Creating your AI Implementation Blueprint

Deepika Giri
Associate Vice President,
IDC Asia/Pacific

Swapnil Shende
Associate Research Manager,
IDC Asia/Pacific

Rakesh Patni
Associate Research Director,
IDC Asia/Pacific

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Executive Summary

Artificial Intelligence (AI) has advanced beyond the experimental phase with Generative AI (GenAI) technologies gaining significant attention. In 2024, organizations adopted a strategic approach to AI integration, focusing on real-world applications. This trend has intensified and is set to gain further momentum in 2025, particularly in the Asia/Pacific region, with an increasing focus on predictive, interpretive, and GenAI use cases that streamline internal processes, boost productivity, and enhance personalized customer experience (CX). This momentum is expected to continue into 2026 and beyond, as organizations recognize AI's potential for market differentiation and operational excellence, fueling innovation and unlocking new opportunities for competitive advantage and business transformation. As AI adoption accelerates, enterprises across the region are aligning their strategies with investment and skills development, though some organizations still expand AI through opportunistic pilots. The AI skills shortage remains a challenge, exacerbated by high compensation competition, particularly in developed countries. Furthermore, data availability, quality, governance, and management are critical to AI's success.

This IDC InfoBrief offers a comprehensive exploration of AI adoption strategies across Asia/Pacific, focusing on key considerations for scaling AI and GenAI applications. It covers trends in technology investment, data and infrastructure priorities, deployment preferences, functional use cases, and industry-specific insights. The report also delves into the foundational aspects of enterprise AI and GenAI initiatives, including technology, talent, and data strategies, while highlighting key challenges organizations face in scaling AI.

Additionally, the report examines key trends in AI platforms, such as the integration of large language models (LLMs) into enterprise systems, the rise of unified AI architectures, and the emergence of GenAI feature stores as standard libraries to accelerate model development. For technology buyers, it provides essential guidance on assessing AI readiness, pricing strategies, and the optimal mix of build, buy, and compose approaches in line with business transformation goals. The report also emphasizes the importance of evaluating IT infrastructure requirements, optimizing the data value chain, and ensuring seamless integration to drive successful AI adoption and long-term growth.

IDC forecasts that the AI-centric server market in Asia/Pacific is expected to reach **$23.9 billion by 2025.**

Businesses in Asia/Pacific should use AI to improve efficiency, reduce costs, and enhance the customer experience. Investing in AI-optimized hardware and software, such as AI-powered PCs, high-performance AI servers, data storage, and cloud infrastructure, supports innovation and drives long-term growth and competitiveness.

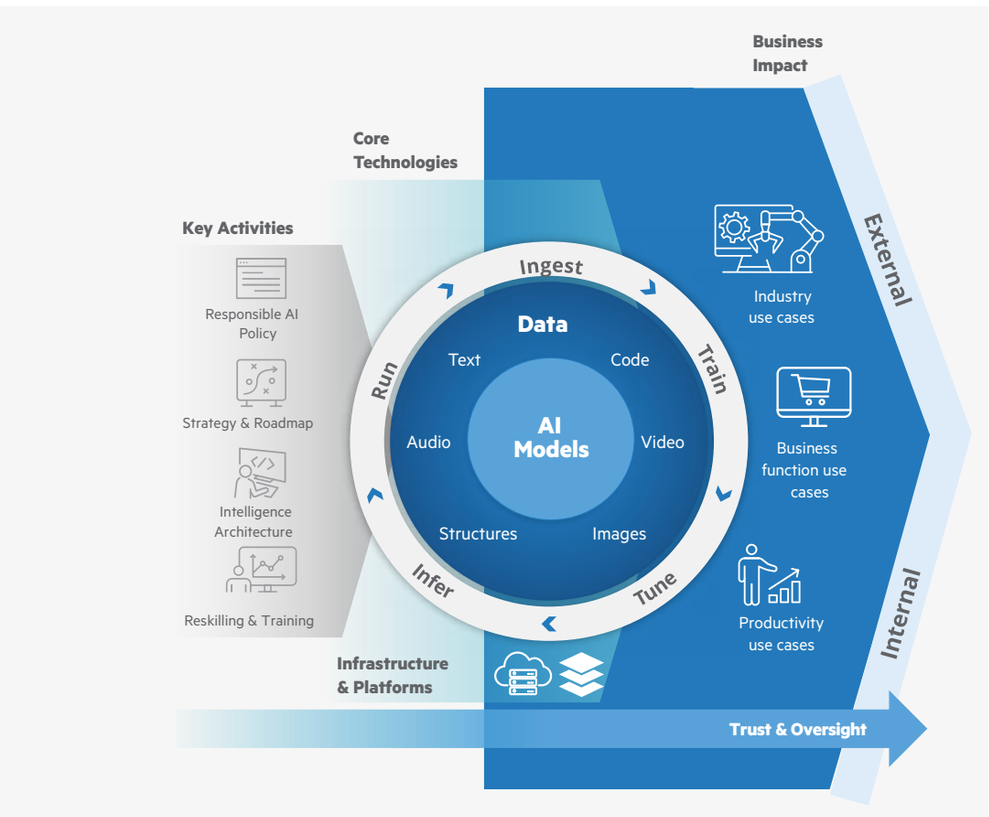
Source: IDC Semiannual Artificial Intelligence Infrastructure Tracker, 2024 H1 release

AI Journey: Path to Impact

The AI Journey of Asia/Pacific Organizations

According to the IDC's FERS Wave 4 Survey, 84% of Asia/Pacific organizations intend to allocate between US$1–2 million toward GenAI initiatives in 2025. This spending encompasses infrastructure, models, applications, and associated services, highlighting a significant investment trend in leveraging AI technologies within IT and various lines of business (LOB).

This Infobrief examines multiple survey findings and in-depth interviews to reveal regional and industry trends in AI and GenAI adoption journey. The document provides insights into challenges, use cases, and adoption rates across sectors, helping IT, functional, and LOB executives make informed AI decisions.



To leverage AI effectively, enterprises must define business goals, assess data infrastructure, build skilled teams, select appropriate technologies, prototype, scale solutions, manage change, and prioritize high-impact use cases.

Prerequisites Before the Journey

- AI policy to include guidelines, roles, prohibited actions
- AI vision, strategy, and roadmap to identify/create use cases for short, medium, and long term
- Intelligence architecture to configure/optimize enterprise frameworks for data (e.g., privacy, security), model development operations (DevOps), and business processes
- Plans to train and reskill employees to develop tools and support inevitable business change

Know Where You are Going (the Right AI Use Cases)

- Productivity use cases utilizing off-the-shelf embedded AI for efficiency and productivity
- Business function use cases utilizing local data and some customization to fine-tune best practice models
- Industry use cases utilizing proprietary data to change business models

Source: IDC Market Perspective, Generative AI: The Path to Impact, August 2023 (EUR151153223)

Different Types of AI Use Cases

Use case categories	Business impact	Implementation approach	Drivers	Consequences	Use case examples
Productivity use cases	▶ Increase task productivity ▶ Drive operational efficiencies	▶ Commercial applications with embedded GenAI ▶ Native GenAI standalone applications	▶ Limited skills ▶ Limited budget ▶ Low risk appetite ▶ Limited internal data	▶ Cost savings & productivity ▶ Quick time to value ▶ Low control of model governance, security, privacy, and data	▶ Summarizing documents ▶ Generating code ▶ Creating marketing content
Functional use cases	▶ Increase functional effectiveness ▶ Provide Contextualized experiences	▶ Fine-tuning open-source models or using AI platforms ▶ Retrieval augmented generation (RAG)	▶ Institutional data ▶ Skills and budget availability ▶ Longer time to value ▶ Some risks	▶ Drives operational efficiencies and greater business focus ▶ Some control over model governance, security, privacy	▶ Engineering knowledge management ▶ Digital assistant ▶ Computer vision ▶ Generative product design and prototyping
Industry use cases	▶ Enable new digital business models, products, and services ▶ Leverage Industry-specific competitive moats	▶ Fine-tuning industry models ▶ Custom-built models	▶ Sufficient quality data ▶ Ample skills and budget ▶ Longer time-to-value	▶ Potential competitive differentiation ▶ Complete control over model governance	▶ Digital twins ▶ Generative drug discovery in life sciences ▶ Generative material design for manufacturing

AI Trends in Asia/Pacific

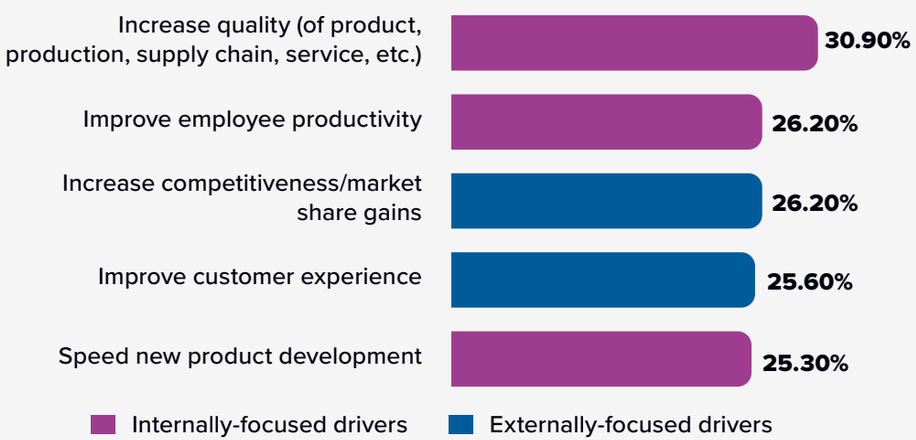
Drivers and Approaches for AI

Asia/Pacific is focusing on internal AI use cases that enhance productivity, followed by external applications that accelerate time to market and boost customer satisfaction.

