EMERGING TECHNOLOGIES

Sovereign AI: What it is, and 6 strategic pillars for achieving it

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Sovereign AI is a growing trend that sees states pursue their own interests by investing in domestic AI capabilities and expertise. Image: Getty Images/iStockphoto

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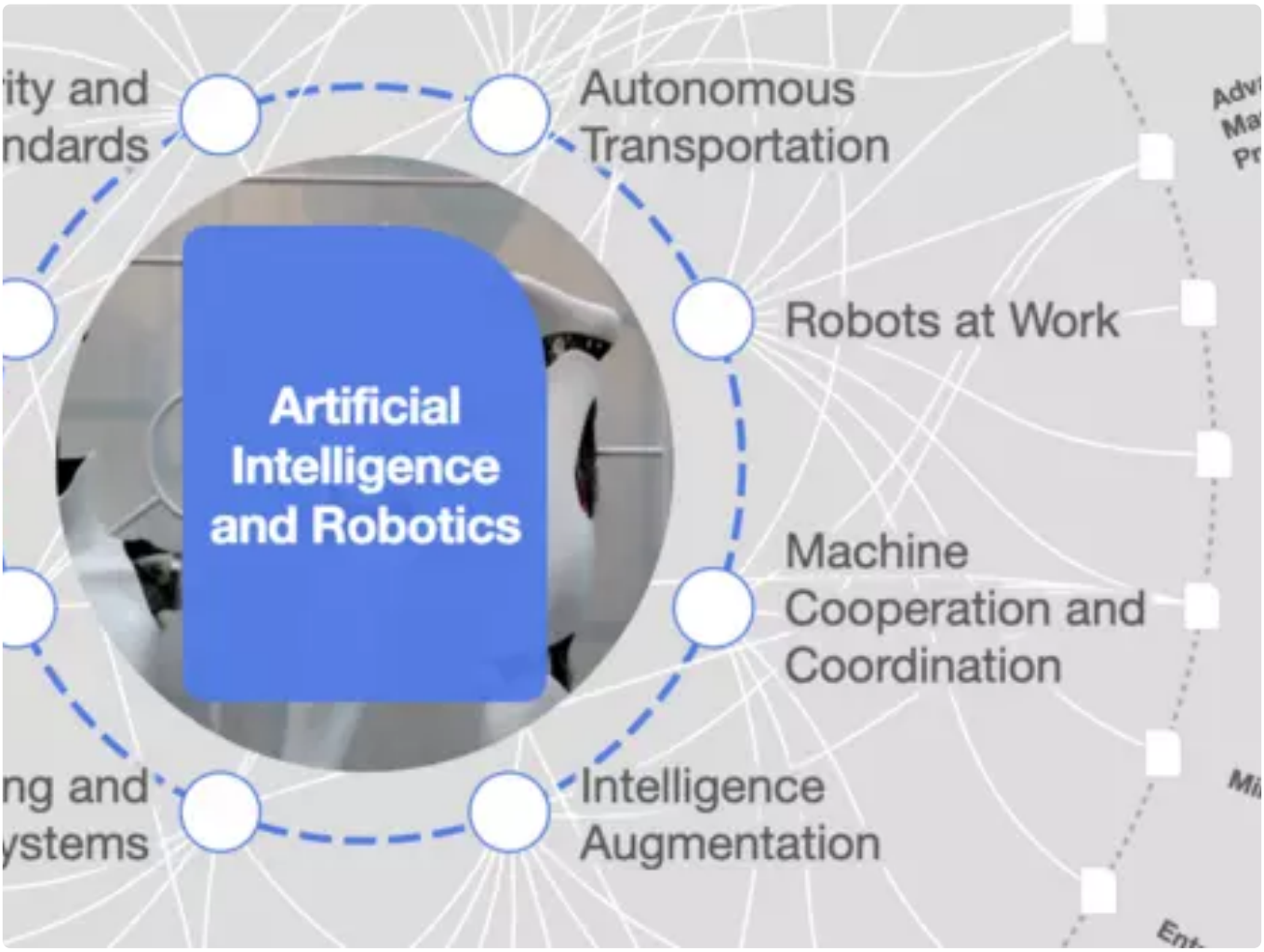

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- As the pivotal role of AI in our future becomes increasingly evident, states are preparing themselves against this disruption by building their own AI algorithms and industries.
- This push for Sovereign AI does not necessarily mean digital isolation, but rather a push for strategic resilience — and it can be done in tandem with global cooperation.
- Here are the six strategic pillars guiding states' development of Sovereign AI.

From producing human-like text, generating new forms of digital art and effortlessly automating laborious tasks, Generative AI has shown unprecedented potential for transforming creative, technical and knowledge work. It is already profoundly impacting most industries.

Meanwhile, considerable new threats and risks have started to emerge and materialize from its widespread use: jobs displacement, misinformation and disinformation and deepfakes all have serious consequences on society, economy and national and international security.

Countries are beginning to recognize the dual-use nature of GenAI. They acknowledge its potential as well as its risks, and the profound implications for their economic growth as well as national security. As one would expect, an increasing number of countries are actively planning and building their own AI infrastructure, capabilities and industry in order to gear up their competitiveness and safeguard their future. They are developing what they consider as their own sustainable "Sovereign AI".

