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Beyond the Hype: Unlocking Value from the AI Revolution

Building flashy AI prototypes is easy, but generating measurable business value is not.

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Generative AI has ignited a wave of enthusiasm and investment. But as companies pour significant resources into the technology, many are realizing a hard truth: building flashy AI prototypes is relatively easy, but generating measurable business value is not.

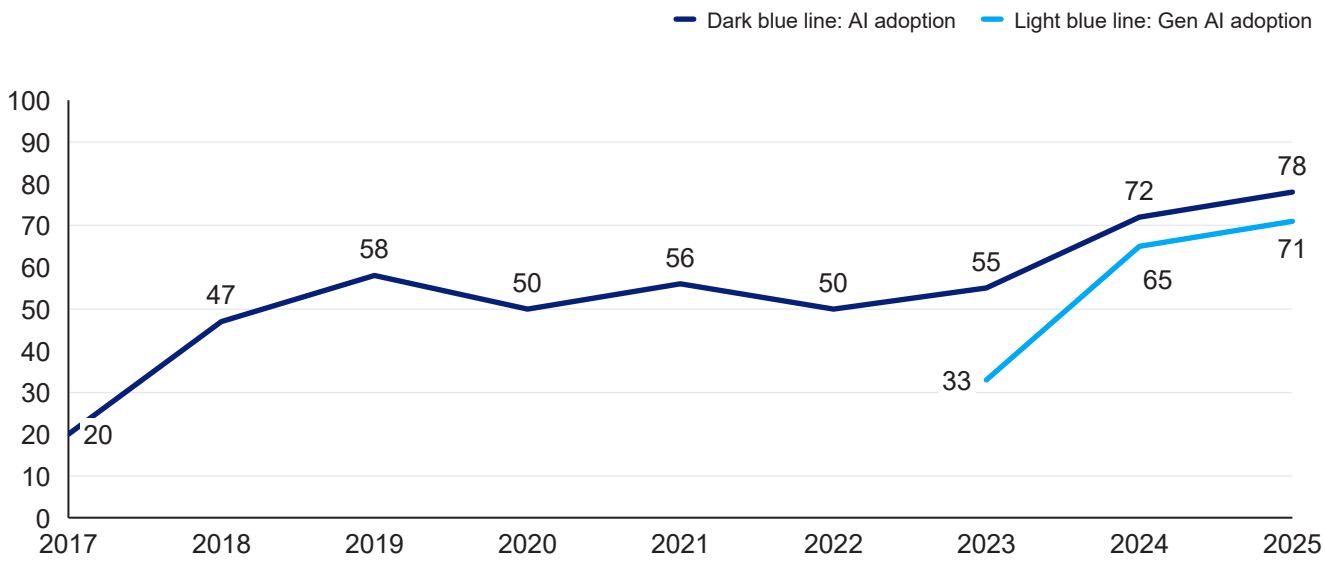
McKinsey research shows that while 80 percent of companies report using the latest generation of AI, the same percentage have seen no significant gains in topline or bottom-line performance. AI tools that help with general tasks can make employees more productive, but the small time savings they create often don't lead to noticeable financial benefits.

Meanwhile, high-value vertical use cases, often tailored to specific business functions, remain largely stuck in the pilot phase — a phenomenon we call the "Generative AI Value Paradox" (Exhibit 1).

Exhibit 1

Generative AI is widely adopted within enterprises, but with limited ROI

Percentage of companies applying AI in at least one business area[1] (share of respondents):



80% of companies report that they have adopted the new generation of AI.

However, 80% of companies also report that they have not seen significant value creation (e.g., revenue increase or cost reduction). We call this phenomenon the "Gen AI Value Paradox."

1. In 2017, the definition of AI adoption was large-scale use of AI in an organization's core business. In 2018 and 2019, the definition was embedding at least one AI capability into a business process or product. Since 2020, the definition has been the adoption of AI in at least one business function within the organization. "The State of AI: How Companies Are Reimagining Their Playbooks to Capture Value." McKinsey, March 12, 2025.

