Shaping the intelligent enterprise

Advancing beyond single-point AI use cases to agentic workflows

Executive summary

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Foreword

The AI-powered enterprise is becoming an operational reality. When we began this research in late 2024, few could have anticipated just how rapidly agentic AI would move from experimental technology to live deployment. Today, intelligent tools are reshaping flows of work and redefining human-system relationships.

We learned that the most successful enterprises are those that understand a simple truth: Real value comes not from individual AI use cases, but from intelligent, enterprise-wide orchestration. That requires more than technology investment. It demands new thinking about operating models, governance, data architecture and workforce design.

The challenge is profound. Many enterprises are still constrained by structures optimized for task-based automation, but the real opportunity lies in enabling adaptive, self-optimizing workflows. As agentic AI matures, the shift in focus from output to orchestration will determine which enterprises realize the full value potential of AI.

KPMG firms are working with clients around the world to help them navigate this transition and we conducted this research to provide our clients with an actionable and practical blueprint. I hope the cross-sector findings in this report provide both insight and inspiration as you build a truly intelligent enterprise.

Adrian Clamp
Global Head of Connected Enterprise
KPMG International

> “As geopolitical disruption, economic uncertainty, and an AI-fueled technology race redefine the global business landscape, organizations can no longer rely on legacy models of growth and resilience. The path forward demands intelligent enterprises, become adaptive, orchestrated and AI-enabled at their core.”

Introduction: The new frontier of enterprise intelligence

To understand how AI is transforming cost efficiency and revenue growth, KPMG engaged with more than 1,400 senior executives across eight sectors. Over the course of this research, we have witnessed one of the fastest and most profound shifts in the trajectory of artificial intelligence.

The pace of technological advancement has outstripped even the most bullish expectations. Generative AI, once the poster child for creative content and natural language processing, has now been rapidly joined and in many respects overtaken by a new paradigm: agentic AI.

Agentic AI moves beyond individual use cases and into the orchestration of entire workflows. It empowers software agents with autonomy and context awareness, enabling decisions, and continuous learning across systems and processes.

Yet this potential is bumping up against structural realities. Our cross-sector study reveals that hybrid operating models, which combine functional depth with agile responsiveness, boost AI return on investment (ROI) by 10 percent when compared to traditional operating models. However, because these hybrid models are optimized for single-point AI applications instead of the end-to-end orchestration that agentic systems require, they are starting to reach their limitations.

As a result, many enterprises are stuck at a strategic crossroad. To capture the next wave of AI-driven value, they must now shift from a model optimized for efficiency to one designed for intelligence. This demands a reimagining of how they structure, govern, and enable their enterprises. In this paper, we identify the trends that are shaping AI maturity across sectors and offer recommendations that can enable organizations to successfully navigate the next wave of AI evolution.

> “As costs come down, existing markets will grow and new ones will emerge. AI will open up new things that have not yet been done before. [The] real value lies in exploring new possibilities, which offer greater competitive advantages.”
>
> **Erik Brynjolfsson**
> Professor and Senior Fellow at the Stanford Institute for Human-Centered AI (HAI)
> Director of the Stanford Digital Economy Lab

AI has moved into the mainstream

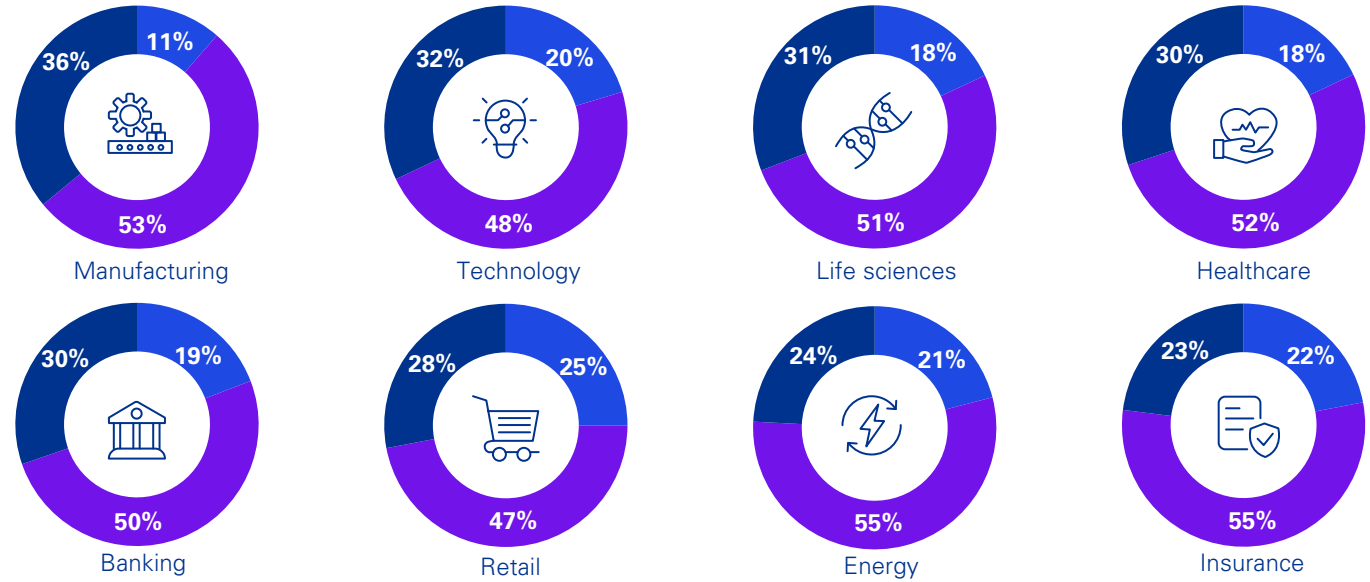
Many companies began their journey through proof-of-concept experiments, followed by scaling successful use cases across functions. Today, AI has become foundational to the modern enterprise, with wide recognition of its strategic importance: Eighty-six percent of executives believe that enterprises that embrace AI in their industry will gain a competitive edge.

