

# The Work of the European Commission HLEG-AI

A World  
Leading SFI  
Research  
Centre



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# Insight



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# Coordinated Plan on Artificial Intelligence

Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - Coordinated Plan on Artificial Intelligence (COM(2018) 795 final)

## About Artificial intelligence

[Policies](#)

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# The **High-level Expert Group** on **Artificial Intelligence** will:

-  Advise on AI-related challenges & opportunities
-  Propose draft AI ethics guidelines
-  Engage with members of the European AI Alliance

#AI |











8<sup>th</sup> April  
2019



26<sup>th</sup> June 2019



INDEPENDENT  
**HIGH-LEVEL EXPERT GROUP ON  
ARTIFICIAL INTELLIGENCE**  
SET UP BY THE EUROPEAN COMMISSION



**ETHICS GUIDELINES  
FOR TRUSTWORTHY AI**

# Ethics Guidelines for Trustworthy AI

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**Lawful  
Ethical  
Robust**

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## 7 Requirements

1. Human autonomy and agency
2. Technically robust and safe
3. Privacy and data governance
4. Transparency
5. Diversity, non-discrimination and fairness
6. Societal and environmental wellbeing
7. Accountability

# The 7 Key Requirements for Achieving Trustworthy AI

Human agency & oversight	AI systems should enable <b>equitable societies</b> by supporting <b>human agency</b> and <b>fundamental rights</b> , and not decrease, limit or misguide human <b>autonomy</b> .
Robustness & safety	Trustworthy AI <b>requires algorithms to be secure, reliable and robust</b> enough to deal with errors or inconsistencies during all life cycle phases of AI systems.
Privacy & data governance	Citizens should have full control over their <b>own data</b> , while data concerning them will not be used to <b>harm</b> or <b>discriminate</b> against them.
Transparency	The <b>traceability</b> of AI systems should be ensured.
Diversity, non-discrimination & fairness	AI systems should consider the <b>whole range</b> of human <b>abilities, skills</b> and <b>requirements</b> , and ensure <b>accessibility</b> .
Societal & environmental well-being	AI systems should be used to enhance <b>positive social change</b> and enhance <b>sustainability</b> and <b>ecological responsibility</b> .
Accountability	Mechanisms should be put in place to ensure <b>responsibility</b> and <b>accountability</b> for AI systems and their outcomes.

# Trustworthy AI and the GDPR (CIPL)

<b>Human agency and oversight</b>	Transparency ( <b>art. 13&amp;14</b> ) / ADM ( <b>art. 22</b> ), Right to obtain human intervention ( <b>art. 22(3)</b> ) / Risk assessment and DPIA ( <b>art. 35</b> )
<b>Robustness and safety</b>	Security ( <b>art. 32</b> ) / Risk Assessment and DPIA ( <b>art. 35</b> ) / Data accuracy ( <b>art. 5(1)(5)</b> )
<b>Privacy and data governance</b>	Data protection principles ( <b>art. 5</b> ) and Accountability ( <b>art. 24(3)</b> ) / Transparency ( <b>art. 13&amp;14</b> ) / Consent ( <b>art. 7</b> ) / Security ( <b>art. 32</b> ) / DPO ( <b>art. 37&amp;38</b> ) / Processor due diligence ( <b>art. 28(1)</b> )
<b>Transparency</b>	Transparency ( <b>art. 13&amp;14</b> ) / ADM ( <b>art. 22</b> )
<b>Diversity, non-discrimination and fairness</b>	Fairness Data Protection Principle ( <b>art. 5.1(a)</b> ) / Risk assessment and DPIA ( <b>art. 35</b> ) / Right to Information on ADM and logic involved ( <b>art. 15(1)(h)</b> )
<b>Societal and environmental well-being</b>	Risk Assessment and DPIA ( <b>art. 35</b> ) / Transparency ( <b>art. 13&amp;14</b> )
<b>Accountability</b>	Accountability ( <b>art. 5(2) &amp; 24(3)</b> ) / Risk Assessment and DPIA ( <b>art. 35</b> ) / Processor due diligence ( <b>art. 28(1)</b> )



# The Assessment List for Trustworthy Artificial Intelligence

This website contains the Assessment List for Trustworthy AI (ALTAI). ALTAI was developed by the [High-Level Expert Group on Artificial Intelligence](#) set up by the European Commission to help assess whether the AI system that is being developed, deployed, procured or used, complies with the seven requirements of Trustworthy AI, as specified in our [Ethics Guidelines for Trustworthy AI](#).

1. Human Agency and Oversight.
2. Technical Robustness and Safety.
3. Privacy and Data Governance.
4. Transparency.
5. Diversity, Non-discrimination and Fairness.
6. Societal and Environmental Well-being.
7. Accountability.

