



StandICT.eu 2023  
ICT STANDARDISATION OBSERVATORY AND SUPPORT FACILITY IN EUROPE

# AI Watch

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# AI Watch



- Knowledge Service from the European Commission
- *Monitor the Development, Uptake and Impact of Artificial Intelligence for Europe*
- Developed by the EC **Joint Research Centre** in close collaboration with **DG CONNECT**
  - To support monitoring and development of the **European strategy for AI**
  - Based on scientific evidence
- Mentioned in the **Coordinated Plan on AI** (published December 2018)

# Main AI Watch publications... so far

- National Strategies on AI
  - in collaboration with OECD
- AI in the Public Sector
- AI Worldwide Landscape
- AI History Timeline
- and several methodology reports

 <p><b>AI for the public sector</b></p>	 <p><b>AI Landscape and Dashboard</b></p>	 <p><b>Strategic Actions and Coordination</b></p>
<p><b>Data: a cornerstone for AI – Toward a Common European Data Space</b></p> <p>For an application of AI to be ready for market entry it has to learn on the basis of training data. Additionally, it may need further data sources in order...</p>	<p><b>Education and Skills</b></p> <p>Education and training are crucial to harness AI, but AI can also help us rethink what competences and skills will be needed in the future to live...</p>	<p><b>Evolution of AI technology</b></p> <p>Although AI has a long history of development, recent breakthroughs have impacted multiple application domains and industrial sectors.</p>
<p><b>Evolution of AI uptake</b></p> <p>AI as a general-purpose technology can rapidly spread across industry sectors and yield strong positive growth effects.</p>	<p><b>Key Enablers</b></p> <p>The Digital Single Market and its regulatory framework will provide key enablers to enhance AI adoption.</p>	<p><b>Social perspective</b></p> <p>It is crucial to think how the concepts of autonomy and identity of individuals as well as security, safety and privacy issues might change under the influence of AI. AI WATCH...</p>

AI Watch portal: [https://ec.europa.eu/knowledge4policy/ai-watch\\_en](https://ec.europa.eu/knowledge4policy/ai-watch_en)

Note: AI Watch is mentioned in the EP June 2020 study  
"Opportunities of Artificial Intelligence"

# AI Watch: Mapping AI use in public services in the EU

- 230 cases (EU27 + CH, NO & UK)



# AI Watch: mapping worldwide AI Landscape

Total number of AI agents

31.04k

Number of AI firms

28.1k

AI Patent applications

29.25k

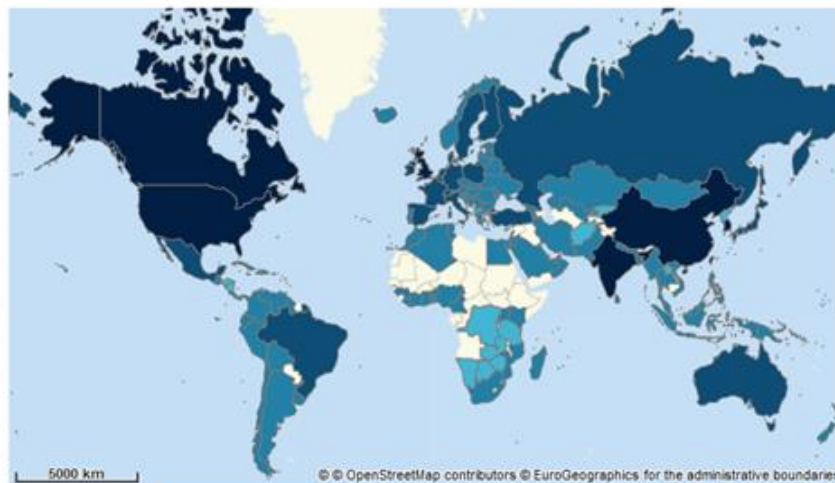
AI Frontier Research publications

4.72k

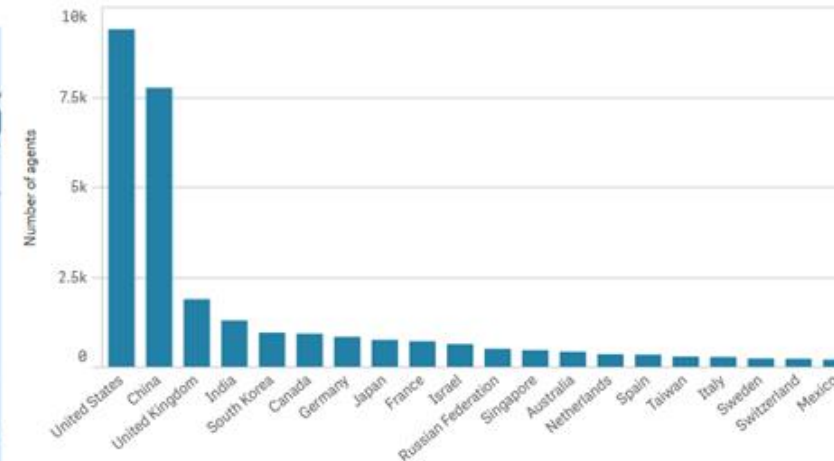
Geographical Area

- Africa
- Canada
- China
- EU28
- India
- Japan
- Middle East
- Oceania
- Other American countries
- Other Asian countries
- Other European countries
- South Korea
- US

