

Technology Innovation and Strategy Primer for 2024

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Initiatives: [Technology Innovation and Strategy](#)

Technology innovation leaders, including CTOs and CIOs, count on technology to enable strategic technology-based business innovation and transformation. They can use this research to identify, assess and guide the operationalization of technology innovations and trends in strategies and roadmaps.

Scope

This initiative prioritizes opportunities of emerging technologies, guides the continuous identification, assessment and monitoring of technology trends, and defines technology strategy and roadmaps.

Topics in this initiative include:

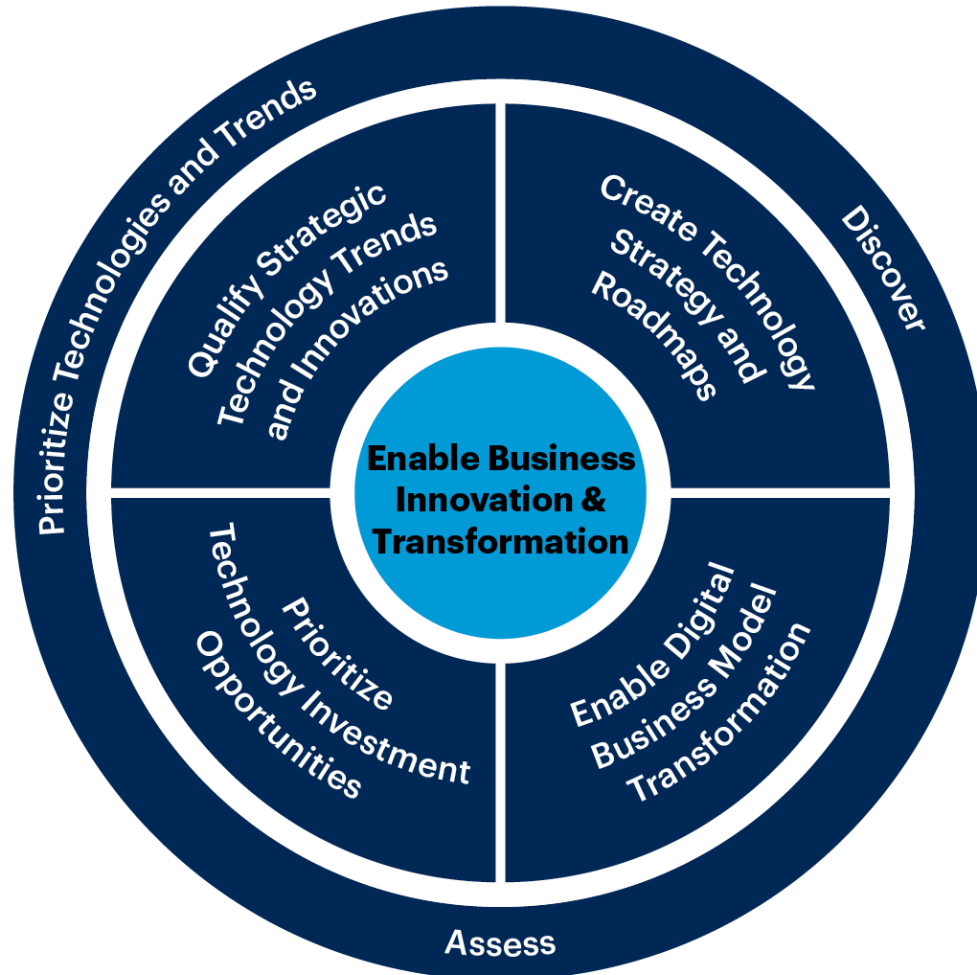
- **Qualify Strategic Technology Trends and Innovations:** Identify the trends and technologies that will impact the organization.
- **Prioritize Technology Investment Opportunities:** Manage a portfolio of technology investment opportunities.
- **Create Technology Strategy and Roadmaps:** Track technologies through the entire life cycle from embryonic to decommission.
- **Enable Digital Business Model Transformation:** Evaluate alternative business models to determine benefits and risks.