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Economic consideration for Sovereign AI

By automating routine tasks and supporting creative, technical and knowledge workers, GenAI allows businesses to focus on innovation and strategic tasks, boosting productivity across various sectors. For instance, in the healthcare industry, GenAI can assist in diagnosing diseases with higher accuracy and speed than ever before. In the financial sector, it can improve fraud detection systems, saving millions.

Furthermore, fostering a domestic AI industry stimulate the high-tech sector and consequently augmenting other economic sectors that depend on it. In fact, AI is leading the next stage of digital transformation and is becoming pervasive and widely accessible.

Therefore, building a workforce that has the knowledge and skills to take advantage of this technology will lead to a fertile national innovation ecosystem that begets future technological advancements and create a national competitive advantage. Sovereign AI thus not only promises to propel economies forward but also positions countries as leaders in the global digital economy.

National security considerations for Sovereign AI

Sovereign AI, by its nature, is aimed at bolstering a nation's ability to protect and advance its interests through the strategic use of AI. AI's usage in the military, for example, is already growing, and there is no doubt that it will continue to accelerate, while the intersection between AI and cybersecurity is becoming a key global and domestic priority.

Over time, Sovereign AI aims to reduce reliance on foreign AI technologies by developing domestic AI capabilities and ensuring access to critical data, technologies, expertise and infrastructure nationally. This could protect the country from potential supply chain disruptions, therefore, reinforcing national sovereignty.

A strategic roadmap for developing Sovereign AI

Developing Sovereign AI requires multifaceted, coordinated and sustainable efforts across several key areas. In general, there are six strategic pillars that guide nations in building their sovereign AI capabilities:

- **Digital infrastructure:** The backbone of Sovereign AI lies in robust digital infrastructure. This includes state-of-the-art data centres equipped with advanced computing capabilities to process and analyze vast amounts of data efficiently. Data localization policies ensure that data generated within national borders is stored and processed locally, enhancing data sovereignty and security. This infrastructure serves as the foundation upon which AI technologies can be developed and deployed effectively.

- **Workforce development:** A skilled workforce is critical for the advancement of AI technologies. Initiatives must focus on STEM education, encouraging students and professionals to pursue careers in AI. This includes updating all levels of education curricula to include AI and machine learning, offering vocational training programmes and facilitating lifelong learning opportunities. By investing in human capital, nations can ensure they have the talent needed to fuel the national AI industry and drive innovation.

- **esearch, development and innovation (RDI):** Investing in RDI is essential for pushing the boundaries of what AI can achieve. Governments should provide incentives and allocate funds for AI research, supporting both foundational and applied research as well as

lead to breakthroughs that propel the nation forward in the global AI landscape.

- **Regulatory and ethical framework:** Balancing innovation with ethical considerations and regulatory compliance is paramount, especially when it comes to AI. Developing a comprehensive regulatory and ethical framework involves setting clear guidelines for AI development and deployment, focusing on issues such as privacy, transparency, data protection, cybersecurity and the ethical use of AI. This framework should also include mechanisms for oversight and accountability, ensuring that AI technologies are used responsibly and for the benefit of society.

- **Stimulating AI industry:** This involves creating a conducive environment for the growth of AI-driven businesses and applications, especially across vital sectors such as energy, healthcare, finance, transportation and manufacturing. Government incentives such as tax breaks, grants and streamlined patent processes can encourage innovation and entrepreneurship in AI. Additionally, public sector adoption of AI technologies can serve as a catalyst for growth, setting an example for efficiency and innovation. Creating public-private partnership models can further accelerate the development and deployment of AI solutions, addressing societal challenges while driving economic growth.

- **International cooperation:** While developing Sovereign AI is about harnessing capabilities within national borders, international cooperation remains crucial. Engaging in dialogues and partnerships with other nations can help set global standards for AI, facilitate cross-border data flows under agreed-upon norms and address shared challenges such as privacy and cybersecurity threats. Collaborating on international projects can also pool resources and expertise, accelerating progress in AI technologies for mutual benefit.

The journey towards Sovereign AI is complex and requires thoughtful and long-term strategic planning and implementation on the national level. As nations embark on this path, the goal is not to self-isolate but to ensure that they are not left behind in the rapidly advancing global digital race, all while safeguarding their interests and securing a competitive edge on the international stage.

