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WHITE PAPER

Everything AI

from opportunity to necessity

Sponsored by: NCS

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Key takeaways

Asia-Pacific's AI spending is projected to reach

US$88 billion

While GenAI is propelling AI to new heights, it is **not the only form of AI** driving today's software-led revolution

About

64%

of organisations in Asia-Pacific are in the **middle stages of maturity**, focusing on specific use cases

Technology limitations, **skills shortages**, and **compliance issues** are significant barriers to AI adoption

A strategic approach to AI adoption involves **investing in talent**, **aligning AI initiatives** with business objectives, and ensuring a **robust tech infrastructure**

AI everywhere: from opportunity to necessity

Introduction

2024 marks another pivotal year as enterprises accelerate their adoption of AI, not only for operational efficiencies and productivity but also innovation and sales. Rapid prototyping of new products for faster time to market is now the number 2 reason for adopting AI, while identifying market opportunities for new revenue growth ranks sixth (see Figure 1).

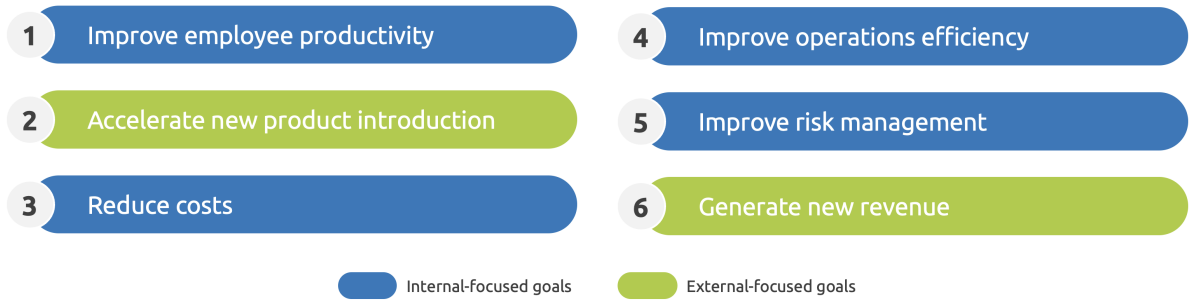
Following billions of dollars in investment by the biggest technology companies across the globe, Asia-Pacific enterprises are riding AI's swelling wave with no end in sight. According to IDC's projections, Asia-Pacific AI spending will reach US$88 billion by 2027, registering a CAGR of 28.2% from 2022 to 2027.

IDC Prediction

Asia-Pacific organisations' AI spending will reach US$88 billion by 2027, registering a CAGR of 28.2% from 2022 to 2027.

Once seen as opportunity, AI is now a necessity. Driven by strong government support, private and public sector collaboration on technology investments, and a growing understanding of AI's potential, the expanded landscape of opportunities for nations at every level cannot be ignored.