<http://altai.insight-centre.org>

## Goal and purpose of ALTAI

ALTAI aims to provide a basis evaluation process for Trustworthy AI self-evaluation. Organisations can draw elements relevant to the particular AI system from ALTAI or add elements to it as they see fit, taking into consideration the sector they operate in. It helps organisations understand what Trustworthy AI is, in particular what risks an AI system might generate. It raises awareness of the potential impact of AI on society, the environment, consumers, workers and citizens (in particular children and people belonging to marginalized groups). It promotes involvement of all relevant stakeholders (within as well as outside of your organisation). It helps gain insight on whether



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**POLICY AND INVESTMENT RECOMMENDATIONS  
FOR  
TRUSTWORTHY AI**



# Impacts: Using Trustworthy AI for a Positive Impact on Europe

<b>Empowering &amp; Protecting Humans &amp; Society</b>	<ol style="list-style-type: none"><li>1. Empower humans by increasing knowledge and awareness of AI</li><li>2. Protect the integrity of humans, society and the environment</li><li>3. Promote a human-centric approach to AI at work</li><li>4. Leave no one behind</li><li>5. Measure and monitor the societal impact of AI</li></ol>
Transforming Europe's <b>Private Sector</b>	<ol style="list-style-type: none"><li>6. Boost the uptake of AI technology and services across sectors in Europe</li><li>7. Foster and scale AI solutions by enabling innovation and promoting technology transfer</li><li>8. Establish public-private partnerships to foster sectoral AI ecosystems</li></ol>
Europe's <b>Public Sector</b> as a Catalyst of Sustainable Growth & Innovation	<ol style="list-style-type: none"><li>9. Provide human-centric AI-based services for individuals</li><li>10. Approach the Government as a Platform, catalysing AI development in Europe</li><li>11. Make strategic use of public procurement to fund innovation and ensure trustworthy AI</li><li>12. Safeguard fundamental rights in AI-based public services and protect societal infrastructures</li></ol>
Ensuring <b>World-Class Research</b> Capabilities	<ol style="list-style-type: none"><li>13. Develop and maintain European strategic AI research roadmap</li><li>14. Increase and streamline funding for fundamental and purpose-driven research</li><li>15. Expand AI research capacity in Europe by developing, retaining and acquiring AI researchers</li><li>16. Build a world-class European research capacity</li></ol>

# Enablers: Leveraging Europe's Enablers for Trustworthy AI

<b>Building Data &amp; Infrastructure</b> for AI	<ul style="list-style-type: none"><li>17. Support AI infrastructures across Member States</li><li>18. Develop legally compliant and ethical data management and sharing initiatives in Europe</li><li>19. Support European leadership in the development of an AI infrastructure</li><li>20. Develop and support AI-specific cybersecurity infrastructures</li></ul>
<b>Generating appropriate Skills &amp; Education</b> for AI	<ul style="list-style-type: none"><li>21. Redesign education systems from pre-school to higher education</li><li>22. Develop and retain talent in European higher education systems</li><li>23. Increase the proportion of women in science and technology</li><li>24. Upskill and reskill the current workforce</li><li>25. Create stakeholder awareness and decision support for skilling policies</li></ul>
<b>Establishing an appropriate governance &amp; regulatory framework</b>	<ul style="list-style-type: none"><li>26. Ensure appropriate policy-making based on a risk-based and multi-stakeholder approach</li><li>27. Evaluate and potentially revise EU laws, starting with the most relevant legal domains</li><li>28. Consider the need for new regulation to ensure adequate protection from adverse impacts</li><li>29. Consider whether existing institutional structures, competences and capacities need revision to ensure proportionate and effective protection</li><li>30. Establish governance mechanisms for a Single Market for Trustworthy AI in Europe</li></ul>
<b>Raising Funding &amp; Investment</b>	<ul style="list-style-type: none"><li>31. Ensure adequate funding for the recommendations put forward in this document</li><li>32. Address the investment challenges of the market</li><li>33. Enable an open and lucrative climate of investment that rewards Trustworthy AI</li></ul>





**In my first 100 days in office, I will put forward legislation for a coordinated European approach on the human and ethical implications of Artificial Intelligence.**

This should also look at how we can use big data for innovations that create wealth for our societies and our businesses.

I will make sure that we prioritise investments in Artificial Intelligence, both through the Multiannual Financial Framework and through the increased use of public-private partnerships.”

- Ursula von der Leyen

[Home](#) > [Publications](#) > [White Paper on Artificial Intelligence: a European approach to excellence and trust](#)

WHITE PAPER

# White Paper on Artificial Intelligence: a European approach to excellence and trust

First published on

19 February 2020

## Files



**White Paper on Artificial Intelligence: a European approach to excellence and trust**

19 February 2020

English (939.4 KB - PDF)

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POLICY AND LEGISLATION

## Proposal for a Regulation laying down harmonised rules on artificial intelligence (Artificial Intelligence Act)

The Commission is proposing the first ever legal framework on AI, which addresses the risks of AI and positions Europe to play a leading role globally.

<https://ec.europa.eu/newsroom/dae/redirection/item/709090>

### See also

[Communication on Fostering a European approach to Artificial Intelligence](#)

# Shaping Europe's digital future

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POLICY AND LEGISLATION

## Coordinated Plan on Artificial Intelligence 2021 Review

The 2021 Coordinated Plan on Artificial Intelligence (AI) is the next step in creating EU global leadership in trustworthy AI. It builds on the strong collaboration between the Commission and Member States established during the 2018 Coordinated Plan.

<https://ec.europa.eu/newsroom/dae/redirection/item/709091>

### See also

[Communication on Fostering a European approach to Artificial Intelligence](#)

### Related topics



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