Source: McKinsey Global AI Survey

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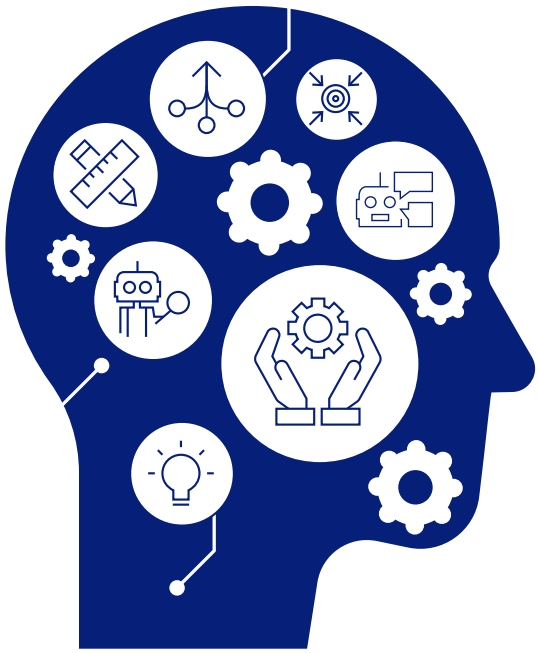
The wave of generative AI continues to gain momentum, with agentic AI pushing the boundaries even further. These autonomous AI systems are designed to make decisions, plan, and take action independently, all while working toward pre-defined goals (Exhibit 2).

In the future, agentic AI will fundamentally reshape organizational structures and ways of working. What starts as tools and copilots for individual employees will evolve into hybrid human-machine teams, where a single employee may orchestrate 15–20 AI agents, unlocking massive productivity gains. Some business functions may eventually become led by "fusion teams," where a few staff manage hundreds of agents, with a potential twenty-fold increase in productivity.

Exhibit 2

An AI agent is a software system with autonomy to achieve predefined goals

Agents have "Agency" –
ability to act, control, and take appropriate actions based on predefined objectives.



- Contextual awareness and memory
- Language and communication
- Collaboration and coordination
- Use of tools
- Learning, error correction, adaptability
- Reasoning and problem solving
- Creativity and innovation

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Four common pain points in deploying genAI across companies in Greater China

Although emerging technologies are creating new possibilities for businesses, many companies still struggle to turn these advancements into real impact.We've observed four recurring challenges that companies in Greater China face. Some are consistent with global patterns, while others reflect the unique dynamics of the local market.

1. Unclear value focus and transformation goals

Many companies struggle to pinpoint where generative artificial intelligence can deliver the most value—whether by reducing costs, improving efficiency, or driving new growth. While some begin with small pilots focused on isolated use cases, they often lack a clear roadmap that aligns these efforts with their broader business strategy. As a result, investments can become fragmented, efforts duplicated, and progress in scaling high-impact solutions limited.

2. Shortage of critical talent and effective collaboration

Successfully driving AI-enabled process transformation requires reimagining workflows and redefining responsibilities across teams. However, a lack of mutual understanding between business and technical functions often creates challenges. In many Chinese companies, this gap is further widened by the relatively limited influence of IT teams within the organization. Compounding the issue, critical roles like data engineers, AI operations specialists, and model governance experts are in short supply, making it difficult to quickly build experienced teams.

3. Limited momentum and execution mechanisms

Despite strong interest from senior leadership, many organizations struggle with unclear ownership and undefined processes to implement their AI strategy. This lack of structure slows execution and weakens overall commitment. On the front lines, teams often either don't fully understand how to use the tools effectively or lack the motivation to adopt them.

4. Fragmented technology and data foundations

From a technical perspective, two common challenges stand out. First, many companies lack a clear data strategy and often attempt to build overly complex centralized platforms, which can delay progress. Second, generative AI pilots frequently operate in silos, relying on different tools and infrastructures. Without a unified architecture, companies face difficulties reusing capabilities, standardizing security, and keeping up with rapid model updates, making it challenging to scale successful pilots across the organization.