Figure 1
Top AI adoption drivers for 2024



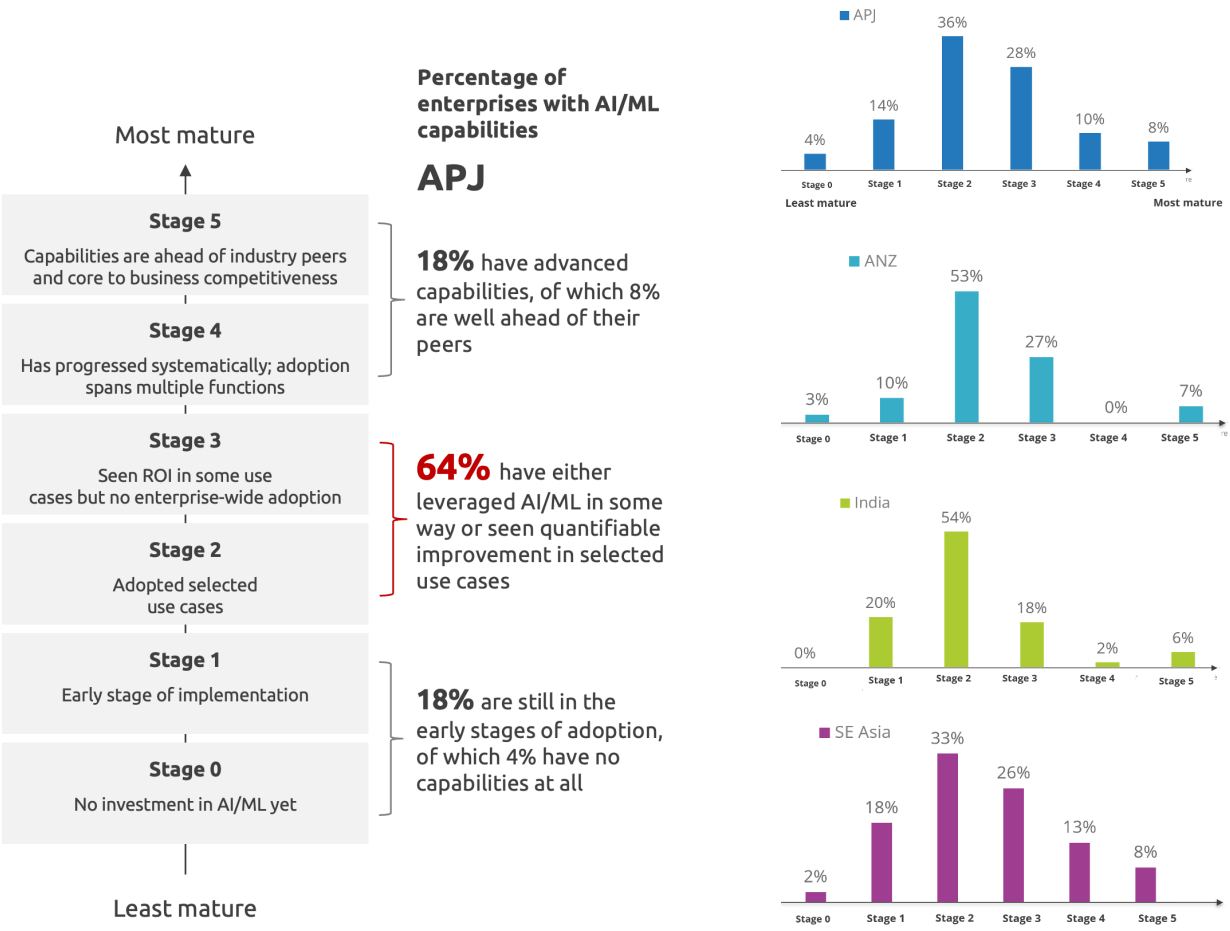
Source: IDC's Data-driven Intelligence Enterprise Survey, 2023

State of AI adoption in Asia-Pacific

In terms of AI/ML adoption, the Asia-Pacific region exhibits diversity, and maturity levels vary considerably. Early adopters like Australia, Singapore, Japan, and South Korea continue to invest and learn, fostering a sustained positive change and growth cycle. Developing countries like India, with robust governmental initiatives and support, a vast talent base, and enterprises proactively embracing AI, are accelerating their AI investments.

As shown in Figure 2, a majority of organisations in the Asia-Pacific region fall within the middle stages of maturity, where AI is utilised for specific use cases rather than being integrated across processes to maximise business value. About 64% have either leveraged AI/ML in some areas of their businesses or already seen quantifiable improvement in selected use cases.

Figure 2
AI/ML-related capabilities of APJ organisations



Source: IDC's Data-driven Intelligence Enterprise Survey, 2023

Amid the widespread application of AI across industries, including knowledge management, cybersecurity, chatbots, and AIOps, industry-specific AI use cases hold even greater significance. These targeted applications of AI address the distinct challenges and opportunities within different sectors, such as:

Healthcare: AI is instrumental in disease detection and diagnosis, enhancing patient care and outcomes. AI systems can predict the onset of diseases and evaluate patient risk factors, prompting preventive measures or early treatments.

Manufacturing: AI-augmented quality management investigation and recommendation systems, automated preventative maintenance, and AI-augmented supply and logistics product quality inspection ensure higher standards and efficiency in production processes.

Banking, financial services, and insurance: AI plays a crucial role in fraud detection, safeguarding against financial risks and ensuring trust and security for customers.

Public sector: AI applications such as safety and emergency response, augmented defense against terrorism, and augmented threat intelligence and prevention systems are paramount for ensuring national security and public safety. Additionally, augmented citizen services agents streamline government services, improving accessibility and efficiency for citizens.

Challenges hindering wider AI adoption

Top on the list of challenges hindering the widespread adoption of AI are technology issues, followed by challenges in use cases due to misalignment of project and business goals, as well as complexity and feasibility (see Figure 3).

