

Realizing augmented engineering

The role of AI and digital continuity in aerospace and defense transformation

Augmented engineering is becoming central to aerospace and defense competitiveness

65%

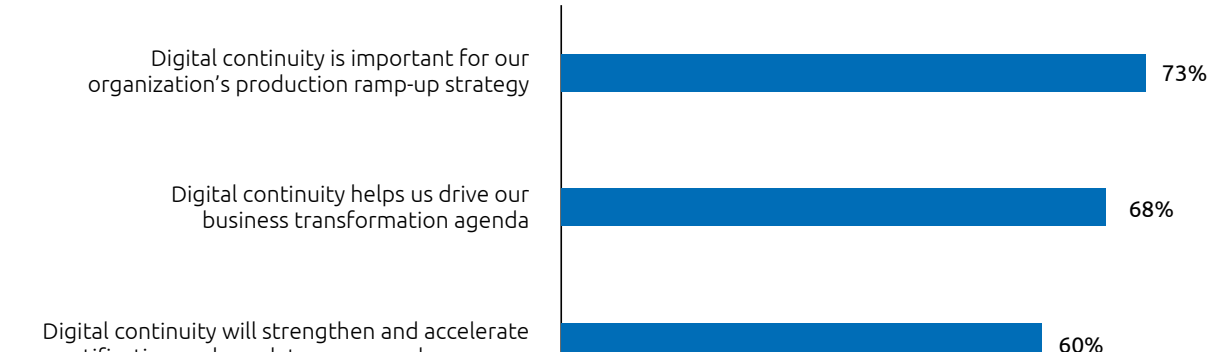
of organizations risk losing future program positions, workshare, and access to top engineering talent to faster-moving or non-traditional players if they fail to deliver an innovative response at speed.

Nearly eight in ten

organizations identify digital-enabled innovation and value creation as critical to engineering and R&D over the next 6–12 months

Digital continuity supports production scale-up, business transformation, and regulatory readiness

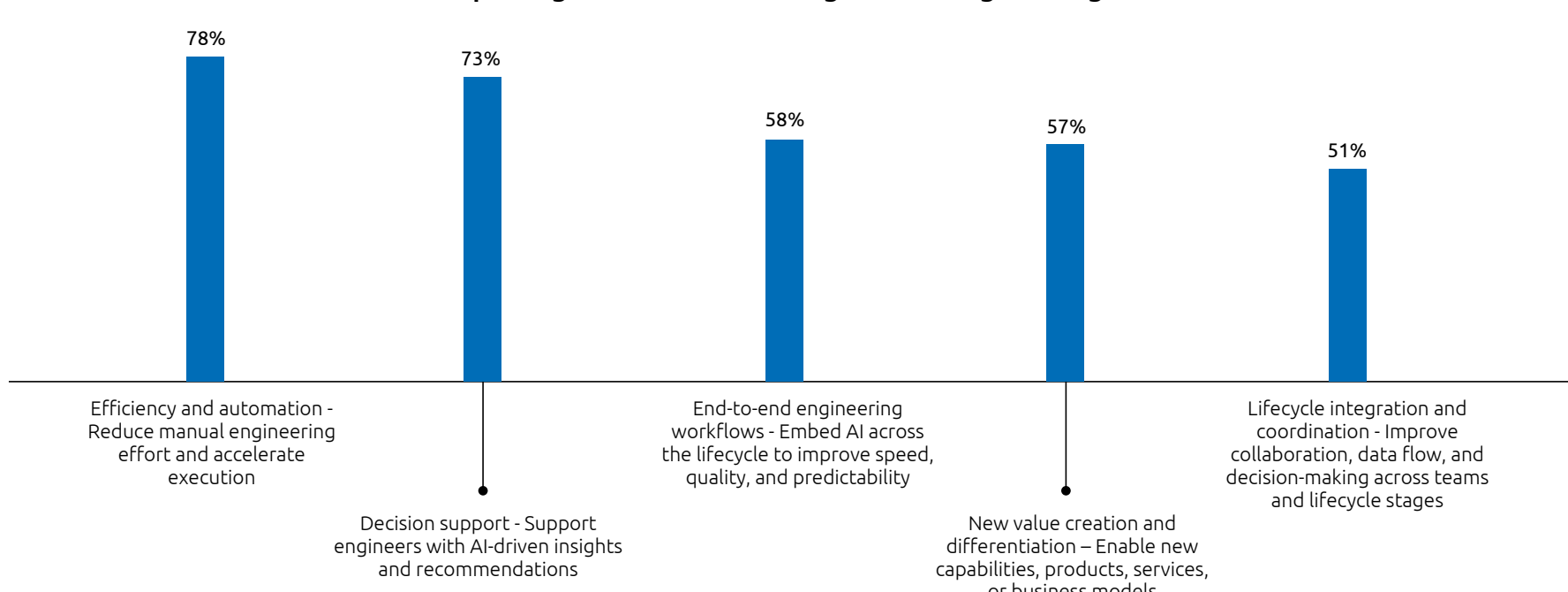
To what extent do you agree with the following statements?



Source: Capgemini Research Institute, Augmented engineering survey, April–May 2026, N = 200 digital continuity experts.

AI adoption is expanding from productivity gains to end-to-end engineering transformation

Top five goals for AI-based augmented engineering



Source: Capgemini Research Institute, Augmented engineering survey, April–May 2026, N = 200 AI experts.