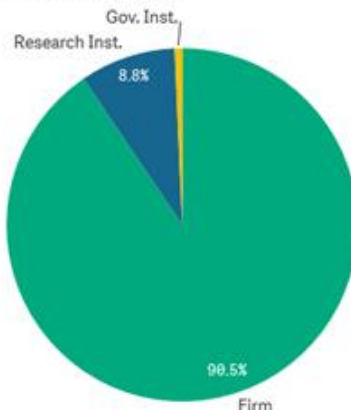
Number of Economic Agents in the AI ecosystem by Country  
Colors proportional to total number of agents



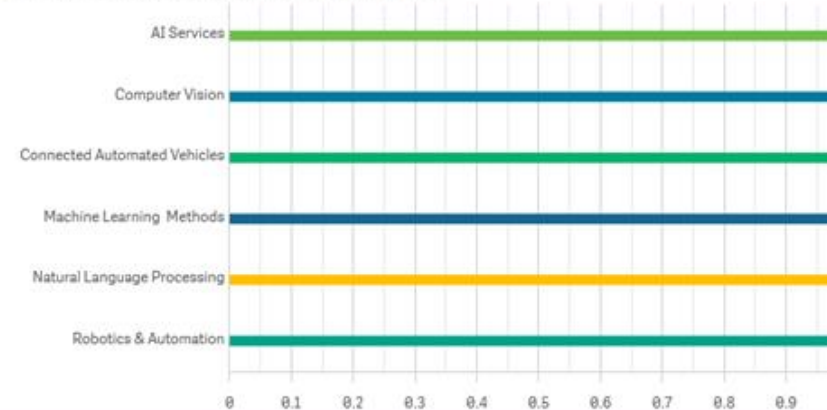
Number of Economic Agents in the AI ecosystem by Country (top 20)



Number of economic agents by Organisation Type



Revealed Comparative Advantage by Thematic Area



- 30+k AI players identified in the period 2009-2018  
- update will be released in Dec 2020

Statistics refer to the period 2009-2018 and therefore UK is included in the EU aggregate

\* Note: EU-only co-funded activities are not considered as such in this world wide overview

# AI Watch: mapping worldwide AI Landscape

## AI WATCH DASHBOARD NAVIGATION

This dashboard contains 4 different sections

Statistics refer to the period 2009-2018 and therefore UK is included in the EU aggregate



### OVERVIEW

Focus on country level data to have a comparative worldwide landscape overview. The number of agents detected in each country is used as an indicator of involvement of a country in AI-related economic processes.



### THEMATIC AREAS OF SPECIALISATION

Identification of technological subdomains and countries' key thematic areas of specialisation, analysing the textual content of worldwide R&D and industrial activities.



### INDUSTRY

Firms detected to be involved in AI. Location of firms, core business and patenting activity, age and main sector of economic activity.



### RESEARCH AND DEVELOPMENT

This section provides a selection of indicators on attractiveness and excellence in research.

Started in May 2019



116 Members

151 Followers

99 average active members  
from Oct 2019

All Content (284)



Blog Posts (109)



Documents (58)



Discussions (4)



Polls (2)



Events (71)



Ideas (40)



Platform URL

<https://webgate.ec.europa.eu/connected/groups/community-of-practice-ai-and-big-data>

- to provide a friendly environment for sharing experiences and knowledge

- to monitor JRC activity

- to implement a network for staying up-to-date

- to strengthen a professional identity

1st AI&JRC Workshop (23 May 2018)



- 72 Researchers contributed by presenting 33 research activities, covering 12 policy areas.
- AI@JRC Report (available online as ePub)

2nd AI&JRC Workshop (05 July 2019)



- 68 Researchers contributed by presenting 27 research activities, covering 8 policy areas
- 2nd AI@JRC Report (available online)

1st AI Competences Survey @JRC (2018)



- 108 Colleagues responded from 29 diverse units
- AI@JRC Survey Report (available online as ePub)

Nov 2020  
Policy-lab to define AI skills  
in the EU public sector

2021  
the Webinar ..