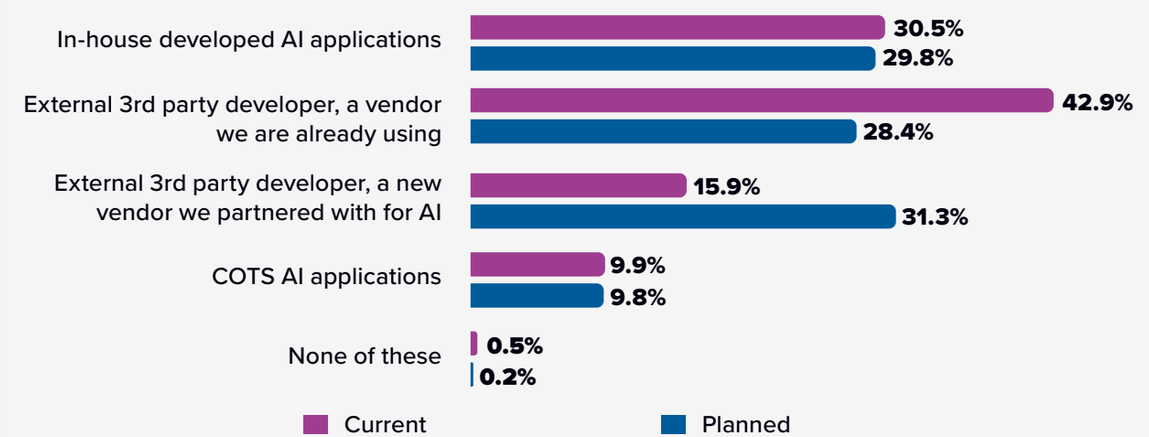
Organizations in the Asia/Pacific region are prioritizing AI initiatives that boost internal productivity and enhance external offerings. They are focusing on use cases that streamline operations, reduce costs, and improve customer satisfaction. This balanced approach ensures that AI investments yield tangible benefits across the business.

Development approaches in Asia/Pacific. Organizations in the region largely depend on external developers (60%) for AI applications, with only about 30% opting for in-house development and around 10% utilizing commercial off-the-shelf (COTS) AI solutions for operational efficiency. Although countries such as Korea focus on building local talent, Japan and Australia often outsource to bridge skill gaps. Notably, higher in-house development correlates with greater AI skill gaps, suggesting that if these gaps persist, organizations may turn to external vendors or COTS solutions for improved efficiency. Additionally, the frequent replacement of AI vendors indicates a fragmented market with evolving requirements. Vendors that offer comprehensive, adaptive solutions will be well-positioned to address these skill gaps and changing business needs.

Primary Business Drivers for Using AI in Projects/Initiatives



Primary Development Approach for AI Applications



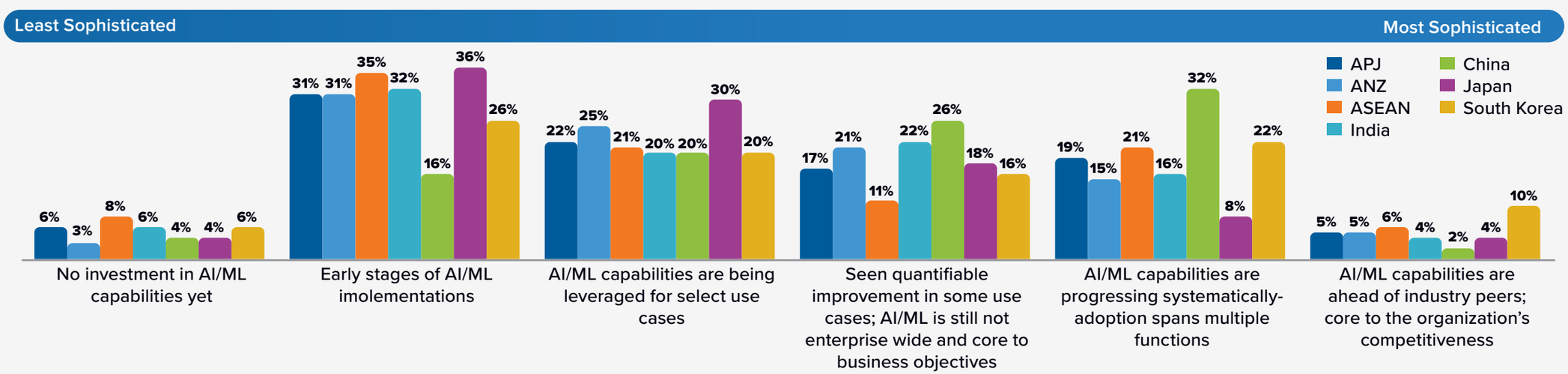
* Asia/Pacific includes ASEAN, Japan, China, South Korea, India, ANZ and others
Source: : IDC's Asia/Pacific Data, AI and GenAI Insights Survey, July 2024, n = 450 for AP

Unlocking AI/ML Potential in Asia/Pacific

- Organizations are increasingly investing in AI and ML capabilities, leading to improved maturity in their applications. However, a significant gap exists in scaling these capabilities synergistically across various business areas. Many organizations leverage AI in isolation rather than integrating it into broader operational strategies. This trend highlights the need for enabling the scaling of AI to fully realize its potential and drive comprehensive business transformation.
- In 2024, AI/ML investments in the region are increasingly sophisticated, with advancements in GenAI technologies driving growth. South Korea has increased industrial automation by integrating AI into smart cities, healthcare, autonomous vehicles, robotics, and manufacturing. In contrast, Australia has adopted a more conservative approach in many industries, especially in areas that rely on traditional practices or less advanced technologies, hindering widespread change. India is experiencing widespread AI adoption, particularly in government, with 4% of organizations outpacing industry peers.
- ASEAN countries such as Indonesia, the Philippines, Thailand, and Malaysia are exploring midrange AI/ML sophistication, while Singapore leads in advanced approaches.

Q. Which of the following best describes the AI/ML related capabilities of your organization?

AI/ML related capabilities of Asia/Pacific organizations



Source: IDC's Asia/Pacific Data, AI, GenAI and Insights Survey, July 2024, AP N=450

1 in 5 AI Projects Fails in Asia/Pacific

Q. What Percentage of your AI/ML Projects Fail?

In 2023, 20% of AI projects in the Asia Pacific failed because of a combination of factors, such as skill shortages and high costs for acquiring talent, data management, model training, and infrastructure. Ineffective AI governance and risk management practices contributed to unclear strategies and regulatory challenges. Additionally, limited budgets and data quality issues, along with resistance to change, emphasized the urgent need for a strategic implementation approach that addresses these critical areas to ensure successful AI project outcomes.

GenAI applications have escalated infrastructure expenses despite declining model token prices. Challenges include data integration issues such as accessibility and quality, compounded by human factors that include skills gaps. Strategic talent acquisition and robust data management are critical remedies. Redesigning data architecture bolsters AI adoption by enhancing quality, scalability, and real-time processing. It also boosts security, accessibility, collaboration, and enables advanced analytics, fostering innovation and aligning with strategic objectives while optimizing costs.

Governance: AI adoption struggles with governance because of data quality and bias, rapid tech changes, lack of frameworks, and misalignment with business strategy, creating significant barriers for organizations.

Skills: Many organizations in Asia/Pacific lack the skills to fully utilize AI, hindering widespread implementation. Therefore, investments in training are crucial.

Costs: High costs for talent, data management, model training, and infrastructure, are major barriers to AI and GenAI adoption. The need for advanced data platforms, combined with technology immaturity and varying access to resources across countries, further exacerbates these challenges.

Q. Please indicate the reasons why your AI projects have failed.

Source: IDC's Asia/Pacific Data, AI, GenAI and Insights Survey, July 2024, Asia/Pacific n = 450

Key Considerations in Scaling AI and GenAI

Scaling AI and GenAI

Key GenAI Concerns for Enterprises

39%	Unpredictable increases in IT operating costs (cloud and on-premises)
38%	Potential regulatory/ compliance risks (e.g., privacy, industry-specific regulations)
28%	Impact on corporate sustainability commitments

Employee Concerns

22%	Leadership/employee misalignment on the productivity value of GenAI
18%	Inadequate skills development
17%	Data security and privacy exposures

Impact of Skill Gaps

47%	Delays in developing new products and services
43%	Delays in digital transformation (DX) journey
32%	Difficulty meeting quality results

Security and Privacy Issues

30%	Risk to security of data and/ or IP
29%	Security policies that do not account for GenAI
28%	Risk to privacy of personal information

IT Team Readiness for GenAI

44%	Moderately prepared with a need to modestly increase investments
27%	Somewhat prepared with a need to significantly increase investments
22%	Extremely prepared with no need to increase investments

Expectations from External SPs

39.5%	Provide security, privacy, and trust of AI systems
35.8%	Infrastructure modernization and implementation
33.6%	Custom AI model development

Outcomes from GenAI

58%	Increased operational efficiency and productivity
55%	Improved customer satisfaction
51%	Developing new business models

Source: IDC's Asia/Pacific Data, AI, GenAI and Insights Survey, July 2024, n = 450; IDC's Worldwide C-Suite Tech Survey, August 2023, Asia/Pacific n = 295; IDC's Future Enterprise Resiliency and Spending Survey, 2024, Wave 4, n = 300

Asia/Pacific GenAI Spending has Gained Momentum

- Globally, organizations dedicate around **33% of their budgets to GenAI**, while **North America** invests about **29%**. Asia/Pacific reflects a strong adoption of GenAI applications where **38%** of AI budgets are allocated to GenAI, compared with 61% combined for predictive and interpretative AI. Excitement for GenAI is palpable, and as use cases evolve, it is expected to increasingly intersect with other AI categories, making GenAI the fastest-growing technology segment in the region.
- The region has experienced a notable increase in organizational spending on GenAI initiatives, rising from 19% in 2023 to 34% in January 2024, and reaching 38% by July 2024.

Asia/Pacific 2024 Investment Allocation for AI-Related Development, Data, and Infrastructure

GenAI

- Creates new content/code using previously created content/code
- Examples: ChatGPT and developer copilots

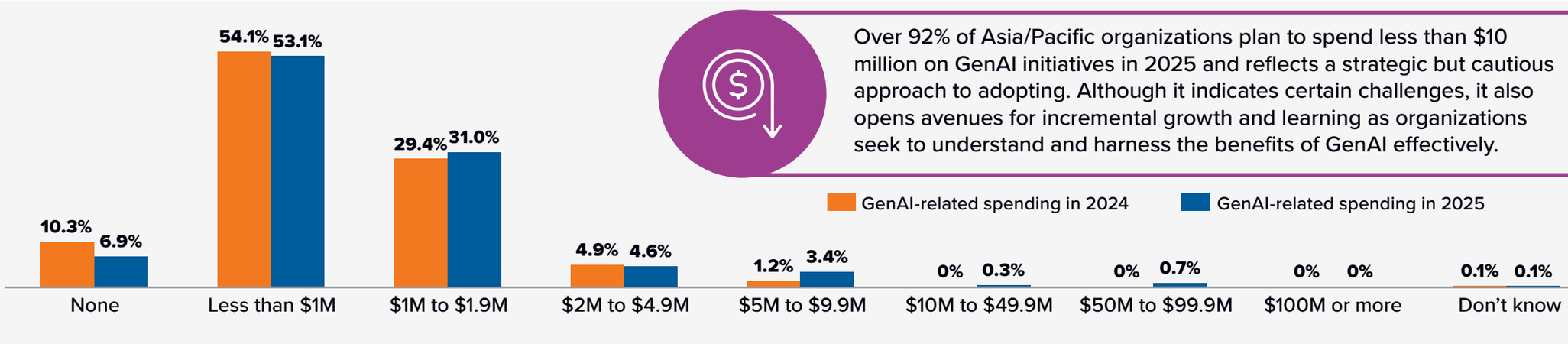
Interpretive AI

- Enhances human efforts, advancing tasks such as image and voice recognition
- Use case: cancer detection

Predictive AI

- Utilizes historical data and provides future predictions
- Use cases: weather forecasting and financial fraud detection

WW GenAI spend 33% | North America 29% | Asia/Pacific 38%



Over 92% of Asia/Pacific organizations plan to spend less than $10 million on GenAI initiatives in 2025 and reflects a strategic but cautious approach to adopting. Although it indicates certain challenges, it also opens avenues for incremental growth and learning as organizations seek to understand and harness the benefits of GenAI effectively.

