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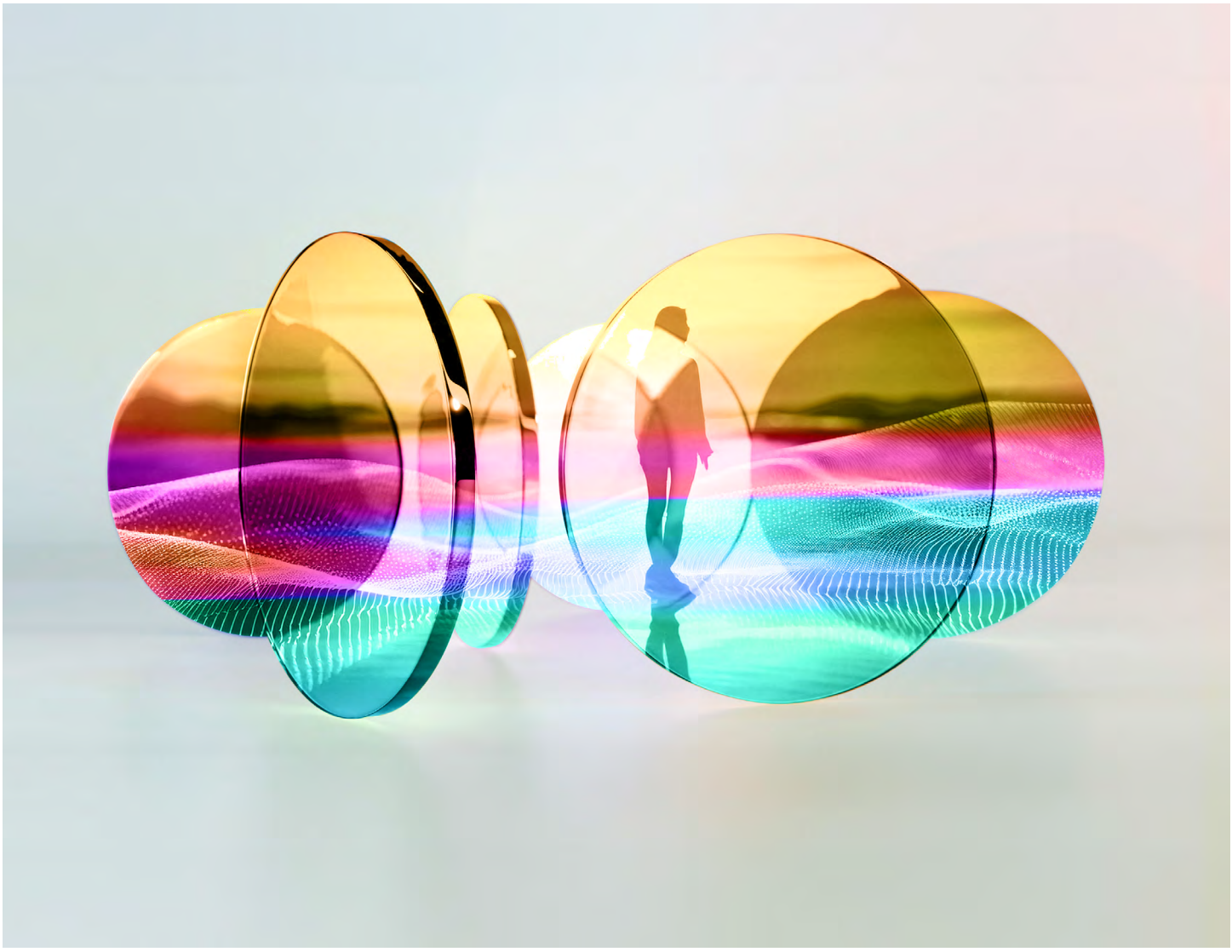


Tech Trends 2025 | Deloitte Insights

A CFO's guide to Tech Trends 2025

Tech Trends 2025 identifies technology trends that will likely disrupt business over the next 18–24 months. These trends have the potential to unlock significant business value—increased productivity, reduced cost, and new avenues for growth and advantage. But they may also require significant investment. This duality puts these tech trends squarely on the CFO agenda to understand, to evaluate, and to strategically partner with the business on placing bets today to realize the future.

