



PwC's Governance Insights Center | December 2024

Overseeing technology: nine questions the board should ask the CIO or CTO

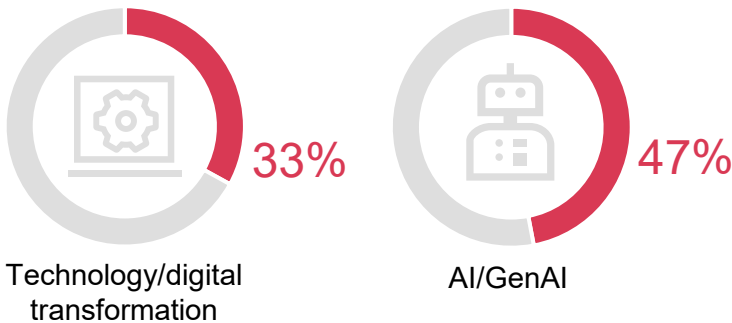


It may be an exaggeration to say that every company is now a tech company, but it's undeniable that innovation and data are integral to most business strategies and operational processes today. Increasingly, a company's technological capabilities determine how — and whether — it can create competitive advantage.

With technology so central to strategy, boards should be actively engaging with the CIO, CTO and other C-suite technology leaders to understand the company's capabilities as well as the value that management sees technology delivering now and in the future. Directors will want to oversee the technology investment plans for seamless alignment with short- and long-term business strategies.

Board members should start by having a solid foundation of how technology is enabling the business strategy. This can include understanding the critical technology systems at the company including their current state, considering age, reliability and efficiency. Understanding whether appropriate technology and data governance policies exist as well as an effective process and control structure is important. From this baseline, boards can focus on where the company is today and where it should be going to meet its strategic objectives

Many directors want more focus on AI and transformation



Q. Which of the following topics should your board spend increased time on over the next 12 months? (select all that apply)
Base: 496
Source: PwC, 2024 Annual Corporate Directors Survey, September 2024.

To boost the board's understanding of technology opportunities and risks and ultimately enhance discussions with the C-suite technology leader, we suggest asking these nine questions:



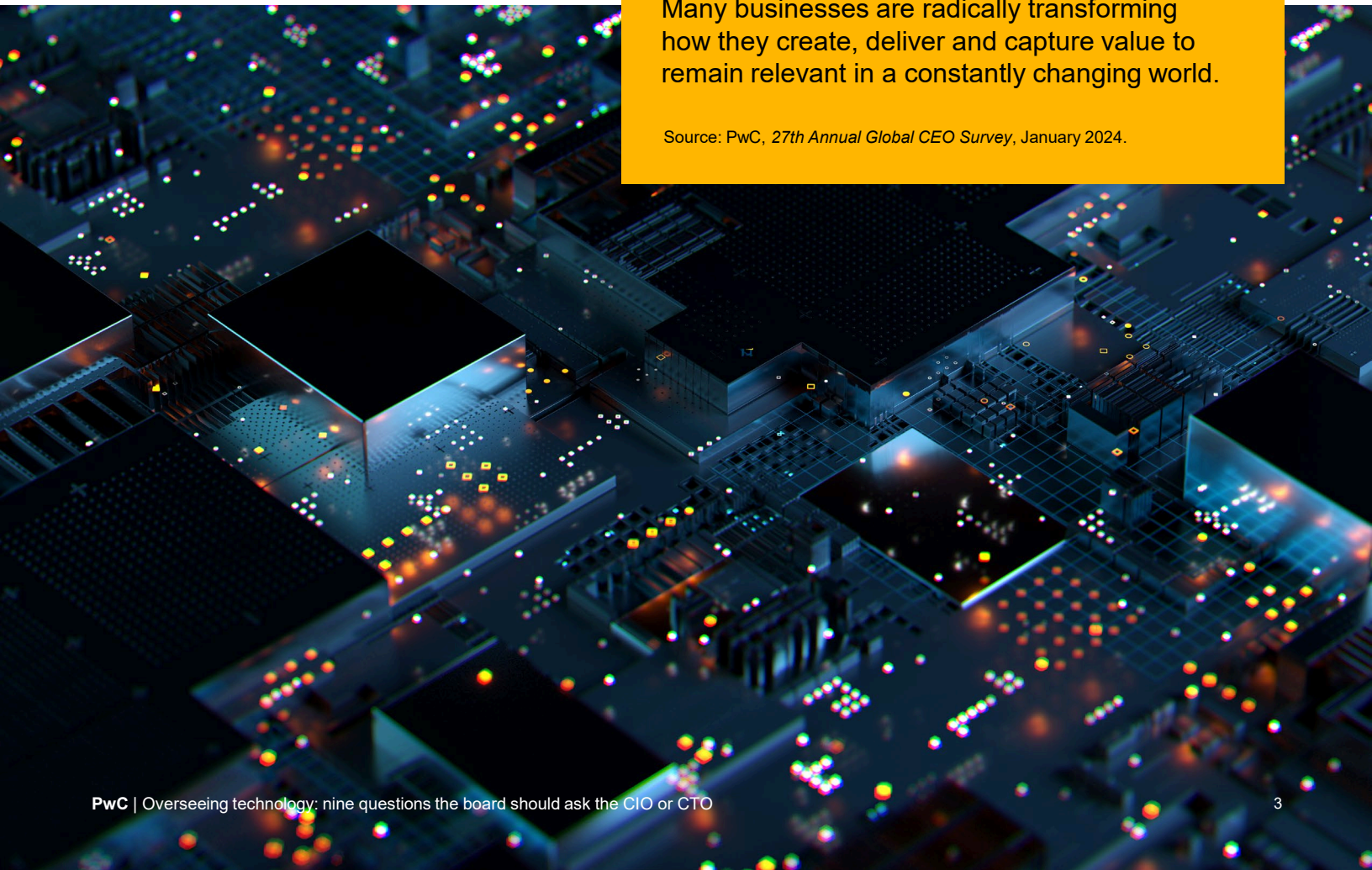
How is technology and data fundamentally changing the industry?

