KPMG

Unleashing the power of generative AI in procurement

How the technology will transform procurement as we know it

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Introduction

The buzz around generative artificial intelligence (AI) is getting louder by the day. Like many others, procurement leaders are tantalized by the opportunity to improve their function with the innovative technology. In a soon-to-be published KPMG survey of 400 C-suite and SVP/VP executives within procurement and outsourcing, respondents listed generative AI as the top emerging technology expected to impact procurement over the next five years, with 96 percent saying they have already made some progress in implementing generative AI. In internal KPMG simulations, we found that using generative AI in pilot programs can lead to up to 80 percent time savings in some procurement use cases.

However, generative AI's ultimate impact on procurement capabilities, efficiency, and effectiveness is far from clear. Few companies have fully deployed generative AI organization-wide, and reports of large-scale benefits are still outliers. Procurement leaders who are constantly on the hot seat to improve performance still need to gather much more information about generative AI, but their utmost goal is to use the technology to make procurement more effective—driving spend reductions and better serving their stakeholders—and more efficient.

In this paper, we argue that generative AI is a game-changing technology for the procurement function and present potential use cases across the procurement lifecycle. We also discuss key challenges and risks companies may face when adopting generative AI and offer practical tips on how to navigate them to make the most of the technology now—and in the future.

Why generative AI will be a massive disruptor—for the better

Based on our work with clients and our study of 400 procurement leaders, KPMG believes generative AI has the potential to reshape procurement's operating model and its role in the organization. In the long term, procurement staff, such as category managers, will be guided and supported by ever-present and knowledgeable AI agents, arming them with deeper analysis and insights, perspectives, and market intelligence.

Our initial analysis indicates that 50–80 percent of the current procurement work can be automated, eliminated, or shifted to self-service models. The cost of the procurement process today is 0.3–0.9 percent of revenue based on American Productivity and Quality Center 2023 benchmarks with annual cost takeout of 0.6–4.0 percent. Through the adoption of generative AI, we anticipate that procurement organizations can dramatically increase ROI as they achieve a greater level of influence on the organization's procurement decisions and category-leading practices, negotiate spend more often with better insights, and exert greater influence on each transaction while simultaneously reducing the cost of activities the procurement function performs today.

Currently, there are many activities that procurement does not support because it lacks the resources, bandwidth, capability, or credibility. The return on investment does not justify hiring a dedicated category manager to develop a strategy for every single category, a supplier manager to run quarterly business reviews for every supplier, or a procurement professional to strategically manage each spend transaction. But with generative AI, the marginal costs of conducting those activities approach zero, making it possible for procurement to fully support and influence all spend-related activities.

In Exhibit 1, we lay out a number of ways that generative AI could transform the operation of the procurement function.

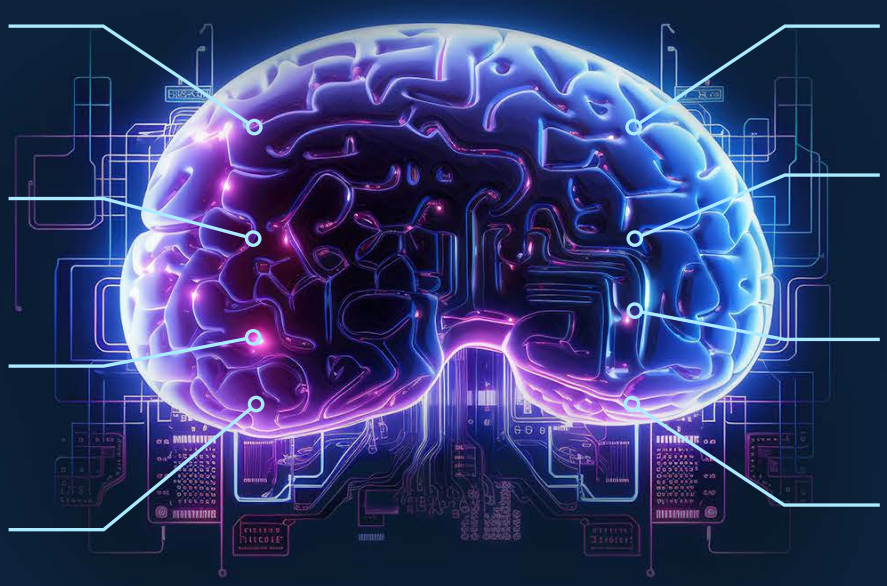
Exhibit 1. Generative AI will transform procurement as we know it

Strategy and insights at scale: All decisions and actions will be informed by real-time AI expert insights (e.g., real-time strategies for all spend categories, etc.).