Figure 3
Challenges faced by enterprises in becoming AI-driven

Source: IDC's Data-driven Intelligence Enterprise Survey, 2023

Technology issues often arise from inadequate architecture and insufficient training data to support specific use cases. Choosing the right tools is also crucial for the success of AI initiatives, as a lack of understanding can result in the selected tool failing to deliver the desired outcome for a given use case. Another significant challenge is the lack of a clearly defined AI use case. When business teams are unclear about the business process KPIs they need to address with AI, it can lead to non-viable use cases or incorrect outcomes.

Skills are another key factor. High salaries and scarcity of AI talent result in costly AI initiatives. With demand for AI talent often exceeding supply, enterprises find it difficult to build and maintain skilled teams.

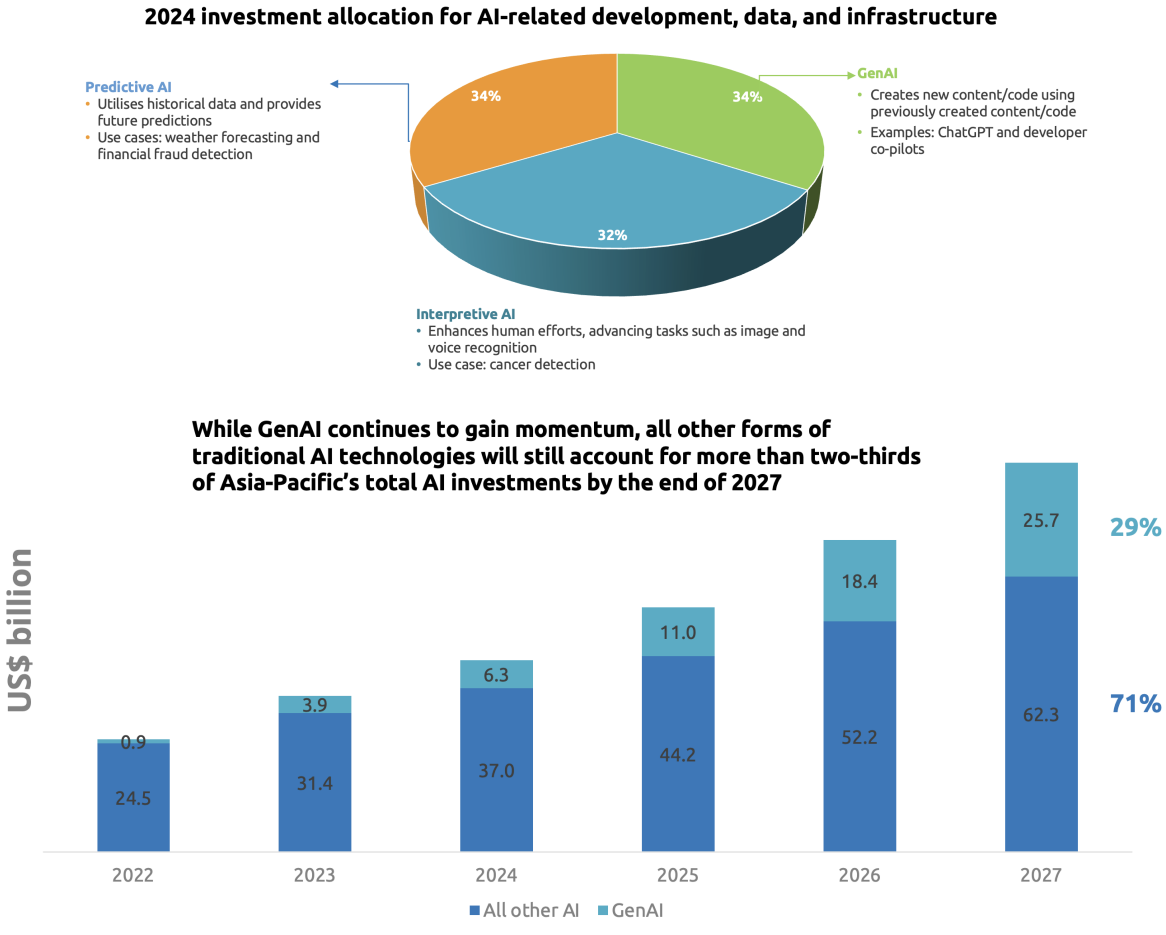
Another critical issue is AI's reliance on foundational elements such as robust data quality and governance, business process engineering, and change management, and these compound the overall high cost of implementation and ownership, making it challenging for enterprises to justify the return on investment. For many enterprises, the cost of implementing AI can be prohibitive, making it even more crucial to select appropriate use cases for AI applications.