For many businesses, new technologies have rapidly transformed stakeholder expectations. Technology is creating new disruptive competitors, reshaping core business models, transforming front- and back-office operations, and changing the overall value proposition for customers. For example, technology is creating software-as-a-service opportunities, changing customer engagement through digital channels, and using AI and robotics to drive supply chain efficiency and reduce working capital.

As technology continues to advance and redefine companies, success requires sustained focus by boards and management on the opportunities, risks and competitive landscape. Directors need to understand how management tracks and evaluates the competitive landscape, reflects on its own evolution and plans to stay ahead of the curve.

» *For more information on business model reinvention and technology trends, check out these resources:*

- [Business model reinvention](#)
- [The new Essential Eight technologies: what you need to know](#)



Many businesses are radically transforming how they create, deliver and capture value to remain relevant in a constantly changing world.

Source: PwC, *27th Annual Global CEO Survey*, January 2024.

How are we using technology to enable the company's business strategy?

As the company's strategy evolves for growth and the demand for personalized customer experiences and enhanced engagement increases, leading companies are assessing and modernizing their technologies to meet and exceed expectations. Companies are leveraging advanced data analytics as well as using AI and generative AI (GenAI) to gain deeper insights and predict customer behavior and needs. They are utilizing technology for real-time personalized experiences and developing omnichannel strategies with a goal of seamless, consistent interactions across digital and physical touchpoints.

The board should understand the technologies required to drive strategic business goals, meet rising customer expectations and build brand loyalty. Discussions with management should include the roadmap to adopt technologies that drive the business strategy. The board will want to focus on those technologies that require significant investments and resources, and the related milestones and metrics to measure ROI. Management's plan should also inform the board of anticipated organizational change, talent and capability uplift necessary to effectively integrate and leverage the technologies.

CEOs who focus on how they use technology — how they're going to scale it across use cases and what financial outcomes they want to achieve from the project — are well positioned to better realize their return on investment.

Source: PwC, *27th Annual Global CEO Survey*, January 2024.

How is AI impacting our business strategy and operations?

By now, most every industry has seen AI or GenAI-based applications transform products, services and operations, with more to come. Most boards and management teams are asking about the strategic opportunities and transformational power of AI adoption. As with any opportunity, there's risk, including responsible use, accuracy of outcomes, and data security and privacy. All these risks of AI need to be managed. But one of the biggest risks today is not doing anything at all with this transformative technology.

To start, boards must understand the company's AI strategy and how it is aligned to the company's overall digital transformation plans. From there, boards should understand how management evaluates and prioritizes the strategic opportunities. In addition, boards should know whether management is planning AI adoption at scale and how management perceives the overall readiness of the company for implementation. Guardrails and risk management for responsible AI adoption is critical by having appropriate policies, processes and controls in place.