Evidence from the first waves of AI adoption, largely focused on automating discrete tasks and enabling individuals and teams, show this belief is no longer theoretical. In our study, 71 percent of respondents report measurable efficiency improvements and 43 percent attribute revenue growth directly to AI initiatives. For those who have scaled effectively, the payoff is clear: Fifty-eight percent have already achieved moderate (>10 percent) to very high ROI from AI investments.

Despite impressive early results, much of AI's value has been captured through point solutions and functional deployments — so although AI has streamlined processes, it has not yet fundamentally changed how enterprises work.

Figure 1: Impact on return on investment (ROI)

Return on investment (ROI) from AI initiatives (among those who measure it)



To the best of your knowledge, what has been the estimated return on investment (ROI) from your organization's AI initiative so far? Banking (n=129), Insurance (n=138), Retail (n=120), Technology (n=128), Manufacturing (n=114), Energy (n=124), Life sciences (n=133).

Source: Shaping the intelligent enterprise: Advancing beyond single-point AI use cases to agentic workflows, KPMG International, 2025

Sectors are at different stages of AI maturity

The data confirms that AI is now mainstream across sectors but with important differences in maturity and investment dynamics.

> We approach [AI] with excitement, but also with a lot of caution. We don't want to have the tool provide input that's going to be relied on by our employees or our regulators without having a means of validating the data. There's still a human involved in every aspect of the output from Gen AI just to ensure accuracy.

Chief Risk Officer, Energy company — US

Overall, our analysis shows that leadership is the biggest driver of maturity. Clarity of vison, strategic alignment, a focus on operational agility and ethics all drive higher levels of AI maturity and ROI. There is a correlation between length of time working with AI and leadership and organizational maturity.

The technology sector finds itself in a unique position as creator and user of its own innovations. Historically, efforts and resources have been concentrated on driving customer-facing use cases, accelerating innovation cycles, enhancing product capabilities and enabling external adoption. However, this has often come at the expense of transforming internal operations, workflows and ways of working.

Life sciences enterprises, on the other hand, have been using AI for several years and have a high level of maturity. Significant AI capabilities are already embedded across drug development, imaging and precision medicine. In this sector AI is a core strategic enabler rather than an experimental technology.

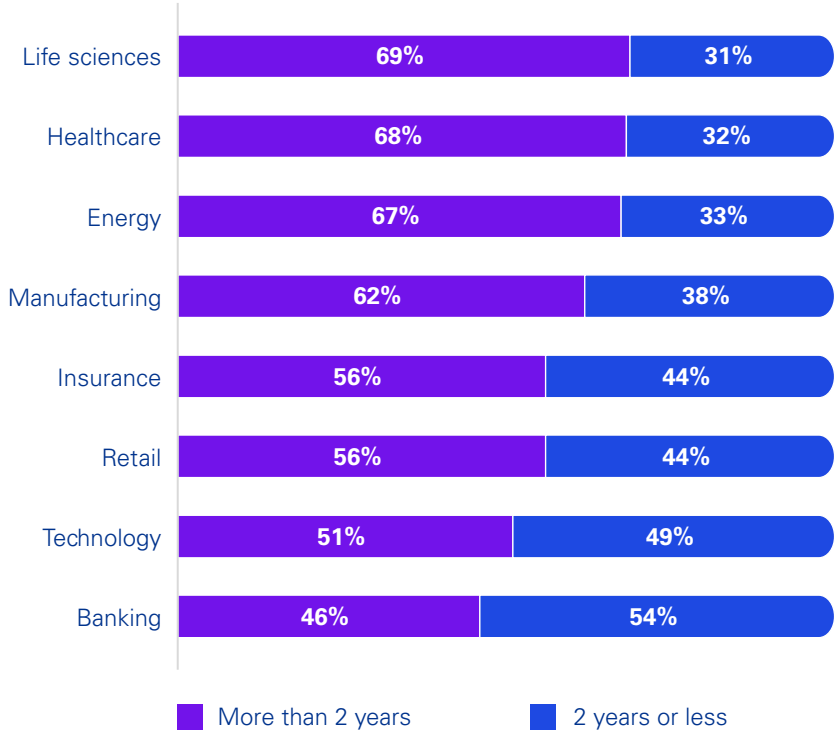
Financial services subsectors are moving at varying speeds. Insurance enterprises, for example, have been particularly careful in their implementation of AI, concerned about regulatory impacts and inhibited by highly siloed functions and legacy systems; however, they are now increasing their level of investment and focusing on areas like claims response and management. But in the banking sector, enterprises are achieving AI-driven cost savings, primarily in the areas of fraud detection, customer service and personalized marketing, although it has yet to see revenue growth.

