European Parliament

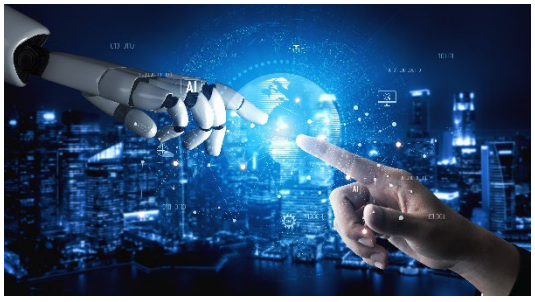
Making Europe an AI continent

SUMMARY

As the global race to harness the power of artificial intelligence (AI) accelerates, the European Union has set the objective of becoming a leading AI continent. The adoption of the Artificial Intelligence Act in 2024 was a milestone in establishing a comprehensive regulatory framework for AI in the EU, but regulation alone cannot make the EU a technological leader. In April 2025, the European Commission published an AI continent action plan, a communication that attempts to look beyond rules and combine regulatory oversight with investment, infrastructure and skills development. It also aims to increase the use of AI in both the private and public sector. The plan illustrates the Commission's growing attention to competitiveness, moving away from its previous focus on setting usage rules

Despite progress in some areas, the EU is still far from being a global leader in AI, in terms of scale, investment, and uptake of AI. Structural weaknesses such as a fragmented single market, limited private investment, and reliance on foreign cloud and semiconductor technology continue to hinder progress. Stakeholders are divided on the road to follow. While industry representatives call for simplifying regulation to boost innovation, civil society warns against sacrificing democratic safeguards.

The EU's prospects of becoming an AI continent depend not only on its ability to implement the AI continent action plan but also on its decisiveness in acting on other fronts such as making progress on the Savings and Investments Union, and its progress in reducing reliance on foreign technologies. The European Parliament will play a central role in scrutinising the Commission's activities and shaping legislation such as the forthcoming Cloud and AI Development Act.



IN THIS BRIEFING

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Author: Maria Niestadt
Members' Research Service

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Introduction

The EU's approach to AI has a dual objective of achieving both technological excellence and trust in AI, aiming to boost research and industrial capacity while at the same time ensuring safety and fundamental rights. The adoption of the AI Act in 2024 was a landmark moment, positioning the EU as the first global actor to establish a comprehensive legal framework for AI.

However, regulation alone is not sufficient for Europe to become an AI continent. To be effective, legislation needs to be implemented effectively. A telling example is the code of practice for general-purpose AI (GPAI) models, which details how to implement the obligations related to GPAIs as set out in the AI Act. The code has received mixed reactions and not all major GPAI model providers have signed it.

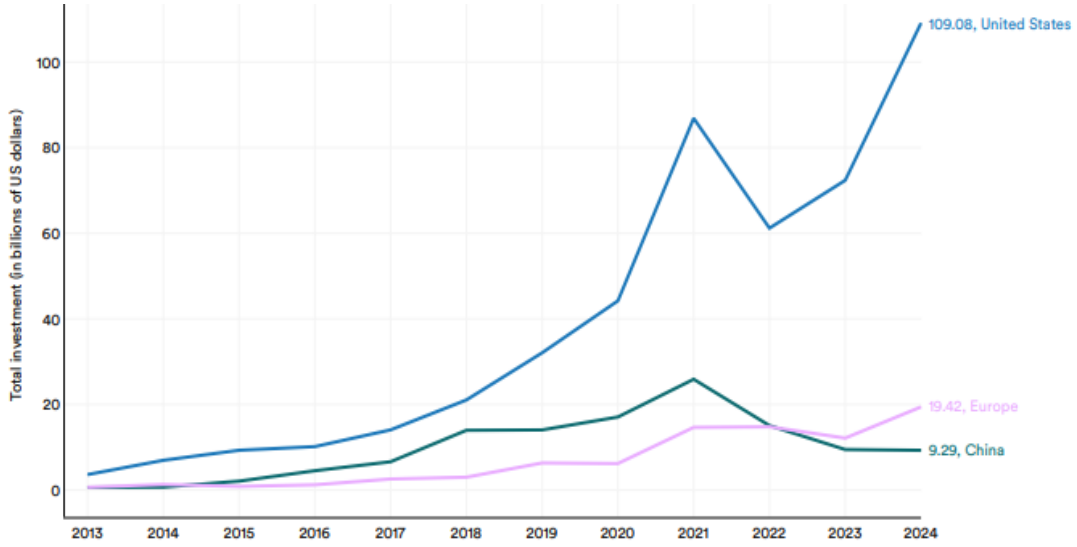
Achieving ambitious goals in AI requires progress in both developing and using AI. Currently, AI use in the EU remains uneven and limited. According to Eurostat, fewer than 14 % of EU enterprises used AI technologies in 2024. There is a notable gap between large, and small and medium-sized enterprises (SMEs). Around 41 % of large enterprises use AI, compared with just 11 % of small ones. By contrast, small businesses in the United States (US) are adopting AI at much higher rates. As of August 2025, the US Chamber of Commerce reported that 58 % of small businesses were using generative AI.

