

AI Systems Map

The AI landscape is increasingly complex, spanning industries and continents. This tool seeks to provide a systems map for local and international players along the AI development and governance pathway so that governments can identify relevant stakeholders and engage potential collaborators.

GENERAL STRUCTURE OF NATIONAL AI ECOSYSTEMS

This table seeks to reflect the relevant AI policy stakeholders in each country's ecosystem. While there are many unique factors, this is meant to be reflective of the general ecosystem structure and to identify the key stakeholders involved in the development of policy proposals, such as a national AI strategy.

Key stakeholder	Role	Examples	Stage of engagement
Government			
Administrator of national AI strategy	Coordinating work and keeping various stakeholders engaged and on track	UK Office for AI, US Office of Science and Technology Policy	AI strategy formulation
Tech rulemaking bodies	Regulatory bodies directly overseeing development and use of technologies such as AI	Many nations have implemented data-privacy offices, and some nations (UK) have implemented dedicated AI offices	Regulatory definition
Sector-specific rulemaking bodies	Regulatory bodies that dictate sector policies and rules, which could govern AI use	Health regulators dictating rules on use of AI for predictive health; US EEOC initiative on AI for hiring and employment	Regulatory definition
Standards research organisations	Standards play a key role in moving from high-level regulation and regulatory policy to tech implementation	NIST: US government-funded standards organisation, which defines evaluation and performance standards for tech. Currently establishing an AI Risk Management Framework	Regulatory definition
Legislative bodies and representatives	Enacting funds and passing regulations usually require legislative action	EU AI Act in deliberation with European Parliament	Law-making and budgeting
Government users of AI and procurement officials	Relevant government stakeholders procuring AI	Local police departments, research labs, defence departments, budget offices and tax authority	Continuous engagement – ideally beginning before procurement of AI systems
Research and advocacy			
National academic institutions	Many strategies have a strong focus on developing a burgeoning AI research ecosystem, which requires academic support and engagement	Stanford and other universities provided feedback and proposals on what a National AI Research Resource would look like	Problem and strategy scoping; fundamental research

Key stakeholder	Role	Examples	Stage of engagement
Civil-society organisations	Representing special interests, rights organisations and independent research	Data & Society, American Civil Liberties Union, Electronic Frontier Foundation	Impact assessment
Research institutions	Many of the key policy issues related to AI are evolving and need research to support them	Alan Turing Institute commissioned to carry out research on the development of AI standards in the UK	Early-stage research and regulatory definition
Industry			
International tech organisations	Tech imports and the impact of international organisations on domestic issues are heavy drivers of policy decisions. Additionally, foreign tech has a vested interest in actions taken in a given country	Chinese tech players feature heavily in US strategic decisions (i.e. banning Huawei)	Industry development and procurement
Domestic tech companies	Domestic tech companies likely have the most to gain or lose in national policy decisions	Meta, Alphabet, OpenAI, Anthropic in the US	Early stage – research, industry development and procurement
Employee/labour representation	Employees will be most impacted by automation, so it's important to represent their viewpoints and experiences	Labour unions (AFL-CIO representation on the National Artificial Intelligence Advisory Committee in the US), representation from digital labour platforms	Impact assessment; educational-resource definition
Professional organisations and standards organisations	Set working guidelines and standards for development, research and engineering. Also host conferences	Institute of Electrical and Electronics Engineers (IEEE), Association for Computing Machinery (ACM)	Regulatory definition and implementation
Domain/sector-specific stakeholders	AI is set to change industries, and it's important to have those players at the table	Representation from industries such as manufacturing, services, agriculture, etc.	Problem definition and technology testing
International cooperation			
International governing bodies and institutions	International bodies have taken steps to set high-level policies for the use and development of AI	UNESCO, OECD and the EU have proposed policies	Responsible AI principles adoption
Multi-stakeholder/multilateral partnerships	Initiatives between governments and industry to promote multilateral coordination	The Global Partnership on Artificial Intelligence started in 2017	Industry development
International trade agreements and alliances	Many trade agreements and alliances are revolving around tech sharing and standards	EU-US Trade and Technology Council, AUKUS	
General public and individual contributors			
Tech and tech-ethics leaders	Impossible to promote/regulate tech without understanding the current state of play from both the tech-capability perspective and the ethical lens	National AI Advisory Committee – made up of a variety of leaders and stakeholders	Continuous engagement – problem definition and strategic development
General public	Most effective democratic rulemaking happens with an open call for public consultation	Use of public consultations, indirect influence over legislative action	

KEY STAKEHOLDERS AND INITIATIVES

UNESCO

[UNESCO Recommendation on the ethics of AI](#) formally adopted by all UNESCO member states in November 2021. Of the major international frameworks on AI, UNESCO has taken the most care in incorporating perspectives from a broad set of global players, including African nations.

African Commission on Human and Peoples' Rights

[“473 Resolution on the need to undertake a study on human and peoples' rights and artificial intelligence \(AI\), robotics and other new and emerging technologies in Africa”](#) adopted in February 2021.

OECD

AI principles adopted in the [Recommendation of the Council on AI](#) in May 2019.

G20

[G20 AI principles](#) (largely taken from OECD principles).

Council of Europe

Council of Europe treaties can be and often are ratified by non-EU member states. They provide a venue for aligning on key issues. For example, the Convention on Cybercrime seeks to align national laws and has been signed by nations such as South Africa, Japan, the Philippines and the United States. The Council of Europe is taking steps to address AI through:

- The Ad hoc Committee on AI's (CAHAI) report, [“Possible elements of a legal framework on artificial intelligence”](#). CAHAI's charter officially closed with this report.
- The Committee on AI (CAI) is continuing to develop work towards an international convention on the governance of AI.

European Union

The proposal for the EU AI Act is set to have global consequences, as most AI developers distribute to European markets.

Global Partnership on AI (GPAI)

A multi-stakeholder initiative between governments, industry and academia that was established in 2018 by France and Canada, GPAI focuses on the responsible adoption and use of AI. With 25 member nations, it has yet to include any African nations.

Smart Africa

A partnership among African nations that seeks to promote growth through technology. They set forth an [AI for Africa Blueprint](#) in 2021.

OTHER INFLUENTIAL PLAYERS ON THE INTERNATIONAL STAGE

Many other organisations are influential in supporting and developing regional and national policy frameworks:

German Agency for International Cooperation

Fair Forward – AI for All programme focuses on AI use, mostly in Africa and India. It is very active in supporting development of national AI strategies.

IEEE, ACM and other industry groups

International professional organisations host conferences, which can be a great convening tool for research and talent. They also actively conduct research on matters such as development standards.

The Future Society

The Future Society (TFS) is an independent non-profit organisation based in the United States and Europe with a mission to align AI through better governance.

MULTINATIONAL AI TECH COMPANIES

AI is becoming a dominant force in industry, with several different types of company emerging. With the inherently borderless nature of the internet, these companies are influential across the world.

Leading AI companies – large multinational companies with top-level AI offerings

Meta	Microsoft	Amazon	DJI	SenseTime
Alphabet	Baidu	Apple	NVIDIA	Huawei

AI infrastructure companies with significant computing, data and connectivity offerings that are crucial pieces of a successful AI ecosystem

Oracle	Microsoft	Amazon	Google	Huawei
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AI research organisations – companies leading in published AI research and development

OpenAI	Meta	Alphabet	Baidu
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