Source: Future Enterprise Resiliency and Spending Survey Wave 4, IDC, April 2024; and Wave7, July 2024 (Asia/Pacific n=300)

From Ideas to Action: Closing the Gap Between POCs and Production

In IDC's global monthly survey of tech decision makers (IT and LOB), participants reported an average of 23 GenAI proof of concepts (POCs) conducted over the past year, demonstrating a robust exploration of potential applications. However, only 3.25 POCs successfully transitioned to production, highlighting challenges in scalability and implementation. Despite these hurdles, organizations are leveraging valuable insights from POCs to refine strategies and improve project specifications, paving the way for more successful deployments and advancements in GenAI technology.

39% Tech/service partners did not meet project specifications

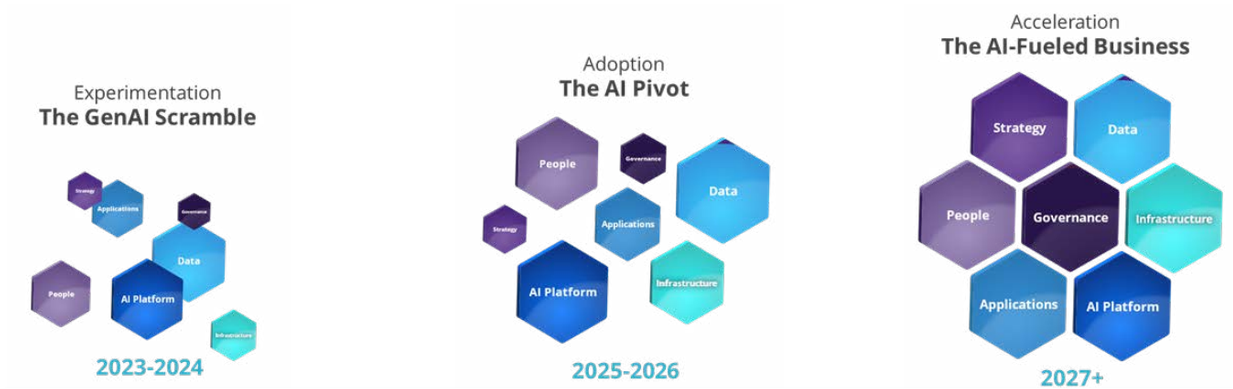
36% Excessive costs prevented meeting ROI objectives

36% Inadequate infrastructure performance/ availability

35% Poor quality/ poorly labeled data sets

33% Lack of developers with required skills/tools

Organizations in Asia/Pacific and worldwide are currently exploring GenAI through POCs yet face challenges in defining clear strategies for impactful projects. This uncertainty intensifies pressure on senior management to demonstrate tangible outcomes from their investments. Meanwhile, tech suppliers are keen to tap into this growing market. They aim to help customers succeed and scale AI implementations while tackling challenges such as meeting project specifications, ensuring data quality, managing costs, and addressing ethical and regulatory issues. To overcome these challenges the best practices include careful planning, selecting a reliable partner, investing in strong infrastructure, and promoting continuous learning. This approach helps optimize AI applications and ensures lasting business impact across various sectors. By aligning best practices with challenges, organizations can enhance their AI strategies and drive meaningful results.



Strategy: Adopt AI strategically, prioritizing high-impact use cases for efficiency

Technology: Develop a solid tech foundation, including appropriate AI platforms, cloud services, and computing resources

Talent: Prioritize talent development for AI, GenAI through training, upskilling, and recruitment to meet business requirements

Data: Transform data strategies with enhanced analysis, content generation, and improved governance for quality, security, and ethics

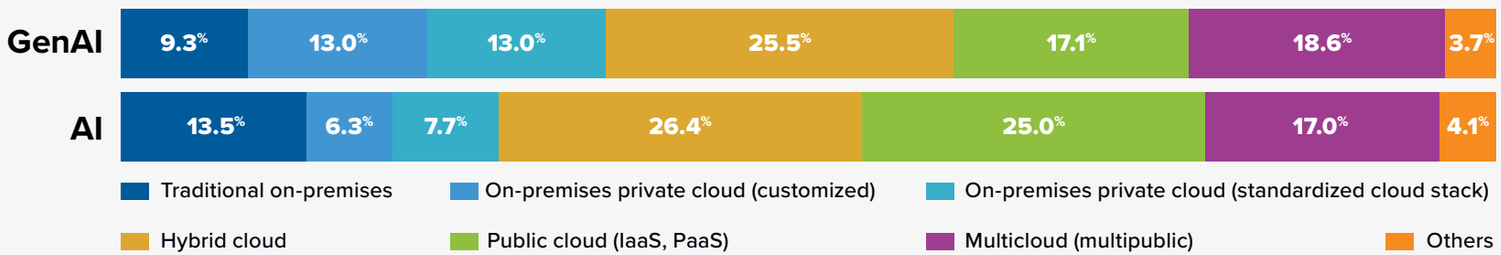
* Costs include multiple factors: operating costs (cloud and on-premises), data management costs, talent, model training.
Source: Future Enterprise Resiliency and Spending Survey Wave 4, IDC, April 2024. Asia/Pacific n = 300

AI and GenAI Deployment Preferences Among Asia/Pacific Organizations

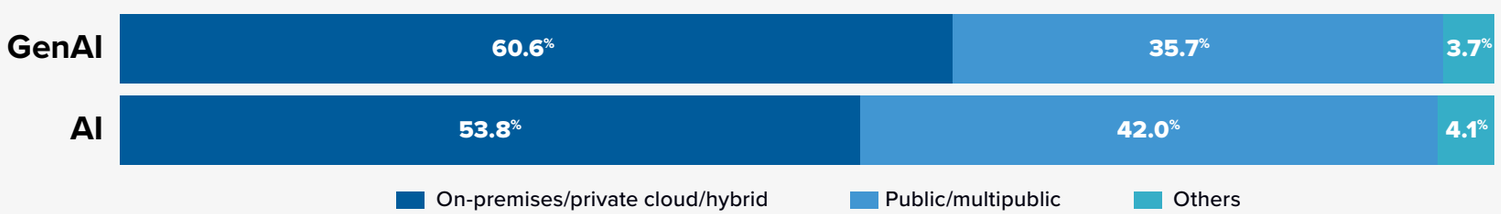
When selecting an AI deployment platform, organizations must consider critical factors such as data security and privacy, scalability and flexibility, cost constraints, performance and latency, and their internal skills and resources. Many businesses in the Asia/Pacific region are calculating how to optimize their infrastructure options from public cloud, multicloud, hybrid cloud, or private cloud.

In 2024, public cloud including multicloud is the top AI/GenAI deployment method for Asia/Pacific organizations. However, if hybrid cloud, private cloud, and on-premises deployment options are combined, the number is significantly larger than the sum of public and multicloud deployments. Furthermore, the gap between the two groups (i.e., the sum of public and multipublic versus the sum of hybrid, private, and on-premises) is wider in GenAI deployment than in traditional AI.

AI and GenAI Deployed



AI and GenAI Deployed (Regrouped)



Need for Private AI

- Buyers choose closed or open-source models based on needs
- Shift from generic to specialized AI models meets industry-specific needs
- CIOs prioritize data and system security in AI adoption decisions
- Enterprise AI maturity spans infrastructure, data, operations, integration, talent, and customization capabilities

Note: 'Others' column includes off-premises private cloud (hosted/managed private cloud), public cloud software-as-a-service (SaaS), sovereign cloud, and edge deployment types.
Source: IDC Asia/Pacific Data, AI, GenAI, and Insights Survey, July 2024, (Asia/Pacific AI n = 364, Asia/Pacific GenAI = 269)

Building the Foundation

Adoption Strategy

Building a GenAI foundation involves several critical areas: strategy, technology, talent, and data. Each of these pillars plays a significant role in ensuring the success and efficacy of AI initiatives.

- Companies in the Asia/Pacific region are keen to adopt AI through a targeted, step-by-step approach. The initial step involves creating an AI roadmap to identify high-impact use cases, prioritizing those that deliver quick and measurable benefits. This strategy aids in establishing a robust foundation for future AI projects while effectively managing risks.
- Dedicated teams or AI hubs oversee these initiatives and thorough cost-benefit analyses ensure alignment with long-term goals.
- Many organizations recognize the importance of engaging a strategic partner that provides robust, scalable infrastructure, and expert services, allowing them to either build solutions in-house or collaborate with external experts.
- By fostering an AI-centric culture and encouraging innovation through gradual implementation and ongoing evaluation, organizations aim to improve efficiency and overall operational effectiveness.

Key AI Strategies Themes Organizations are Adopting Across Verticals in Asia/Pacific

Phased approach: Starting with smaller, less complex projects to demonstrate value and build confidence

Continuous improvement: Iterating AI initiatives based on performance metrics and evolving needs

Alignment with business goals: Ensuring that AI initiatives directly contribute to organizational objectives

Risk management: Addressing concerns related to data privacy, regulatory compliance, and ethical considerations

Data-driven decision making: Leveraging robust data sets to inform AI applications

While each organization has its unique priorities, these strategies collectively highlight the potential of AI to drive innovation, improve efficiency, and enhance customer experiences across various industries. As AI evolves, organizations adopting a strategic and data-driven approach will be well-positioned to reap its benefits.