Public administrations in the EU also report relatively low levels of AI uptake. In a 2025 study[1] on AI and generative AI adoption by local and regional administrations, 27 % of respondents reported having adopted AI and generative AI solutions.

AI research excellence remains one of the EU's greatest strengths. Europe has not only produced a large proportion of the scientific publications on AI[2] but is also home to several renowned research institutes and centres on AI such as the German Research Center for AI (DFKI) and INRIA (the French national research institute for computer science and AI). Projects like Jupiter – the first European exascale computer – contributes to progress in AI research and innovation. The pan-European AI network ELLIS helps to unite top AI researchers to focus on fundamental science, technical innovation and the societal impact of AI. The EU also leads in fields such as robotics. As mentioned in the 2024 Draghi report, Europe is the second largest robotics market after China, and a major robotics supplier worldwide.

However, the EU struggles to translate its research base into globally competitive firms. While the EU produces strong research, the commercialisation of these innovations often happens elsewhere. EU startups and scaleups frequently relocate to the US to gain access to venture capital and computational resources. AI researchers also seek opportunities abroad. This move usually takes place at graduate school level when many top European AI talents go to the US for graduate studies.

Figure 1 – Global private investment in AI by geographical area, 2013-2024



Source: AI Index report 2025.

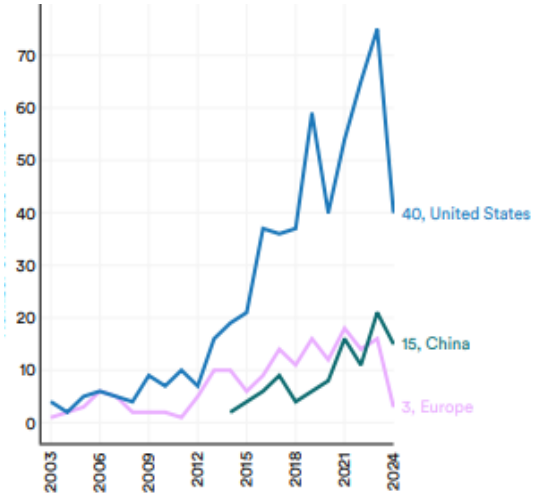
The lack of investment scale is particularly visible. As shown in Figure 1, between 2013 and 2024 US private investments in AI reached $109.1 billion (€92.33 billion), 25.1 times the amount invested in the highest-ranking country in the EU: Sweden. China invested US$9.29 billion (€7.86 billion) (-1.9 % compared to 2023), while Europe invested US$19.42 billion (€16.43 billion) (+60 % compared to 2023).

The imbalance extends to AI models. As shown in Figure 2, the US still leads in producing top AI models. Europe is a long way behind, with only three notable AI models[3] released in 2024: Mistral Large, Mistral Large 2 and Pixtral Large (all by Mistral AI). Mistral AI and Photoroom[4] were also the only European companies included in the Forbes' list of the most promising privately held AI companies in the world in 2025.

In terms of granted AI patents, Europe is far behind China and the US. Most of the world's AI patents granted between 2010 and 2023 originated in China (69.7 %), followed by the US (14.2 %), with Europe accounting for just 2.77 %. However, one EU country (Luxembourg) ranks very well[5] on a per capita basis.