Extreme personalization: Every output and interaction will be informed by and tailored to the customer, supplier, product, service, and commodity.

Guided everything: Ever-present AI agents will guide all activities, get involved early, and enable smart, compliant decisions.

Democratization of specialty work: Work that currently requires decades of specialty experience will be performed by novice users with AI guidance.



Self-service will feel like full service: Interactions will be proactive, intelligent, helpful, efficient, and frictionless.

Agent versus agent: AI agents will communicate, collaborate, and negotiate with customers, suppliers, and with their AI agents.

Current work reduction of 50–80 percent: The majority of current source-to-pay (S2P) work will be automated or eliminated via self-service or improved productivity.

Shared everything: Services dependent on local/business knowledge will become shared services through AI support.

In sum, we believe the main payoffs from transforming the procurement function around generative AI will be:

Enhanced customer experience: These new capabilities will create highly personalized and relevant content and experiences for individual requisitioners, department or functional leaders, and even suppliers. Interactions will be better guided, intuitive, and streamlined, as generative AI will be able to automatically populate much of the information that users must enter into systems today.

Greater innovation: By utilizing generative AI, procurement can enable the business to foster innovation in its products and services. This will involve using generative AI for market research on new supply market trends, technology disruptions, and emerging value chain models. Additionally, the application of generative AI will expedite sourcing and supplier on-boarding, facilitating the inclusion of new suppliers with innovative capabilities. Finally, procurement will use generative AI to encourage supplier development, ultimately driving targeted joint innovation.

Supplier performance and risk: Generative AI will also help the organization realize the full value of supplier relationships by enhancing the management of supplier performance and risk.

Connected enterprise insights: Generative AI will synthesize insights from the combined dataset of the different procurement tools as well as other datasets utilized across the front, middle, and back office. For example, in the current environment, procurement often learns of requirements when the business initiates a request. Given access to data in upstream systems, such as marketing campaign data, generative AI can predict procurement requirements months in advance.

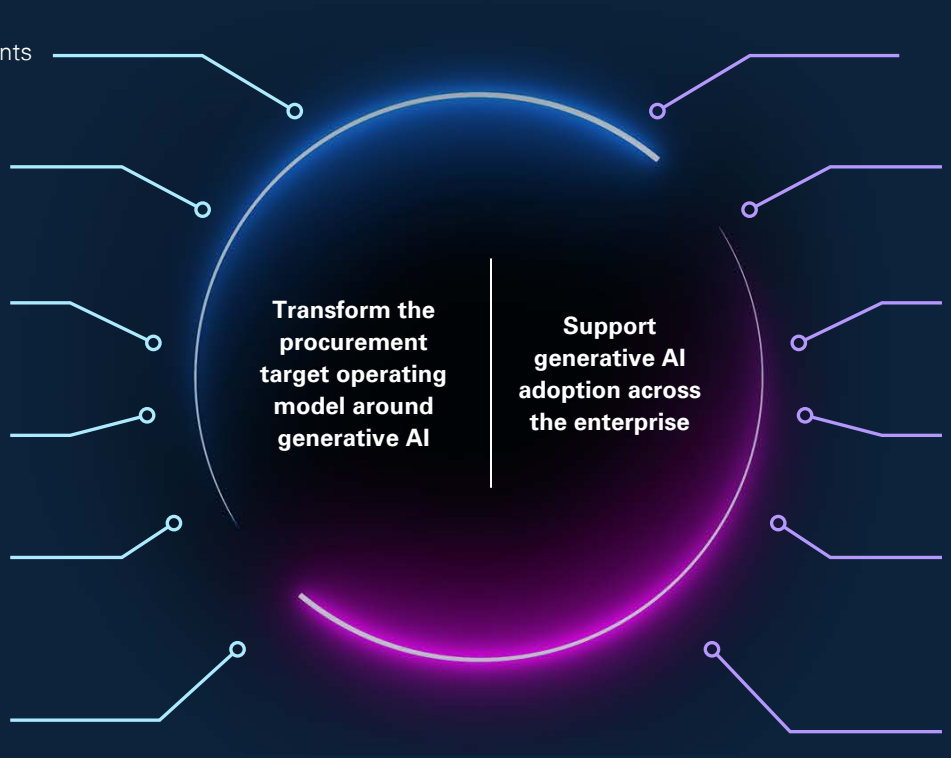
Deeper insights: With guidance from skilled prompt engineers that procurement will likely employ in the future, generative AI will deliver deep insights in category and sourcing strategies, process improvement ideas, and supplier development plans.