Healthcare and manufacturing enterprises also report a relatively long history of AI usage, particularly in specialized areas such as clinical decision support, diagnostics, predictive maintenance and supply chain optimization. However, investment levels in these sectors are more variable, often constrained by legacy infrastructure and regulatory complexity.

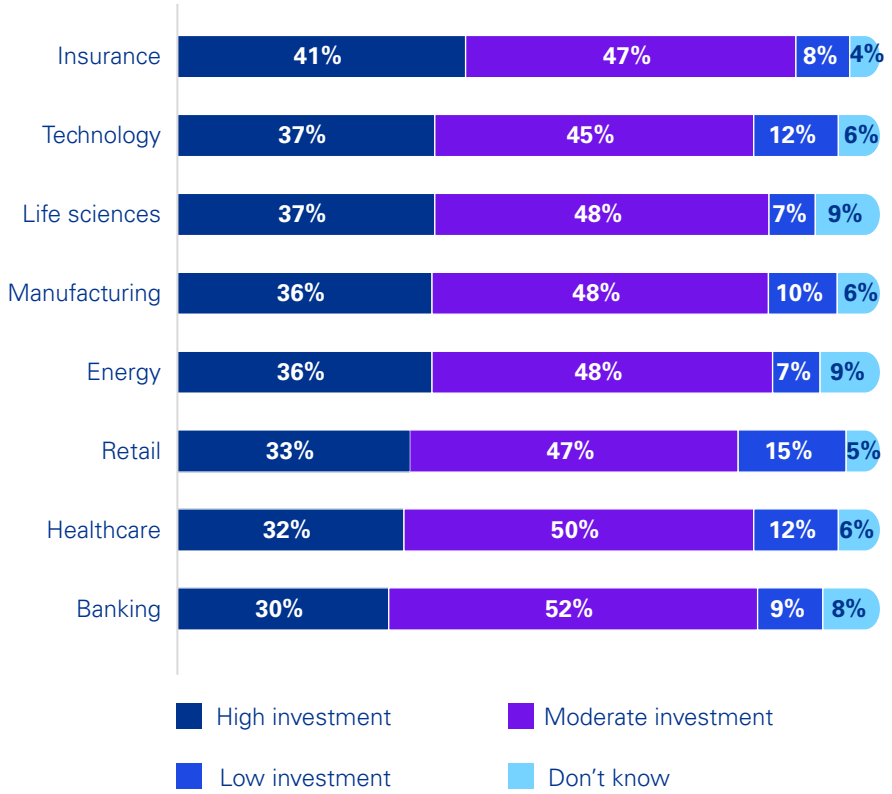
Retail shows a contrasting profile: While many retailers are relatively newer adopters of AI, investment growth is strong, driven by the need to accelerate personalization, optimize merchandising and enhance digital customer experiences in highly competitive markets.

Figure 2: Length of time using and investment in AI

Time using AI



Investment in AI



How long has your organization been using artificial intelligence (AI)? To the best of your knowledge, what percentage of your organization's global technology budget goes towards AI initiatives (e.g. customer services automation, predictive analytics, AI driven product development, etc.)? Banking (n=183), Insurance (n=183), Retail (n=163), Technology (n=183), Healthcare (n=183), Manufacturing (n=163), Energy (n=163),Life sciences (n=183)

Source: Shaping the intelligent enterprise: Advancing beyond single-point AI use cases to agentic workflows, KPMG International, 2025

Adapting to a disruptive world

The research shows that companies are investing in new capabilities that their operating models are not yet designed to support. Without structural change, AI's potential value will be trapped in functional silos and disconnected initiatives.

The commercial world stands at a pivotal moment. Businesses today face an escalating convergence of pressures, from geopolitical volatility and persistent economic uncertainty to an intensifying, AI-fueled technology arms race. These forces are triggering a strategic crisis that demands urgent, fundamental change.

The traditional functional operating model, which has underpinned enterprise organization for over 300 years, is now a structural constraint. Designed for efficiency and control within siloed departments, it is increasingly incompatible with the speed, complexity and interconnectedness of today's business challenges. Organizations should now move beyond incremental change and rapidly reconfigure their operating models to prepare for a new era of structural evolution.

At the heart of this transformation is a shift in focus, from internal functions to value creation across the enterprise. Businesses will need to orient themselves around value streams: the cross-functional, end-to-end processes that deliver outcomes for customers and stakeholders. These value streams provide the essential platform for embedding AI and other transformative technologies.