In this report, we provide a synthesis of the trends from Deloitte's Tech Trends 2025 report, why the trends matter for CFOs, and the questions to start asking today.

Trends for today's CFO agenda

- What's next for AI?
- The intelligent core
- Spacial computing takes center stage

Trends CFOs must understand

- Hardware is eating the world
- IT, amplified
- The new math

Trends for today's CFO agenda

What's next for AI?

To take advantage of the burgeoning excitement around Generative AI, many organizations have already adopted large language models (LLMs), the best option for many use cases. But some are already looking ahead. Despite their general applicability, LLMs may not be the most efficient choice for all types of organizational needs. Enterprises are now considering small language models and open-source options for the ability to train LLMs on smaller, more accurate data sets. Together with multimodal models and AI-based simulations, these new types of AI are building a future where enterprises can find the right type of AI for each task. That includes AI that not only answers questions but also completes tasks. In the coming years, a focus on process optimization and execution may usher in a new era of agentic AI, arming consumers and businesses with copilots capable of transforming how humans work and live.

Small language models are trained on highly curated data to solve specific tasks. **Multimodal models** produce content in multiple media but require significantly more resources. **Agentic AI** goes beyond Q&A capabilities and completes discrete tasks in the real world.

Why CFOs should care

Enterprises could face a proliferation of approaches to AI investment. When allocating capital, CFOs need to compare investments and trade-offs in data organization, functionality, cost, and risk. They will equally need to quantify and measure real, tangible business value from those investments. Agentic AI solutions hold promise to transform operations, including finance, with digital coworkers who can own and execute workflows, processes, and activities. Imagine AI agents that can perceive, reason, and act, carrying out finance activities like scenario planning, forecast accuracy, or working capital optimization. "There's an app for that" could well become "There's an agent for that." Of course, new standards for risk and trust will be required. But the future of AI entices with its promise of powerful new resources to understand—and act on—the many levers affecting companies' operational and financial performance.

What CFOs should ask

1. Are we preparing for AI with standards that ensure high-quality, well-managed, and interoperable data?
2. How will we balance the use of LLMs with smaller, more specialized models to optimize AI strategy?
3. How should we prepare for the integration of agentic AI and its potential impact on our business operations and workforce—in finance and across the enterprise?

The intelligent core
AI changes everything for core modernization

Core systems providers have invested heavily in AI, rebuilding their offerings and capabilities around an AI-fueled or AI-first model. The integration of AI into core enterprise systems represents a significant shift in how organizations operate and leverage technology for competitive advantage. This transformation is about automating routine tasks and fundamentally rethinking and redesigning processes to be more intelligent, efficient, and predictive. It requires careful planning due to integration complexity, strategic investment in technology and skills, and a robust governance framework to help ensure smooth operations. But beware of the automation paradox: The more complexity is added to a system, the more vital human workers become. Adding AI to core systems may simplify the user experience, but it will make them more complex at an architectural level. Deep technical skills are still critical for managing AI in core systems.

Options for adding AI functionality to core systems

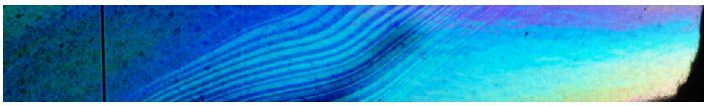
Core system vendor	Third-party AI vendor	Do-it-yourself
Offers easy integration	Offers greater range of functionality	Offers total control and customizability
Little control over functionality	Potential for extra cost	Requires extensive expertise

Why CFOs should care

CFOs who have invested, or are likely to invest, in core technologies like enterprise resource planning (ERP) should understand how AI will both enhance and disrupt today's one-size-fits-all models. Major providers will build in AI capabilities that can work across multiple systems. The core becomes an enabler for AI to learn and improve, leading to a transformation in how leaders access information. We imagine a future where reports, updates, and insights are presented in real-time, easy-to-digest forms like social media feeds. Tasks that take hours today would take seconds—or less. Companies are likely to realize new operational efficiencies and cost savings. But minimizing risk will be critical as well. CFOs will need to ensure governance models are in place before feeding critical, highly sensitive financial data into AI-driven models.