Instead of driving the world's technological advancements, the EU is a client of powerful foreign tech companies and is particularly dependent on US technology such as advanced AI semiconductors and cloud services. Amazon, Google and Microsoft continue to control nearly 70 % of the European cloud market, while the largest European provider accounts for less than 2 %. This reliance creates vulnerabilities not only in terms of competitiveness but also in terms of sovereignty and security.

Figure 2 – Number of notable AI models by geographical area, 2003-2024



Source: Epoch AI, 'Data on AI Models', AI Index Report 2025.

Geopolitical context

The geopolitical context in which the AI continent action plan was released is highly competitive. In the US, President Trump's administration has reversed Biden-era safety-focused initiatives and replaced them with a deregulatory approach that aims to remove barriers to American leadership in AI. In July 2025, the Trump administration published 'Winning the race. America's AI Action Plan', which emphasises competitiveness and lighter-touch rules. It calls for AI systems to be 'free from ideological bias', and to protect freedom of speech. Since President Trump took office, EU-US cooperation in digital matters has also taken a hit. For example, the EU-US Trade and Technology Council has not held any meetings.

China, according to Carnegie analysts Scott Singer and Matt Sheehan, is at a crossroads, trying to balance accelerated AI deployment and State control. In January 2025, China released a new AI model (DeepSeek-R1) that demonstrated capabilities comparable to leading US AI models. DeepSeek claims that the model was trained at lower cost and without relying on the most powerful AI accelerators, which the country has difficulties obtaining due to US export controls.

Recent developments in the United Kingdom indicate that the UK is positioning itself closer to the US and its light-touch regulatory approach. In September 2025, the UK and the US agreed on a new Tech Prosperity Deal, which includes joint efforts to make advances in AI development and use. At the same time, several US tech companies announced more than £31 billion (€35.72 billion) of investments in the UK's AI and tech infrastructure. The UK's recent focus has shifted from AI safety to AI security,[6] as evidenced by its decision to change the name of the UK AI Safety Institute to the AI Security Institute. However, in March 2025 a proposal for an AI Bill was reintroduced in the House of Lords. The bill is much more limited than the EU's AI Act and mostly seeks to create an AI Authority in the UK, set broad regulatory principles for AI and establish regulatory sandboxes for AI.

For the EU, these developments highlight the scale of the challenge. The EU aspires to set global standards for AI and promote trustworthy AI. It also aims to reduce its reliance on foreign technologies. Achieving this is not easy, especially when global competitors are advancing rapidly in AI innovation and adopting a lighter-touch regulatory approach. The geopolitical context shows that becoming an AI continent is not only a question of internal reforms but also requires external action. That is one of the reasons why the EU is trying to deepen its digital cooperation with other countries such as India, Japan, Singapore, Canada and South Korea. These partnerships will be crucial for fostering AI innovation and promoting EU values across the globe.

Within the EU itself, the political landscape has also shifted following the 2024 European Parliament elections. This change has steered the debate on AI towards competitiveness and simplification. In January 2025, the Commission proposed the Competitiveness Compass, an economic framework to guide its work in the coming years. It highlights the industrial adoption of AI, advancements in research and innovation, and the enhancement of supercomputing capacity as essential factors in achieving AI leadership. One example of the shift towards less regulation is the Commission's decision to withdraw the AI Liability Directive. The European Commissioner responsible for tech, Henna Virkkunen, defended the withdrawal decision on the grounds of the need to first simplify AI rules before presenting new rules.

The AI continent action plan: Progress so far

On 9 April 2025, the European Commission published a communication entitled 'The AI continent action plan'. The initiative sets out a roadmap to establish the EU as the leading AI continent.

EU action plans are typically aimed at turning overarching strategies into concrete actions and driving progress towards certain objectives. The AI continent action plan sets five objectives:

1. Building large-scale AI data and computing infrastructure
2. Improving access to data
3. Fostering innovation and accelerating AI adoption in strategic EU sectors
4. Strengthening AI skills and talent
5. Fostering regulatory compliance and simplification.

To achieve these objectives, the Commission proposes various concrete measures, many of which are already under way. The action plan identifies responsible actors and highlights the need for collaboration between the EU, national and local levels. It also includes specific timelines and deadlines for numerous actions, such as issuing a call for expressions of interest to invest in AI gigafactories by 9 April 2025 and launching the AI Skills Academy by the second quarter of 2025.

