European Commission

2030 DIGITAL DECADE

Annex Italy

REPORT ON THE STATE OF THE DIGITAL DECADE 2023

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Digital Decade Country Report 2023: Italy

Italy has untapped digital potential to contribute further to the collective efforts to achieve the EU's Digital Decade targets. Given the size of the Italian economy and its population, current and future efforts will contribute significantly. In recent years, Italy has made significant advances in terms of infrastructure, but performs below the EU average on skills and some aspects of the digitalisation of public services. The strategies adopted on cloud, blockchain, AI, and recently on cybersecurity, together with the reforms and investments under the Recovery and Resilience Plan, create a solid framework for achieving a sustainable and inclusive digital transformation.

Italy is collaborating with other Member States in exploring the possibility to set up a **European Digital Infrastructure Consortium (EDIC)** on establishing the European Cybersecurity Skills Academy. Italy is one of the Member States that have jointly submitted a formal application to set up the European Blockchain Partnership and the EDIC on European Blockchain Infrastructure, supporting EU-wide cross-border public services.

DIGITAL SKILLS

Italy's progress in digital skills remains slow, contributing only modestly to the Digital Decade target. Only 46% of the population have basic digital skills. This undermines their capacity to benefit from digital opportunities and to exercise their digital citizenship and has a negative impact on Italy's inclusiveness. Italy adopted a specific national strategy and included reforms and investments in the Resilience and Recovery Plan (PRR) which are intended to increase the level of digital skills. While the importance of developing new skills and updating job profiles is recognised as a priority, the number of enterprises actually offering training to their employees is still insufficient.

Italy's number of ICT graduates remains significantly below the ambitions for the EU's Digital Decade, as the country is unable to meet the business demand for qualified professionals. Even though the offer to provide training is evolving and has been expanded by new flexible training offers focusing on STEM, the share of ICT graduates remains at 1.5%, which is insufficient and significantly below the EU average of 4.2%. Moreover, the share of women among ICT specialists is 16%, well below the EU average of 18.9%.

Italy should step up its efforts on digital skills, in particular in upskilling and reskilling of its labour force. Moreover, it should introduce skills forecasting to match the needs of its labour market and improve cooperation particularly with industry and civil society. Italy should increase the capacity of the educational systems to train more ICT specialists, leveraging the RRF funding.

DIGITAL INFRASTRUCTURE

Italy has made some remarkable progresses towards achieving the Digital Decade targets on digital infrastructures and its RRP represents a significant boost for important investment. Concerning the Digital Decade target for fixed very high-capacity network (VHCN), Italy still remains below the EU average (54% of households against 73% in the EU), despite a 10 percentage points jump between 2021 and 2022. Italy achieved nationwide 5G coverage in 2021 and 93% of harmonised spectrum was assigned as of 2023. Also, 5G coverage provided on the 3.4-3.8 GHz spectrum band to 80% of households.

Italy continues to strengthen its position in the semiconductors technologies and cloud computing sectors. Investments under the RRP include support for participation in the Important Project of Common European Interest (IPCEI) 'Microelectronics and Communication Technologies' with 10 direct participants active in a wide range of applications. Italy is at the forefront of High-Performance Computing (HPC) and quantum computing. LEONARDO, a world-class supercomputing system developed and assembled in Europe, is currently the fourth most powerful supercomputer in the world. LEONARDO will be further improved to become one of the first European-built quantum computers. In March 2023, Italy launched TeRABIT, an infrastructure based on last-generation dedicated fibre optics, allowing data to be exchanged at terabit speeds (1 000 billion bits per second). Several operators are starting to deploy a more decentralized edge cloud infrastructure, in particular to overcome potential congestion issues and optimize video service.

Italy should step up its efforts on connectivity infrastructure, in particular Gigabit coverage. It will be crucial for Italy to maximise the available to improve fixed connectivity coverage and consolidate the significant achievements made in mobile connectivity, particularly for advanced applications.

Measures taken by Italy in the field of semiconductors, edge nodes and quantum computing should continue in order to help the EU to become a strong market player in these areas.

DIGITALISATION OF BUSINESSES

Most Italian SMEs have at least a basic level of digital intensity in line to EU average (70% compared to the EU average of 69% in 2022). Progress has been especially strong in the use of electronic invoices, outperforming the EU's average with 95% (in 2020), as well as the percentage of SME turnover from ecommerce reaching 14% (in 2022). However, more could be done in relation to update of advanced digital technologies: whilst, in 2021, cloud was used by 52% of enterprises, well above the EU average of 34%, the picture is different for big data and AI, where, in 2020, only 9% of enterprises used big data, and, in 2021, 6% used AI. Italy is actively participating in the European Digital Innovation Hub (EDIH) network with 13 EDIHs, which were selected to be co-funded by EU's Digital Europe Program and Italian Government. Despite these measures the possibility for start-ups to scale up in Italy remains limited when compared to other Member States. Furthermore, Italy is participating in the IPCEI on Next Generation Cloud Infrastructure and Services.

Italy should continue implementing its policies in the area od digitalisation of businesses. In particular, Italy should continue supporting the development and deployment of advanced technologies, notably AI and big data, including capacity and knowledge building. Italy should strengthen its efforts to encourage entrepreneurship in digital sectors and create an ecosystem of innovation, in particular for start-ups and SMEs, improving their chances to scale up.

DIGITALISATION OF PUBLIC SERVICES

Italy scores below the EU average on providing digital public services for citizens (score of 68 vs. 77) and businesses (score of 75 vs. 84). Despite the delays accumulated over recent years, increased efforts has been made in relation to: (i) availability, efficiency and security of digital infrastructure, (ii) the interoperability of data and information across public administrations, (iii) the implementation of the once-only principle, (iv) incrementing the use of the digital identity and (v) the completion of the system for electronic health records. Recent measures taken to ensure more user-centric public services and to improve the accessibility of digital public services are likely to further encourage the public to use digital public services by citizens.

Italy should step up its efforts to digitalise public services. In particular, it should speed up the implementation of existing and planned measures.

DIGITAL IN ITALY'S RECOVERY AND RESILIENCE PLAN (RRP)

The Italian Recovery and Resilience Plan devote EUR 48 billion (25%) to the digital transformation and out of which EUR 42 billion is expected to contribute to the Digital Decade targets [1]. Italy has already achieved several digital measures, such as: (i) the reform 'Cloud First and Interoperability'; (ii) the reform of ICT procurement; (iii) streamlining and accelerating ICT procurement; (iv) calls for expression of interest to select projects under the 'Important Projects of Common European Interest'; (v) the adoption of a National Plan for New Skills; and (vi) five connectivity measures.

1 *Based on Annex VII of the RRF Regulation. Furthermore, a qualitative assessment of the data took place to allow for an estimation of the possible contribution of RRF measures to the Digital Decade targets and the remaining part is also supporting the general objectives of the Digital Decade. This applies to all descriptions of the RRPs included in this Annex.*
The information provided refers to the Recovery and Resilience Plan as adopted by the Council before 1 September 2023, without prejudice to potential ongoing revisions of the plan.