Current and upcoming EU actions and funding related to AI

Boosting the EU's technological and industrial capacity and AI uptake across the economy[1]

- Funding for research and innovation in AI technologies to strengthen European industrial leadership, excellence in science, and support AI applications which address societal challenges in sectors such as health, transport and agrifood
- Supporting breakthrough, market-creating innovation through the pilot phase of the European Innovation Council
- Strengthening AI research excellence centres and upgrading the pan-European network of such centres
- Supporting the uptake of AI, with a focus on small and medium-sized enterprises, non-tech companies and public administrations, via an AI-on-demand platform giving support and easy access to the latest algorithms and expertise, and a network of AI-focused Digital Innovation Hubs facilitating testing and experimentation
- Setting up industrial data platforms offering high quality data sets. As an example, the Copernicus programme is delivering large quantities of quality, structured data. Its data archives can be used by machine and deep learning algorithms to support a large number of applications
- Stimulating more private investment in AI under the European Fund for Strategic Investments
- Research and innovation in fields such as explainable AI, unsupervised machine learning, energy and data efficiency
- Exploring joint innovation procurement for the use and development of AI
- Testing and experimentation facilities in areas such as transport, healthcare, agrifood and manufacturing, supported by regulatory sandboxes
- Supporting the adoption of AI by organisations across all sectors, including public interest applications, through co-investment with Member States
- Support centre for data sharing, closely linked to the AI-on-demand platform to facilitate development of business and public sector applications
- Smart Specialisation Platform on Industrial Modernisation: Inter-regional partnerships for investments in advanced technologies and AI
- Exploring the most critical industrial applications of AI, where we can create the highest added value for the EU and help European business, notably SMEs anticipate the AI opportunities and prepare the transition. The Intelligent Cities initiative will support testing and piloting these AI applications among other emerging technologies with the final objective to develop successful innovation ecosystems, restore sustainable economic growth and wellbeing.
- Reinforcing the European advanced manufacturing support centre for small and medium-sized enterprises

[1] Section 3.1 of Commission Communication on Artificial Intelligence for Europe (COM/2018/237 final)

Preparing for socio-economic changes brought about by AI[2]

- Setting up dedicated (re-)training schemes in connection with the Blueprint on sectoral cooperation on skills – which brings together businesses, trade unions, higher education institutions and public authorities – for professional profiles which are at risk of being automated, with financial support from the European Social Fund

- Gathering detailed analysis and expert inputs (High-Level Expert Group on the Impact of the Digital Transformation on EU Labour Markets) to anticipate the changes on the labour market and the skills mismatch across the EU, and inform decision-making at EU, national and local levels.

  More specifically, the Commission will (i) publish a foresight report on the impact of AI in education; (ii) launch pilots to predict the training requirements for future competence profiles; and (iii) publish an expert report addressing the labour market impacts of AI, with recommendations

- Supporting Digital Opportunity Traineeships (2018-20) in advanced digital skills for students and fresh graduates

- Encouraging, through the Digital Skills and Jobs Coalition, business-education partnerships to take steps to attract and retain more AI talent and to foster continued collaboration

- Inviting social partners to include AI and its impact on the economy and employment, including the importance of diversity and gender balance in AI jobs, in their joint work programmes at sectoral and cross-sectoral level where relevant

- The European Institute of Innovation and Technology will integrate AI across curricula in the education courses it supports, in order to contribute to developing a talent pool for AI in Europe

- Supporting the acquisition of advanced digital skills including AI-specific expertise

- Broadening the scope of the current European Globalisation Adjustment Fund beyond redundancies caused by delocalisation, including to those resulting from digitisation and automation

[2] Section 3.2 of Commission Communication on Artificial Intelligence for Europe (COM/2018/237 final)

Ensuring an appropriate ethical and legal framework[3]

