Policies for collaborative robotics and Artificial Intelligence (AI) systems

Policy brief on Collaborative robots, human-AI systems and the role for policy

Artificial Intelligence (AI), Robotics and other related advanced technologies are undoubtedly transforming European industries.

A wide range of studies made predictions to what extent industrial automation replaces jobs and have a negative consequence on employment, whilst recent research suggests a much more positive scenario for job creation.

Change management will be key to motivate people to embrace the transformation and adopt a new mindset and behaviour.

Policy will need to implement more foresight exercises to better assess the repercussions of integrating AI and robotics into the workflow.

An important question for the future is how we can create interactive intelligent systems that address our key societal goals and combine the power of humans and machines for the sake of the creation of new value.

Organisational and ethical aspects of transformation require more focus

Various EU Member States have an AI strategy and programmes to foster technological development including robotics or the uptake of robotics solutions.

There are only a few examples where policy measures are in place to tackle the related risks, incentivise ethical behaviour and monitor systematically the impact of human-machine systems on work. Despite national AI strategies launched in almost each country, few of them discuss the implications of AI on ethical behaviour and on the labour market.

The European Union has been particularly active in setting new requirements towards AI technology-based solutions. More needs to be done in terms of integrated thinking, where technology, human intelligence and creativity are working together.

Key points from the European Commission White Paper on Artificial Intelligence: a European approach to excellence and trust.

Identify in advance high-risk sectors and applications, including facial recognition software.

Impose new regulatory requirements and prior assessments to ensure that high-risk AI systems conform to requirements for safety, fairness and data protection before they are released onto the market.

Use access to the European market as a lever to spread the EU's approach to AI regulation across the globe.

For more information, read the full Policy Brief on Collaborative robots, human-AI systems and the role for policy here:
https://ati.ec.europa.eu/reports/policy-briefs/collaborative-robots-human-ai-systems-and-role-policy

Policymaking should focus on integrating human-centred practices in the technological value chain and policymaking lifecycle

The following observations can be made to inspire further policymaking:

Technology experts and end-users need to work together and jointly design the AI algorithms to ensure a full fitness check.

Policy will need to carefully guide the process and mitigate the risks of the self-governance of tech companies.

Policymakers can foster human-centred design by integrating transparency requirements into AI-based products.

The new challenges that arise in the area of occupational health and safety need to be considered more broadly.

New action plans should be created to consider the impact of collaborative AI and robotics systems on the workplace.

Skills policies could be inspired to become more human-machine focused, where digital ergonomics and other ethical considerations are taken seriously in parallel with enhancing technology knowledge.

The potential of AI, robotics and other related digital technologies can unlock unprecedented opportunities not just to increase industrial competitiveness but also to address key societal challenges.

About the Advanced Technologies for Industry (ATI) project

The ATI project – funded by the European Commission – supports the **implementation** of Europe's new growth strategy with a systematic monitoring of **technological trends** and reliable, **up-to-date data** on advanced technologies.

The **Policy Briefs** analyse national and regional policy measures focused on a specific policy challenge, technological area or mode of implementation and explore policy tools that have been designed and implemented with the aim of fostering the generation and uptake of advanced technologies. The reports provide a comparative analysis of some of the most relevant national and regional examples on the policy landscape in the EU. They highlight the lessons learnt based on existing policy evaluations, monitoring or any other learning process and will present both good practices and potentially the bad ones. In the case of novel policy initiatives, they focus on the key challenges in the design process.

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