Addressing these challenges requires a holistic approach. This involves investment in talent development, careful cost-benefit analysis, clear alignment of AI initiatives with business objectives, robust technology infrastructure, strategic use case selection, adherence to compliance standards, organisational change management, and strong partnerships with supportive vendors.

Expansive world of AI

While GenAI is propelling AI to new heights, it is not the only form of AI driving today's software-led revolution. About 34% of Asia-Pacific enterprise AI budgets are focused on GenAI, with 66% directed towards predictive AI and interpretive AI. Figure 4 illustrates the expansive world of AI.

Figure 4
Investments reflect the expansive world of AI

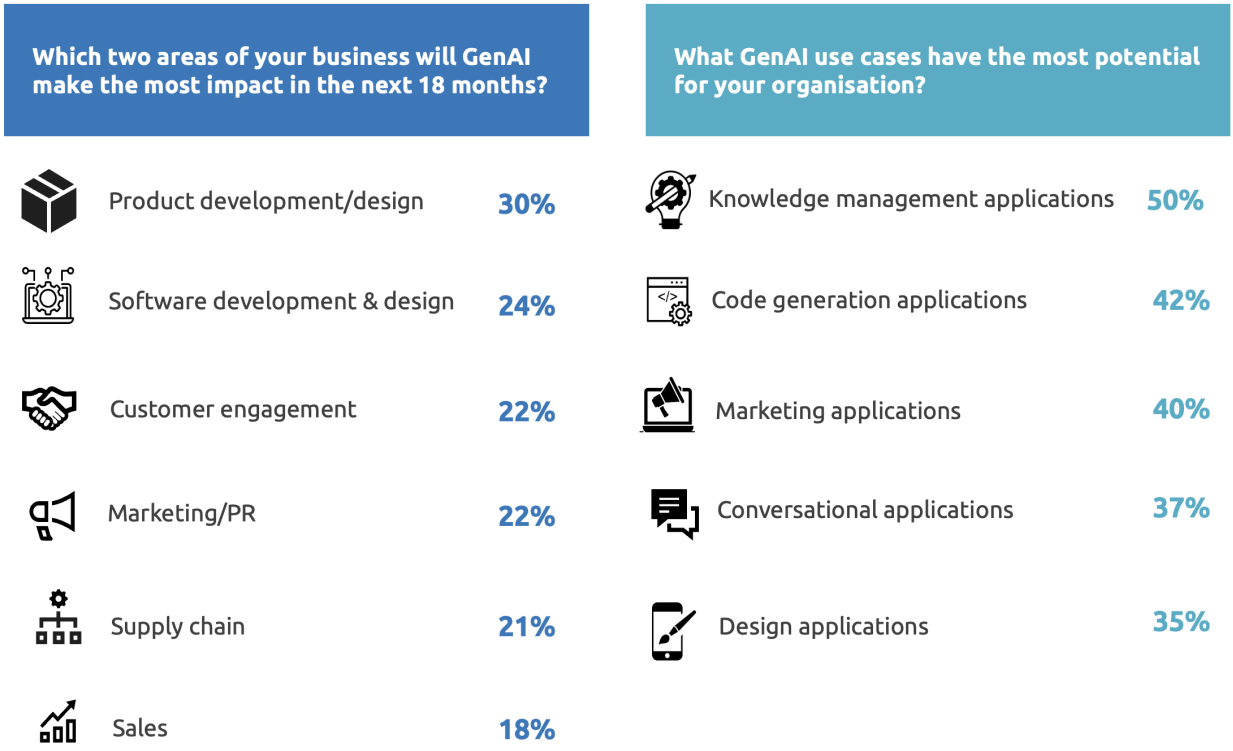


Source: IDC's Data-driven Intelligent Enterprise Survey, 2023 & IDC's AI Spending Guide V2 2023 Forecast

Unlocking GenAI's potential

An indicator of the expansive impact of GenAI is its wide range of use cases: from customer-facing applications to operational and financial applications, as well as design and marketing tools impacting product development, and customer experience management areas (Figure 5).