» *For more information on AI:*

- [The power of AI and generative AI: what boards should know](#)
- [Six board priorities for an early-stage GenAI strategy](#)



How are we transforming our back-office functions for optimization?

Many companies are investing in automating and integrating processes using AI or other technologies to streamline and accelerate operations while enhancing both employee and third-party experiences. With these changes, employees can have greater focus on high-value tasks instead of low-value administrative work. An optimized back office also plays a critical role in supporting front-office functions by delivering faster, more accurate services, which in turn improves customer satisfaction and business performance.

Management should have a well-defined strategy for leveraging technology to empower employees and transform their ways of working. The board should understand this strategy, risk management process and how implementation success will be measured.

Technology on the board's agenda

For a company that makes a significant technology investment as part of a major digital transformation, board oversight is critical. The board should make sure it has the right oversight approach, focusing on the strategic plans as well as the related risks and opportunities. The board should also understand the change management programs and how management monitors performance. To learn more about the board's role in overseeing technology and digital transformations, see [*Technology: helping corporate boards oversee digital transformation*](#).

How are we leveraging data into competitive insights?

Companies capture more data than ever before, but the ongoing challenge is how to effectively utilize and leverage this data to inform decisions that drive growth, enhance the customer experience and improve operations. Technology can help, and AI and machine learning are aiding efforts to develop coherent insights.

Boards should engage with business unit and functional leaders by asking: What operational areas would benefit from new or more robust data and analytics, and how can management integrate real-time data into decision-making processes for better outcomes? Management should have a clear perspective on the data assets and business analytics capabilities that would give the company a competitive advantage, both in customer experience and operational efficiency.

How are we proactively managing key technology-related risks and integrating them into ERM programs?

Management needs a robust, proactive risk management program to address the latest technology risks, including data security, privacy, compliance and vendor risk. These risks continue to increase as companies expand their use of technology, expand their digital footprint and consider emerging new regulations. Additionally, companies are increasingly reliant on third-party software programs to provide critical technologies, adding to the complexity of risks. Companies should have due diligence processes in place for vetting new vendors and partners and to make sure key risks are integrated into the overall ERM program.

Boards need to oversee key risks related to technology as part of their oversight. They often rely on assurances from the CIO and CISO. But annual testing and third-party validation of the effectiveness of controls and the compliance with industry and regulatory standards are critical.

When things go wrong — a major breach or critical system down for a long period of time — there can be significant reputational damage as well as financial and legal implications. Boards need to understand how management is preparing for these events, while, of course, working to mitigate the risk. Crisis management planning, including business continuity, disaster recovery and incident response plans, should be developed and tested.

Third party vendor risk in the spotlight

Most companies outsource software development, making it crucial to build an ecosystem of technology partners that can supply talent, tools, insights and innovation. These partners are effectively an extension of the company's team, with management striving to maximize their value and efficiency. Directors should discuss with management significant vendors and partners, the due diligence processes for vetting new relationships and how leaders are managing risks related to brand, data security and privacy.

66% of tech executives rank cyber as the highest risk for mitigation, compared to 48% of business executives



78%

of executives believe that regulations have helped to challenge, improve or increase their cybersecurity posture

Source: PwC, 2025 Global Digital Trust Insights, September 2024.

» For more information on AI:

- [Overseeing cyber risk: the board's role](#)
- [Bridging the gaps to cyber resilience: The C-suite playbook](#)