Spend savings: Generative AI will enable procurement to influence more of the organization's requirements and demands, develop deeper sourcing insights across a broader array of spend categories, and help the organization arrive at better sourcing decisions.

Increased efficiency and productivity: Working in conjunction with existing systems and tools, generative AI will further automate many procurement activities and will enable greater use of self-service.

Exhibit 2. Procurement will have two generative AI priorities

Apart from transforming itself, procurement will play a leading role in the broader organization's adoption of generative AI. In the coming years, generative AI will drive game-changing productivity and capability improvements in most supply markets. Procurement will need to help its stakeholders across the organization (sales, customer service, IT, HR, etc.) to manage and realize those improvements. Procurement will need to proactively plan for generative AI impacts on key contracts and spend categories, and potentially renegotiate current agreements or identify new suppliers in order to help stakeholder fully realize the technology's value.



Process: Redefine all procurement processes around generative AI, eliminating prior constraints of cost, effort, scale, insight availability, etc.

People and organization: Redefine the organization and new roles around the management, prompting, and approval of AI-performed work.

Technology: Implement the full stack needed for generative AI. Adopt AI in each S2P domain (e.g., risk, invoice, etc.) and across domains.

Data and analytics: Move from static, siloed reporting to real-time domain and enterprise AI insights on demand.

Governance and controls: Reexamine and bolster controls to manage AI-enabled activities. Embed AI in controls environment.

Service delivery model: Enable self-service for virtually all S2P services and expand the universe of what is delivered through shared services.

Lead make/buy across the enterprise: Reevaluate all supply and outsource agreements.

Proactively manage pricing/cost model changes: Ensure sharing of supplier gains and define desired cost models (e.g., value-based, as-a-service, pay-for-use, etc.).

Manage contracting model changes: Define new contract terms and ensure adoption.

Facilitate supplier innovation: Incentivize supplier adoption of generative AI to grow value.

Manage risks of generative AI: Incorporate management of risks, including cyber, IP theft, leakage of value from data, fraud, privacy, quality of output, etc., in procurement activities, supplier interactions, and supplier-delivered capabilities.

Manage supply base risks: Manage elevated risk of supplier failure driven by generative AI disruption, including shifts in the supplier's market, lost business, and new investment demands.

Emerging use cases

Generative AI will support or automate nearly all of procurement across its lifecycle. We highlight potential applications in each stage:

Procurement lifecycle

1. Category management: A challenge for many procurement functions is that they lack resources to field a team of category leaders to develop and update strategy in every spend category, support and influence each stakeholder group, and bring to bear leading practices. With generative AI, activities such as category spend planning and stakeholder-requirements gathering can be automated since AI agents can write entire category strategies. Strategies can also be updated in real time, as needed, for every category, and personalized for every stakeholder.

2. Strategic sourcing: This is the mechanism through which procurement value is delivered in most organizations, however sourcing efforts are often simply treated as a bidding exercise. Limited insights into category leading practices and limited ability to capture and rationalize requirements result in incremental, rather than step-change, improvements. Some small categories are rarely, if ever, addressed. With generative AI, activities such as RFx development, response review, and summarization can be automated. Insights derived from category management can be applied to develop more strategic approaches to maximize value. In our survey of procurement leaders, approximately half of respondents indicated that they see application of generative AI as an emerging theme that will impact sourcing strategies in the next 3–5 years.