Source: IDC 2024 (in-depth interviews with industry leaders)

Technology Strategy

Technology is a critical pillar in building a robust foundation for AI and GenAI. To adopt AI and GenAI, organizations need a solid tech foundation, including appropriate AI platforms, cloud services, and computing resources. AI and GenAI adoption resolve data issues, integrate AI incrementally, and build a technology architecture that is scalable, reduces technical debt, and is interoperable and modular, allowing for upgrades with new technological advancements. Organizations in Asia/Pacific focus on integrating ML frameworks, data storage, and analytics tools while ensuring system compatibility, scalability, and security. To effectively leverage AI technologies, organizations follow these key stages and steps:

Stages in AI Technology Adoption in Asia/Pacific Organizations

01 Invest in infrastructure:
Acquire necessary hardware such as GPUs and upgrade systems to support AI workloads

02 Develop scalable solutions:
Use of cloud services and open-source tools to create flexible, cost-effective AI infrastructure

03 Build dedicated teams:
Set up specialized AI teams or global hubs to lead and innovate in AI projects

04 Leverage known tools:
Enterprises leverage known tools for efficiency, integration, support, scaling, and cost-effectiveness

05 Address data and technical challenges:
Fix data issues, integrate AI step by step, build a scalable, modular platform, and ensure easy upgrades for future technology advancements

06 Explore partnerships:
Combine internal efforts with external partnerships to fill expertise and resource gaps

Source: IDC 2024 (in-depth interviews with industry leaders)

Talent Strategy

As organizations in Asia/Pacific aim to scale their GenAI capabilities, they encounter several challenges. IDC research highlights three main barriers: lack of governance and policies, a shortage of skilled AI talent, and high costs. Over 72% of enterprises stress the need for data and AI skills in new hires to bridge this gap. Additionally, three-fourths see strategic consulting partners as crucial for overcoming talent shortages.

Organizations in Asia/Pacific are prioritizing talent development to support AI and GenAI adoption. They focus on training data scientists and AI champions to drive innovation and overcome resistance. Upskilling in-house talent is essential, alongside recruiting international experts. This commitment to building a skilled workforce aligns with business goals and fosters a culture of continuous technological advancement.

Organizations in Asia/Pacific focus on the following to rectify scarcity of skilled talent

Investing in internal training: Focus on upskilling existing employees, including data scientists and AI specialists, through targeted training and development programs

Building specialized teams: Develop dedicated AI teams or Centre of Excellence (COE) that combine technical and functional experts to enhance AI initiatives across business units

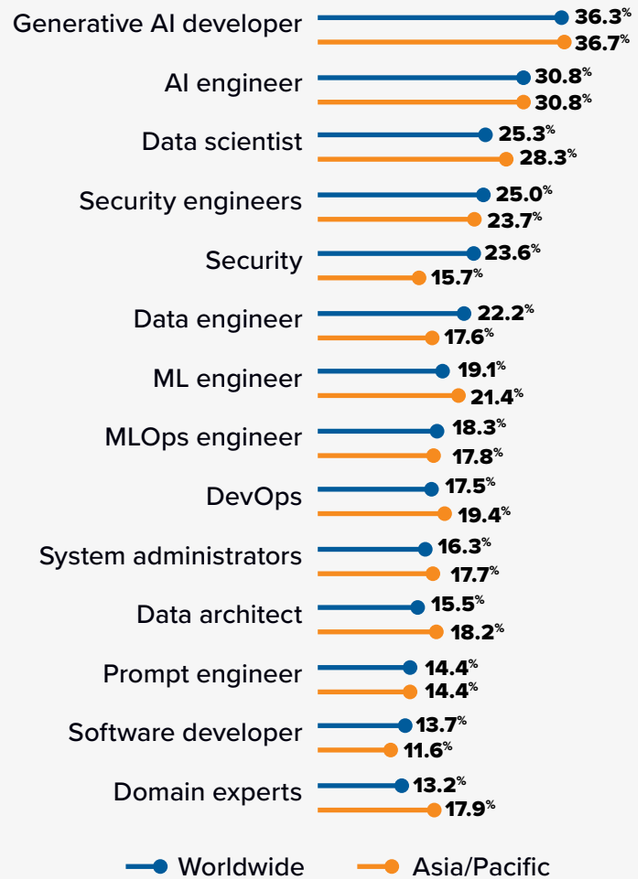
Fostering an AI-centric culture: Encourage a culture that values AI, promoting collaboration between teams and data scientists while supporting continuous learning and adaptability

Hiring and development of talent: Recruit skilled professionals to fill talent gaps and balance internal expertise with external hires, particularly in data science

Leveraging external expertise: Utilize external vendors for specific tasks while keeping control over strategic AI projects to bridge talent shortages

Use of small-scale projects for learning: Start small-scale AI projects to build team expertise and confidence, providing practical learning experiences

Q. Which of the following best describes the AI/ML related capabilities of your organization?



Source: IDC 2024 (in-depth interviews with industry leaders); IDC Global GenAI Technology Trends Survey 2024, #AM24050019-S (WW=624, Asia/Pacific=56)

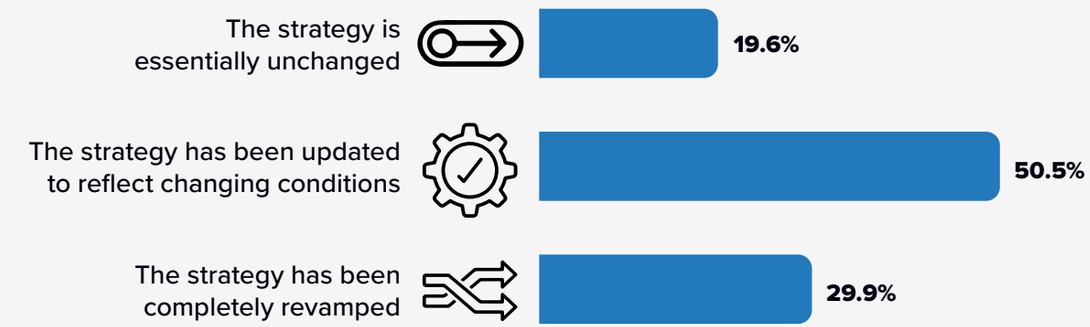
Data Strategy

Data is essential for driving effective decision making and scaling AI initiatives. To leverage data successfully, organizations follow these steps:

- **Ensure data quality and integrity:** Prioritize accurate, representative, and well-managed data. Invest in data management systems to address availability and integrity issues. Implement master data management practices to maintain data consistency.
- **Develop a unified data platform:** Build and harmonize a unified data platform for effective AI integration. Focus on data cataloging, integration, and quality to support AI technologies across various business areas.
- **Implement robust data governance:** Establish a comprehensive data governance structure, including a dedicated Chief Data Officer, to ensure high-quality, harmonized data for AI applications. Address data sovereignty and privacy concerns with secure data handling practices.
- **Leverage real-time and proxy data:** Utilize real-time data and proxy data to enhance AI model development and operational insights. Ensure data readiness by leveraging comprehensive and centralized sources, such as electronic health records (EHRs) in healthcare organizations, to generate actionable insights.
- **Adopt secure data practices:** Implement secure data handling and processing practices to mitigate risks related to data privacy and compliance with regional regulations. Explore private AI deployments or on-premises models for sensitive information.
- **Continuous monitoring and adaptation:** Regularly assess and refine data management practices to ensure data remains reliable and valuable for AI initiatives. Emphasize continuous monitoring to drive informed decision making and improve overall business performance.

Source: IDC 2024 (in-depth interviews with industry leaders)

Q. Since the emergence of GenAI, how has the organization's Data Strategy (from data ingestion to data analytics and AI) changed?



How GenAI Is Transforming Enterprise Data Strategy in Asia/Pacific

- The emergence of GenAI has transformed data strategies across the Asia/Pacific region, impacting everything from data ingestion to analytics and AI applications.
- AI-driven tools now play a central role in automating data ingestion, enriching unstructured data, and accelerating analytics, enabling more efficient, scalable approaches to decision making and business insights. This transformation is further characterized by enhanced data analysis capabilities, innovative content generation, and a shift in organizational approaches to data governance and utilization.
- As a result, over half of Asia/Pacific organizations have updated their strategies to align with GenAI initiatives and adoption, with an increased focus on ensuring data quality, security, and the ethical use of AI technologies.