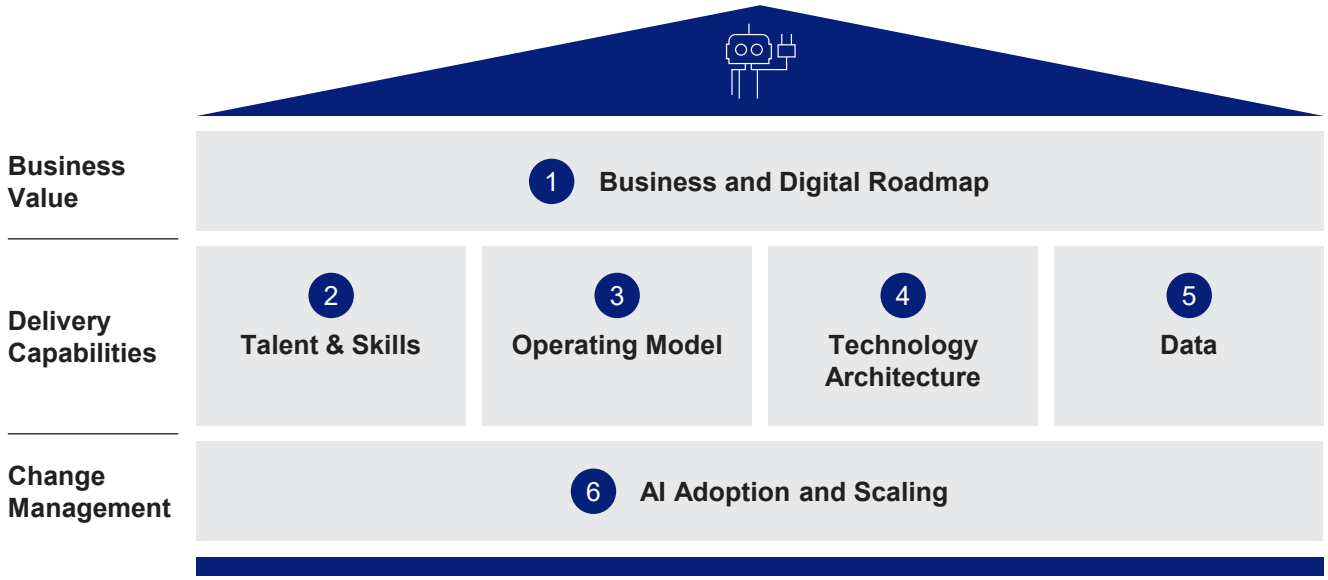
Chinese enterprises face an additional layer of complexity: the relatively low rate of cloud adoption. This slows infrastructure upgrades and complicates AI integration, making it harder for these companies to test, iterate, and scale AI applications as effectively as their global counterparts.

Breaking through the hype: Lessons from 3 Gen AI deployment cases

In our book, *Rewired: The McKinsey Guide to Outcompeting in the Age of Digital and AI*, we distilled insights from the digital transformation journeys of hundreds of global companies into a strategic framework centered on three core dimensions—value, delivery, and change management—supported by six essential enablers (Exhibit 3).

Exhibit 3

To fully unlock the potential of AI and Gen AI, companies need to be "rewired" on multiple fronts



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This framework is equally relevant for scaling generative AI deployments, as the core challenge remains the same: true value is unlocked only when an organization fundamentally reimagines how it operates.

This framework also aligns closely with the four common pain points we've observed in Chinese enterprises:

1. Define a value-led transformation roadmap

Enterprises should start by identifying their most critical business domains and mapping the end-to-end processes that drive performance, whether in core operations or new business development. With these priorities in mind, they can set top-down, value-driven goals and redesign key processes to integrate AI and digital capabilities. Use cases should be prioritized based on their potential impact and feasibility, allowing organizations to allocate resources effectively and develop a practical, phased roadmap for transformation.

2. Build talent capabilities and an agile delivery model

Unlocking the full value of generative artificial intelligence requires close collaboration between business and technology teams. Business leaders need to deepen their understanding of generative AI and broaden their perspective on how it can drive value, while digital and technical teams must develop a more nuanced understanding of business needs to translate them into effective technical solutions.

While hiring external talent might seem like an obvious solution, it is often challenging to find individuals who possess both strong technical expertise and deep institutional knowledge. A more practical approach is to identify high-potential employees within the organization and equip them with the necessary skills through systematic capability-building programs.