Building large-scale AI infrastructures

The communication describes how the EU is leveraging the European High Performance Computing Joint Undertaking (EuroHPC JU) supercomputing capacity to set up AI factories. AI factories bring together computing power, data, and talent to help startups, industry, and researchers to develop AI models and applications. So far, the EuroHPC JU has selected, in two phases, 13 AI factories, which are already being deployed across the EU (in Spain, Italy, Germany, Finland, Greece, Sweden, Luxembourg, Austria, France, Slovenia, Poland and Bulgaria).

Participating countries can also set up AI factory antennae, which provide remote access to the supercomputing resources of the linked AI factory located in another region or Member State and to the accompanying ecosystem and research facilities. The call for expressions of interest in AI factories antennae was open until 9 July 2025, and implementation is expected by the end of the year.

Some analysts have criticised the fact that open-source projects are not given priority access to AI factories, although the action plan does recognise that 'AI model development in the EU benefits from advances in open-source approaches'. Priority access is given to 'AI innovators – startups, scaleups, SMEs – and selected EU-funded research projects'. The access policy of the EuroHPC JU supercomputers and AI factories states that supercomputers are 'open to public and private users residing, established or located in a Member State or in a third country associated to the Digital Europe Programme (DEP) or to Horizon Europe Programme (HE)'. Usage is free of charge for users from the public sector, for industrial users for applications related to research and innovation activities, and for SMEs' private innovation activities. They should all adopt an open science approach, except SME users undertaking private innovation activities.

For the development and training of very large AI models and applications, the Commission proposes to set up AI gigafactories. These will integrate over 100 000 advanced AI chips – four times more than the largest AI factory's supercomputers. They will also integrate energy-efficient data

centres, and AI-driven automation to optimise AI model training, inference, and deployment. AI gigafactories will be implemented through public-private partnerships. In order to stimulate private investments in AI gigafactories, the Commission has launched the Invest AI initiative, which aims to mobilise €20 billion investment for up to five AI gigafactories across Europe, and €200 billion for all investments in AI. In April 2025, the EuroHPC JU launched a call for expressions of interest in AI gigafactories; 76 non-formal applications were submitted, proposing to set up AI gigafactories in 16 Member States across 60 different sites. That is well beyond what the European Commission was expecting.

To increase the EU's cloud and data centre capacity, the Commission is planning to present a proposal for a Cloud and AI Development Act. The proposal is expected to cover three pillars: promoting research and development in sustainable data processing, tripling the EU's data centre capacity, and ensuring a secure, EU-based cloud infrastructure for critical use cases. A public consultation on the future act was open until 3 July 2025 and the legislative proposal is expected in Q4 2025 or Q1 2026.

Improving access to data

A strong AI ecosystem requires broad access to high-quality data. The Commission is expected to address this in the second half of 2025 with a new Data Union strategy. The strategy is expected to focus on strengthening Europe's data ecosystem, by enhancing interoperability, improving data availability and facilitating data sharing across sectors. A stakeholder consultation on the Data Union strategy was open between May and July 2025.

One important tool under this strategy will be the Data Labs, which will be set up as part of AI factories. Data Labs will bring together data from different AI factories covering the same sectors. The Data Union strategy will also investigate ways to reduce unnecessary bureaucracy and simplify how businesses can comply with EU data rules, so they can more easily share and use data for AI.

Fostering innovation and accelerating AI adoption

To accelerate the uptake of AI across sectors, boost industrial competitiveness and improve the quality of public services, the Commission is proposing an Apply AI strategy. Between 9 April and 4 June 2025, the Commission's Artificial Intelligence Office held a public consultation and call for evidence on this strategy. The strategy is expected to be published on 7 October 2025.

Furthermore, the Commission is planning to leverage the European Digital Innovation Hubs to ensure that they fully support the adoption of relevant AI solutions in strategic sectors. These hubs provide services such as funding advice, networking, and training. As of December 2025, European Digital Innovation Hubs will become AI Experience Centres.

On 28 May 2025, the Commission published the EU startup and scaleup strategy that aims to facilitate innovative startups' and scaleups' access to finance, public procurement, markets, services and talents.

