

Two-thirds of organizations rate physical AI as a high priority for the next three to five years

- **79% of organizations are already engaging with physical AI¹, with 27% already deploying or scaling solutions**
- **60% of executives believe that physical AI will enable robotics adoption in areas that were once impossible or impractical**
- **43% of executives are interested in physical AI as an enabler of domestic production at scale**

Paris, April 16, 2026 - The [Capgemini](#) Research Institute today published a report '[Physical AI: Taking human-robot collaboration to the next level](#)', which explores the impact of physical AI on robotics and the value it could unlock for businesses. Physical AI marks a shift in robotics from automation to autonomous action in the real world. The opportunity it represents is widely recognized by executives across sectors, from high tech (93%) to warehousing and logistics (69%) and agriculture (59%), as well as the globe: with nearly three quarters of executives in the US, and around two thirds in Europe, and APAC in agreement.

Moving from experimentation to business impact

Physical AI is at an inflection point as technological breakthroughs and market forces converge to accelerate real-world deployment at scale. Advances in foundation models are equipping robots with the intelligence needed to operate autonomously in complex environments, while simulation technologies are compressing training cycles by enabling large-scale learning.

An emerging AI-robot-data flywheel is reinforcing this progress, as deployed systems generate real-world data that continuously improves performance and generalization. These gains are amplified by advances in edge computing² and batteries, falling hardware costs, new commercial models such as robotics-as-a-service (RaaS), and connectivity breakthroughs including private 5G and precise wireless positioning.

The optimism is widespread, with 60% of executives saying that physical AI will enable robotics applications that were previously impossible or impractical. Use cases span hazardous operations, micro-logistics, pick-and-place, and field inspection, as well as sector-specific applications such as dynamic assembly in manufacturing, healthcare and eldercare support in the public sector, and disaster-damage assessment in insurance.

Supporting reindustrialization and operational resilience

As reindustrialization efforts accelerate in Europe and the United States, physical AI is emerging as a key enabler of this transition. Indeed, 43% of executives say that reshoring and reindustrialization are increasingly driving their interest in physical AI as a means to support domestic production at scale, while two-thirds of organizations now rank physical AI as a high priority in their automation agenda for the next three to five years. More than half of business leaders cite autonomous mobile robots, industrial robotic arms and cobots as the fastest growing robot form factors in their organization in the next three to five years, well ahead of humanoids³.

Workforce constraints are a central driver for the growing interest in physical AI. More than labor costs, the top driver of investment in physical AI is labor shortages, especially in the agriculture, retail, high tech, warehousing and logistics and automotive sectors. Geographically, Japan leads in prioritizing physical AI within automation strategies, with more than three quarters of executives identifying it as a priority over the next three to five years, ahead of the US.

¹Physical AI represents the next major evolutionary stage in AI: AI that acts in the physical world. Robotics is among its most significant applications.

²Edge computing means processing data where it is created, such as directly on a robot, instead of sending it to a remote data center.

³In this report, humanoids refer to robots with human-like form factors, including both full-humanoid robots (with torso, head, two arms, and two legs) and human-like robots that share some human features but may differ in structure (e.g., wheels instead of legs, fewer limbs, or simplified body plans).



Physical AI also supports the agility required to make reindustrialization viable over the long term. Nearly half of executives identify improved flexibility as a key benefit, highlighting the ability to reconfigure production systems and workflows more rapidly than with traditional robotics or fixed automation. Moreover, over half of executives highlight improvements in safety and reduced physical strain.

"Physical AI marks a shift from systems that describe the world to systems that can act within it. However, robotics has a long history of overpromising, as early breakthroughs created expectations the technology could not yet meet." explains Pascal Brier, Chief Innovation Officer at Capgemini and Member of the Group Executive Committee. "What is different today is not the hype, but the convergence of AI, data, and engineering maturity. The opportunity is real, provided we focus on what works at scale. Deploying physical AI responsibly, safely, and progressively will be essential to building trust, with security by design, transparency, and human oversight at the core of sustainable human-robot collaboration."

Scaling physical AI and humanoid robots despite persisting barriers

Nearly two-thirds of executives expect physical AI to reach scale – in terms of moving from pilot projects to large-scale deployments - within the next five years, although only 4% say they are already operating at scale. In fact, scaling physical AI remains a challenge for nearly eight out of ten executives, primarily due to a lack of technology and operating readiness.

Near-term growth will be led by established robot form factors. Humanoid robots, despite strong interest, still face significant barriers and remain a longer-term bet: 72% of executives identified technical immaturity such as reliability and dexterity, while 63% were deterred by the high cost and 58% by the training challenges. In addition, more than six in ten executives are currently unclear on the ROI of humanoid adoption.

Societal acceptance is also a concern with more than six in ten executives believing that public resistance will be a critical obstacle to the adoption of humanoid robots. Public sentiment on this issue varies by region, with 68% of executives in France citing public resistance as a barrier compared with 56% in Spain.

To access the full report: <https://www.capgemini.com/insights/research-library/ai-in-robotics/>

Methodology of the report

In January and February 2026, the Capgemini Research Institute conducted a global survey of 1,678 executives from organizations with annual revenue above \$1 billion, across 16 countries across North America, Europe, and Asia-Pacific and spanning 15 industries. For aerospace and defense as well as government and public services, the threshold was \$500 million. Executives surveyed were director level and above.

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