3. Contract lifecycle management (CLM): Historically, technology and data limitations made it difficult for organizations to maintain central visibility and control of all their agreements, limiting efforts to drive compliance to contract. Only half of procurement leaders responding to our survey reported being at least "somewhat satisfied" with their CLM capabilities. Generative AI is a perfect fit to address these challenges: it can read and understand contracts, recommend changes, and draft contract language. It can also generate intelligence about the organization's portfolio of contracts and highlight compliance gaps and commercial risks. The market for generative AI-enabled CLM solutions is packed with many providers offering slick functionality and customer success stories. We expect these, as well as custom solutions for contract lifecycle management, to be broadly adopted in the next one to three years, outpacing other generative AI applications in procurement.

Emerging use cases

Generative AI will support or automate nearly all of procurement across its lifecycle. We highlight potential applications in each stage:

Procurement lifecycle

4a. Supplier risk management: Our survey respondents indicated that they are not highly confident that their supplier risk management/mitigation is currently being executed efficiently and effectively. They identified the greatest supplier risk management gaps in third-party risk (87 percent), vendor screening and due diligence (75 percent), and performance management capabilities (75 percent). A generative AI agent can assist the gathering of risk data through direct supplier outreach and interaction, analysis of supply market data, analysis of supplier performance, and review of internal company factors such as demand changes. It can also synthesize disparate data elements into predictive risk insights and can recommend strategies for resolution. All this, with a near zero marginal cost.

4b. Supplier relationship management: Survey respondents indicated that their top three challenges inhibiting effective and efficient supplier relationship management are obtaining needed performance data, strategically managing strategic suppliers, and inefficient supplier management processes. We see an opportunity for generative AI to take on the job of data gathering, obtaining data through direct interaction with suppliers and internal company personnel, and gathering sentiment analysis from meetings and emails. Generative AI will also synthesize data from across disparate internal systems, including changes in delivery performance, quality, and delivery lead times. It is also capable of conducting autonomous scorecard readouts with the organization's mid-tier and smaller suppliers, allowing human supplier managers to focus their time on strategic suppliers. Generative AI can even improve those strategic interactions by preparing analysis and recommending areas of focus for performance improvement and innovation.

5. Requisition to receive: In most large organizations, much of the requisition to receive process is already automated. But requisitions that do not follow an optimized automated path typically drive long cycle time, potential for non-compliant spend, frustrated users, and internal procurement cost. With generative AI, the vast majority of those requests can be accommodated via an automated assistant that will provide intelligent, high-touch support that helps users find and buy what they need from the right supplier at the right price in compliance with the company's existing supply agreements and policies. The assistant may even help users interact with suppliers to identify and define purchase options and solicit and negotiate quotes. Given speed and cost advantages, organizations may choose to pass all purchases, even those that are fully automated today, through a generative AI agent to evaluate optimization opportunities (such as demand management, supplier negotiation, or spot buys) on a transaction-by-transaction basis.

6. Invoice-to-pay: Many organizations have automated key elements of their invoice-to-pay process, utilizing e-invoicing, automatic matching, and approval workflow engines. However, even organizations with mature invoice-to-pay capabilities see challenges in processing of paper invoices and dealing with exceptions preventing automatic matching and payment. Generative AI has the skills to improve on existing optical character recognition and exception management processes. It can even directly contact suppliers to clarify and address mismatches or issues to ensure accurate invoice processing and eliminate bottlenecks that result in late payments to suppliers.

