
FORRESTER®
2027
PREDICTIONS
Technology & Security

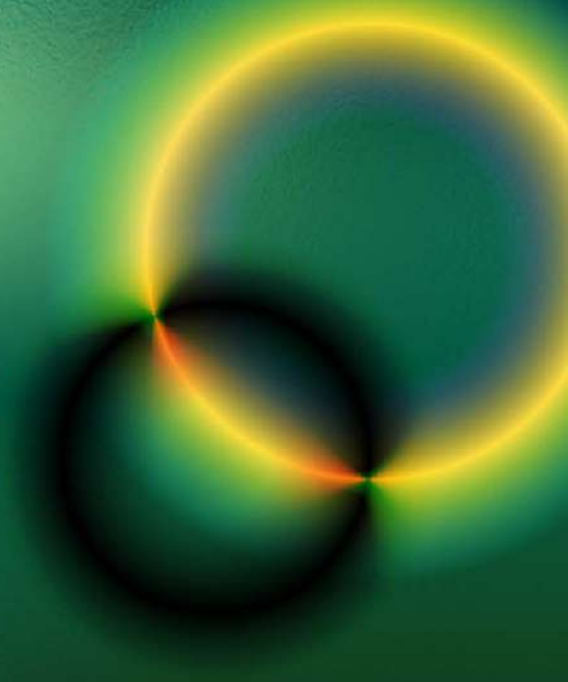
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The Pursuit And Peril Of Control

In 2027, CIOs and CISOs will face a new challenge: gaining more control over technology without slowing progress. Pressure to prove ROI will intensify as AI takes up more of the technology budget, and infrastructure choices, security risks, and sovereignty requirements will make decision-making harder. Leaders will need to make tougher calls about where to invest, how to build and secure their technology environments, and how to prepare for emerging technologies that could quickly shift priorities.

But greater control will bring risks of its own. Cost and infrastructure decisions will require difficult trade-offs, while the growing use of AI across technology operations could introduce new points of failure. Efforts to gain more control could also slow progress and make it harder to maintain trust.

For CIOs and CISOs, 2027 will reward deliberate choices. Use these predictions to anticipate what's ahead, weigh the trade-offs, and make better technology decisions.

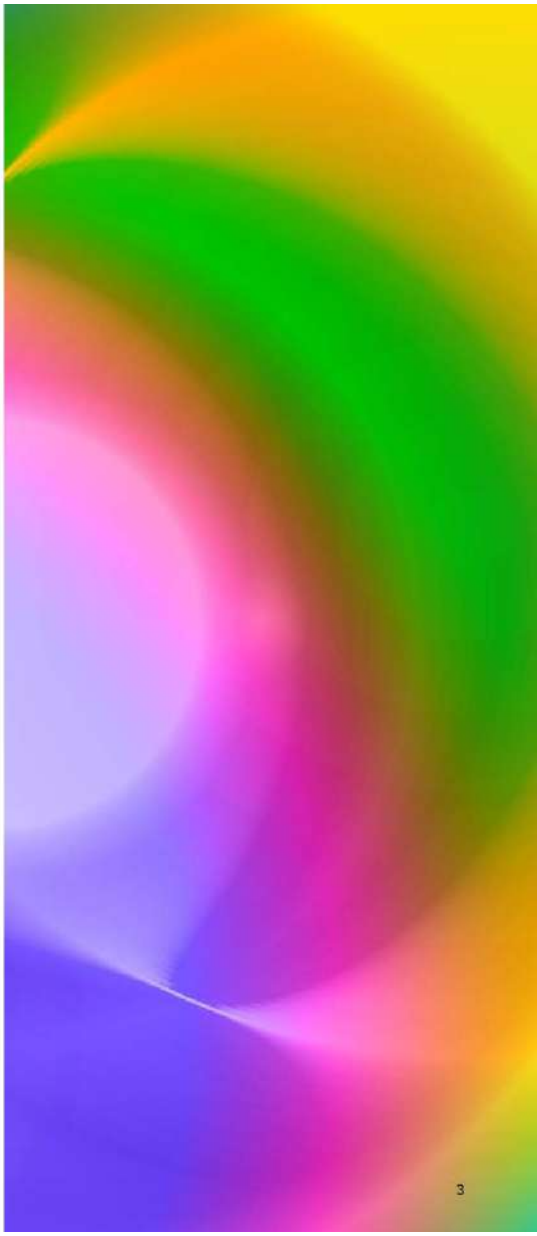


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AI will take one dollar in five of all business technology spending.

Forrester's Global Tech Market Forecast, 2025 To 2030 puts global tech spending at $6.1 trillion in 2027, up 7.6% from 2026, but its composition will shift hard toward AI. Nearly three-quarters of AI spending will be on servers and equipment. Computer equipment's share of tech spending growth will increase from 10% in 2025 to 26% by 2030, while tech consulting and systems integration will fall from 15% to 7%. Budgets won't keep up with AI needs. Forrester's Budget Planning Survey, 2026 shows that most leaders will see their budgets increase next year, but only 53% expect one above the IMF's projected inflation rate of 3.2%, so just under half lose purchasing power. Third-party services is the domain where this will be felt most — it's where leaders plan the deepest cuts and where AI automation is driving down costs for consulting and managed services delivery. Open your services and seat-based software renewals six months early, redirecting what you can reclaim into absorbing token cost and context management.