However, this transition is not straightforward. It requires organizations to confront a series of entrenched, systemic challenges, including the fragmentation of data, the lack of interoperability across legacy systems and deep capability gaps in adopting AI-enabled technologies. Overcoming these barriers demands not only investment in technology, but a radical rethinking of enterprise architecture, skills, governance and ways of working.

The traditional functional operating model, which has underpinned enterprise organization for over **300 years**, is now a structural constraint.

Agile digital foundations: A prerequisite for AI success

Sixty-six percent of organizations cite data as their most significant challenge, with issues spanning poor quality, restricted access, fragmented storage and integration problems. But this is not just a technical issue; it is rooted in how organizations are structured.

In most organizations, data ownership and governance remain siloed, reflecting legacy organizational structures rather than end-to-end value delivery. Just 17 percent of firms have implemented a fully automated data fabric, the kind of intelligent, unified infrastructure required to power AI at scale. Moreover, while 84 percent of enterprises acknowledge the importance of data security and trust frameworks, only 29 percent have delivered comprehensive data security training, exposing a significant gap between strategic intent and operational readiness.

In many ways, agentic AI is both the source of new demands on enterprise data and the catalyst for fixing them. These autonomous agents operate continuously across the enterprise, ingesting data from multiple sources, assessing data quality, resolving inconsistencies, enforcing governance rules and dynamically routing trusted data to where it is needed.

This is where the concept of value streams becomes critical. Unlike traditional functional structures, value streams cut horizontally across the organization, aligning people, processes, data, and technology around an outcome, a prerequisite for successfully deploying autonomous agents.

17 percent

of firms have implemented a fully automated data fabric, the kind of intelligent, unified infrastructure required to power AI at scale.

Intelligent business functions require new cross-functional operating models

Most tellingly, while 61 percent of enterprises are now piloting or deploying agentic AI, only 38 percent believe their operating model enables consistent workflow integration.

Just 37 percent report that cross-functional collaboration is effectively supported, an essential capability for scaling agentic workflows across the enterprise. Even more striking, less than a quarter of organizations (24 percent) have established a dedicated AI center of excellence to drive adoption in a consistent, enterprise-wide manner.

These gaps highlight the structural and organizational barriers many firms face as they seek to transition from isolated AI initiatives to fully orchestrated, agentic operating models.

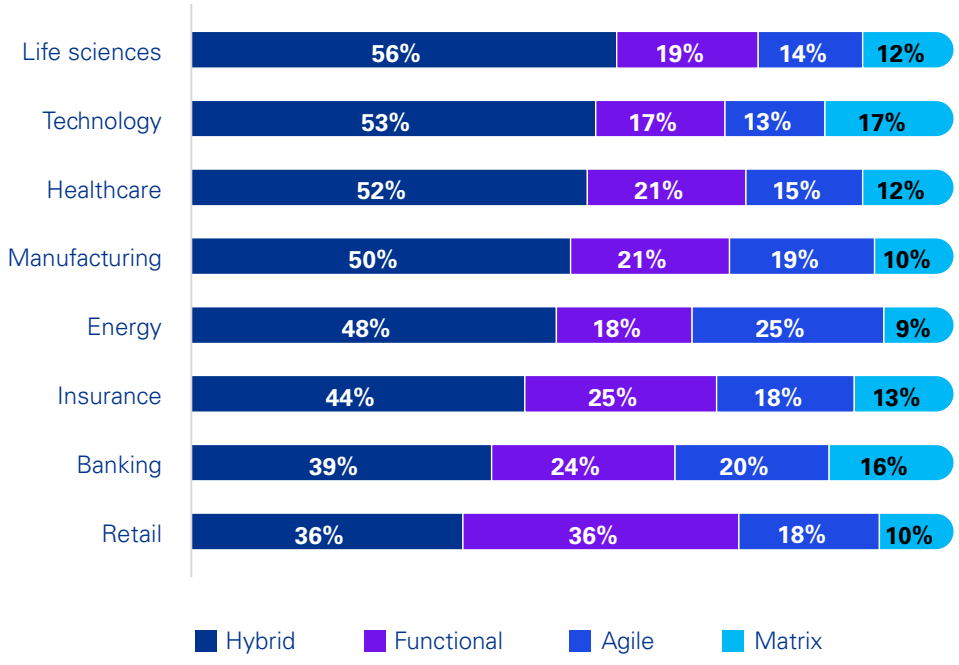
37 percent
report that cross-functional collaboration is effectively supported, an essential capability for scaling agentic workflows across the enterprise.

“I believe that compatibility between new and old facilities is a common challenge for enterprises undergoing intelligent transformation. Traditional equipment uses outdated communication protocols, while new smart devices use modern IoT [Internet of Things] protocols. This makes communication between them extremely difficult. Moreover, traditional equipment often cannot connect to high-speed networks since AI applications require high-speed connectivity.”