Source: Office of the CDO Survey 2024, IDC, August 2024, Asia/Pacific n =3 14

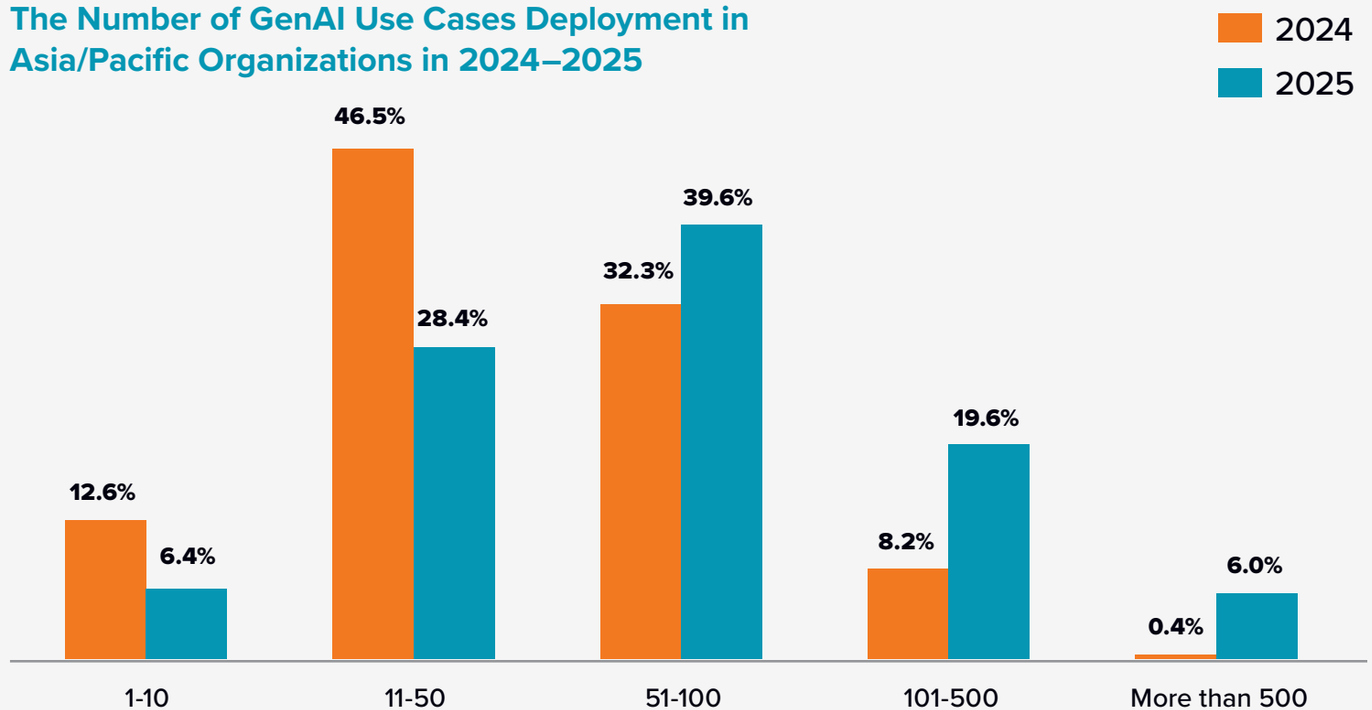
Functional Applications and Use Cases

The Expansion of GenAI Use Cases Among Asia/Pacific Organizations

The Asia/Pacific region is rapidly adopting GenAI use cases. IDC's recent survey reveals that **87.4% of Asia/Pacific organizations will deploy more than 10 GenAI use cases in 2024, and 25.6% will have more than 100 GenAI use cases in 2025**. If we include the POC projects that are not deployed for various reasons but still considered meaningful for ongoing AI journey, the degree of GenAI experience of Asia/Pacific organizations would be even deeper and wider than this survey data suggests.

As organizations gain extensive experience with GenAI through real-world use cases, their expectations are shifting beyond small-scale, isolated experiments. Key enterprise software (SW) engineering challenges—such as systems integration, performance optimization, latency management, fault tolerance, security, and cost efficiency—must draw insights from these diverse GenAI use cases to evolve into robust, enterprise-grade AI systems.

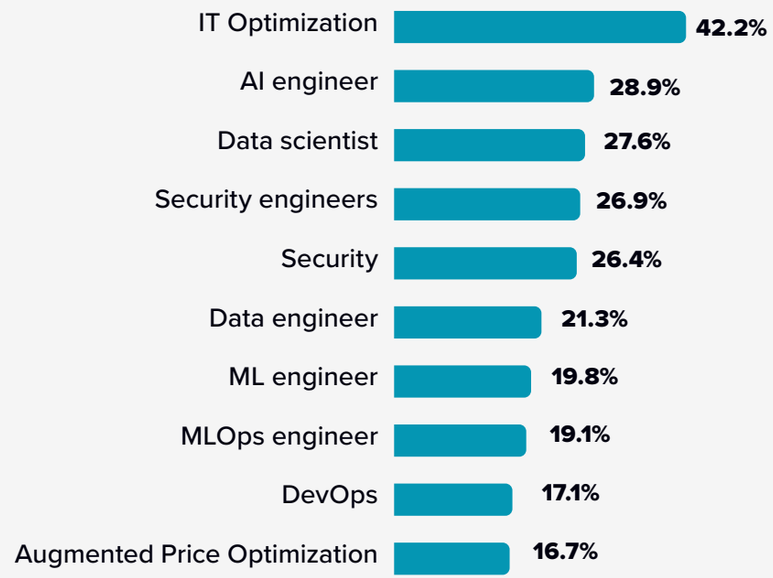
The Number of GenAI Use Cases Deployment in Asia/Pacific Organizations in 2024–2025



IDC's Asia/Pacific Data, AI, GenAI and Insights Survey, July 2024 (n=450 for Asia/Pacific)

Top AI Use Cases Across Functional Areas

Top 10 AI Use Cases of Asia/Pacific Organzations in 2024



IDC's Asia/Pacific Data, AI, GenAI and Insights Survey, July 2024 (n=450 for Asia/Pacific)

Asia/Pacific organizations' AI use cases span numerous business functions. IDC's recent survey reveals that the top 10 AI use cases cover a wide range of areas, including IT operations, marketing, supply chain management, HR, and more. This suggests that AI/GenAI is influencing many business domains rather than being confined to a few tech-savvy departments.

IDC's Asia/Pacific Data, AI, GenAI and Insights Survey, July 2024 (n=450 for Asia/Pacific)

GenAI Use Cases For IT Optimization

End-User Experience

- Intelligent IT service desk response
- Ticket deflection/Personalized routing
- Knowledge base search and summarization
- Virtual agent and conversational AI
- Personalized dashboard generation

Service Automation

- Infrastructure as code
- Usage and cost compliance
- Self healing

FinOps

- Predictive resource capacity
- Cloud cost data ingestion and analysis
- Optimization recommendation
- Automated scaling

Service Performance

- Noise reduction
- Service observability
- Root cause analysis
- Dynamic baselining and thresholds
- Anomaly detection

AI-Driven IT Optimization

More than 40% (42.2%) of Asia/Pacific organizations are using AI for their IT operations, and IDC expects GenAI will further automate many areas of IT operations. Many software developers are using GenAI tools on their desktops to quickly draft codes. Also, these GenAI tools can validate and modify any given code to increase IT productivity. Furthermore, prompt chains and agentic workflows are opening a new possibility to automate and optimize IT operations as a system. Existing enterprise systems will integrate GenAI features to automate many tasks, such as IT help desk, FinOps, anomaly detection, infrastructure provisioning, and so forth.

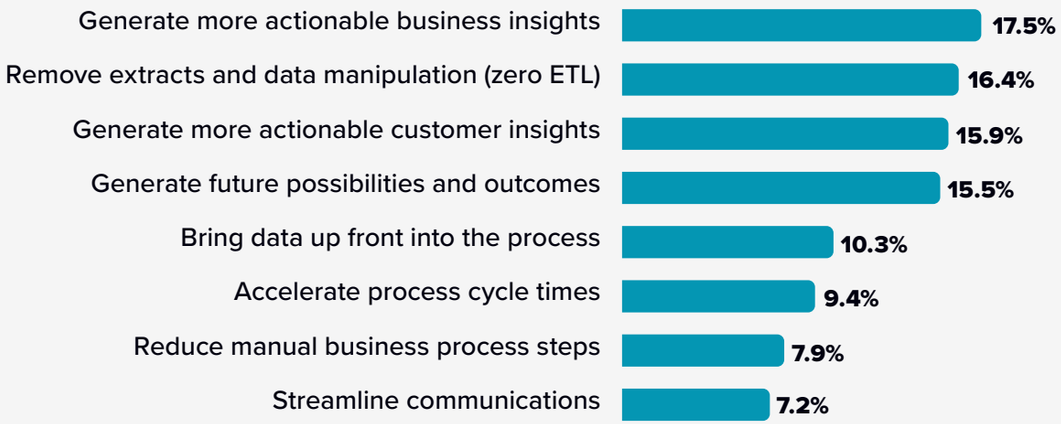
Recommendations

- Clearly define GenAI use cases for IT operation, and build a roadmap to solve them step by step
- Invest in data quality, data governance, and AI governance, which work as a common ground for all GenAI use cases
- Train existing IT staff to use AI tools embedded in IT products

GenAI Roadmap to Innovate All Business Functions

Innovate Business Process with a Big Picture of AI Roadmap

Q. What is the top business process change you expect to drive innovation from GenAI-powered applications in the next 18 months?



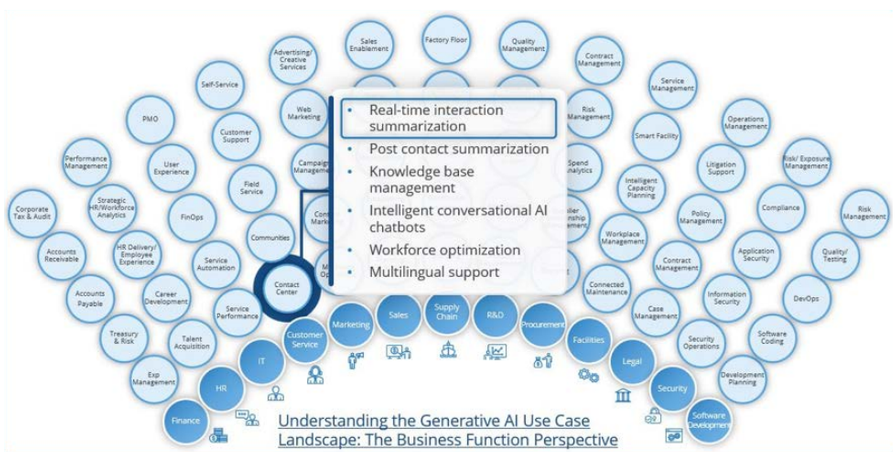
Source: IDC FERS Wave 1 – 2024, January 2024 (Asia/Pacific n = 300)

The second most popular AI use case is **business innovation**. According to IDC's AP Data, AI, GenAI, and Insights Survey, **28.9% of Asia/Pacific** organizations are using AI for business innovation and automation. Business innovation and automation is rather a broad category, which may include other functional use cases (e.g., price optimization). What the result signifies is that organizations consider AI as an effective tool to improve their operational and strategic competency. Another IDC survey (FERS Wave 1) shows that Asia/Pacific organizations expect GenAI would change their business process to drive innovation, and many of them expect it would automate data analytics and strategic decision making, which deal with business uncertainties. This level of automation was not highlighted in traditional robotic process automation (RPA) era. It is business users themselves that are now expanding GenAI to some uncharted territories of automation.

An Eagle Eye View of GenAI Functional Use Cases

GenAI use cases are widespread across many business functions including customer service, sales operations, HR, and logistics as shown below. It is important to map how organizations' GenAI journeys are progressing over different business functions to properly coordinate IT budget. One way to map this GenAI journey is to build GenAI functional use case taxonomy in which organizations can see a big picture (as shown below) to plan and evaluate their GenAI adoption. As a reference, IDC created 255 GenAI business function use cases with detailed definitions. The taxonomy also prescribes the difficulty and risk factors to implement each use case. IDC taxonomy is only one example to illustrate how to have an eagle-eye view to lead GenAI adoption. Organizations can build their own GenAI landscape with the help of external consulting partners.

