



## Artificial Intelligence (AI)

*Artificial intelligence (AI) has the potential to double annual economic growth rates of developed economies and increase labour productivity by 40% within 20 years.<sup>1</sup> It can improve conditions for society on the whole by innovating sectors like manufacturing, healthcare, agriculture, education, infrastructure, public safety and financial services. But there is a need for a coherent European approach to invest in AI to maintain our scientific and commercial leadership. To seize the opportunities offered by AI, Europe needs to enable technological progress, encourage the uptake of emerging technologies and address the potential challenges in a smart and future-proof way.*

*We can expect AI-based systems to reshape current employment and skills needs. Productivity improving technologies may make certain tasks obsolete, or change the nature of certain processes. However, AI will not replace humans, but assist and enhance their work. The emergence of AI will also create opportunities in many areas, resulting in an overall net increase in jobs for Europe if a favourable harmonised regulatory environment for businesses and appropriate educational and long-life learning strategies are implemented.<sup>2</sup> Re-skilling Europe's workforce is essential to reap the benefits of this technological shift. Currently 40% of EU citizens possess digital skills whereas 90% of jobs will require them by 2025.<sup>3</sup>*

### Key Messages

- AI is a tool that powers applications in a variety of sectors. There can be **no horizontal, one-size-fits-all approach to AI**. Different uses of AI pose different challenges and require different responses. "Narrow AI" applications are proving benefits for citizens in a number of differing areas eg. cancer diagnosis, voice-recognition in phones, fraud detection, advanced driving assistance systems.
- The roll out of AI is in its early stage and its potential should not be hampered by disproportionate regulatory obstacles. Europe should abandon its risk-averse approach and **embrace the economic and societal benefits AI can offer** if developed responsibly. Regulatory intervention, which should be considered only where real market failures exist, should be harmonised at EU level.
- When systems powered by artificial intelligence are deployed more questions may arise around ethics and liability. Society and the legal frameworks should adapt to respond to new needs. It is also important to realise that **priority should be placed on applying frameworks that already exist** as many can already answer these questions today (eg.

<sup>1</sup> *Why Artificial Intelligence is the Future of Growth*, Purdy, Daugherty, Accenture (2016)

<sup>2</sup> *Automation and Independent Work in a Digital Economy*, OECD (2016)

<sup>3</sup> *Skills Guarantee Roadmap*, European Commission (2016)



consumer protection, liability, data protection, security and safety frameworks). Existing legislation and initiatives may also need to be adapted in order to provide innovative opportunities, for instance, with regard to a clear application of liability. This way emerging AI technologies will be allowed to prosper in Europe to facilitate the development of innovative applications.

- An informed and fact-based dialogue among relevant stakeholders is required to identify potential economic and societal challenges of specific AI applications. Policy makers should remain informed on AI developments through a **continued dialogue with stakeholders and experts** in industry, the research community, academia, civil society and where applicable financial supervisors. The development of AI-based technology happens on a global scale, so a narrow focus on Europe is not an option as international competition in this field is high.
- We need a **coherent European approach to innovation policy and investment in AI** to maintain digital leadership. The Public-Private Partnership for robotics in Europe, has reached good results: up to €700 million of EU funding for 2014-20, bolstered by an extra €2.1 billion of investment committed by the industry. But this is not enough. Financial incentives for investment in research, development and application of AI are required to keep Europe competitive and influence the fast-paced technological environment.
- Businesses need to prepare for competitive AI-based tools to rely upon their workforce to function. But this does not equal full scale automation and the replacement of all human contributions. We believe that the largest potential of AI lies in the partnership between humans and machines. That is why the **roll out of AI needs to be human centric**. While data can be analysed and processed more efficiently by machines, humans should remain in charge when it comes to critical decision-making, emotional intelligence, value judgements.
- Automation has proliferated since the first industrial revolution took hold. Each wave of industrialisation and automation has had an impact on employment – however rather than reduce overall employment, there has been an overall increase. This requires new skills for new kinds of work. It is essential that governments and industry collaborate to meet the demands for these jobs, **invest in re-skilling and life-long learning**. This means closing Europe's existing digital skills gap to ensure our workforce is ready for the jobs of tomorrow.
- Understanding and trusting decision making in relation to AI technologies is essential for furthering its accountability. Relevant Information that explains how certain impactful automated decisions are taken should be **made accessible and easily interpretable** for citizens to evaluate how those decisions were reached. This should in no way permit full exposure of businesses technology or mathematical algorithms which would not aid accountability to average users in practice but instead flourish on the basis of competition of how results are demonstrated.