Strengthening AI skills and talent

The EU needs to strengthen AI skills across the board, starting from basic AI literacy to advanced AI skills, by addressing existing gaps, promoting gender diversity, increasing awareness among citizens and public administrations, and strengthening the EU's capacity to maintain and attract global AI talent. The Commission has already announced the launch of the AI Skills Academy: a one-stop shop

providing education and training on skills related to the development and deployment of AI. These education programmes and training courses are meant for a wide audience, including undergraduate, graduate, and post-graduate students, professionals, SMEs, startups, and public sector employees. The call for the establishment of three of the sectoral digital skills academies (quantum, AI, virtual worlds) was published on the EU Funding & Tenders Portal and has been open for submission from 15 April 2025 onwards.

Fostering regulatory compliance and simplification

The EU adopted the AI Act in 2024 to establish a single market for AI, ensuring free circulation across borders and harmonised conditions for access to the EU market. The AI Act follows a risk-based approach, imposing requirements primarily on high-risk AI applications. However, implementation of this act requires clear guidance. In addition, European harmonised standards for the AI Act would provide legal presumption of conformity.

The AI continent action plan aims to ensure that the implementation of the AI Act is both seamless and foreseeable. To achieve this objective, the Commission is proposing specific actions. For example, it promised to launch, by July 2025, an AI Act Service Desk, which will provide access to information and guidance on the regulatory framework. By mid-September 2025, the Commission had not yet launched this service desk, but it had launched a call for tender (open until 19 May 2025) as part of the efforts to establish the AI Act Service Desk.

The Commission is also preparing various documents to support the implementation of the AI Act. These include implementing and delegated acts and guidelines, facilitating, for example, the consistent application of the AI Act with sectoral product legislation. The Commission also facilitates compliance by steering co-regulatory instruments, such as the development of standards in support of the AI Act and the code of practice on GPAI. The final version of the code of practice on GPAI was published in July 2025, complemented by Commission guidelines on key concepts related to general-purpose AI models.

Multi-level governance and implementation of the action plan

The success of implementing the AI continent action plan will depend not only on the European Commission but also on effective cooperation with other levels of governance. At the EU level, the Commission, together with the EuroHPC JU, has multiple tasks in implementing the action plan, such as setting up a single entry point for all users to access AI factories and their services, launching calls for proposals and adopting a proposal for the Cloud and AI Development Act. The European Parliament will exercise its budgetary and oversight powers, scrutinising the Commission's actions. Once the Commission presents the Cloud and AI Development Act, the Parliament and the Council will debate and vote on it.

In May 2025, the Commission presented the AI continent action plan in the Committee on the Internal Market and Consumer Protection (IMCO). During the meeting, some IMCO Members asked questions on issues such as reliance on foreign technology for AI gigafactories, simplification of AI regulation, and access to high quality data. They welcomed the establishment of the AI Act Service Desk but inquired about its accessibility for SMEs, as well as about energy efficiency in AI factories and AI gigafactories and the uptake of AI in companies.

Member States, with their various levels of governance, also have a role in translating the action plan into practice. They decide the location of AI factories and AI gigafactories, allocate co-funding and

design national AI strategies that can also boost AI uptake and digital skills. Local and regional authorities have a key role, for example, in the building permit procedure.

The European Committee of the Regions is preparing an opinion on the AI continent action plan. In the draft opinion, the rapporteur Alberto Cirio (EPP, Italy) regrets that the plan did not pay more attention to cybersecurity, welcomes the idea of establishing an AI Act Service Desk and recommends taking into account a number of factors when deciding on the location of AI gigafactories, such as the availability of energy sources and grids, a skilled workforce, adequate housing supply, avoidance of over-concentration of critical technologies in one spot, and ensuring high-speed and high-quality connectivity.

Stakeholder views[7]

Stakeholders have generally welcomed the AI continent action plan. However, their views diverge on certain points. While industry representatives generally welcome simplification efforts, civil society groups are worried that some measures of the plan might have adverse effects on people and the environment.

Digital Europe – a European trade association that represents the digital technology industry – welcomed the plan as a shift in the right direction, and praised steps towards simplification. However, it reminded the Commission that more investments, as announced in the action plan, should lead to 'real business deals, not just more university R&D'. Simplification efforts were praised also by the European Tech Alliance (EUTA) and the Information Technology Industry Council (ITIC). In addition, the EUTA supported the Commission's commitment to improving access to high-quality data and efforts to retain and attract more AI talent to the EU.