Digital continuity remains the foundational bottleneck to scaling AI-enabled engineering

Most aerospace and defense organizations still operate with fragmented lifecycle architectures

Only around 6%

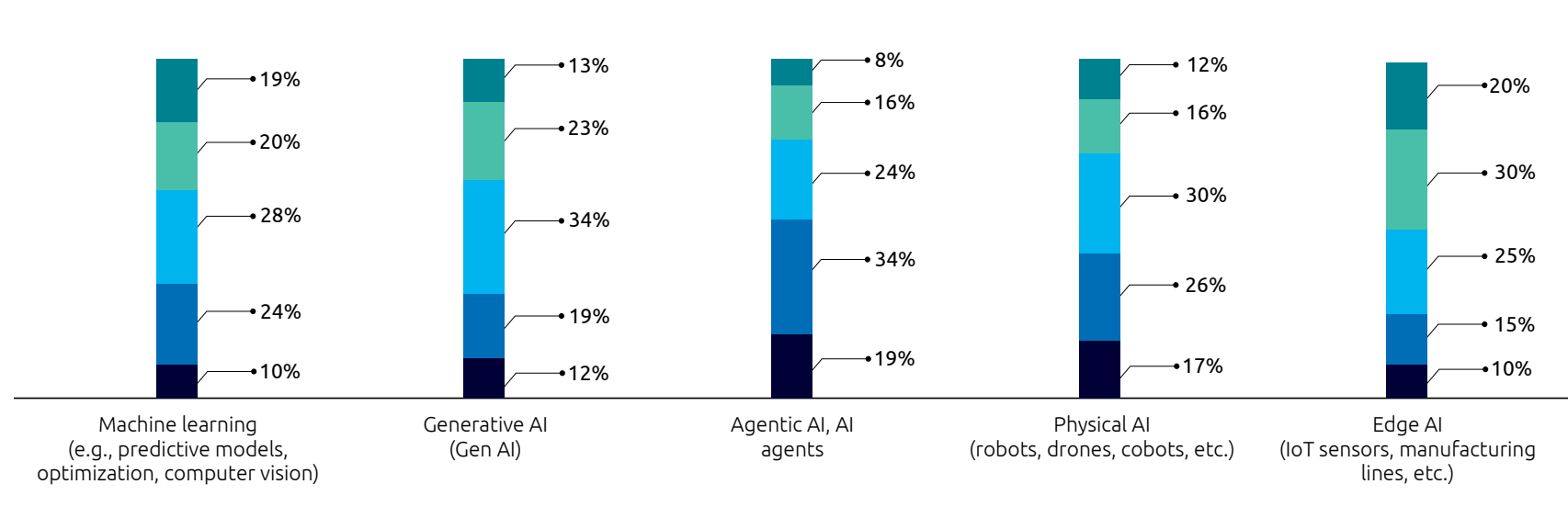
of organizations have achieved true end-to-end digital continuity with a connected enterprise-wide architecture and a single source of truth

35%

describe their environments as only partially connected, while another 30% say systems are connected only within certain functions.

Most AI use cases in engineering remain at exploration and pilot stages

Please rate the overall adoption level for the following types of AI within your engineering function



Source: Capgemini Research Institute, Augmented engineering survey, April–May 2026, N = 200 AI experts.

Foundational gaps constrain augmented engineering transformation

Only 4%

of organizations have fully implemented closed-loop feedback processes, while another 9% have standardized such practices across most programs.

Collaboration across the supplier-integrated enterprise remains majorly document-driven. **53% of organizations** still rely on it with Tier 2 & 3 suppliers; 43% with strategic Tier 1 partners.

Only 9%

of organizations have fully implemented governance frameworks for human-agent collaboration at scale, while 30% are still building or rolling out structures.

Organizations seek greater control over AI, but dependence on external ecosystems complicates integration, governance, and large-scale adoption.

Source: Capgemini Research Institute, Augmented engineering survey, April–May 2026, N = 200 organizations.

Augmented leaders are able to translate integrated capabilities into system-level impact

Only 10% of organizations are augmented leaders, combining strong digital continuity and engineering AI capabilities to outperform their peers across key engineering metrics.

Metric	Leaders are able to achieve...
Engineering cost reduction or avoidance	2.0x better outcomes
Compliance and certification performance	1.9x better outcomes
Time-to-market / cycle time	1.5x better outcomes
Engineering quality	1.1x better outcomes
Workforce effectiveness	1.4x better outcomes
Supply-chain performance and resilience	1.5x better outcomes

* **Augmented leaders** are organizations in this cohort have built strong capabilities across both digital continuity and AI-enabled engineering. They combine advanced lifecycle connectivity, robust data governance, and mature AI operating models to embed AI across design, manufacturing, and certification workflows.

Operationalizing augmented engineering at scale

Engineer trust by design

Embed safety, quality, certification, sovereignty, and trust into engineering by design

Industrialize AI in decision-grade engineering workflows

Create an engineering decision intelligence layer

Build the AI and compute foundation for engineering at scale

Industrialize AI

Build the engineering foundation

Transform digital continuity into an authoritative engineering knowledge backbone

Redesign engineering processes and operating models around human-AI teams

Build closed-loop learning from design to sustainment

Redesign the operating model

Source: Capgemini Research Institute analysis.

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