3. Drive adoption through targeted change management

To drive meaningful business impact, organizations must actively adopt and integrate generative artificial intelligence into daily operations. Achieving this requires a proactive approach to change management. Companies should invest in clear communication, targeted training, and incentive mechanisms to ensure employees understand and effectively use AI tools. Sustained adoption fosters a virtuous cycle of usage, feedback, and iteration, enabling AI solutions to continuously evolve alongside the business.

4. Build scalable tech architecture and unified data foundations

A practical, future-ready technology architecture is critical for success. Enterprises need a setup that not only supports the continuous evolution of large language models (LLMs) and AI agents but also aligns infrastructure investments with their near- and mid-term business priorities. Instead of making large upfront investments, organizations should take a phased approach, building out infrastructure based on the priority of specific use cases to stay aligned with the rollout of AI applications. Hybrid cloud architectures offer a flexible way to gradually enhance existing systems while moving toward this goal.

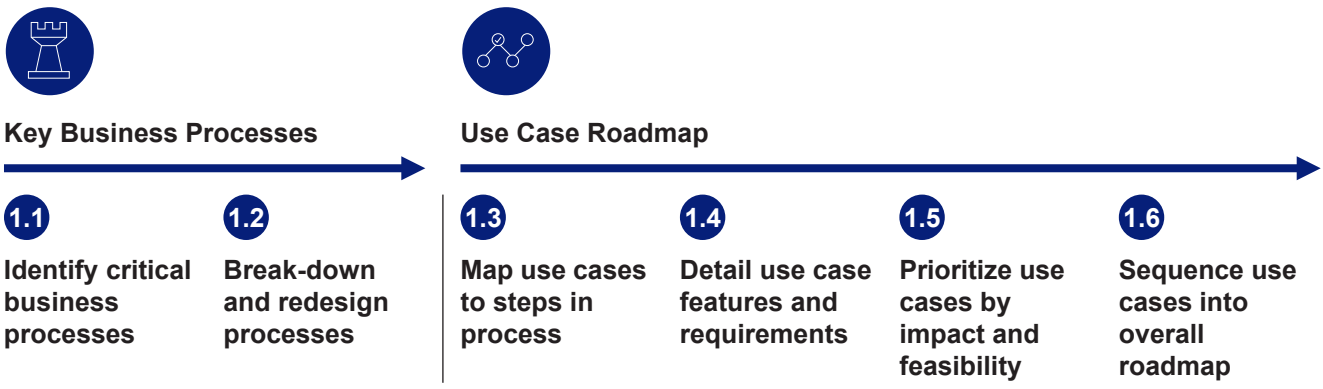
The following three case studies illustrate how companies can successfully transition from pilots to scaled deployments, showcasing different approaches to overcoming common challenges. The first case highlights an enterprise-wide transformation that spanned multiple functions and enablers. The second demonstrates the creation of a flexible, modular tech stack to support AI at scale. The third underscores the critical role of change management in embedding AI into daily operations to unlock sustained value.

Case 1: Full-Scale transformation—From AI strategy to agile execution

Facing a saturated market and intensifying competition, a discrete manufacturing company found its core revenue growth slowing. With the industry entering a price war, profit margins were also shrinking. To break out of this situation, the leadership embraced generative AI, not to showcase flashy use cases, but to fundamentally rethink core processes across over ten business and functional units—from R&D to manufacturing, procurement, supply chain, and quality. The company laid out a cross-functional AI roadmap to deliver end-to-end impact (Exhibit 4).

Exhibit 4

Digitalization roadmap: Build a use case roadmap embedded in the most critical business processes



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In the manufacturing function, for example, the company combined predictive AI, generative AI, and traditional digital tools to address production bottlenecks. A closed-loop system was established. Machine vision and sensor data were used to monitor performance in real time and pinpoint losses. When any KPI deviated from target, the system alerted the line leader or supervisor to intervene or escalate.

Daily and weekly cross-functional performance meetings followed, focused on problems from the past 24 hours. Teams prioritized issues, assigned owners, and moved to resolution. For more complex problems, root cause analysis was powered by generative AI, which acted as an assistant and engine to help engineers sift through large volumes of data to identify core issues.

