added to the roadmap the measure 'Transition 5.0', a tax credit scheme supporting investments in digitalisation and the green transition of businesses.** In 2024, the government gave impulse to the implementation of the measures, already part of the REPowerEU

[51] Implementing Law No 159 of 13 November 2023 ('Decreto Caivano'). See press release at this link: Comunicato stampa del 07 Ottobre 2024 | Agcom.

chapter of the RRP, aiming to accelerate the productive system's transition to an energy-efficient, sustainable, and renewable-based production model. Investments under 'Transition 5.0' have to achieve at least a 3% reduction in energy consumption at the production unit level or a minimum of 5% if calculated specifically on the affected process. Eligible investments under the scheme include: technologically advanced tangible and intangible assets (including software, platforms, applications); material assets for the self-production and self-consumption of renewable energy, including energy storage systems; and training activities aimed at acquiring or strengthening skills in technologies relevant to the digital and energy transition of production processes.

Available data shows a generally low take-up of the measure. So far, EUR 500 million have been assigned (out of the EUR 6.3 billion planned).

Another noteworthy initiative is the launch of a Technical Working Group involving the Department of Digital Transformation, ARERA (the Regulatory Authority for Energy, Networks, and Environment) and AGCOM. The aim of the Working Group is to identify synergies between the digitalisation and energy transition sectors. Specifically, the objective is to facilitate the deployment of fibre optic infrastructures and increase technology adoption. The Working Group has concluded hearings during which the views of multiple stakeholders were collected, and activities are currently underway to organise and summarise the information gathered.

**2024 recommendation**:

- Continue and intensify the efforts to join up the twin green and digital transitions, 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 the 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 digital solutions deployed in line with the relevant EU guidance and with the support of the methodology developed by the European Green Digital Coalition, with a view to future policy development, as well as attracting relevant financing.

**No information available on measures taken to address the recommendation.**

# Annex I – National roadmap analysis

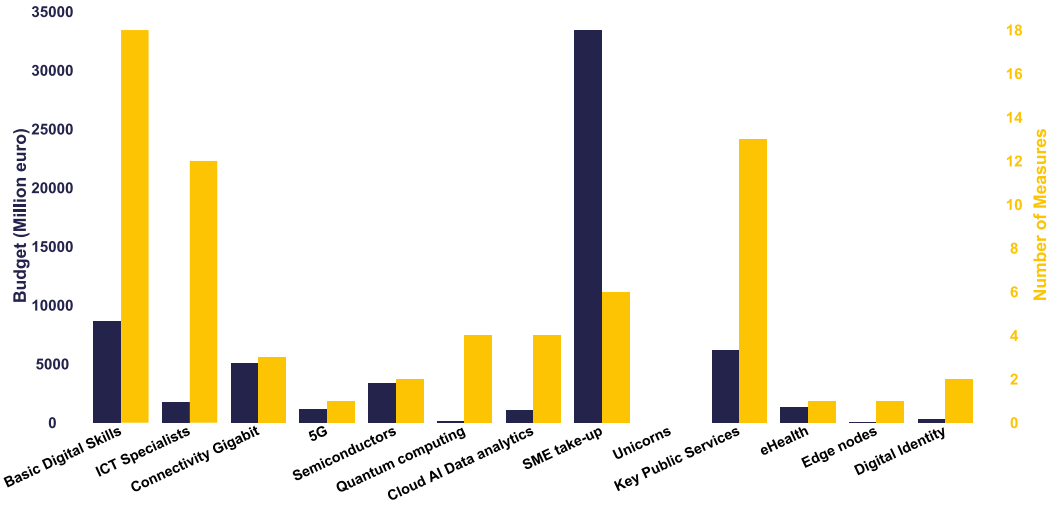
**The adjusted roadmap addresses a substantial number of roadmap recommendations issued in 2024.**

Italy revised the trajectories and the list of measures that contribute to their achievement, while submitting an explanation of the revisions made and of the reactions to the 2024 recommendations. The Italian roadmap has not been published.

The adjustment **adapted some of the 2030 national targets** to respond to the recommendations issued in 2024. In particular, the 2030 targets on basic digital skills and ICT specialists were increased, respectively, to 80.1% and 8.4%, and some of the measures in place were extended and reinforced. On the other hand, the adjustment did not revise the targets for the uptake of AI and data analytics. However, it should be noted that those targets, although remaining below the EU ones, are set at ambitious levels, i.e. 60% by 2030 (the EU targets are 75%). Overall, the Italian roadmap covers all targets and provides related trajectories to 2030.

As part of the adjustment, **Italy revised several existing measures and introduced five new ones**. Among the new measures, three focus on enhancing basic digital skills, reinforcing efforts to promote digital competence across all population groups and target audiences.

**Measures and budget in national roadmap** [52]




The adjustment also incorporates two major national policy initiatives into the roadmap for business digitalisation: transition 4.0 (on the uptake of 4.0 technologies) and transition 5.0 (which supports investments in technologies for the green transition of Italian enterprises).

Finally, it adds the measure for the development of the IT Wallet to the roadmap, supporting the roll-out of the EUDI Wallet.

Additionally, the addendum offers further details on implementation and outlines several new initiatives. However, these are not formally included in the repository of measures (e.g. policies to

[52] When referring to national roadmaps, data used in this report is that 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.

support unicorns). Some of these initiatives are still under development (e.g. the quantum strategy).

As part of the adjustment, Italy also extensively revised the set of measures to ensure the **accuracy of the information reported and the budget** (in line with the 2024 recommendation).

Measures included in the roadmap were also linked to the relevant parts of the declaration on **digital rights and principles** and the digital decade general objectives.