Figure 5
Use cases for GenAI



Source: IDC Future Enterprise Resiliency and Spending Survey, Wave 2, 2023 (n = 362 for APJ)

IDC Prediction

By 2028, GenAI-based tools will be capable of writing 70% of software tests, decreasing the need for manual testing and resulting in improvements to test coverage, software usability, and code quality.

IDC FutureScape: Worldwide Developer and DevOps 2024 Predictions — Asia-Pacific (excluding Japan) Implications

Enhancing knowledge management with GenAI is a primary use case among Asia-Pacific enterprises. GenAI facilitates the creation, retrieval, and sharing of knowledge within organisations. Code generation applications offer significant advantages for software development by improving employee productivity, code quality, and innovation in software development projects.

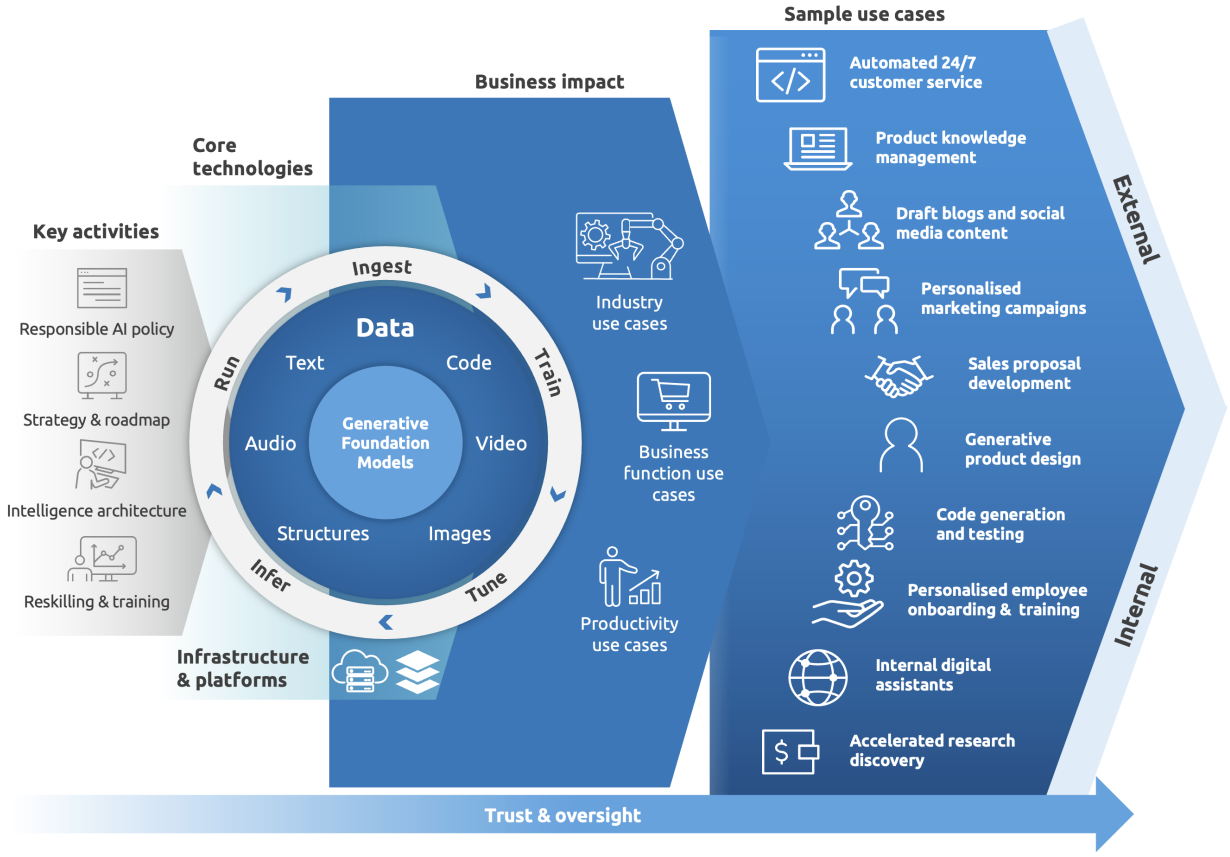
By 2025, 35% of enterprises will have mastered the use of GenAI to codevelop digital products and services, leading to double the revenue growth compared with their competitors.[1]

Blueprint for AI, from productivity to business functions and new models

The value delivered by AI to organisations is through use cases, which are defined by IDC as business-funded initiatives enabled by technology that delivers a measurable outcome. Selecting the right AI use cases is crucial for enterprises to progress, gain experience, and mature in AI adoption.