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Analysis

Figure 1: Technology Innovation and Strategy Overview

Technology Innovation and Strategy



Source: Gartner
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In an ever-changing and highly competitive business environment, technology innovation is seen as essential for enabling business innovation and transformation. In addition, the 2023 Gartner CEO and Senior Business Executive Survey listed growth and technology as CEOs' top strategic business priorities for 2023 and 2024 ¹ (see [2023 CEO Survey – The Pause and Pivot Year](#)).

Since the beginning of 2023, these priorities have been revisited, and even more emphasis is put on technology innovation. This is mainly due to the unprecedented scaling of generative-AI-based or embedded solutions and propositions.

Furthermore, democratized generative AI will have a great impact on innovation throughout organizations. Gartner believes that by 2026, more than 80% of enterprises will have used generative AI APIs and models, and/or deployed GenAI-enabled applications in production environments, up from less than 5% in 2023 (see [Top Strategic Technology Trends for 2024](#)).

This focus on innovation to support organizational growth will mean that technology innovation leaders, including CTOs and CIOs, should focus on enabling technology-based business innovation and transformation — taking into account the impact of artificial intelligence on each one.

Technology innovation leaders will need to take these four key actions to ensure innovation for their organization:

- Qualify strategic technology trends and innovations
- Prioritize technology investment opportunities
- Create technology strategy and roadmaps
- Enable digital business model transformation

Topics

This initiative guides technology innovation leaders in their mission to drive digital business model transformation. It provides insights into early trends and technologies to assess innovation opportunities that drive technology priorities and investments that are aligned with business strategies. Moreover, it provides guidance to manage the innovation culture and process.

Qualify Strategic Technology Trends and Innovations

Qualifying strategic technology trends starts with identifying key technology trends through trendspotting. Assessing the maturity and readiness of emerging technologies for deployment is crucial to maximize benefits and minimize risks of early adoption.

Questions Your Peers Are Asking

- How do I spot technology innovations, trends and disruptions?
- How do I assess new technology innovations, trends and disruptions?
- How do I manage technology and trend risk?

Recommended Content

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- [Understanding the CTO's Role in Technology Strategy](#)
- [The Gartner Trendspotting Framework: Driving Operations, Innovation and Strategy](#)
- [Getting Started With Trendspotting](#)
- [Use Trendspotting to Identify the Trends That Matter and the Impact on Technology Adoption](#)
- [Tool: How to Build an Emerging Technology Radar](#)

Planned Research

- Distributed technology innovation management
- Managing technology and trend risk
- How to measure the value proposition for trendspotting in technology organizations
- Trendspotting tools

Prioritize Technology Investment Opportunities

Prioritizing technology investment opportunities requires technology innovation leaders to take three actions. They must identify and prioritize technology innovation opportunities; develop a standardized approach to a digital investment strategy; and develop a strong technology innovation investment strategy with targeted objectives.

Questions Your Peers Are Asking

- How do I select technology innovation opportunities and investments?
- How do I prioritize technology opportunities and investments?
- What are the best practices, processes, projects and approaches to fund technology innovation?

Recommended Content

🔒 Some recommended content may not be available as part of your current Gartner subscription.

- [Innovation Insight for Generative AI](#)
- [What to Do If You Can't Trust GPS](#)
- [Technologies to Watch October 2023: Microbial Fuel Cells, Microbots, Robot Training and Quantum Innovation](#)

Planned Research

- Top strategic technology trends for
- Technologies to watch
- Hype Cycle for Emerging Technologies, 2024
- Architecting for business-led innovation

Our research in this area addresses the following topics:

Create Technology Strategy and Roadmaps

Creating a technology strategy and the roadmaps to support IT requires alignment to and support of business strategies through either top-down business requirements or bottom-up technology enablement. The technology strategy (for example, a generative AI or metaverse strategy) is then visualized and communicated with the use of technology roadmaps.