Phases of generative AI adoption in procurement

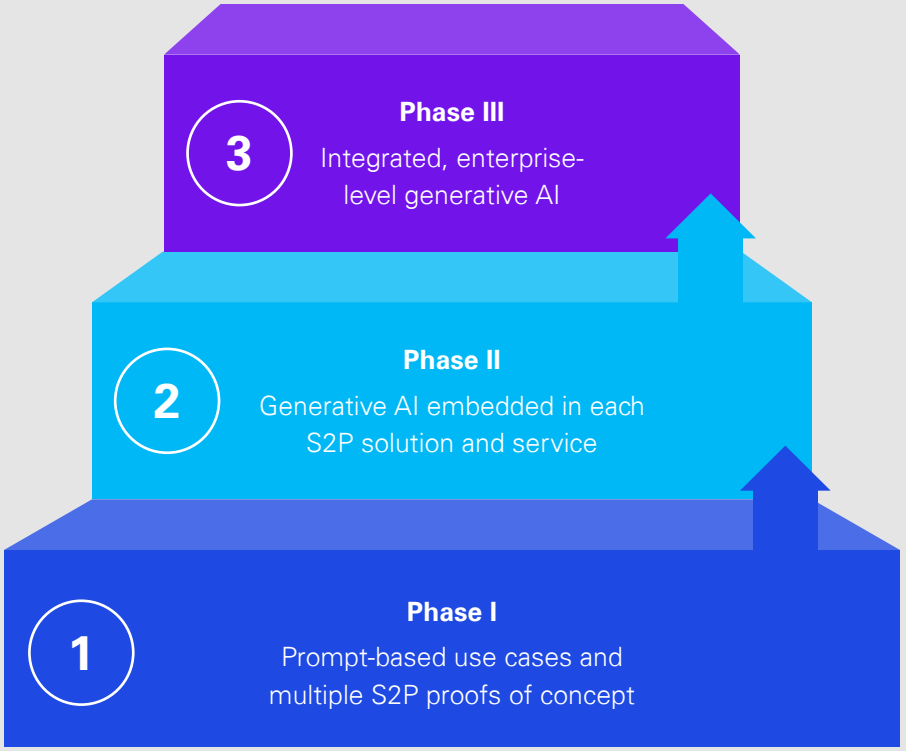
We see three phases of adoption for generative AI in procurement that are likely to play out over the coming 3–5 years (Exhibit 2). But organizations need to think about all three today to set in motion the right strategies, activities, and investments, and to navigate potential risks.

Phase I: We are currently in this first phase, which is characterized by organizations testing multiple source-to-pay (S2P) proofs of concept (POCs) with generative AI. Tech-savvy employees in procurement at many companies are already prompting generative AI tools to get suggestions or content to support routine tasks (e.g., research, writing category strategies, and writing requests for proposal). These prompt-based interactions will provide workforce augmentation opportunities to key knowledge workers such as category managers and will help the organization build a broader understanding of generative AI opportunity areas and business case. However, these prompt-based use cases will not be integrated into existing processes and applications.

Phase II: In the second phase, organizations will build on the first phase, adopting generative AI features and capabilities introduced by current S2P solution providers. In addition, procurement organizations will implement offerings from upstart solution providers specializing in generative AI. Adoption of these offerings will yield significant improvements in user and employee experience, automation rates, and effectiveness of key tasks. While embedded generative AI solutions may not fully deliver end-to-end connected enterprise insights, they will deliver deeper insights within the data domains of individual solutions. Organizations will need to manage the risk of proliferation of multiple disparate AI user interfaces that each user will have to interact with.

Phase III: During this phase, organizations will move to deploy a common, integrated, enterprise-level generative AI across all functions, spanning individual solutions and datasets. (Phase I, II, and III solutions will coexist in the future.) Unlike function-specific AIs, enterprise-level generative AI will be able to effectively deliver wide ranging insights about the business and operations. Processes will be redefined around generative AI, enabling a transformation of the operating model. This may lead to a 50–80 percent reduction in current human S2P work, but new procurement roles, such as a "supply innovation leader," could be added to tackle new market and technological opportunities that generative AI may unlock.

Exhibit 2. Generative AI will be adopted in three phases



Challenges to adoption

A caveat that business leaders must understand is that generative AI is not limited to a few isolated use cases. Realizing the complete value of generative AI will require full enterprise transformation, scrutinizing every layer of the target operating model around generative AI. Ensuring a proper infrastructure is in place is crucial. A program that lacks the data necessary to enable AI insights or the governance and controls to deliver the responsible AI capabilities the organization expects will result in a less-than-thorough foundation and an improperly functioning program, opening an organization up to litigation, negative public relations, the loss of customers, a dip in profitability, and unwanted attention from regulators.

We expect that the pace of generative AI adoption will be much faster for the "haves"—organizations that have fully integrated technology and data environments—than for the "have nots"—those whose technology and data environments remain fragmented and siloed. For some "have nots," the business case for generative AI adoption may be the decisive factor in making investments to better integrate their systems and data.