To ensure actions were executed, the company implemented a digital confirmation tool to track resolution progress. This helped managers monitor whether corrective actions were carried out as expected, reinforcing accountability and embedding new capabilities into the organization.

After defining the AI transformation roadmap, execution proved to be the biggest hurdle. The tech team had been focused on systems maintenance and lacked transformation experience. Business teams had limited understanding of AI, making cross-team collaboration difficult and slowing progress.

To address this, the company identified high-potential talent across departments and formed a digital delivery factory. Through structured training, these individuals quickly developed the domain and technical skills needed to support AI implementation. The squads were organized by business area and led by business-side staff, working closely with technical counterparts through daily stand-ups and sprint planning and reviews. This enabled fast iteration and feedback.

With this systematic approach, the company doubled its profit margin in just two years.

Case 2: Modular, scalable architecture—Building a LEGO-like AI foundation

A global high-tech electronics company with strong in-house R&D capabilities wasn't looking to experiment with AI—it wanted to build a scalable, adaptable tech foundation to support ongoing AI evolution and large-scale deployment across diverse use cases.

The company redesigned its core systems to establish a modular, loosely coupled architecture that could accommodate different types of AI services and models in the future (Exhibit 5).

The company established a robust platform to support its AI initiatives across four key areas. First, it integrated structured and unstructured data into a centralized data lake, building end-to-end capabilities for data collection, labeling, segmentation, and governance to enable effective model training and inference.

Second, it deployed multiple large language models (LLMs) and embedding models, incorporating evaluation mechanisms to ensure high-quality, interpretable outputs.

Third, it leveraged LLM orchestration frameworks and open-source tools to manage model operations and deployments, providing the flexibility needed to address diverse business scenarios.

Finally, the company designed a unified user experience layer across key business units—including research and development, manufacturing, sales, and service—to deliver a consistent and seamless experience for employees.

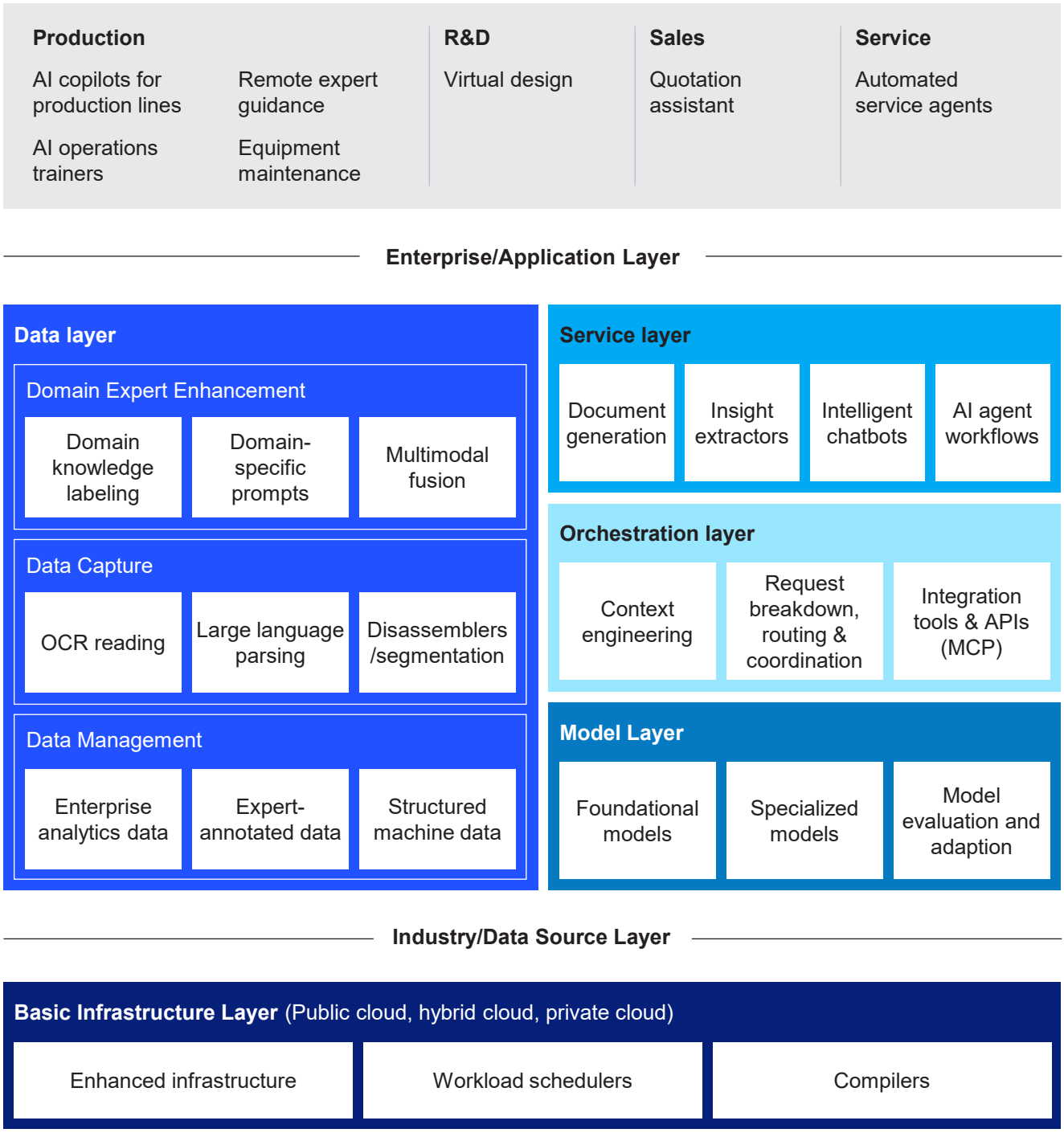
On infrastructure, a hybrid cloud model with high-performance GPU clusters and container tools provided scalability and multi-model support.