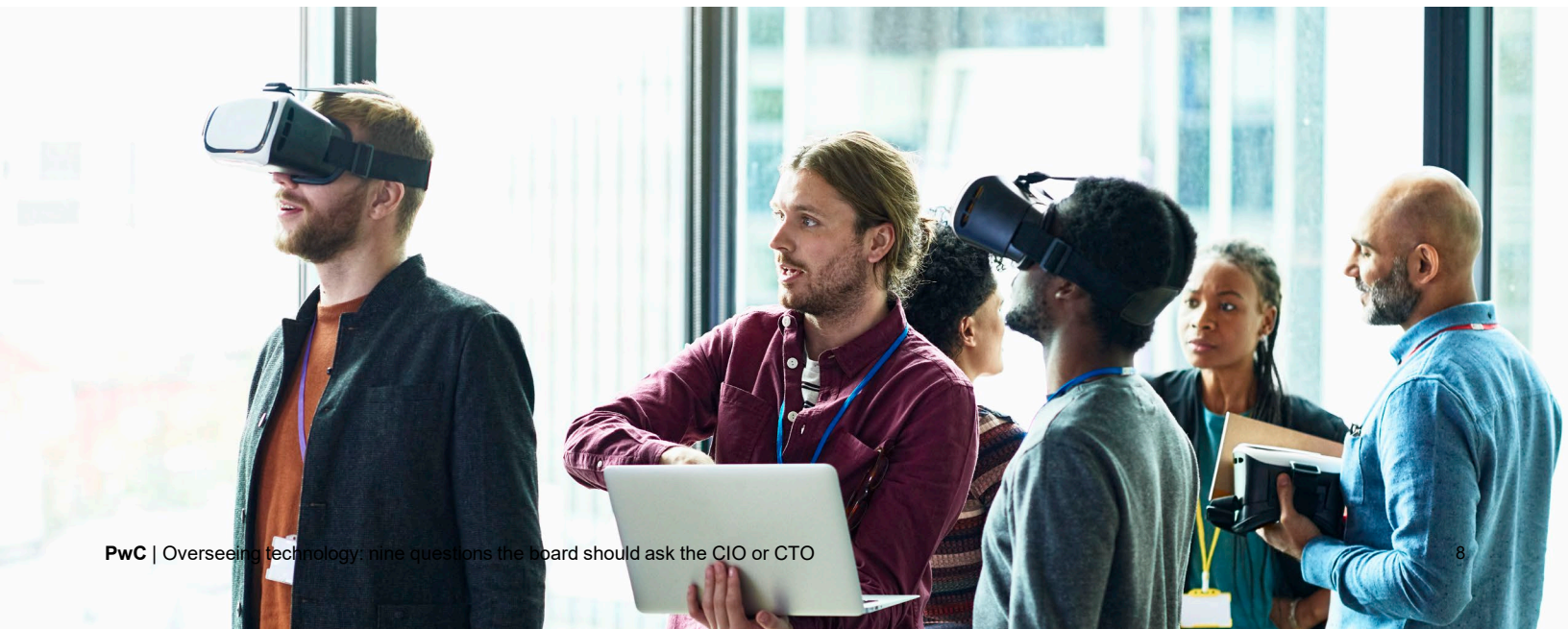
Does our technology spend align with our strategic priorities?

Technology investment is often a major item in the budget, making it important for boards to understand how management expects these expenditures to benefit the company. Understanding the balance of IT spending aimed at maintaining critical business operations to investments in enhancing capabilities and remediating technical debt is important. There can also be significant “shadow IT” at companies, in which technology expenses occur at the business unit or functional level rather than through the central IT function. Directors will want to ask about these expenditures to understand overall technology spend and make sure that investments align with the business strategy.

How are we creating a culture of innovation and upskilling to benefit from modern technologies such as GenAI?

Modern technologies such as GenAI are transforming the workplace, empowering employees to achieve more, faster. To harness these and other opportunities, companies must cultivate a culture of both innovation and responsibility. The company must prioritize upskilling at every level across the organization to develop talent and the new skills needed. The talent strategy should be assessed for new or different skillsets and how that talent will be acquired if needed.

The board should understand management’s philosophy on continuous learning and innovation. Is management investing in customized training and upskilling programs? Encouraging a mindset that embraces new technologies and incentivizes speed and creativity is crucial. Developing the right culture and talent is essential for companies to stay competitive and agile in a rapidly evolving marketplace.



Do we have digital leaders to match our aspirations and a strong governance framework to drive our technological transformation?

This era of digitization and AI, in which mobility and speed are essential, demands a different type of technology leader and an agile governance model. For most companies, the use of technology and data for insights will continue to expand, becoming increasingly complex and impactful. Having the right leadership and governance model will be ever more crucial to make sure that these investments are appropriately considered and effectively executed across the enterprise.

Today's CIO needs to lead proactively, with a deep understanding of the company's business, industry and future direction. There needs to be a strong governance model for decision-making and monitoring investments for success. Boards should assess whether the appropriate leadership is in place to lead the technology strategy and usher the organization through its transformation.



53%

of CIOs think their board is **not very effective at developing relationships** with senior leaders outside of the boardroom

Source: PwC and The Conference Board, *Board Effectiveness: A Survey of the C-suite*, April 2024.

For more information

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