SME United – the association of crafts and SMEs in Europe – also expressed support for the AI continent action plan and highlighted the pivotal role that SMEs play in fostering an AI-driven continent. It reminded policymakers that one of the reasons why SMEs have not adopted AI is the lack of skills. Therefore, it has called for the AI Skills Academy to be developed with the close involvement of SMEs.

The global tech trade association, the Information Technology Council (ITI), headquartered in Washington, also welcomed the AI continent action plan's focus on simplification and innovation. It encouraged 'the EU to launch an assessment of all EU rules applying to AI, including the AI Act and GDPR, to identify, streamline and simplify complexities and overlaps'.

The Big Data Value Association (BDVA) shared its views on the AI continent action plan in the stakeholder consultation on the Apply AI strategy. The BDVA highlighted the importance of integrating EU AI and data strategies into a cohesive ecosystem. It also called for the action plan to articulate clearly how AI will improve citizens' lives in specific sectors such as healthcare and education, and to adopt more flexible and rapid funding instruments.

Civil society groups have warned that simplification should not come at the cost of rights and accountability. Organisations such as European Digital Rights (EDRi) have warned that the AI continent action plan risks undermining fundamental rights and environmental protections. They are particularly worried about the possible delaying or reopening of the AI Act. EDRi has also reminded policymakers that several measures announced in the action plan might have an adverse effect on other EU objectives such as becoming climate neutral. For instance, data centres consume a lot of electricity and water, and can lead to more carbon dioxide emissions. Moreover, the extraction of

critical minerals needed for building the hardware that powers AI can cause problems. For example, cobalt is extracted in countries such as the Democratic Republic of the Congo, which has reportedly violated workers' rights.

Outlook

While some progress has been made to implement the AI continent action plan, much work still lies ahead. So far, the Commission has carried out the concrete actions announced in the AI continent action plan on time. It is progressing fast with certain measures such as setting up AI factories and has launched public consultations such as the one on the Apply AI strategy on time.

However, simple strategies and public consultations will not be enough. To become an AI continent, the EU needs also to substantially increase investments and make progress on the Savings and Investments Union (SIU), the new framework launched in March 2025 to mobilise citizens' savings and channel more private capital into EU companies. SIU builds on the previous initiative, the Capital Markets Union. The Commission is working on several measures of the SIU, including a proposal for simple EU savings and investment accounts for citizens, but considerable progress will still be required before a fully functioning savings and investments union is in place. Success will not only depend on EU citizens' readiness to invest more of their savings but also on the willingness of national governments to transfer certain competences to the EU level.

Addressing the challenge of AI adoption, particularly among SMEs and the public sector, will be crucial. Without widespread demand and uptake of AI solutions, the benefits of AI will not diffuse across the economy, and the EU will not reach its targets under the Digital Europe programme. These challenges should be addressed in the Apply AI strategy that is expected to be published on 7 October 2025. The same day, the Commission is expected to publish a European strategy for AI in science that should pave the way for a European AI Research Council. In addition, the Commission is expected to propose a 28th regime: a single EU-wide set of corporate rules that should help startups to invest and scale more easily across the bloc. The public consultation on this initiative is open until 30 September 2025.

Finally, the balance between regulation and innovation remains delicate. Stakeholders welcome measures that facilitate implementation of the AI Act such as the AI Act Service Desk. However, civil society groups have stressed that simplification should not come at the cost of rights and accountability. The broader challenge for the EU is to position itself as a leader of trustworthy AI, while at the same time strengthening its capacity to compete globally.

MAIN REFERENCES

European Commission, AI continent action plan, 9 April 2025.

ENDNOTES

1 Carried out for the European Committee of the Regions.

2 Between 2020 and 2024, 18 % of scientific publications on AI originated from Europe, compared to 20 % from China and almost 15 % from the US.

3 Notable in terms of state-of-the-art advancements, historical significance, high citation rates and significant use.

4 A French startup that is developing a new generation graphic editor using AI.

5 Second place in the world after South Korea.

6 AI safety focuses more on preventing unintended harm or negative consequences of AI systems. It aims to ensure that AI aligns with human values, societal norms and ethical principles. AI security focuses more on protecting AI systems from malicious attacks and cybersecurity threats.

7 This section aims to provide a flavour of the debate and is not intended to be an exhaustive account of all different views on the AI continent action plan.

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