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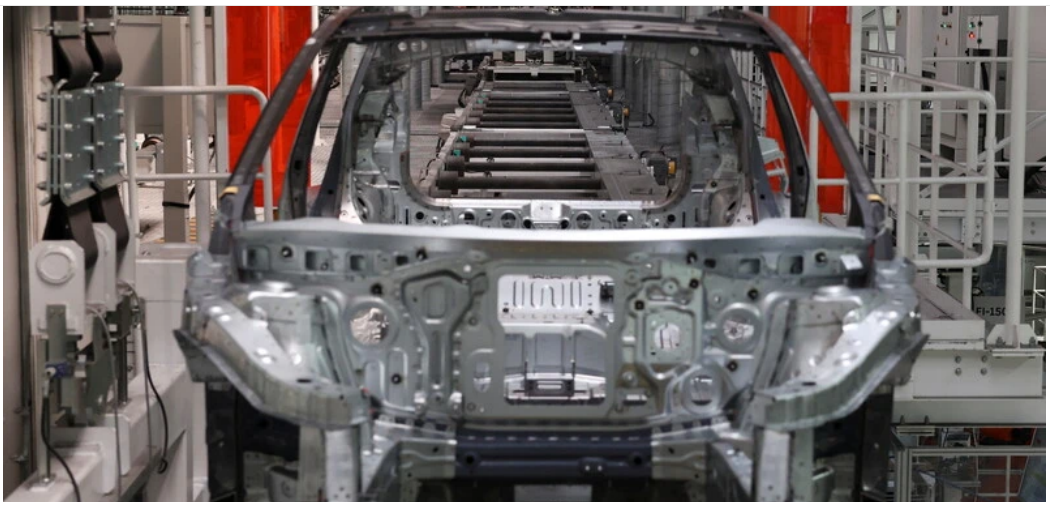

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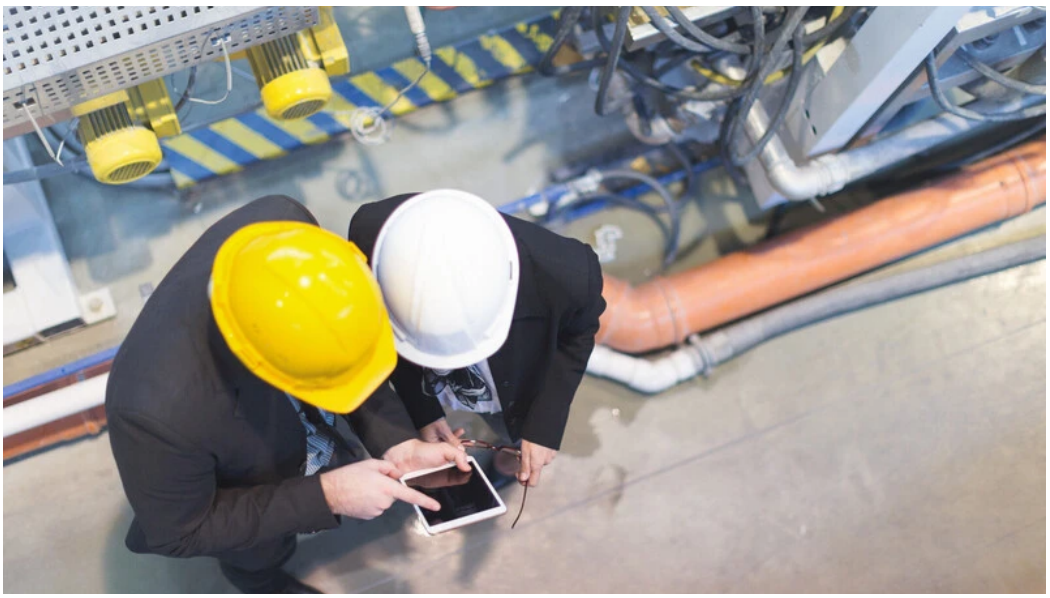

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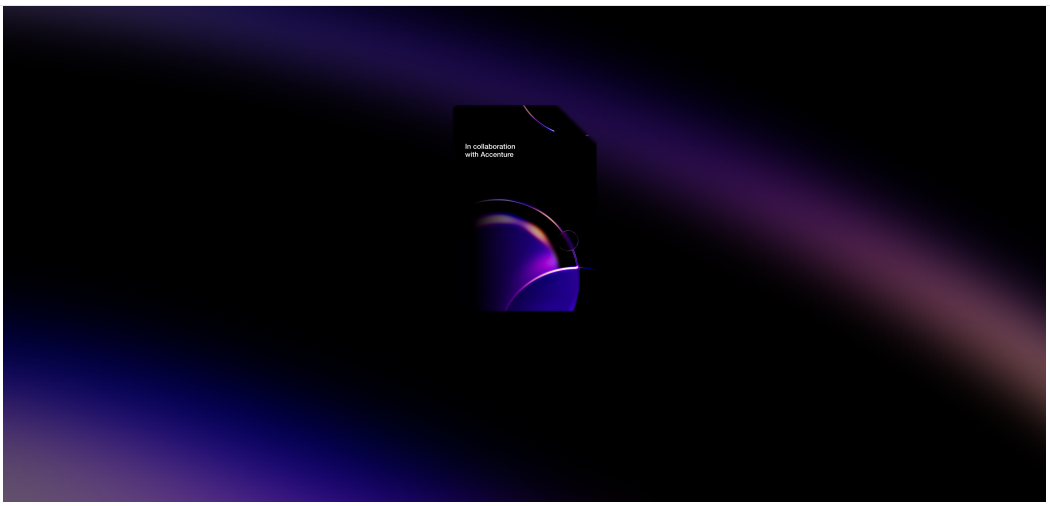

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