255 GenAI Business Function Use Cases

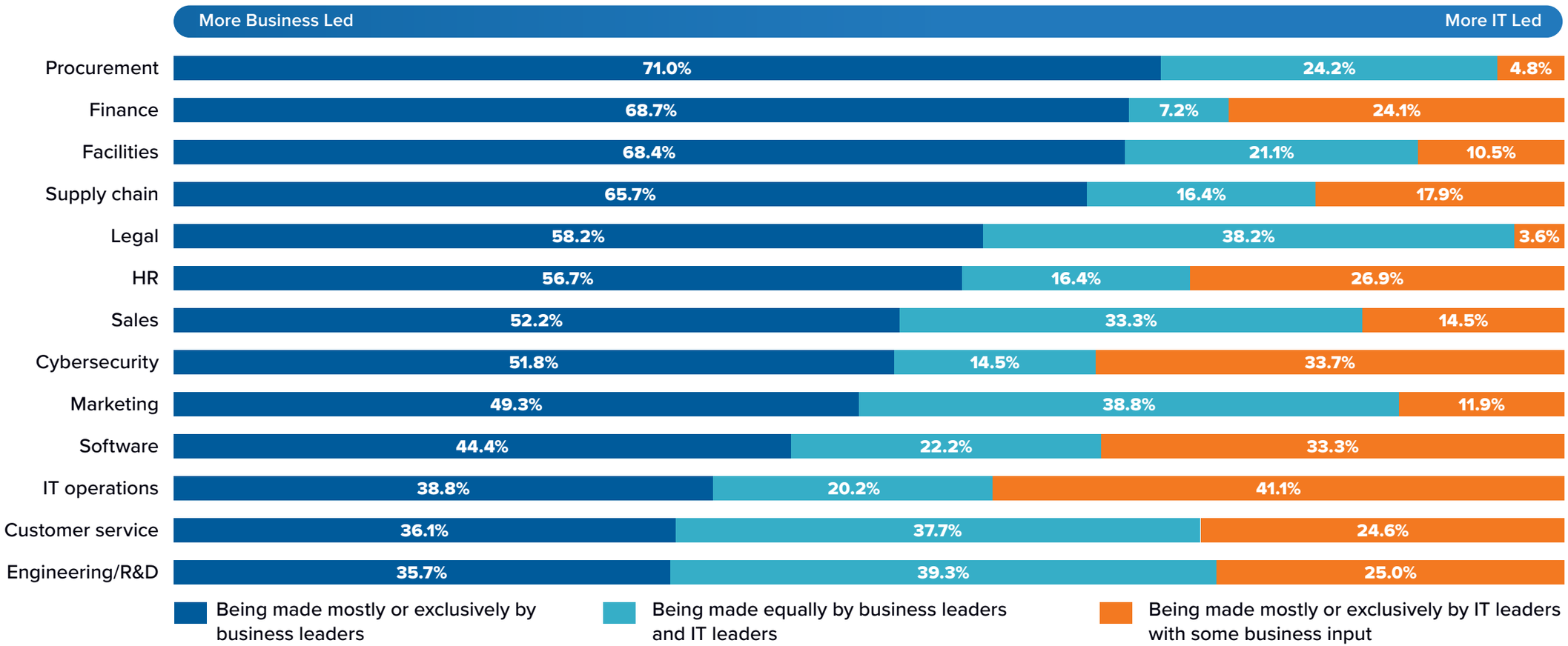


Note: Contact Center example is chosen simply to illustrate the three levels of use case taxonomy.

Source: IDC Generative AI Use Case Taxonomy, March 2024. Note that this is not a single document but a set of 13 taxonomy docments covering 13 functional areas with 255 use cases in total. In IDC.com, search the document title with a business function of interest.

Business Leaders will be Key Decision Makers Going Forward

Q: Who is making the investment decisions for GenAI use cases within the next 18 months?



Source: IDC WW AI Use Case Survey Special Report. August 2024; Asia/Pacific n = 919.

AI and GenAI Industry Insights

AI Adoption in Banking — A Functional View

84% Of banking organizations say they are currently using AI and 67% GenAI

The banking sector is expected to continue its commitment to AI and GenAI technologies and applications with a view to drive better performance across internal business functions, as well as supporting specific use cases around fraud detection and mitigation and anti-money laundering activity. These investments will drive ongoing improvements in operational efficiency, reduce fraud, and enhance the overall customer experience.

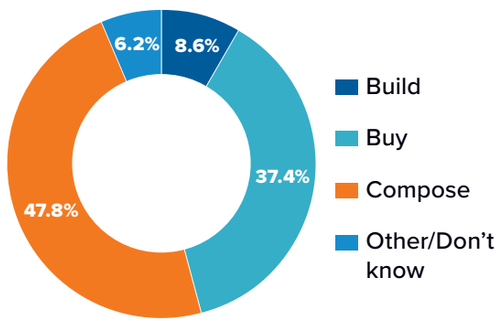
GenAI Adoption Approach

Banking organizations prefer to compose AI solutions (47.8%) because it allows for more flexibility in integrating different AI models and tools, which can be tailored to specific business needs without the full resource commitment required for building from scratch or the limitations of off-the-shelf solutions. However, this approach often demands increased investment in infrastructure and professional services, including expert support in areas such as security, data management, and skill gaps mitigation. Enterprises need robust scalable infrastructure offerings and expert services to ensure seamless integration, strong security frameworks, and effective AI deployment across the organization.

Top Banking GenAI Use Cases by Function

Customer service training, HR recruitment, and talent acquisition are key areas for innovation as these processes require repetitive tasks that can be efficiently automated and scaled by GenAI. Automating customer service agent training and HR recruitment processes can drive significant value by reducing costs and enhancing talent management. These efficiencies directly impact operational effectiveness, streamline talent acquisition, and support long-term organizational growth by ensuring that the right skills are recruited and developed to meet evolving business needs.

GenAI Adoption Approach in Banking (%)



Compose: fine-tuning an existing GenAI model (usually open source) on top of an enterprise AI platform

Build: developing a foundational model using institutional data

Buy: leveraging enterprise applications with GenAI capabilities or native GenAI applications

Extent to which GenAI will disrupt the banking sector's competitive position or business operating model in the next 18 months

Disrupting Now

Will Disrupt in next 18 Months

Top Banking GenAI Functional Use Case Areas in the Next 18 Months

01	**ITOps: Service Performance** – Anomaly detection and service observability
02	**HR: Recruitment and Talent Acquisition** – Job requisition drafting
03	**Procurement: Supplier Relationship Management**
04	**Legal: Policy and Contract Management** – Policy change management and repository management
05	**Customer Service: Training** – Onboarding, reskilling, and simulations

Top Business Objectives From GenAI Functional Use Cases In Banking — Implemented or Plan to Implement Within 18 Months

01	Improve data management for the finance function
02	Optimize planning, budgeting, and forecasting
03	Manage and mitigate financial risk
04	Improve decision making and manager effectiveness
05	Improve ability to attract and retain workforce

Source: IDC WW AI Use Case Survey, July 2024 (Asia/Pacific n = 919, Asia/Pacific, Banking/Finance . n = 173.)

Source: IDC FERS Wave 1 – 2024 (Asia/Pacific n = 300, Asia/Pacific Finance n = 38)

Banking Priorities for AI in Asia/Pacific—Industry Use Cases

Targeted investments in pilot projects and POCs will help identify high-impact use cases in banking, facilitating their transition to full-scale implementation and driving broader AI adoption across the organization.

2024 $M	**2156**	**808**	**510**	**461**	**326**
Top 5 Industry Use Cases in Banking	Augmented fraud analysis and investigation	Augmented threat intelligence and prevention	AI-enabled customer service and self service	Augmented field service and contact center	Augmented compliance and risk
5-Year CAGR	**28.7%**	**26.8%**	**29.6%**	**29.8%**	**26.1%**
What It Does	Detects fraudulent financial activities such as money laundering, check tampering, billing fee waivers, and larceny by using AI to learn and identify suspicious transactions from employees and customers.	Processes intelligence reports, extracts key information, structures it, and identifies threats to databases, systems, and websites by leveraging AI and analyzing various data points.	Offers a dynamic knowledge base that resolves customer queries by generating articles, identifying unresolved issues, curating relevant content, offering personalized product recommendations, and engaging customers in multiple languages using customer data and feedback.	Facilitates issue resolution in banking by optimizing customer interactions via AI-enabled digital channels and intelligent interactive voice response (IVR), offering real-time call summaries, sentiment analysis, and personalized recommendations.	Provides real-time AI-powered digital assistant for banking that monitors tax/regulatory changes, mitigates compliance risks, improves cash flow forecasts, optimizes portfolios, and generates scenario analyses for risk management and liquidity modeling.
Business Metrics	▸ Fraud detection rate ▸ Loss reduction due to fraud prevention	▸ No. of threats detected ▸ Mean time to respond (MTTR)	▸ Customer satisfaction (CSAT) ▸ Average response time (ART) ▸ First call resolution (FCR)	▸ Average handle time (AHT) ▸ Cost per service request	▸ Compliance adherence rate ▸ Regulatory fines or penalties avoided ▸ Risk mitigation success rate

The integration of ML and AI is driving a profound shift in the banking sector, enabling more efficient fraud detection, personalized customer experiences, and streamlined risk management. AI is revolutionizing how banks manage large volumes of transactions in real time, flagging suspicious activities, and ensuring regulatory compliance. As financial institutions continue to innovate, AI and ML will remain at the forefront, transforming everything from credit risk modeling to automated financial advice, reshaping the competitive landscape and offering new value to customers.