IDC's *Generative AI: The path to impact framework* (Figure 6) outlines key activities organisations should establish and how to approach new AI use cases to deliver organisational impact.

Figure 6
GenAI: The path to impact



Source: IDC, 2024

Types of AI use cases

There are three broad types of AI use cases that need to be assessed:

Generic productivity. These are basic use cases, such as summarising a report, generating a job description, or code generation. This functionality is being infused into existing applications where the standalone application addresses a specific request or output that enhances the employee's work task or knowledge.

Business function. These specific use cases will tend to integrate a model (or multiple models) with enterprise data for a specific function. Well-established enterprise applications and platforms from vendors will begin to incorporate AI into their offerings to provide these capabilities. Business functions include finance, IT, legal, supply chain, engineering, HR, marketing, customer experience.

Industry-specific. These advanced use cases will generally require more custom work (and, in most cases, require building your own AI model) to address industry-specific processes or activities. These will impact every industry and every phase, from product development (e.g., drug discovery), operations (e.g., visual inspection in manufacturing), and customer experience (e.g., product recommendations in retail).

Mapping AI's journey: Use cases and future outlook 2024-2026

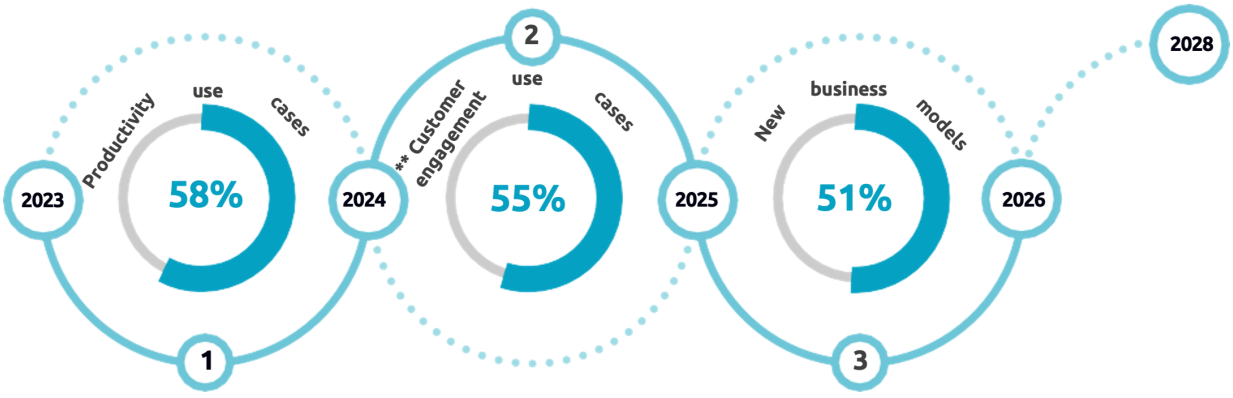
The adoption of AI will continue to evolve as enterprises experience its transformative impact. According to IDC's research, C-suite executives expect AI initiatives over the next 18 months to deliver substantial value. The top 3 expected outcomes are productivity, customer engagement, and new business models. This evolution can be understood in three waves, each with its distinct focus and impact, as shown in Figure 7.

Efficiency gain and cost reduction time: AI enhances IT productivity with virtual assistants and conversational platforms, focusing on efficiency and knowledge management across enterprises.

Customer engagement and experience: AI advances from internal productivity gains to customer-facing applications, using platforms powered by NLP and ML for enhanced customer experience. Multimodality personalises interactions based on emotions or sentiments.

Innovation in business models: The long-term vision for AI involves transforming business models, pioneering innovative operations, and delivering value through GenAI insights. Early adopters in various industries lead this transformation, setting new benchmarks for innovation and competitiveness.

Figure 7
Top 3 desired business outcomes from AI initiatives



****C-suite's most sought-after advice from CIO office**

Source: IDC, 2024

As enterprises navigate these waves of change, it becomes increasingly critical for the role of leadership to foster an environment that encourages innovation, ensures ethical use, and builds trust in AI technologies.

Risk mitigation

As with any technology, adopting AI has its pros and cons for enterprises. While they can gain a competitive advantage, there is also the risk of data breaches or misuse. Private AI models can be a suitable solution, combined with public data sets. To ensure data quality and the accuracy of AI models, data sharing best practices should be followed (see Figure 8).