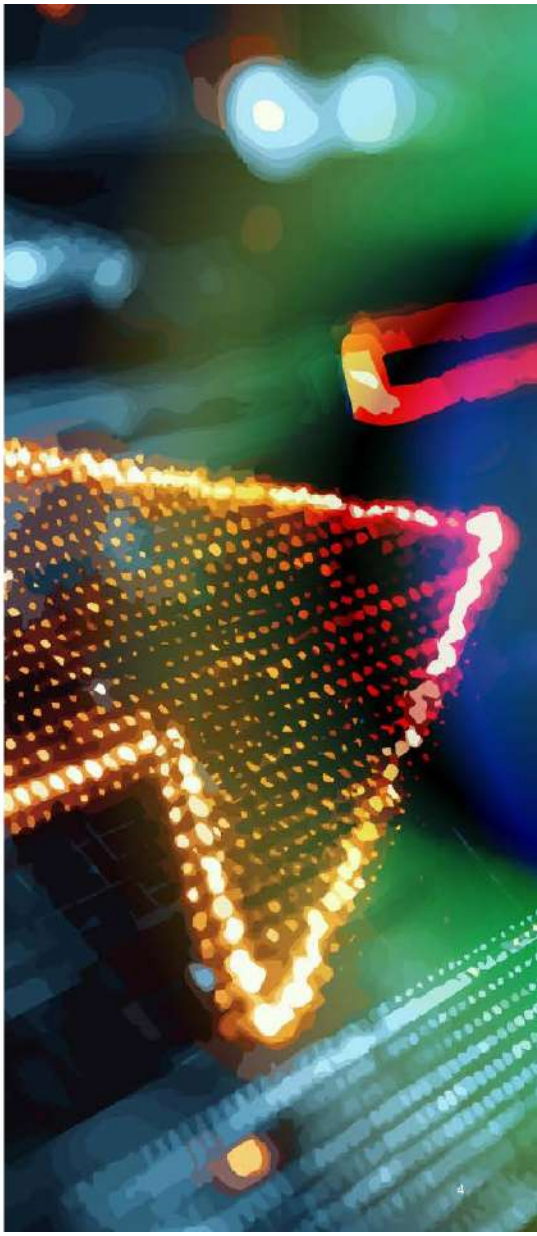


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A quantum breakthrough will cause a broad C-suite scramble.

Most believe quantum is years away, and that is still the likely outcome. However, a possibility exists: the breakthrough that nobody is expecting. ChatGPT did that for AI, with CIOs now scrambling to find agentic AI value at scale. Our research shows the foundations for fault-tolerant quantum have arrived sooner than expected. What happens when the board starts demanding plans for your firm's response to Q-Day or your competitors being first to market for exploiting quantum algorithms? That concern is not unfounded: According to Forrester's Emerging Technology And Innovation Survey, 2026, 87% of technology and business decision-makers at the director level and above report that their organizations are not allocating resources to quantum computing. The technology will be disruptive enough to force changes in strategy and investment priorities. If a breakthrough does occur — in hardware, algorithms, or both — this will cause CIOs everywhere to question readiness.



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A quarter of AI infrastructure RFPs will require non-NVIDIA accelerator options.

NVIDIA will remain the default platform for frontier model training and large-scale inference, but enterprises will increasingly require second-source accelerators to reduce costs and mitigate supply chain chip shortages, sovereignty, and geopolitical risks. Rather than replacing NVIDIA, organizations will segment workloads across accelerator types based on model size, latency, data sensitivity, and deployment location. Hyperscalers are accelerating this shift through investments in proprietary silicon such as AWS's Trainium, Google's Ironwood TPU, and Microsoft's Maia 200 per site, while regional providers are advancing alternatives including Alibaba Cloud's Zhenwu and Huawei's Ascend to support sovereign and domestic deployments of AI systems. Start now by incorporating workload-to-accelerator mapping and heterogeneous infrastructure requirements into AI infrastructure sourcing and architecture planning.



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Digital sovereignty will drive a 20% increase in enterprise software localization.

After decades of standardization on common global enterprise resource planning, CRM, data, and process models, digital sovereignty is not merely a compliance concern but a buying criterion. In Forrester's Enterprise Applications Software Survey, 2026, 43% of respondents cited data privacy, residency, and sovereignty risks as a concern when adopting SaaS solutions. Forrester's Cloud Survey, 2026 found that 43% of private cloud decision-makers keep applications on-premises due to data sensitivity and privacy concerns, while 59% of public cloud decision-makers said that digital sovereignty constraints completely determine cloud vendor selection. Data localization laws, sovereign cloud mandates, and divergent AI regulations will proliferate and drive higher localization costs. In 2027, invest in regional data stores, country-specific AI models, localized business processes, and jurisdiction-specific compliance controls.



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An AI-generated bug or regression will cause a global outage across multiple industries.

Patch releases have reached truly staggering proportions, with major vendors sometimes delivering hundreds of — and in the most extreme case, over a thousand — updates across dozens of products at one time. As the hamster wheel of AI-assisted vulnerability discovery picks up speed, a mantra of "find fast and fix things" will emerge. The pressure to develop and distribute patches quickly will overwhelm software engineers tasked with code review and QA because teams and processes will not have scaled to meet the increasing demands. Concerns over exploitability due to shrinking gaps between frontier and open-weight models will force security leaders to rely more on AI to remediate code or update dependencies. The mismatch between vulnerability discovery/patching velocity and testing capacity will result in a bug in AI-generated code that causes an outage on the same scale as the one in July of 2024. Organizations will have to strengthen their ability to rapidly roll back unreliable vendor patches.



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Turn Our Predictions Into Action

AI is changing how technology and security leaders invest, build, and manage risk. Leaders need to understand what matters, what it means for their organization, and where to act.

For more than 40 years, Forrester has helped leaders understand what's ahead and decide what to do next. Our research, data, and experts can help you put these predictions to work.

Predictions 2027 Webinar: Technology & Security
Join the analysts behind our predictions to explore what's ahead for technology and security leaders and how to make deliberate choices about investment, infrastructure, innovation, and risk.

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