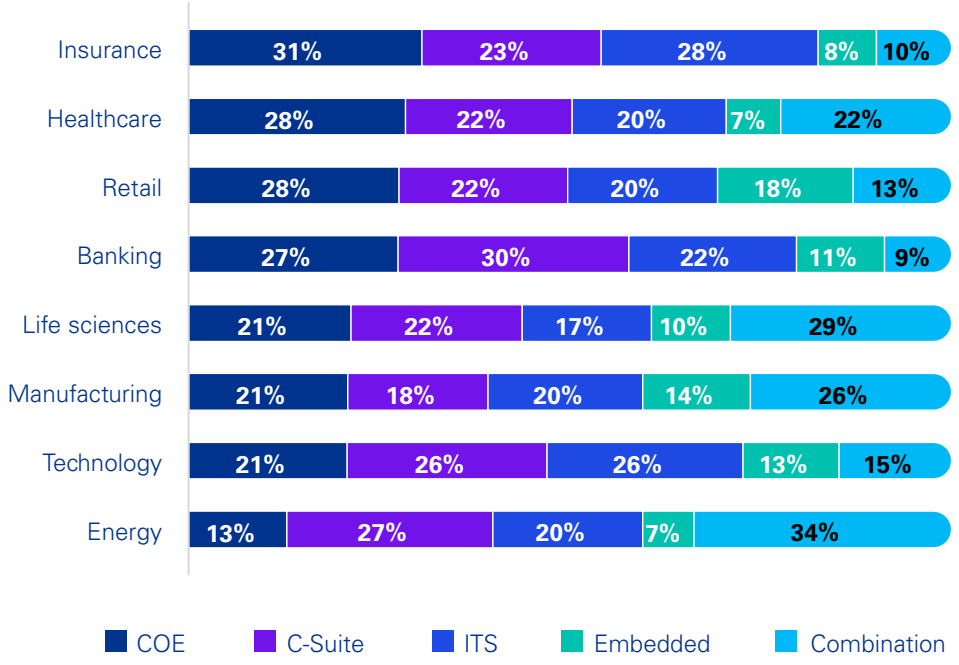
Chief Information Officer, Large manufacturer — China

Figure 3: Operating model and AI structure

Operating model



AI structure



How would you describe your company's current organizational structure and operating model?

How would you describe your company's current structure for managing and implementing artificial intelligence (AI) initiatives? Banking (n=183), Insurance (n=183), Retail (n=163), Technology (n=183), Healthcare (n=183), Manufacturing (n=163), Energy (n=163), Life sciences (n=183)

Source: Shaping the intelligent enterprise: Advancing beyond single-point AI use cases to agentic workflows, KPMG International, 2025

Preparing for the future with a resilient enterprise-wide strategy

Over the next five years, KPMG anticipates a profound evolution in digital transformation, driven by the rise of the intelligent economy.[1] Enterprises can transform into 'intelligent enterprises' leveraging AI, Gen AI and new technologies to transform operating models and business models.

Companies will evolve into ecosystem orchestrators, using AI to help create intelligent, self-optimizing networks that seamlessly connect suppliers, customers, logistics providers and industry partners. These AI-driven ecosystems can redefine how organizations operate, shifting from linear, siloed production models to agile, predictive and collaborative networks that maximize efficiency, sustainability and innovation.

This demands that organizations develop a resilient, enterprise-wide strategy — one that goes far beyond traditional digital roadmaps or isolated transformation programs. To compete in an intelligent economy, businesses should re-architect themselves around adaptive value streams, AI-enabled decisioning, and dynamic collaboration models that span internal functions and external partners.

> We need to set up processes to improve data quality because we can have a lot of data. It could be documents, images, videos; it could be basic data. If it's not of good quality, because the processes aren't uniform or because we have too much diversity, then it's going to be very complicated to implement AI, or the scope of implementation is going to be limited. We believe that autonomous agents will make a real difference to this.

Chief Information Officer, Healthcare — France

[1] Blueprint for Intelligent Economies: AI Competitiveness through Regional Collaboration, World Economic Forum in collaboration with KPMG International, January 2025

Becoming an intelligent enterprise

An intelligent enterprise is not defined simply by the presence of AI, but by its ability to orchestrate autonomous agents across interconnected value streams, thus enabling adaptive, self-optimizing workflows.

Achieving this level of enterprise intelligence requires shifting towards dynamic, responsive ecosystems where agents and human teams collaborate fluidly to drive continuous value creation.

We have observed that enterprises move through three phases of AI value creation:

Enabling workforces and building AI foundations.

Establishes the data integration, governance and skills necessary for responsible AI adoption.

