National strategies on Artificial Intelligence
A European perspective in 2019

Country report – Italy

In August 2019, the Italian Ministry of Economic Development released a draft version of its National Strategy on Artificial Intelligence for public consultation (Italy, 2019a). At the same time, the Ministry also published a background paper, entitled Proposals for an Italian strategy for AI, providing initial guiding principles and policy recommendations as a basis for Italy's AI strategy (Italy, 2019b). The public consultation closed on the 13th of September and a final draft is currently at hand with the high-level group that was commissioned to develop the AI strategy for Italy.

The policy report provides a long-term strategy for a sustainable development of AI. It presents key objectives to increase the development and competitiveness of AI in Italy:
- Improving AI-related skills and competences at all education levels and creating lifelong learning and reskilling opportunities for the labour force;
- Fostering AI research and innovation to enhance the competitiveness of the entrepreneurial ecosystem;
- Establishing a regulatory and ethical framework to ensure a sustainable and trustworthy AI;
- Supporting (international) networks and partnerships;
- Developing a data infrastructure to fuel AI developments;
- Improving public services through a wider adoption and use of AI applications.

As per funding, the Italian government earmarks €1 billion of public investments by 2025 for the strategy implementation. The high-level working group expects that the public investments will create a leverage effect on private investments of the same amount, resulting in a total investment volume of €2 billion.

1   Human capital

The deployment of AI technologies is largely dependent on the skills and competences of the people that develop them. Recognising this fact, the Italian government aims to strengthen the **provision of AI competences at all education levels**. At the primary and secondary education level, the government will develop a National Plan for the Digital School to update teachers' skills in digital education and AI-related courses and to incorporate these courses in the students' curricula. At higher education levels, the government will encourage the integration of courses with AI-related themes in Bachelors, Masters and doctoral programs. In addition, lifelong learning initiatives will be set up in the form of professional online courses in AI, and upskilling and reskilling training programs in AI for the workforce.

2   From the lab to the market

The **Italian AI research ecosystem** is backed by a wide range of national centres of excellence such as the Artificial Intelligence and Intelligent Systems Laboratory (AIIS) of the Italian Interuniversity Consortium for Informatics (CINI), the Italian Institute of Technology (IIT) and the Institute for Calculation and Networks for High Services (ICAR) of the National Research Council (CNR). To **increase the competiveness of the AI industry** and the usage of AI applications in the public sector, the Italian government will reinforce the available public funding and will encourage public-private venture capital support. One of these initiatives is Smart&Start Italia, a government-funded scheme that encourages new businesses in the digital economy. Dedicated funding schemes will be developed to finance experimentation and testing activities in blockchain, artificial intelligence and internet of things. In addition, the government recalls the establishment of the National Innovation Fund in 2019, which has an initial budget of €1 billion. Besides financial instruments, the

government is also setting up advisory services through the appointment of innovation managers that will help SMEs during the technological and digital transformation process. **Priority sectors** that are particularly promising for the development of AI in Italy are: manufacturing industries, food, energy, healthcare, transport, smart cities, culture and tourism, and public administration. With respect to AI in the public administration, the Task Force on Artificial Intelligence of the Agency for Digital Italy recently released a white paper on artificial intelligence at the service of citizens.

3   Networking

In terms of **networking**, the Italian strategy highlights that it will encourage the above mentioned centres of excellence to build up a network for research and development which will work in close relationship with the industrial community. A total of 8 Competence Centres, established by the Ministry of Economic Development, and 12 European Technology Clusters, set up by the Ministry of Education, Universities and Research, will form the basis for a national network for knowledge exchange and collaboration. These nodes are integrated in the Digital Europe Programme for the period 2021-2027 and constitute a backbone for pan-European networks together with the establishment of Digital Innovation Hubs. The Italian strategy mentions its proactive support to European initiatives such as the Confederation of Artificial Intelligence Laboratories in Europe (CLAIRE) and the public-private partnerships for electronic components and systems (ECSEL). The government also foresees to establish a central hub that will be in charge of coordinating national networking efforts and that will be duly equipped with appropriate digital infrastructure. To increase the **international attractiveness** of Italy in the field of AI, the Italian government foresees to strengthen existing policy instruments aiming to attract foreign talents such as the EU Blue card and the Italian Startup Visa. Finally, the **dissemination and uptake of AI** will be fostered through promotion campaigns via broadcasting and multimedia, targeting the population as whole. For the protection of citizens, special attention will be devoted to inform about fake news and issues of cyber security.

4   Regulation

To ensure that the design of AI systems is based on principles of transparency, reciprocity and reliability, the Italian government emphasises the need to establish a **regulatory and ethical framework for AI**. From an ethical point of view, the government commits to contribute to the European Ethical Guidelines and to consider the creation of certificates to validate and monitor AI applications developed in an ethically sound way. From a legal perspective, the government will analyse the current legislation and update it where needed in order to remove any barriers to a smooth AI development. Regulatory sandboxes will be set up to facilitate testing of AI applications.

5   Infrastructure

The Italian government will **harness the potential of the data economy** by improving the interoperability and accessibility of public administration data through API interfaces. To facilitate data exchanges, the government will actively promote the development of Data Sharing Agreements, in particular in strategic sectors with a high potential and collective interest. It will also launch pilot projects to evaluate the benefits of Data Trust models, aiming to ensure data sharing in a fair, safe and equitable way. Lastly, the government will proactively support the creation of a Common European Data Space. With regard to the development of a **digital and telecommunication infrastructure**, the Italian government is participating in the Joint Undertaking to develop a competitive European computing ecosystem (EuroHPC). In terms of connectivity, Italy is further expanding its ultra-broadband optical fibre network and explores ways to extent its 5G network.

6   Update

The Italian Ministry of Economic Development will monitor and evaluate the progress of the national AI strategy on a continuous basis and update its implementation where needed.

References

Italy (2019a). Strategia Nazionale per l'Intelligenza Artificiale. Ministero dello Sviluppo Economico. https://www.mise.gov.it/images/stories/documenti/Strategia-Nazionale-Intelligenza-Artificiale-Bozza-Consultazione.pdf

Italy (2019b). Proposte per una strategia italianaper l'intelligenza artificiale. Gruppo di Esperti MISE sull'intelligenza artificiale. https://www.mise.gov.it/images/stories/documenti/Proposte-per-una-strategia-italiana-2019.pdf

Background information

This country report has been prepared in the context of AI Watch and the OECD AI Policy Observatory.

AI Watch is the European Commission knowledge service to monitor the development, uptake and impact of Artificial Intelligence (AI) for Europe, launched in December 2018.

The OECD AI Policy Observatory (OECD.AI) is an inclusive hub for public policy on AI. It aims to help countries encourage, nurture and monitor the responsible development of trustworthy AI systems for the benefit of society.

This country report has been created on the 25th of February 2020. Please visit https://ec.europa.eu/knowledge4policy/ai-watch/italy-ai-strategy-report for regular updates.