

Enhancing EU legal frameworks for AI & robotics

SIENNA project Policy Brief #1

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Highlights

To support and ensure ethical and human-rights respectful design, development, deployment and use of AI and robotics technologies, we need policy-makers to:

Create an **EU regulatory framework** for artificial intelligence (AI) and robotics products and services

Enhance protection of **vulnerable populations**, especially the poor, children, minorities and other marginalised groups, from the adverse impacts of AI and robotics

Measure/review the adequacy of **complaints redressal in companies** deploying AI and robotics systems in the EU

Make explicit commitments and take actions to **reduce technological surveillance** of individuals and **prevent discrimination**

Prohibit AI-enabled large-scale scoring of individuals, AI-based **racial profiling** by default and when used, enforce strict controls.

Who is this for?

European Union (EU) institutions, particularly the European Commission, European Parliament, European Council, Council of the European Union, European Data Protection Board, European Data Protection Supervisor, and the European Union Agency for Fundamental Rights.

Introduction

In principle, existing EU legal frameworks (e.g., human rights data protection, product liability and safety) are fully applicable and should be able to cope with the challenges posed by AI and robotics and other emerging technologies. However, SIENNA research has identified various gaps and challenges that must be addressed. This brief presents some of the urgent actions required and recommendations for European Union institutions.

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Technology, ethics and human rights

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Recommendations

Ensure consistency and a harmonised approach across the Union and establish common governance standards to address AI and robotics risks

- Create a specific EU regulatory framework for AI and robotics systems, products and services
- Create/designate a European Agency for Artificial Intelligence
- Set up a framework for cooperation of national competent authorities via network of national authorities, as well as sectorial networks and regulatory authorities, at national and EU level

Increase reliability and security of AI and robotics products and services, and make them respectful of European values and rules

- Encourage the use of ethical impact assessment, ethics by design, human rights impact assessments (HRIAs) and include provisions for such frameworks and assessments in the new EU regulatory framework for AI and related technologies. These should also be referenced via amendments to existing legislation or in guidance documents as part of standard practice.
- Use regulatory sandboxes to test the safe and effective use of AI and robotics technologies in real- world environment
- Set up a sector-specific conformity assessment/certification schemes for high-medium risk products and services
- Establish criteria and conditions for conformity assessment/certification

Clarify key concepts

- Clearly and consistently define in legislation the scope of ‘high-risk’ AI in existing or new legislation or via a Resolution or Opinion
- Provide interpretative and evolving guidance on risky AI and robotics applications
- Further clarify the definition of ‘product’ in the Product Liability Directive to address the complexity of emerging technologies

Enhance protection of vulnerable populations, especially the poor, minorities and children

- Expand the list of vulnerable groups to include children, elderly, people with disabilities, disfavoured or excluded people, minorities, inhabitants of poor countries, and social welfare recipients
- Amend the European Pillar of Social Rights (EPSR) in one or more of the following ways: (a) Include a new principle on protection of the poor and redress from technological harms, (b) update its general content to reflect concerns related to AI and robotics

Effectively enforce existing laws

- Mandate proper record keeping, information provision and auditing
- Add basis/develop further redress by design mechanisms
- Assess/facilitate reporting on Member States implementation of EU AI and robotics regulatory framework/policies

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Fill product safety gaps

- Address gaps in current product safety legislation, i.e., General Product Safety Directive, Machinery Directive, the Radio-Equipment Directive and the New Legislative Framework
- Reinforce requirements for manufacturers on instructions and warnings for users of AI and robotics products
- Require algorithm developers to disclose the design parameters and metadata of datasets where accidents occur
- Additional obligations for manufacturers to ensure that they provide features to prevent upload of software that affects safety during the lifetime of the AI and robotics products
- Provide/facilitate compensation for damage caused by products that are defective because of software or other digital features
- Central EU registry of defective (products that have harmed natural persons or property) algorithms, AI or robotics products and cases

Address discrimination gaps

- Prohibit AI-enabled large-scale scoring of individuals, AI-based racial profiling by default and where used, enforce strict controls
- Provide further clarification on when a certain practice breaches the prohibition of indirect discrimination
- Expand the scope of ‘protected characteristics’ to cover discrimination on other basis e.g., financial status

Ensure access to justice and remedies for adverse human rights impacts

- Measure/review adequacy of complaints redressal in companies deploying AI and/or robotics systems in the EU
- Investigate which regulations have and are likely to be vulnerable to regulatory capture, the connected institutional cultural factors, and what factors in the regulatory process enhance the influence of special interests

Reduce mass and disproportionate surveillance of individuals

- Make explicit commitments and actions to reduce technological surveillance of individuals, e.g., ban/prohibit/pause biometric recognition technologies facilitating mass surveillance, boost and/or create additional oversight mechanisms

Reduce abuse in dominant market positions

- Disempower such positions through fines or mandating that some activities must be blocked or paused as illegal and/or unlawful

Guarantee compensation for damage caused by robots

- Set up a general compensation fund to guarantee compensation if damage caused by a robot is not covered by insurance

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Final thoughts & take-aways

At this time, we do not recommend pursuing a specific legal status for autonomous systems or electronic personhood.

The key take-away is the urgency to ensure **consistency and a harmonised approach** across the EU and establish common governance standards to address the risks of AI and robotics. We should recognise that flexibility and sector and/or use specificity regulation are critical (along with national policy peculiarities) to consider given the nature of and development in AI and robotics along with the emergence of other new technologies.

The challenges to creating and/or implementing actions at the EU-level are many, depending on the measure, the actor responsible and the timing of the action. What might help address these challenges is:

- **closer dialogues between the EU institutions** (to align policy and positions as feasible to avoid message confusion),
- **greater transparency in the regulation development and consultation process** (to avoid regulatory capture),
- **inclusive stakeholder dialogues** and involvement in consultation (not perfunctory),
- increased **parallel funding of research into addressing legal issues,**
- getting regulators to **talk to each other**,
- and **knowing and understanding when to not regulate**.

Further reading

Siemaszko, Konrad, Rowena Rodrigues, & Santa Slokenberga, "SIENNA D5.6: Recommendations for the enhancement of the existing legal frameworks for genomics, human enhancement, and AI and robotics", 2020 (Version V2.0).

@SiennaEthics www.sienna-project.eu

This policy brief was prepared by Trilateral Research Ltd. on behalf of the SIENNA project based on the recommendations in D5.6 (for AI and Robotics).

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