What CFOs should ask

1. Do we understand our core tech vendor's AI roadmap? How will we balance vendor-provided AI modules, third-party tools, or in-house models?
2. How can the business and IT best partner to reimagine core business processes with AI?
3. How will we manage autonomous finance and business operations while managing complexity and risk?



Spatial computing takes center stage

Spatial computing continues to spark enterprise interest because of its ability to break down information silos and create more natural ways for workers and customers to interact with information. We're already seeing enterprises find success with use cases such as advanced simulations that allow organizations to test different scenarios to see how various conditions will affect their operations. With a stronger focus on effectively managing spatial data, organizations can drive more cutting-edge applications. In the coming years, advancements in AI could lead to seamless spatial computing experiences and improved interoperability, enabling AI agents to anticipate and proactively meet users' needs.

Spatial computing refers to technology that allows users to interact with digital information in a physical space, effectively merging the digital and physical worlds.

Why CFOs should care

Spatial computing has the potential to unlock new revenue and growth opportunities for industries such as health care, manufacturing, logistics, and entertainment, requiring evaluation of how and if the technology may unlock value for the organization. For finance teams, spatial computing may also represent the potential for deeper, real-time insights into business operations. We're not talking about executives sitting around a table with headsets reviewing financial reporting. Instead, the use of simulations like digital twins—virtual replicas of physical objects, systems, or processes—can help to optimize costs, enable more effective capital planning, and unlock insights. With real-time data from its physical counterpart, a digital twin can bring together operational and financial information more seamlessly and allow finance leaders to interact with data in completely novel and engaging ways.

What CFOs should ask

1. Will spatial computing disrupt our value chain?
2. How can spatial computing improve our operating efficiency and decision-making?
3. Is our data ready to support spatial computing, and what investments do we need to make?

Trends CFOs must understand

Hardware is eating the world

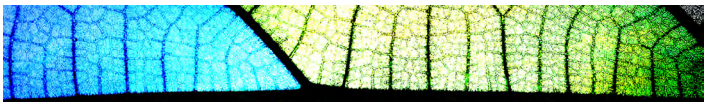
After years of software dominance, hardware is reclaiming the spotlight. As AI demands specialized computing resources, companies are turning to advanced chips to power AI workloads. In addition, personal computers embedded with AI chips are poised to supercharge knowledge workers by providing access to offline AI models while "future-proofing" technology infrastructure, reducing cloud computing costs, and enhancing data privacy. Although AI's increased energy demands pose sustainability challenges, advancements in energy sources and efficiency are making AI hardware more accessible. Looking forward, AI's continued integration into devices could revolutionize the Internet of Things and robotics, transforming industries through smarter, more autonomous devices.

Why CFOs should care

A great refresh of enterprise hardware may be on the horizon, and CFOs need a thoughtful capital allocation approach. Thanks to the lessons of cloud in the past decade, enterprises know that the cost of runaway models operating on runaway hardware can quickly balloon. In addition, all that hardware takes a lot more power. Associated costs will likely rise, and stakeholders will likely increase their focus on the large energy demands. The specific value for finance will come when hardware enables advanced capabilities to analyze data and deliver powerful insights and commentary. CFOs who become fluent in the language of technology will likely be better prepared to influence their companies' strategic investments and communicate their own AI priorities.

What CFOs should ask

1. How can we optimize our infrastructure, considering the cost and ownership trade-offs between specialized AI hardware and cloud-based solutions?
2. How will we measure the impact of energy demands of new AI hardware while contemplating evolving regulatory dynamics?



