



The CIO's path to driving value with generative AI

How Chief Information Officers can dramatically increase their impact on the business by knowing the right tools to adopt generative AI

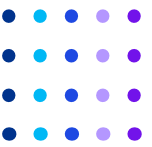
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Introduction

Generative AI has captured the attention of nearly every business leader with its promise to reshape service delivery models, dramatically increase productivity and efficiency, enhance the user experience, speed innovation and more. CIOs can play a pivotal role in realizing that promise. As the leaders of generative AI implementation, they have an opportunity to truly transform their businesses.

It will be a collaborative effort, to be sure. The CFO may be responsible for value and use-case management, prioritizing efforts that promise to provide the greatest return on investment. The CRO can help identify and mitigate the risks that are inherent in this new technology. Yet the CIO can be at the center of this revolution—provided they're prepared to act quickly to handle both the tactical and strategic challenges. The opportunity may be fleeting, but for the moment, the role of "generative AI leader" may be up for grabs.

In this paper we look at how CIOs can help their companies use this powerful technology to become stronger competitors, and in the process reinforce their value as a key strategic partner to the business.



Be the driving force in generative AI strategy

Generative AI has the potential to remake processes, enable new operating models (including IT's own), and help achieve company-wide strategic goals, such as productivity improvements, revenue uplift and innovation. But, given all the excitement about generative AI and the rapid proliferation of vendors targeting all sorts of applications, there is a great risk of a free-for-all. Departments, business units, and functions could easily start generative AI implementations on their own, leading to waste, duplication, and incompatibilities.

CIOs are in a position to prevent the chaos, work with the business to define generative AI strategies, and drive organization-wide adoption. And, by demonstrating a clear vision for generative AI, guiding its strategic and ethical use, and fostering collaboration across departments, CIOs can prove they are proactive, forward-thinking, innovative leaders who are essential to the organization's growth and success.

Not only can CIOs help develop an overall strategy for generative AI and establish clear pathways for adoption by business units, but they can also make sure that adoption does not interfere with or duplicate other efforts. Generative AI adoption needs to fit with the organization's overall digitization and digital transformation plans, as well as with near-term performance improvement efforts. The CIO is also the leader who can see where generative AI might improve collaboration across functions—and head off conflicts. CIOs can also determine how generative AI fits into the company's data strategies—deciding what data can and should be used for large language models and what needs to be kept separately, and what new data should be acquired.

How to do it? We can draw lessons here from the introduction of other transformative technologies. When the cloud was introduced, for example, many saw it simply as a less costly replacement for their existing data centers by eliminating the traditional IT operational overhead, with the added benefit of converting capital expenses to operating expenses. Legacy applications could

be “lifted and shifted” there, or more easily replaced with modern and fully managed software-as-a-service (SaaS) alternatives.

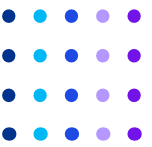
Cloud hasn't become the great money saver many had hoped for—indeed, most have learned it's just the opposite.¹ But it has become an enabler of transformative operating models and even entirely new business models—a source of value creation. Those who recognized this potential early on seized a significant advantage.² Generative AI now presents a similar opportunity, with the CIO at the helm.

To get a handle on generative AI strategy, CIOs might think about platforms like ChatGPT as something like the arrival of the iPhone. Before Apple's 2007 announcement, there were smart phones, but they couldn't do much more than send emails. Arguably, Apple's breakthrough innovation was not the iPhone itself, but the app store and developer ecosystem created around it. That provided easy access to a world of entertainment, information, and applications that made smartphones useful and accessible to everyone. Today, smartphones are cameras, GPS navigation systems, movie screens, language translators, payment devices, exercise trackers, boarding passes—the list is seemingly endless. It's those apps that have transformed business models, the economy, society, and our lives.

Generative AI opens access to artificial intelligence in a similar way to how the iPhone made smartphones ubiquitous. But in a corporate context, the CIO must be a facilitator for adoption for the organization to get the most value out of this revolutionary technology and avoid the pitfalls.

¹ See “[Adopt a cloud-first IT strategy](#),” KPMG LLP, 2022

² See “[Taking control of cloud costs: the FinOps imperative](#),” KPMG LLP, February 2023



How to get started: the first 90 days

How should CIOs implement the generative AI capabilities the business is asking for? How will they secure the new tools and data? How will they ensure the company is using the right data—and not exposing proprietary data or somebody else’s intellectual property? How will the new applications align with legal or regulatory requirements? How will they measure adoption and usage? How will they verify the anticipated value is being realized?

Working with clients and from our experience implementing generative AI at KPMG, we have developed a “**First 90 Days**” approach.