The true value lay not just in leveraging large models but in creating an integrated foundation that combined data, models, tools, and business logic. This cohesive framework enabled continuous iteration and the scalable expansion of use cases.

Exhibit 5

Infrastructure: Enabling gen AI use cases require a set of infrastructure modules to be built over time

Reference Architecture



Source: McKinsey

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Case 3: Change management—Embedding AI across the frontline

A leading internet company successfully deployed generative AI across three key domains—sales, coding, and product design. However, this transformation was not just technical; it was cultural. Clear, top-down communication from leadership played a critical role in helping employees embrace new ways of working (Exhibit 6).

Exhibit 6

Change management: Companies must over-invest in driving adoption and employee engagement

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The company's approach spanned four key levels:

Shared understanding: Leadership used strategic messaging, internal events, and live demos to highlight the importance and potential of generative AI. These efforts built confidence and alignment across the organization.

Skill building: Structured learning paths were launched for all employees, with tailored programs for key roles. Training included workshops, coaching sessions, product demonstrations, and access to internal knowledge hubs. Employees were also encouraged to create their own AI agents to deepen their familiarity with the technology.

Behavioral change: AI tools were embedded into daily workflows and routines, such as OKRs, team meetings, and sprint reviews. To drive adoption, the company introduced AI champions, functional leads, and incentives like badges and reputation points to reward active usage.

Impact tracking: Clear KPIs and usage tracking mechanisms were established. Functional leaders monitored tool adoption and business outcomes, while surveys and usage data helped identify friction points and guide iterative improvements.

These efforts ensured AI was not only deployed, but also actively used and translated into tangible business value.

Conclusion

The age of generative AI is no longer on the horizon—it has arrived. This shift represents not only a leap in technological capability, but also a strategic inflection point for enterprises entering a new era of intelligent transformation. From reimagining core processes to redesigning organizational models, from building robust data and technology infrastructure to reshaping culture and mindset, businesses must develop integrated capabilities across strategy, talent, technology, and governance to unlock the full value of AI.

To move from experimentation to meaningful outcomes, companies should approach generative AI with a strategic lens—shifting beyond pilots and use-case exploration into full-scale enterprise transformation.

The window of opportunity is now open, but it won't remain open for long. Those who act decisively will shape their AI future on their own terms. Those who wait may be left playing catch-up.

Source: McKinsey Technology Trends Outlook 2024, McKinsey.com

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