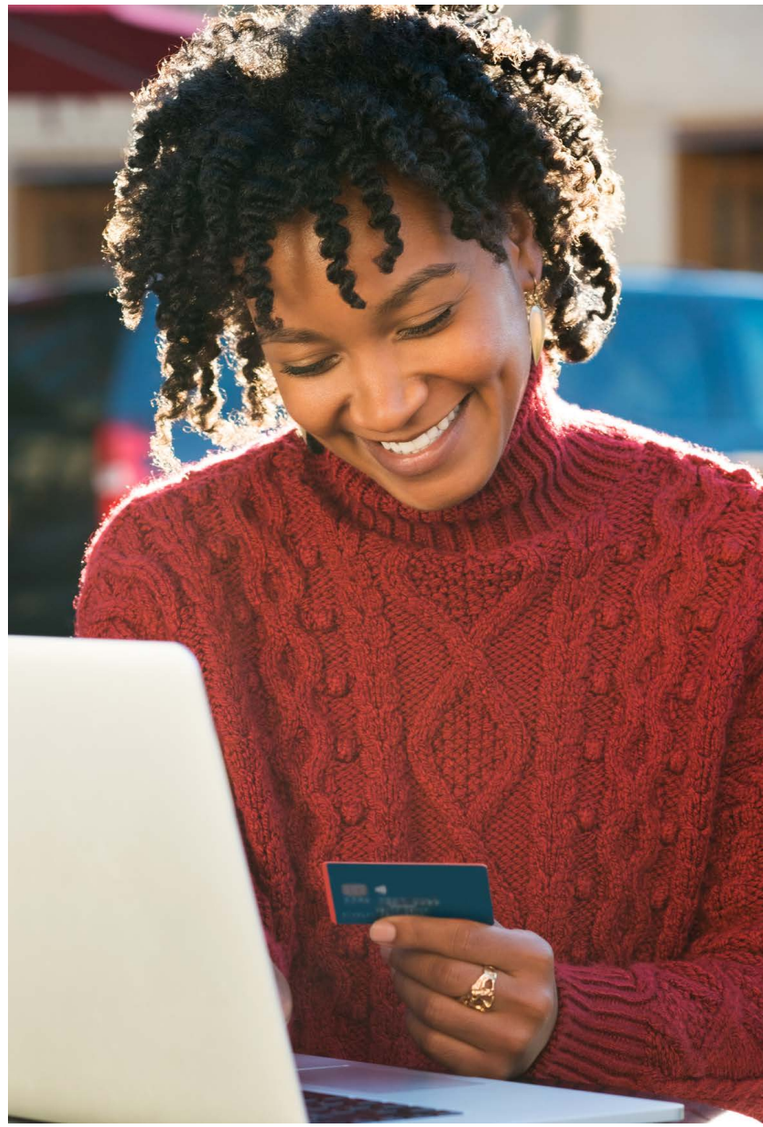
Source: IDC's Worldwide AI and Generative AI Spending Guide 2024 | August (Version 2, 2024) Forecast

Key Peer Insights from Banking IT Decision Makers

Key Findings

- For banking, ROI for AI varies widely with a potential return ranging from 2% to 25% that is based on use cases.
- Organizations tend to allocate a portion of the IT budget for AI and GenAI initiatives, with a focus on increasing investments in IT infrastructure such as GPUs, to support AI use cases.
- Organizations foresee regulatory constraints and data privacy laws hindering the global deployment of AI models designed for risk and compliance.
- Organizations key focus areas include hiring data developers, Large Language Models (LLMS) engineers, data scientists, and User Interface (UI) specialists with cloud expertise in the next 6 to 18 months.

> AI is here to stay, but its overhyped promise requires a **selective, strategic approach**. The real challenge lies in **balancing innovation with regulation, data privacy, and resource constraints**. As we navigate these complexities, the potential for AI to revolutionize banking remains immense, but only if we can overcome these hurdles.
>
> – Product Development and Innovation Leader at a multinational bank in Singapore



AI Adoption in Manufacturing — A Functional View

Manufacturers in Asia/Pacific say they are currently using AI (78%) and GenAI (54%).

The manufacturing sector is projected to deepen its investment in AI and GenAI technologies to enhance both operational efficiency and productivity. These advancements across internal functions will drive improvements, such as supply chain optimization, predictive maintenance, and quality control. AI-powered use cases including demand forecasting and real-time production monitoring, will not only streamline processes but also reduce downtime and minimize waste. With these investments, manufacturers can expect to achieve greater precision, reduce operational costs, and enhance overall customer satisfaction through more reliable and efficient production.

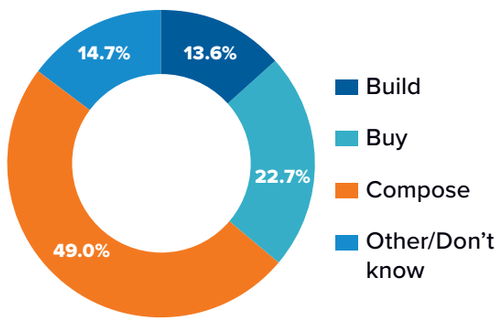
GenAI Adoption Approach

Manufacturers prefer to compose AI solutions (49%) because it offers greater flexibility in integrating various AI models and tools, enabling customization to specific operational needs without the constraints of prebuilt solutions — only 13.6% plan to build their solutions from scratch. However, this approach often requires increased spending on infrastructure and domain-specific professional services, which includes expert support in areas such as manufacturing execution system (MES) systems, data management, supply chain, and workforce skill gaps mitigation. Manufacturers need robust, scalable infrastructure and expert services to ensure seamless AI integration, secure operations, and effective deployment across production environments.

Top Manufacturing GenAI Use Cases by Function

Top Manufacturing GenAI Use Cases by Function: For a manufacturer, collaboration for product development within its engineering department and network design in the supply chain is likely to drive business value by accelerating innovation through digital threads and ecosystem development while optimizing supply chain efficiency to reduce costs and enhance overall production agility.

GenAI Adoption Approach in Manufacturing (%)



Compose: fine-tuning an existing GenAI model (usually open source) on top of an enterprise AI platform

Build: developing a foundational model using institutional data

Buy: leveraging enterprise applications with GenAI capabilities or native GenAI applications

Extent to which Asia/Pacific manufacturers believe GenAI will disrupt their competitive position or business operating model in the next 18 months

43%	52%
Disrupting Now	Will Disrupt in next 18 Months

Top Manufacturing GenAI Functional Use Case Areas in the Next 18 Months

01	**Supply Chain: Network Design —** Service level agreement optimization and insights for network design
02	**Sales: Prospecting and Lead Generation —** Predictive lead scoring and personalized digital interactions
03	**HR: Recruitment and Talent Acquisition**
04	**Facilities: Enhanced Workplace and Property Management —** Connected maintenance with digital twin models for performance predictions
05	**Engineering/R&D: Product Collaborations —** Developing digital threads and generative ecosystem development

Top Business Objectives From GenAI Functional Use Cases In Manufacturing — Implemented or Plan to Implement Within 18 Months

01	Simplify/manage multidiscipline design and increase creativity and innovation for new products
02	Increase development productivity
03	Digitalization of the procurement function
04	Increase revenue through growth of new customers
05	Improve sales performance and lead generation through better knowledge of target audience

Source: IDC WW AI Use Case Survey, July 2024 (Asia/Pacific n = 919, Asia/Pacific, Manufacturing. n = 76.)

Source: IDC FERS Wave 1 – 2024 (Asia/Pacific n = 300, Asia/Pacific Mfg. n = 38)

Manufacturing Priorities for AI in Asia/Pacific—Industry Use Cases

To accelerate AI adoption across manufacturing operations, early and wide-ranging POCs will set the stage for high-impact use cases to move into full production and ultimately encourage broader integration of AI across the organization.

2024 $M	**707**	**500**	**491**	**444**	**422**
Top 5 Industry Use Cases in Manufacturing	AI-powered quality and compliance	Augmented planning and logistics	Augmented product requirements, design, and collaboration	Augmented connected maintenance (including digital twins)	Augmented product R&D (including digital thread for better digital twins)
5-Year CAGR	**29.1%**	**31.2%**	**29.6%**	**28.3%**	**28.4%**
What It Does	Simulates realistic manufacturing environments for product testing, identifies defects across domains, and generates configuration-specific troubleshooting procedures. It also ensures regulatory compliance by monitoring digital resources and comparing them to business processes.	AI automates customs processes, optimizes logistics, predicts freight needs, and enhances network design for efficiency and sustainability. It improves inventory forecasting, order fulfillment, and workforce planning, supporting decision making via scenario modeling and real-time adjustment.	Supports generative design with AI for product geometry optimization, and provides interactive guidance during design, simulation, and manufacturing. It evaluates design processes and translates real-time feedback into actionable insights for product improvement.	Automatically generates asset life-cycle reports for manufacturing, leveraging AI to predict performance, optimize installations, and forecast equipment failures. Integrates external and operational data for enhanced logistical and decommissioning models.	Generates synthetic data for manufacturing when real data is scarce or costly, and develops software code/firmware for product features and embedded systems. GenAI enables custom digital thread software to automate data exchange and analytics, unifying R&D, customer insights, supply chain, manufacturing, and service data.
Business Metrics	▸ Defect detection rate ▸ Regulatory compliance adherence	▸ Logistical efficiency ▸ Forecasting accuracy	▸ Time-to-market ▸ Product quality ▸ improvement rate	▸ Asset uptime ▸ Failure prediction accuracy	▸ R&D cycle time ▸ Innovation rate

In the manufacturing industry, the adoption of ML and AI is revolutionizing production processes, improving efficiency, and reducing downtime through predictive maintenance. AI is enhancing everything from supply chain optimization to quality control, allowing manufacturers to automate complex tasks and respond quickly to market changes. As advancements in AI and ML continue, they will play a key role in advancing smart manufacturing, enabling more agile production lines and greater precision, and unlocking new possibilities for automation and robotics. By enhancing development productivity, digitalizing procurement, and improving sales performance, manufacturers can efficiently manage complex production environments, boost revenue, and better serve diverse customer bases across the region.

Source: IDC's Worldwide AI and Generative AI Spending Guide 2024 | August (Version 2, 2024) Forecast

Key Peer Insights from Manufacturing IT Decision Makers

Key Findings

- For organizations, AI reduces costs and waste in manufacturing, boosting productivity and revenue growth.
- Organizations focus on practical, smaller investment approaches for AI to enhance effectiveness, align with business goals, and pave the way for smooth tech integration.
- Organizations prioritize a clear and phased strategy for AI adoption to ensure successful integration and alignment with their business goals.
- Organizations prioritize building internal AI capabilities to ensure skilled staff drive adoption and project alignment.

Change management is the ultimate challenge in AI implementation. Beyond technology, it's the **human element that poses the greatest difficulty**. Despite its potential, AI's success hinges on **overcoming internal resistance** and effectively guiding people through transformation.

– Group Head of Strategy & Innovation of a multinational manufacturing organization

AI Adoption in Energy — A Functional View

Energy companies in Asia/Pacific say they are currently using AI (83%) and GenAI (73%).

The energy sector is expected to increase its investment in AI and GenAI technologies to boost operational efficiency and productivity. These innovations will drive improvements in areas such as grid optimization, predictive maintenance, and energy distribution. AI-powered use cases, such as demand forecasting and real-time energy monitoring, will streamline operations, reduce downtime, and minimize energy waste. By adopting these technologies, energy companies can achieve greater precision, lower operational costs, and enhance overall reliability and service quality for consumers.