Day 1

On day one, it’s crucial to establish a clear generative AI strategy and roadmap, including identifying the business problems that generative AI can solve, the desired outcomes, and the timeline for adoption. That strategy and roadmap involves five key components:

- 1 Privately instanced large language models (LLMs)**
- 2 Enterprise data sources**
- 3 Enterprise use cases**
- 4 API development ecosystem**
- 5 Third-party generative AI solutions**

It all starts with privately instanced LLMs, which serve as the foundation for generative AI within an organization, allowing for secure, customized solutions that cater to specific needs. The next four then build upon this groundwork and should be strategically prioritized and integrated based on the organization’s unique requirements.

For example, an IT-focused organization that invests significant time in code development may prioritize the implementation of third-party generative AI such as code development enablers, to help achieve efficiency gains and streamline their development processes.³ Alternatively, for organizations in heavily regulated industries, prioritizing enterprise data sources can be vital because it allows employees to access the right information swiftly and enables them to adhere to stringent regulatory constraints. This personalized approach can help businesses to derive maximum value from their AI investment while fostering innovation and enhancing overall efficiency.

³ “[Generative AI and the software development lifecycle](#),” KPMG LLP, September 2023



Days 2 to 30

With a strategy and a set of priorities in hand, CIOs should next conduct a needs assessment, which helps to identify the specific generative AI capabilities that the organization will require, which involves understanding the organization’s current processes, data, and capabilities.

Days 31 to 90

Over the next 60 days, CIOs will select and deploy the initial generative AI tools and technologies. This begins by evaluating different vendors and solutions to help identify those that best align with the organization’s strategy and roadmap.

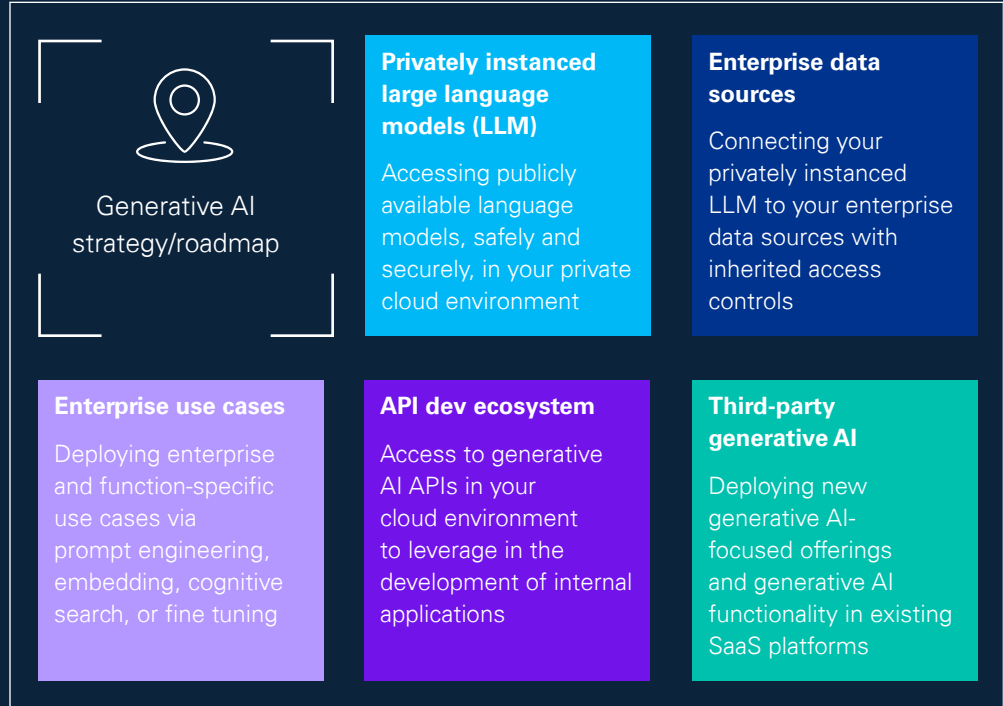
Throughout the 90 days, it’s essential for CIOs to take into account security (data encryption, access controls, etc.), responsible AI to mitigate potential risks such as bias and discrimination, and user adoption (employee training and support).

By carefully selecting the appropriate components of a generative AI strategy and aligning them with the organization’s priorities, companies can effectively harness the full potential of generative AI to drive growth, facilitate collaboration, and pave the way for future success.

90-day plan

Enterprise generative AI

Steps to get started



Built on a strong foundation of:



Transforming IT with generative AI

In addition to helping business units, departments, and functions bring generative AI into their processes, CIOs are also responsible for adoption of the new technology in the IT department itself. Indeed, when we asked top leaders where they expect generative AI to have the greatest immediate impact, the top answer was IT.³ By meeting management's expectations for quick adoption—and rapid payback on investment—the IT department can be a model for how to do generative AI right.

There is no shortage of possibilities in IT. Think about an operations incident manager who might spend hours painstakingly crafting email updates to multiple audiences when incidents occur—one kind of message for highly technical people, another for non-technical senior executives, another for customer service representatives, and so on—until the incident is resolved.