IT, amplified
AI elevates the reach (and remit) of tech talent

After years of progressing toward lean IT and everything-as-a-service offerings, AI is sparking a shift away from virtualization and austere budgets. Long viewed as the lighthouse of digital transformation throughout the enterprise, the IT function is now taking on AI transformation. Because of Generative AI's applicability to writing code, testing software, and augmenting tech talent in general, forward-thinking technology leaders are using the current moment as a once-in-a-blue-moon opportunity to transform IT across five pillars: infrastructure, engineering, finance operations, talent, and innovation. As both traditional and Generative AI capabilities grow, every phase of tech delivery could see a shift from human in charge to human in the loop. Such a move could eventually return IT to a new form of lean IT, leveraging citizen developers and AI-driven automation.

Why CFOs should care

For many organizations, the IT function may sit within a shared service organization or is, in some way, outsourced. CFOs need to understand the transformative power of AI for IT operations and the cost, risk, and capability implications on service delivery choices. New roles and responsibilities will emerge. IT will be more integrated with the business than ever before. It may flatten but have a wider purview. AI can deliver efficiencies in cost, innovation, data analysis, and many other areas. Realizing the full benefits will require investment, however, and CFOs must engage with their IT counterparts to ensure the right first steps. For Finance, working closely with IT to understand each other's requirements, avoid duplicate capabilities, and manage costs will become table stakes.

What CFOs should ask

1. What is the optimal service delivery model for our IT organization? What is the right balance between internal investments and outsourced capabilities in emerging technology areas?
2. What capabilities exist today and what capabilities are needed within IT and Finance to manage AI costs?
3. How much should we invest in IT capabilities to properly reap the benefits and manage the risks of AI?

The new math
Solving cryptography in an age of quantum

In their response to Y2K, organizations saw a looming risk and addressed it promptly. Today, IT faces a new challenge, and it will have to respond in a similarly proactive manner. Experts predict that quantum computers, which could mature within five to 20 years, will have significant implications for cybersecurity because of their ability to break existing encryption methods and digital signatures. This could pose a potential risk to the integrity and authenticity of data and communications. Despite the uncertainty of the quantum computer timeline, inaction on post-quantum encryption is not an option. Emerging encryption standards offer a path to mitigation. Updating encryption practices is fairly straightforward—but it's a lengthy process, so organizations should consider acting now to stay ahead of potential threats. And while they're at it, they can considertackling broader issues surrounding cyber hygiene and cryptographic agility.

Cryptography is the practice of securing communication and data using mathematical algorithms and protocols to ensure confidentiality, integrity, authentication, and non-repudiation.

Cryptographically relevant quantum computer (CRQC) is a quantum computer capable of breaking current public-key cryptographic systems, thereby compromising the security of encrypted communications and data.

Why CFOs should care

Although IT will lead here, CFOs must keep their finger on the pulse. Material cybersecurity events may increase, which will require CFOs to understand the potential risk and exposure of corporate assets today and in the future. Bad actors may be stealing encrypted data now to unlock it once powerful quantum computers arrive. Finance organizations, together with their business partners, will need to evaluate the costs, benefits, and risks of investing or not investing in solutions to combat data harvesting and future-proof against CRQCs. CFOs can also encourage new thinking around standards, controls, and testing procedures. Until quantum-resistant cryptographic systems are available and in place, organizations' data will remain under threat.

What CFOs should ask

1. How are we currently assessing and preparing for the potential risks posed by CRQCs to our cybersecurity infrastructure?
2. What steps are we taking to inventory our existing cryptographic systems and develop a comprehensive plan to transition to quantum-resistant cryptographic solutions?
3. What investments and resources are necessary to ensure our organization is quantum-ready, and how are we prioritizing these efforts in our overall cybersecurity strategy?

Conclusion

Technology will continue to drive transformation across all sectors and functions. CFOs must understand the trends powering change and recognize business value to evaluate and advise on investment. They will need to ask the right questions across the enterprise, keep a close eye on data policy, and manage change in their own finance organizations. Even the CFO role itself will evolve. Those who embrace the possibilities today can help to usher in an exciting tomorrow.

To learn more about how technology might impact your business, explore the full Deloitte Tech Trends 2025 report.

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