# Monitoring Standards on AI

- Monitor and gather information on the current work from the relevant international and global Standards Developing Organisations (SDOs) on AI Framework
- 2020 Deliverables:
  - Class A liaison with ISO/IEC JTC 1/SC 42
  - Identification of relevant SDOs and standardisation activities and proposal for possible engagement with some of them
  - Mapping of AI standardization landscape on the next EC proposal for AI Regulation (Version 1.0)

Joint DG CNECT and DG JRC working group



# Relevant SDOs and activities

- Directly engaged

- ISO/IEC JTC1-SC42



- CEN/CENELEC Focus Group on AI



- joint EC-CENELEC Committee on AI

- ITU-T Focus Group on Environmental Efficiency for AI (FG EE4AI)



- In contact with

- IEEE P7000 (covering human ethical values during system design)



- OECD Focus Group on AI (aiming at measuring and analysing the economic and social impacts of AI technologies and applications)



- ETSI Industry Specification Group (ISG) on SECURING AI (SAI), Experiential Networked Intelligence (ISG ENI)



- Collaboration with H2020 StandICT project

- Focus Group on Environmental Efficiency for Artificial Intelligence and other Emerging Technologies –related to SDGs
- JRC role:
  - Vice-chair of the Focus Group and co-chair of the WG3: “Implementation Guidelines of AI and Emerging Technologies for Environmental Efficiency” along with China Telecom
  - Leader of the technical report specification “Computer Processing, Data management and Energy perspective”

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## Focus Group on Environmental Efficiency for Artificial Intelligence and other Emerging Technologies (FG-AI4EE)

YOU ARE HERE: HOME > ITU-T > FOCUS GROUPS > ENVIRONMENTAL EFFICIENCY FOR ARTIFICIAL INTELLIGENCE AND OTHER EMERGING TECHNOLOGIES

Automatic Translation: English | العربية | 中文 | Español | Français | Русский

Focus Group on AI for autonomous and assisted driving

Focus Group on Quantum Information Technology for Networks

Focus Group on Environmental Efficiency for Artificial Intelligence and other Emerging Technologies

Focus Group on Artificial Intelligence for Health

Focus Group on Vehicular Multimedia

Concluded Focus Groups

### FG-AI4EE

ITU-T Focus Group on "Environmental Efficiency for Artificial Intelligence and other Emerging Technologies" (FG-AI4EE) was established by ITU-T Study Group 5 at its meeting in Geneva on 22 May 2019.

The Focus Group identifies the standardization needs to develop a sustainable approach to AI and other emerging technologies including automation, augmented reality, virtual reality, extended reality, smart manufacturing, industry 5.0, cloud/edge computing, nanotechnology, 5G, among others. The Focus Group develops technical reports and technical specifications to address the environmental efficiency, as well as water and energy consumption of emerging technologies, and provide guidance to stakeholders on how to operate these technologies in a more environmentally efficient manner to meet the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals.

Meetings | Contacts | Focus Group News

**Second Focus Group meeting**  
Virtual, 10 December 2020

- Meeting agenda
- Meeting invitation
- Meeting documents

**Virtual Workshop on AI and environmental efficiency**  
09 December 2020

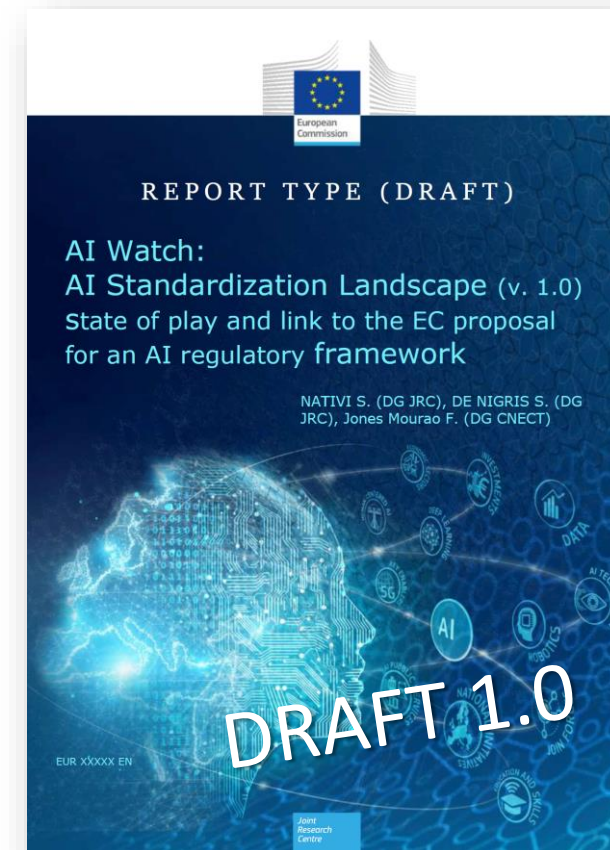
- All presentations
- Video recording

**Next Working Group e-meetings**

Working Group 3: 15 December 2020  
14:00-15:30 (CET)

# Mapping the AI standardization landscape on the AI Regulation proposal

- Provide a survey of the relevant international standards, technical specifications and working items dealing with AI, as **to high risk applications and systems**
  - ethics, transparency, privacy, quality, accuracy, testing, and monitoring aspects
- Link them to the **requirements of the future EU regulatory framework on AI**
- **Analyze the results and provide some initial recommendations**





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AI Watch Webpage

[https://knowledge4policy.ec.europa.eu/ai-watch\\_en](https://knowledge4policy.ec.europa.eu/ai-watch_en)

Thanks from

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