Opportunity often comes with risk. In the KPMG Generative AI Survey from July, we found that the most significant barriers to implementing generative AI included concerns about an uncertain regulatory landscape, lack of skilled talent to develop and implement, and an inability to pivot legacy applications and systems. Error, fraud, misuse, loss of intellectual property, and other risks will remain major considerations for years to come. Generative AI can also raise ethical concerns, such as the possibility of unintentional bias or discriminatory outputs.

Businesses also need dedicated digital literacy initiatives to empower and enable their employees to get the best out of generative AI. Education, experimentation, and a positive culture of responsible adoption will all be essential to support generative AI solutions. Specialized knowledge of prompt engineering and using the outputs of generative AI in a responsible manner are also critical for sustained success.

Each business must build an institutional framework that is true to its risk tolerance, cultural complexity, and investment appetite for technology-led transformation.

Getting started

Each business must build an institutional framework that is true to its risk tolerance, cultural complexity, and investment appetite for technology-led transformation. But there are some common steps we recommend to build out a generative AI program:

1. **Target value:** Generative AI brings capabilities that can close long-standing gaps that have plagued procurement organizations. Among other capabilities, generative AI assistants can address end-user and supplier inquiries efficiently and can drive improved service. It can also help the organization implement standard contract terms and manage compliance to contract pricing. A key first step is to assess where generative AI can add value, and to define specific use cases that the organization can explore through proof-of-concept efforts.

2. **Build momentum:** Start small. Once you've identified and scoped a few use cases, start building them, then expand their scope as you prove out the value. There's no need to identify every procurement use case before you launch proofs of concept. Scoring some quick wins can help build momentum.

3. **Assess solution provider offerings:** If they have not yet, your independent software vendor (ISV) partners will approach you promising new generative AI-enabled capabilities. Consider whether these capabilities will drive tangible benefits and consider the impact of that S2P provider's offering on the overall future S2P architecture. Keep in mind the risk of a fragmented UX from too many generative AI assistants. Also, consider build versus buy options: many organizations are leveraging off-the-shelf generative AI LLMs and other models to develop solutions where their requirements and environment benefit from specific capabilities.

4. **Get ready:** Assess your organization's readiness to scale procurement generative AI capabilities. Many organizations have gaps across the target operating model and will require foundational improvements in functional process, data, technology, organization, service delivery model, and governance and controls. We anticipate that many organizations will need to make foundational improvements in their data quality, completeness, and integration to scale generative AI solutions and realize full value. Early generative AI efforts (E.g., phase 1) will help to discover data needs as well as gaps that will need to be resolved.

5. **Lead on generative AI:** Procurement leaders often complain that their organization lacks a "seat at the table" with the business and is seen more as a compliance and transaction processing group than as a strategic partner. The coming step-change generative AI productivity improvement across the supply market presents an opportunity for procurement to be proactive and take the lead in assessing the opportunity and leading on the activities needed to realize the benefits and protect the organization's interests.

6. **Ensure responsible AI:** A successful generative AI implementation must proactively address risks and security implications, including accuracy of outcomes, data protection and privacy, and loss of intellectual property. A governance strategy is needed to help ensure that generative AI solutions can be scaled across the organization in a trusted and secure manner while allowing for innovation and adoption. As part of responsible AI, procurement must consider how generative AI will impact its interactions with its multitude of stakeholders, including requisitioners, suppliers, and other partners.

How KPMG can help

As an early and enthusiastic advocate for the power of AI and a leading procurement advisory firm, KPMG is well-positioned to help your organization leverage generative AI in procurement. Drawing on our leading procurement insights and deep expertise enabling a variety of generative AI solutions, 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. Our experience enables businesses to see the potential benefits of this technology across a wide range of shared services and design a service delivery framework that help leverage the most appropriate internal, external, or blended capabilities.

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. We can help you develop processes and the right controls to identify and mitigate these risks.

Generative AI is here, and 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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KPMG Generative AI Survey

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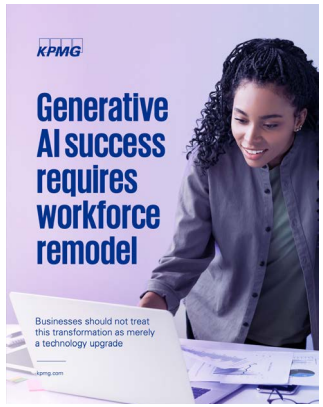

Generative AI success requires workforce remodel

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