Protecting data assets: For C-suite executives, including CEOs, CFOs, and CIOs, safeguarding their organisation's data assets is crucial. Data is often considered one of the most valuable resources for businesses, serving as the foundation for AI-driven insights, decision-making, and innovation. With the increasing reliance on AI comes the heightened risk of data breaches, unauthorised access, and misuse.

IDC Prediction

Data is often considered one of the most valuable resources for businesses, serving as the foundation for AI-driven insights, decision-making, and innovation.

Brand and regulatory risks: Organisations prefer private AI models tailored to their needs, using their own data or trusted sources. This maintains control over data and reduces the risk of breaches. They also combine internal data with public data sets to boost AI model performance while safeguarding proprietary information. In addition, enterprises train their AI models to analyse customer behaviour, market trends, and operations for better decision-making and stay ahead in their industries. Organisations ensure data quality and optimise AI model performance by following data-sharing best practices, which include setting up strong governance, quality standards, and management processes. These measures help minimise errors and biases, ensuring AI models, especially LLMs, perform effectively.

Partnerships to enhance value: Enterprises also collaborate with external service providers to achieve better value realisation by proving ROI, accessing tailored solutions for specific challenges, and gaining earlier access to innovation in AI technology. This enables enterprises to maximise the impact of their AI investments, drive business growth, and maintain a competitive edge in their respective industries.

Figure 8
Leveraging AI for enterprises

Preferred AI models
Private versions of GenAI models built on public data

GenAI inhibitors
Expose the organisation to brand and regulatory risks
Cost of running/building GenAI

GenAI advantage
Leverage **internal business data** to give the organisation a significant advantage over the competition

GenAI priority process
Implement data sharing and operations practices that ensure **data integrity** for all LLMs (insource/third party)

Source: IDC, 2024

By 2026, 25% of organisations will utilise AI-enabled risk and compliance solutions to continuously monitor data in real time to predict noncompliance internally or from third-party associations.

IDC FutureScape: Worldwide Worldwide Future of Trust 2024 Predictions — Asia-Pacific (excluding Japan) Implications

Next steps

Adopt a multi-pronged approach, focusing on the long-term strategy while aiming for multiple quick wins in the shorter term that align to current business needs. There are some areas critical to the long-term success of these initiatives, starting with policies that form a strong foundation for AI adoption, having a robust data value chain and future-proof architecture, and building up a skilled AI workforce.

Essential next steps to prepare your business for AI:

1

Establish the foundation for AI readiness

- Develop comprehensive policies for the ethical use of AI and GenAI technologies, covering data privacy, algorithmic transparency, fairness, accountability, and security.
- Align these policies with industry standards and specific compliance requirements.

2

Build a robust data value chain

- Create a comprehensive data governance framework with policies, procedures, and responsibilities for managing data.
- Ensure data reliability, trustworthiness, and compliance with relevant regulations to power effective AI applications and enable data-driven decision-making.

3

Align build-and-buy mix with a business transformation roadmap

- Weigh the benefits of building AI solutions in-house versus purchasing pre-made solutions, considering needs, resources, and stakeholder involvement.
- Align these decisions with long-term goals to drive innovation and competitiveness.

4

Evaluate ROI and build for the future

- Identify metrics and KPIs to measure the ROI of AI solutions, such as cost savings, revenue generation, efficiency gains, improved decision-making, or competitive advantage.
- Continuously monitor and adjust strategies based on performance metrics and real-world data.
- Consider strategic partnerships with industry leaders and specialised AI vendors to access cutting-edge technologies and expertise, fostering collaboration and driving innovation.

5

Offer training and enablement

- Increase awareness and understanding of AI technologies through training sessions and workshops.
- Provide specialised training on AI ethics, responsible AI practices, bias detection, and mitigation, and the ethical implications of AI applications.

Appendix

[1] IDC FutureScape: Worldwide Digital Business Strategies 2024 Predictions.

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets. With more than 1,300 analysts worldwide, IDC offers global, regional, and local expertise on technology, IT benchmarking and sourcing, and industry opportunities and trends in over 110 countries. IDC's analysis and insight help IT professionals, business executives, and the investment community to make fact-based technology decisions and to achieve their key business objectives. Founded in 1964, IDC is a wholly owned subsidiary of International Data Group (IDG, Inc.).

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