³ See "Generative AI: From buzz to business value," KPMG LLP, 2023

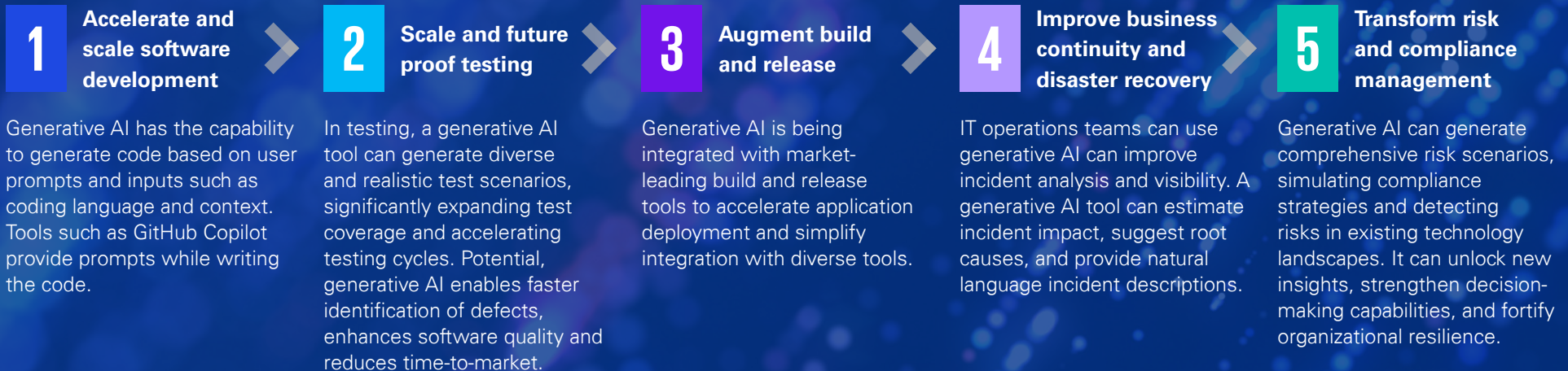
⁴ See "How generative AI can revolutionize the software development cycle," KPMG LLP, 2023

A generative AI tool, guided with proper prompts can read the incident logs and generate detailed, targeted messages as needed until the incident is resolved. That not only frees the manager to focus on resolving the incident but will also speed communications to users and give them more useful information about what's happening.

Importantly, generative AI also has great potential impact for programming. From generating code to testing to distribution and installation, generative AI tools can be used to automate software development steps. Expected benefits include greater developer productivity and improved quality by providing an easy way to test alternative ideas, facilitating adoption of new concepts and programming languages, and generating functional prototypes.⁴

Generative AI in the IT department

Some emerging uses that our clients are assessing or implementing



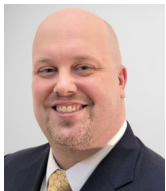
How KPMG can help

An early and enthusiastic advocate for the power of AI, KPMG is well positioned to help your organization adopt generative AI. Drawing on our deep experience in machine learning and natural language processing, we can help guide your organization through strategy, use case development, vendor selection and implementation—and then provide ongoing support to help you enhance your investment in this transformative technology. We understand both the promise of generative AI and the process and cultural changes that will be required to realize its full potential.

KPMG also recognizes that all users of generative AI have a responsibility to learn about the technology's risks and how to control those risks to prevent harm to customers, businesses, and society. Those risks will grow and evolve as AI technology advances and becomes more pervasive, and as public pressure from regulators increases. KPMG can help to develop processes and the right controls to identify and mitigate these risks.

Generative AI is here. Its impacts will soon be felt across markets, businesses, and the workforce. By choosing the right partners and getting started on the generative AI journey, organizations can ensure that they're driving this bold new transformation and realizing the full value—for themselves and for their industry—of the generative AI revolution.

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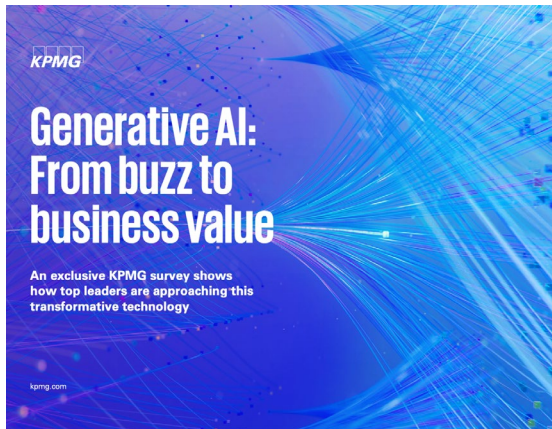


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Learn how KPMG can help make your [generative AI implementation](#) successful, and explore how we can help you [adopt AI](#) in a safe, trustworthy, and ethical manner.

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