- AI ethics guidelines and mid and long-term policy and investment recommendations, drawn up by the High-Level Expert Group on Artificial Intelligence, with input from the European AI Alliance and in close cooperation with the Member States
- Issuing a guidance document on the interpretation of the Product Liability Directive in light of technological developments by mid-2019, with input from the Expert Group on liability and new technologies
- Publishing, by mid-2019, a report on the broader implications for, potential gaps in and orientations for, the liability and safety frameworks for AI, Internet of Things and robotics, with input from the Expert Group on liability and new technologies
- Implementing a pilot project proposed by the European Parliament on Algorithmic Awareness Building, to gather a solid evidence-base and support the design of policy responses to the challenges brought by automated decision-making, including biases and discrimination (2018-2019)
- Supporting national and EU-level consumer organisations and data protection supervising authorities in building an understanding of AI-powered applications with the input of the European Consumer Consultative Group and of the European Data Protection Board
- Reflecting on interactions between AI and intellectual property rights, from the perspective of both intellectual property offices and users, with a view to fostering innovation and legal certainty in a balanced way
- EU Fundamental Rights Agency will carry out an assessment of the current challenges faced by producers and users of new technology with respect of fundamental rights compliance

Joining forces[4]

- Coordinated plan on AI with the Member States, as part of the existing European platform of national initiatives to digitise industry (DEI), in order to maximise the impact of investments at EU and national levels, exchange on the best way for governments to prepare Europeans for the AI transformation and address legal and ethical considerations
- Systematically monitoring AI-related developments, e.g. policy initiatives in the Member States, AI uptake and its impact on labour markets as well as AI capabilities, including high-level benchmarking, showcasing current capabilities and developing an AI index in order to inform the discussions
- International outreach (G7/G20/OECD/UN)

[3] Section 3.3 of Commission Communication on Artificial Intelligence for Europe (COM/2018/237 final)
[4] Section 3.4 of Commission Communication on Artificial Intelligence for Europe (COM/2018/237 final)

Main sources of EU Funding

2018-2020

Under Horizon 2020, around EUR 1.1 billion has been invested, overall, in AI-related research and innovation during the period 2014-2017, including in big data, health, rehabilitation, transport and space-oriented research.

For the period 2018-2020, the Commission will increase its own investment to around EUR 1.5 billion for (an increase of around 70%), triggering an additional EUR 2.5 billion under the existing public-private partnerships (for example in robotics and big data). The goal is to reach a total of EUR 20 billion (public and private) for 2018-2020, through matching efforts by the Member States and the private sector.[5]

Horizon Europe

Horizon Europe is the EU's flagship programme to support research and innovation, with a total amount of EUR 97.6 billion allocated for 2021-2027. AI is one of the key activities in the 'Digital and Industry' cluster, which is part of the 'Global Challenges and Industrial Competitiveness' pillar (pillar 2). Pillar 2 focuses on applied research and incremental innovation with a view to addressing both industrial and societal needs, and it is the pillar that will receive the largest share of resources. The amount allocated to the second pillar is EUR 52.7 billion, of which EUR 15 billion should be for the cluster that also covers AI, i.e. 'Digital and Industry'.

Digital Europe

Digital Europe is a new programme aimed at shaping Europe's digital transformation to the benefit of citizens and businesses. Additional funds will allow the EU to invest more in digital economy and society. Under Digital Europe, the EU will invest EUR 9.2 billion to align the next long-term EU budget 2021-2027 with increasing digital challenges The main areas to be addressed are high-performance computing, artificial intelligence, cybersecurity and advanced digital skills and ensuring their wide use and accessibility across the economy and society by businesses and the public sector alike.

Under the Digital Europe programme, EUR 2.5 billion of the total amount of EUR 9.2 billion will be for AI. The funding will target in particular testing and experimentation facilities and data platforms. Digital Europe also provides for investing EUR 700 million in supporting the development of advanced digital skills, including in relation to machine learning, and EUR 1.3 billion in supporting deployment projects, including for SMEs to engage in digital transformation, notably in areas like AI.

InvestEU

The InvestEU programme will further broaden the support base available to companies undergoing digital transformation by providing access to finance. InvestEU will be based on a diverse range of activities and financial instruments such as loans, equity, financing and guarantees, and the EUR 38 billion budgetary guarantee from the EU is expected to trigger EUR 650 billion in additional investment. The key areas targeted include the development and deployment of digital technologies and services through AI and advanced digital skills, and the provision of working capital and investment and risk financing from seed to expansion stages, in particular for SMEs and small midcap companies.

[5] Section 3.1 of Commission Communication on Artificial Intelligence for Europe (COM/2018/237 final)