Embedding AI across the enterprise

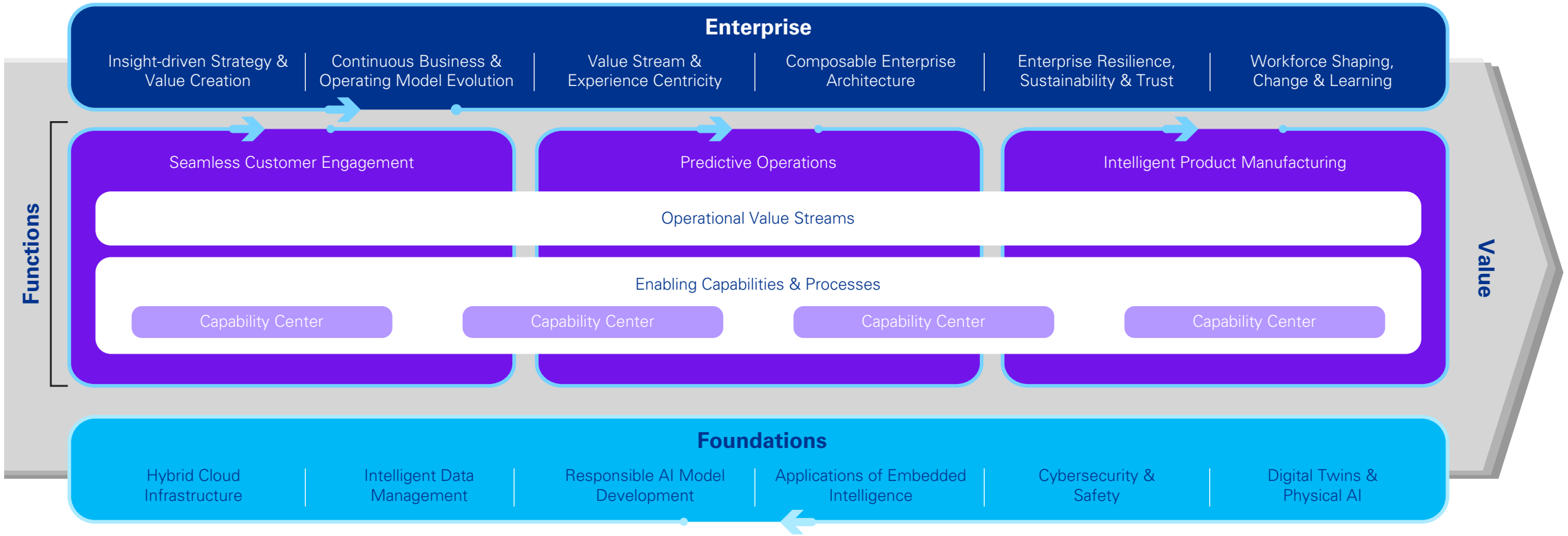
Integrates AI into workflows, products, services, value streams, robotics and wearables, delivering greater value.

Evolving operating models and ecosystems

Uses AI and frontier technologies to solve large sector-wide challenges.

Blueprint for an intelligent enterprise

This blueprint outlines some of the key, high-level capabilities for an AI-powered, customer-centric organization. An intelligent enterprise leverages advanced technologies, personalized experiences, data-driven insights and automated operations to enhance efficiency, innovation and resilience. Focused on embedding intelligence across value streams, capability centers and processes, it ensures seamless customer interactions, robust risk management, intelligent product manufacturing and future-ready adaptability to thrive in the intelligent economy.