Several stakeholders were **consulted** for the adjustment of the roadmaps, including Italian public administrations in charge of the different areas of action, members of the Italian Digital Skills and Jobs Coalition, and regions.

Overall, the **roadmap reflects a solid effort. It remains highly ambitious, both in terms of targets set, financial resources mobilised and the scope of measures introduced**. The inclusion of new initiatives and the strengthening of existing ones demonstrate commitment to accelerating progress towards the targets. At the same time, there is room to further consolidate the roadmap initiatives in certain areas – such as artificial intelligence and support for unicorns – to enhance coherence and strategic impact.

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

## Multi-country projects and best practices

Italy is a member of the three established European Digital Infrastructure Consortia (EDICs): the Alliance for Language Technologies EDIC, the Local Digital Twins towards the CitiVERSE EDIC and the EUROPEUM EDIC. Italy is also working towards setting up EDICs in the area of agri-food and mobility and logistics. Italy is directly participating in the IPCEI on Microelectronics and Communication Technologies (IPCEI-ME/CT) and in the IPCEI on Next Generation Cloud Infrastructure and Services (IPCEI-CIS). Italy is also a participating state of the EuroHPC Joint Undertaking (JU) and of the Chips JU.

Italy has contributed to the Best Practice Accelerator [53] by sharing three best practices in the framework of the Digital Skills cluster (network of digital facilitation services, the digital civic service and fund for *Repubblica Digitale*).

## EU funding for digital policies in Italy

Italy allocates 26% of its total recovery and resilience plan to digital (EUR 46.8 billion)[54]. In addition, under cohesion policy, EUR 4.9 billion (representing 11% of the country's total cohesion policy funding), is dedicated to advancing Italy's digital transformation[55]. According to JRC estimates, EUR 45.04 billion directly contribute to achieving Digital Decade targets (of which EUR 41.88 billion comes from the RRF and EUR 3.16 billion from cohesion policy funding)[56].

The RRF and Cohesion funding provide balanced support across the different Digital Decade targets. Notably, the Italian RRP makes a significant contribution to the targets related to the digitalisation of businesses, thanks to the large 'Transition 4.0' measure. The plan also includes important reforms and investments aimed at transforming the public administration, such as the deployment and uptake of Electronic Health Records and e-ID. Furthermore, the RRP addresses digital skills development through measures focused on improving basic digital skills, increasing training on advanced digital skills, and upskilling and reskilling the workforce.

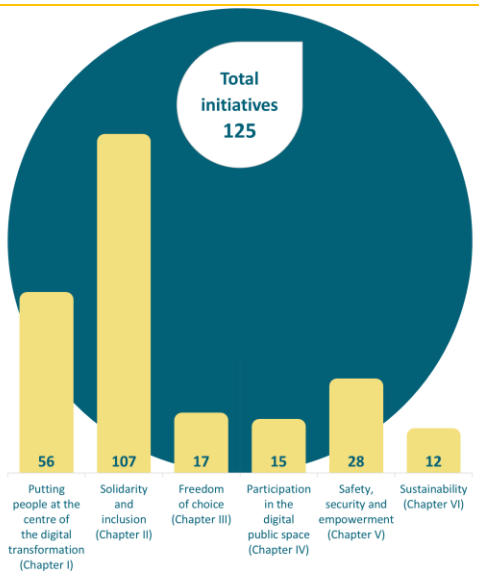
[53] The Best Practice Accelerator (BPA) is a platform that enables Member States to share successful measures and challenges encountered in their efforts to meet their Digital Decade targets and objectives. Best practices are available to all Member States via the BPA Repository and showcased in regular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

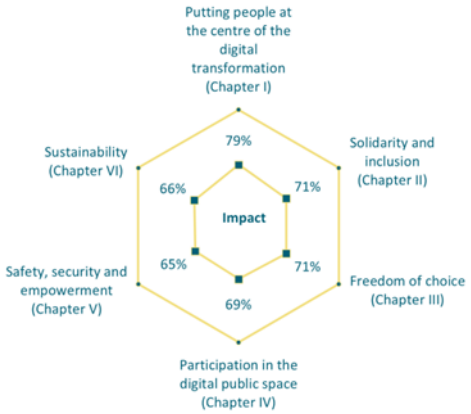
[54] The share of financial allocations that contribute to digital objectives has been calculated using Annex VII to the Recovery and Resilience Facility Regulation. Last data update: 16 May 2025.

[55] 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.

[56] 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[57]




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

Italy has been one of the most active Member States in implementing digital rights and principles, with over 100 initiatives overall and 12 new initiatives launched in 2024, showing notable progress towards its commitments. Italy is most active in the area of Digital education, training and skills (II). There is room for improvement, especially with regards to Protection and empowerment of children and young people in the digital environment (V) 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 Italy (mainly national government) and how these are perceived by citizens.

The indicators suggest that Italy is most successful in implementing commitments related to Putting people at the centre of the digital transformation (I). Italy should review and strengthen efforts in areas where the impact of digital rights initiatives appears to be limited despite relative activity, notably on Safety, security and empowerment (V).

According to the Special Eurobarometer 'Digital Decade 2025', 48% of citizens in Italy think that the EU protects their digital rights well (a 1% decrease since 2024). This is above the EU average of 44%. Citizens are particularly confident about getting digital products and services that minimise damage to the environment and society (64%, above the EU average of 50%). They are most worried that their right to a safe digital environment and content for children and young people is not well protected (44%, below the EU average of 48%).

[57] Based on a study to support the Monitoring of the Implementation of the Declaration on Digital Rights and Principles, available here. For a more detailed country factsheet accompanying the study, click here.