Questions Your Peers Are Asking

- How do I choose technology to support organizational sustainability goals?
- How do I create specific technology strategies and roadmaps (e.g., AI, ChatGPT, cloud)?
- How do I develop actionable roadmaps from business and IT strategy to realize strategic objectives and key results?

Recommended Content

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- [Four Flavors of IT Roadmaps](#)
- [Roadmapping Effectiveness Diagnostic](#)
- [Tool: Templates for CTOs to Create Effective Technology Roadmaps](#)
- [A CTO's Guide to Open-Source Software: Answering the Top 10 FAQs](#)
- [A CTO's Guide to Navigating the Cloud-Native Container Ecosystem](#)

Planned Research

- The difference between a technology roadmap and a strategic plan
- The impact of implementing new technology on your existing technology landscape (e.g., architecture, infrastructure, data and security)
- Architecting for business-led innovation
- Compute evolution: Virtual machines, containers, serverless — which to use when

Enable Digital Business Model Transformation

Enabling digital business model transformation requires organizations to sense and respond to the opportunities and threats that emerging technologies will bring. Technologies like generative AI and others have the potential to upend industries and require a deep understanding of the impact of these technologies on industries. Organizations need to know how to leverage innovative technologies to transform their business models, products and services to ensure sustainable digital business.

Questions Your Peers Are Asking

- [How do I build a digital foundation and product capabilities?](#)
- [How can I facilitate transformative changes to our business and operating models?](#)
- [What does a good technology strategy look like for digital business transformation?](#)

Recommended Content

🔑 Some recommended content may not be available as part of your current Gartner subscription.

- [Building a Digital Future: Emergent AI Trends](#)
- [Integrated Technology Planning \(PG&E\)](#)
- [Use Value-Investing Principles to Prioritize Technology Innovation Investments](#)

Planned Research

- [Generative AI strategy](#)
- [Scaling generative AI across the enterprise](#)
- [What technology innovation leaders need to know about digital foundations](#)

Suggested First Steps

- [Top Strategic Technology Trends for 2024](#)
- [Hype Cycle for Emerging Technologies, 2023](#)
- [Hype Cycle for Generative AI, 2023](#)

Essential Reading

- [Getting Started With Trendspotting](#)
- [Use Trendspotting to Identify the Trends That Matter and the Impact on Technology Adoption](#)
- [Technological Implications of Generative AI](#)

Evidence

¹ 2023 Gartner CEO and Senior Business Executive Survey. This survey was conducted to examine CEO and senior business executive views on current business issues, as well as some areas of technology agenda impact. The survey was fielded from July through December 2022, with questions about the period from 2022 through 2024. One-quarter of the survey sample was collected in July and August 2022, and three-quarters was collected from October through December 2022. In total, 422 actively employed CEOs and other senior executive business leaders qualified and participated. The research was collected via 382 online surveys and 40 telephone interviews. The sample mix by role was CEOs (n = 277); CFOs (n = 95); COOs or other C-level executives (n = 19); and chairs, presidents or board directors (n = 31). The sample mix by location was North America (n = 169), Europe (n = 105), Asia/Pacific (n = 102), Latin America (n = 29), the Middle East (n = 11) and South Africa (n = 6). The sample mix by size was \$10 million in revenue to less than \$50 million (n = 3), \$50 million to less than \$250 million (n = 51), \$250 million to less than \$1 billion (n = 102), \$1 billion to less than \$10 billion (n = 190) and \$10 billion or more (n = 76).

Disclaimer: Results of this survey do not represent global findings or the market as a whole, but reflect the sentiments of the respondents and companies surveyed.

Document Revision History

Digital Future Primer for 2023 - 8 September 2023

Related Priorities

Initiative Name	Description
Tech Innovation & Strategy Leadership	This initiative advises how to demonstrate strategic technology innovation leadership by evolving the technology innovation function and strategy operating model.

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