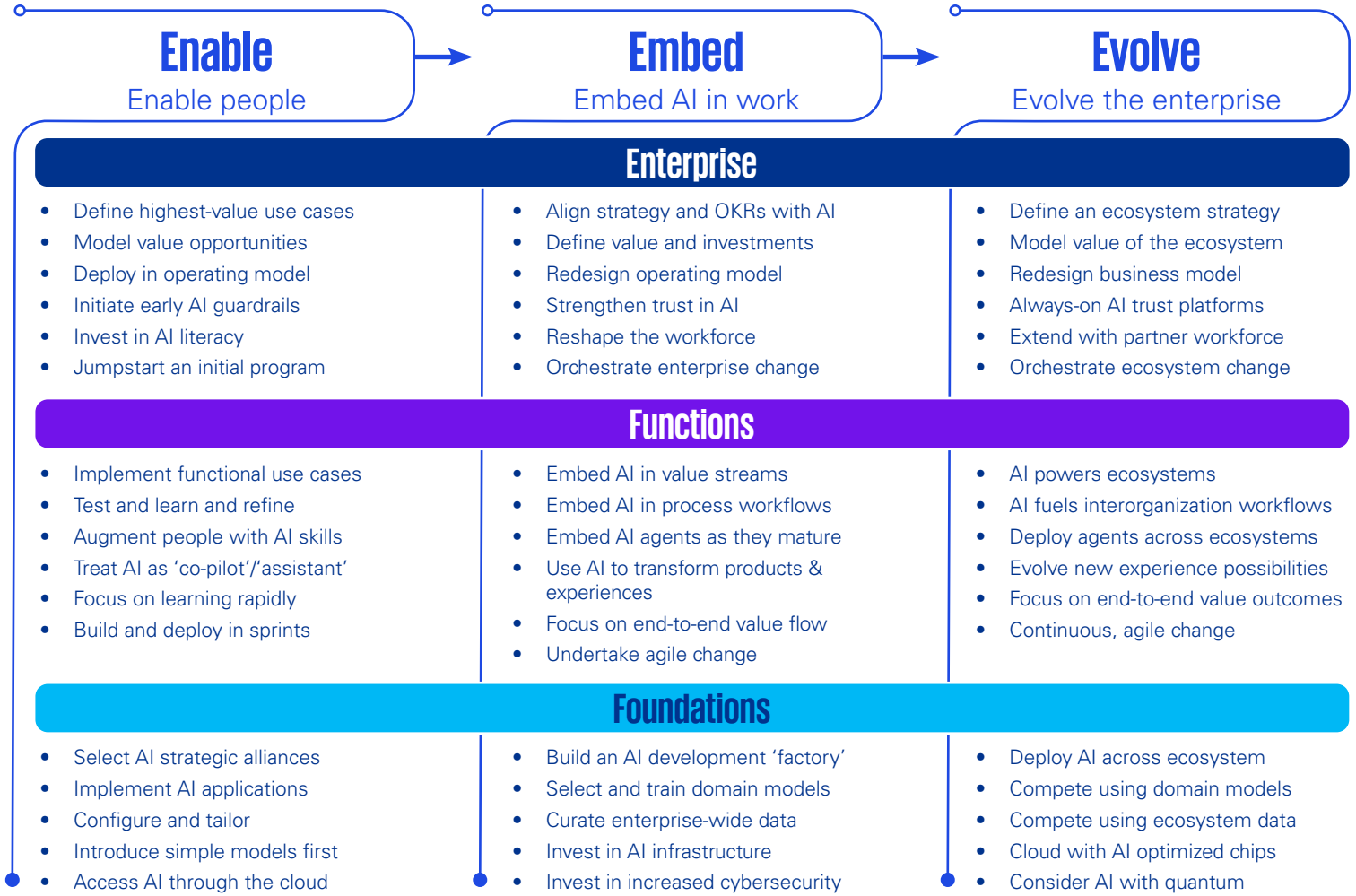
Phases on the AI journey

Focusing on maturity across the three phases — Enable, Embed and Evolve — is critical for sustained value creation. It requires increasing the maturity of the capabilities that are vital to the foundations, functions and enterprise layers simultaneously.

At the enterprise layer, increased AI maturity involves orchestrating AI across functions to enable enterprise-wide innovation and strategic alignment. Without a balanced focus on all three layers, organizations risk missing opportunities for transformation.

At the functions layer, AI should be embedded into key value streams, optimizing specific processes and creating improved outcomes, such as more compelling products and services and more engaging, end-to-end employee and customer experiences.

At the foundations layer, organizations should build up the new AI-first technology stack, through a process of technology modernization. Infrastructure, data, models and applications can all become optimized for delivery of AI.



The path to value in AI is uneven across the enterprise, with innovation in some areas being easier or more worthwhile to pursue than in others. For example, some areas of the same enterprise will focus on foundational efficiencies (Enable), other functions or value streams may be scaling AI for growth (Embed) and a few may even be exploring transformative opportunities within ecosystems (Evolve).

The value at stake

To guide clients' AI strategy and investments, KPMG in the US analyzed vast amounts of data to quantify the Gen AI opportunity. The analysis calculated the potential value at stake from fully deploying and adopting Gen AI across all potential uses within companies.

Over

17 million companies globally assessed.

After looking in depth at

7,000 companies employing

72 million people and pressure-testing results with

500 clients,

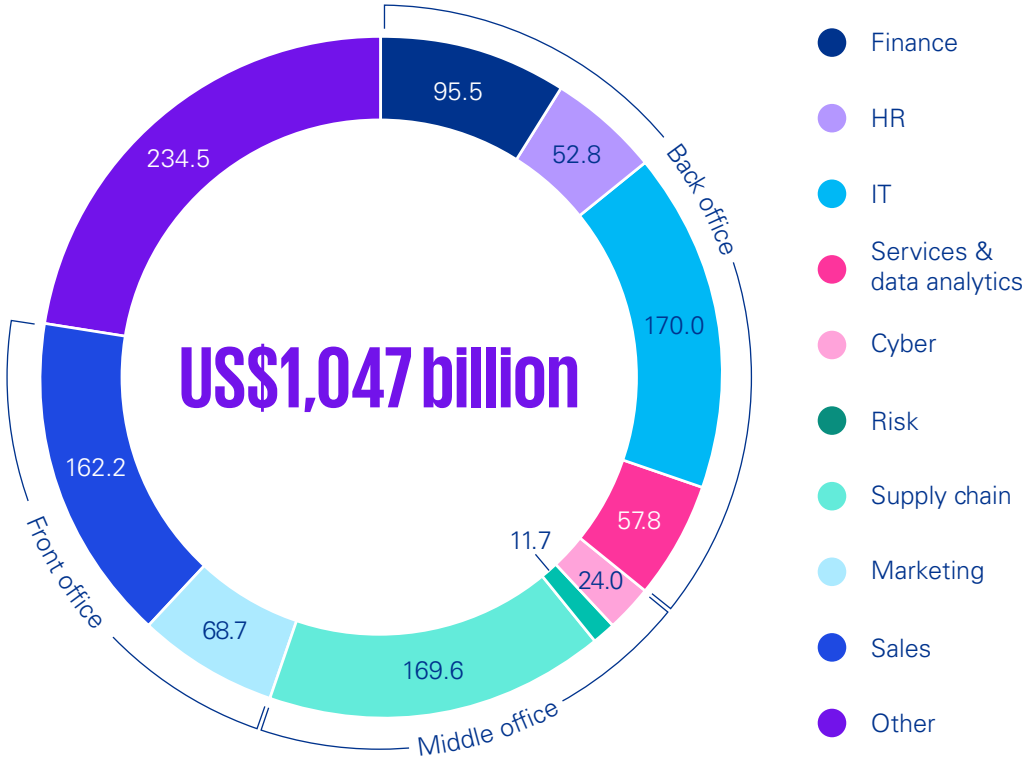
the results equate to

4 — 18% EBITDA* improvement in labor productivity alone.

Our calculations and methodologies show the potential value opportunity within the intelligent industries in the chart to the right.

*EBITDA = Earnings before interest, taxes, depreciation and amortization

Figure 4: Gen AI opportunity, task complexity: Total (Value in US$ billions)



Source: Quantifying the GenAI opportunity, KPMG in the US, February 2025

What leaders should do next

1

Anchor your AI strategy in value

Develop a cohesive AI strategy that aligns with core business objectives and the end-to-end flows of work that drive value. Rather than deploying AI opportunistically, identify value streams where AI can deliver measurable operational and customer impact — from supply chain optimization and fraud prevention to hyper-personalization and dynamic pricing. This requires a clear blueprint for how AI initiatives connect, scale and evolve across the enterprise.

2

Embed trust and governance into the AI operating model

As AI becomes more autonomous and pervasive, embed trust by design. Establish robust governance frameworks covering explainability, accountability and ethical oversight. This includes AI safety, data security and decision transparency — particularly important for agentic systems operating with limited human intervention. Trust also comes from proactive engagement, involving cross-functional stakeholders early to address concerns about AI's impact on roles, data use and control.

3

Create a sustainable data and technology architecture

Data remains the single greatest barrier to AI success. Only a minority of enterprises have the automated, accessible and interoperable data infrastructure that AI, especially agentic AI, requires. To move forward, modernize architecture by investing in data fabrics, containerized AI libraries, API-driven microservices and intelligent edge capabilities. The goal is to enable real-time intelligence across systems, functions and ecosystems, while ensuring legacy interoperability and future-proof scalability.

4

Build a workforce culture that elevates human AI collaboration

AI should not be viewed solely as a tool but as a collaborative partner that augments human capability. Rethink processes, roles and workflows, defining how AI and humans co-create value across business functions. This means building cross-functional teams, fostering AI literacy, and designing new decision models where agentic systems and employees interact with clarity and accountability.

How KPMG can help

KPMG Velocity: helping organizations change smarter and move faster

KPMG Velocity provides AI-enabled products and services through a platform ecosystem for organizational change. It integrates our insights, methods, expertise, capabilities and data with advanced technology, to help clients build and operate intelligent, agile and resilient enterprises, capable of sustaining the next level of growth and value creation.

1 Evolve the enterprise

KPMG supports clients in rethinking and redesigning their operating models to embed AI at the core.

This includes:

- Establishing modern technology foundations powered by AI and data
- Redesigning enterprise functions for AI enablement
- Orchestrating agile operating models and intelligent ecosystems
- Preparing the workforce through transformation and continuous learning

2 Build trust

Underpinned by a Trusted AI framework, KPMG Velocity harnesses the power of AI and ensures that AI deployments align with principles of ethics, transparency, fairness and accountability. KPMG helps organizations build not only smart AI systems, but also trustworthy and compliant ones, especially critical in regulated or reputationally sensitive environments.

3 Embed agentic AI capabilities

AI is not an add-on; it's embedded in everything KPMG delivers.

- **KPMG agents:** Pre-built, purpose-designed AI agents that can be deployed within client organizations to augment decision-making, automate processes or deliver continuous services.
- **Intelligent support and recommendation engines:** Embedded in delivery workflows to enhance efficiency, quality and speed.

4 Enable sector-specific ecosystems

Velocity enables sector-specific ecosystems with alliances such as Google Cloud, Microsoft, Oracle, Salesforce, SAP, ServiceNow and Workday, to create industry-specific transformation solutions. Velocity provides prepackaged, sector-aligned journeys (e.g. in healthcare, digital banking, human services) that can accelerate time to value while enabling strategic differentiation.

5 Future-proof through innovation

Velocity helps establish modernized technology foundations that unlock rapid AI innovation and value to accelerate deployment of AI solutions. You can achieve a robust, agile and cost-effective infrastructure for advanced AI, transforming your technology stack into a strategic asset for continuous innovation and sustained competitive advantage.

Intelligent enterprise sector reports

For deeper insights and detailed analysis tailored to your industry, click on the images below to access full sector-specific reports.

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