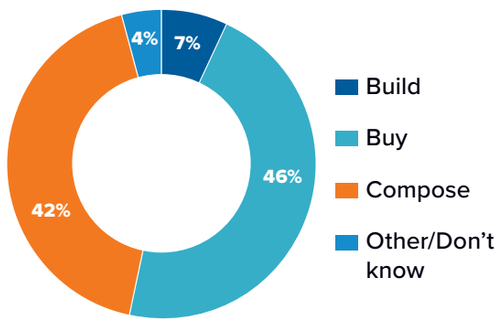
GenAI Adoption Approach

Although many energy companies prefer to buy off-the-shelf solutions, 42% of organizations say they would "compose," preferring to fine-tune AI models – leveraging their enterprise data — that support industry-specific tools for optimizing systems such as smart grids, energy trading platforms, and renewable integration. Only 7% plan to build their solutions from scratch. Energy companies often have a greater dependence on external vendors, as they often lack the capabilities, skills, and experience to develop their own solutions. This lack of maturity often necessitates increased investment in AI infrastructure and specialized professional services, including expert support for energy data management, asset monitoring, and addressing workforce skill gaps. Energy companies need robust, scalable infrastructure and domain expertise to ensure seamless AI integration, secure operations, and effective deployment across their networks and systems.

Top Energy GenAI Use Cases by Function

For energy companies, collaboration in cybersecurity and product development within R&D is likely to drive significant business value by enhancing information security and accelerating innovation through digital threads and generative ecosystem development. Additionally, connected maintenance within facilities will optimize operational efficiency by leveraging real-time data and predictive analytics to reduce equipment downtime and maintenance costs. Together, these initiatives enhance the overall agility and resilience of energy systems, ensuring both cost efficiency and improved grid reliability.

GenAI Adoption Approach in Energy (%)



Compose: fine-tuning an existing GenAI model (usually open source) on top of an enterprise AI platform

Build: developing a foundational model using institutional data

Buy: leveraging enterprise applications with GenAI capabilities or native GenAI applications

Extent to which Asia/Pacific energy companies believe GenAI will disrupt their competitive position or business operating model in the next 18 months

46%	54%
Disrupting Now	Will Disrupt in next 18 Months

Top Energy GenAI Functional Use Case Areas in the Next 18 Months

01 **Sales: Sales Enablement —** Text prompt interface and personalized training

02 **Procurement: Contract Management —** Contract drafting

03 **Cybersecurity: Information Security —** Auto-updates rules and policies

04 **Supply Chain: Planning —** Dynamic demand forecasting, enhanced risk management, and identification

05 **Facilities: Connected Maintenance —** Digital twin models for external impact predictions

Top Business Objectives from GenAI Functional Use Cases in Energy — Implemented or Plan to Implement Within 18 Months

01 Enhanced operational scalability

02 AI-augmented innovation

03 Enhanced job satisfaction

04 Supporting the digital transformation of the organization

05 Developing the strength and depth of skills in the function

Source: IDC WW AI Use Case Survey, July 2024 (Asia/Pacific n = 919, Asia/Pacific, Energy. n = 71.)

Source: IDC FERS 2024, Wave 1 Asia/Pacific n = 300, Asia/Pacific Energy n = 30

Energy Priorities for AI in Asia/Pacific — Industry Use Cases

Investments in AI will help energy providers manage fluctuating demand and optimize resource allocation as they integrate renewable energy sources and deal with grid complexities. AI capabilities are accelerating the development of smarter energy solutions, from predictive maintenance to energy forecasting, offering better visibility of operations and enabling data-driven decision making.

2024 $M	263	220	128	84	76
Top 5 Industry Use Cases in Energy	Augmented threat intelligence and prevention	Digital twins/augmented connected maintenance	AI-enabled connected and enhanced facilities management	Augmented planning and logistics	Augmented compliance and risk
5-Year CAGR	26.7%	26.2%	26.8%	30.3%	28.7%
What It Does	Energy companies operate in a high cyberthreat environment — establishing a security operations center with AI-powered augmented threat intelligence and prevention enables real-time detection, rapid response, and proactive defense against increasingly sophisticated attacks.	Provide real-time monitoring and predictive analytics for infrastructure, enabling proactive equipment maintenance, reducing downtime, and optimizing asset performance for improved efficiency and reliability in operations.	AI leverages real-time data to optimize facility operations by automating energy management, predicting equipment failures, and streamlining maintenance workflows, resulting in reduced operational costs, improved efficiency, and enhanced sustainability across infrastructure and assets.	AI-driven planning and logistics optimizes resource allocation and scheduling of grid maintenance and energy distribution, ensuring efficient supply chain management, timely equipment delivery, and streamlined operations, while reducing costs and improving overall service reliability.	AI enhances compliance by monitoring regulations and automating risk assessments for energy distribution and grid operations, ensuring adherence to safety and environmental standards while reducing penalties, minimizing operational risks, and improving overall regulatory reporting accuracy.
Business Metrics	▸ Incident response time, number of detected and prevented cyberthreats	▸ Asset uptime, maintenance cost reduction	▸ Operational cost savings, energy efficiency improvements	▸ On-time delivery rate, supply chain cost optimization/ reduction	▸ Regulatory compliance rate, penalty fines avoided

The use of ML and AI in the power system sector will deliver significant transformation, allowing for the optimization of grid operations, enhanced reliability, and accelerated progress toward a cleaner energy future. As innovation advances in the field, AI and ML will continue to play a pivotal role in reshaping the energy landscape and unlocking the full potential of distributed energy resources (DERs). Digital twins are central to enabling real-time simulations and predictive analytics, allowing operators to monitor and optimize the performance of power assets, reduce downtime, and enhance decision making, ultimately leading to more efficient and resilient grid management.

Source: IDC's Worldwide AI and Generative AI Spending Guide 2024 | August (Version 2, 2024) Forecast

Key Peer Insights from Energy IT Decision Makers

Key Findings

- Organizations identify AI and GenAI use cases across all functions, including procurement, finance, manufacturing, legal, and HR, with some already mature.
- Global organizations allocate significant annual budgets for strategic AI initiatives, with a major focus on Asia/Pacific.
- Organizations prioritize responsible AI practices, integrating ethics and compliance to mitigate risks and ensure standards alignment.
- Some organizations have global AI hubs with 100 to 250 professionals driving strategy and execution.

Investing in AI is not just a trend but a **serious, long-term commitment** that is reshaping industries, driving revenue, and enhancing efficiency. The journey toward AI adoption is transformative, **demanding a blend of strategic investment, robust infrastructure, and a culture that embraces innovation**.

– VP of a Global Strategy and Implementation for a multinational energy firm

AI Adoption in Healthcare — A Functional View

Healthcare companies in Asia/Pacific say they are currently using AI (86%) and GenAI (59%).

The healthcare sector is expected to significantly increase its investment in AI and GenAI technologies to enhance operational efficiency and patient outcomes. These innovations will drive improvements in areas such as diagnostics, predictive analytics, and personalized treatment plans. AI-powered use cases, like real-time patient monitoring and demand forecasting for medical resources, will streamline workflows, reduce bottlenecks, and minimize errors in patient care. By adopting these technologies, healthcare providers can achieve greater precision, lower operational costs, and ultimately enhance the quality and timeliness of care delivered to patients.

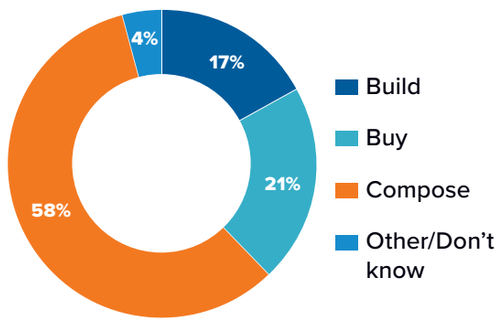
GenAI Adoption Approach

Healthcare organizations prefer to compose AI solutions (**58.2%**) as it offers greater flexibility to tailor and integrate AI tools into existing systems for specialized applications such as diagnostics, personalized treatment plans, and medical data analysis. Only 16.8% plan to build their AI solutions from the ground up, largely because of the complexities of developing such advanced technologies in-house. Healthcare providers tend to rely on external vendors for specialized solutions because of internal AI skill gaps. This approach requires substantial investment in expert services, such as data security, regulatory compliance, and seamless integration with EHRs. To ensure effective AI deployment, healthcare organizations must prioritize scalable, secure AI infrastructure and platforms to improve patient outcomes and operational efficiency.

Top Healthcare GenAI Use Cases by Function

For a healthcare organization, patient service delivery can be enhanced by using self-service tools that enable patients to manage appointments, access personalized communication, and interact with virtual assistants. These tools streamline operations, reduce administrative burdens, and improve accessibility with multi-language support and AI-curated knowledge bases. By analyzing patient feedback and integrating seamlessly with existing systems, GenAI fosters a patient-centric approach, driving better engagement, efficiency, and trust while optimizing the overall quality of care.

GenAI Adoption Approach in Healthcare (%)



Compose: fine-tuning an existing GenAI model (usually open source) on top of an enterprise AI platform

Build: developing a foundational model using institutional data

Buy: leveraging enterprise applications with GenAI capabilities or native GenAI applications

Extent to which Asia/Pacific healthcare organizations believe GenAI will disrupt their competitive position or business operating model in the next 18 months

Disrupting Now | **Will Disrupt in next 18 Months**

Top Healthcare GenAI Functional Use Case Areas in the Next 18 Months

01 **HR: End-user Experience**

02 **Procurement: Contract Management**

03 **Customer Service: Self-service —** Customer self-scheduling and self-service knowledge base

04 **ITOps: Service Performance —** Anomaly detection and service observability

05 **Facilities: Intelligent Capital Planning and Execution**

Top Business Objectives from GenAI Functional Use Cases in Healthcare — Implemented or Plan to Implement Within 18 Months

01 Supporting the digital transformation of the organization

02 Developing strength and depth in skills

03 Implementing a new procurement operating model

04 Increasing supplier diversity

05 Reduce costs and streamline operations

Source: IDC WW AI Use Case Survey, July 2024 (Asia/Pacific n = 919, Asia/Pacific, Healthcare. n = 41.)

Source: IDC FERS Wave 1 – 2024 Asia/Pacific n = 300, Asia/Pacific Healthcare n = 28

Healthcare Priorities for AI in Asia/Pacific — Industry Use Cases

AI investments in healthcare are crucial for driving DX, optimizing resource allocation, and enhancing operational efficiency. AI innovations such as predictive diagnostics and automated workflows, accelerate smarter healthcare solutions, improving patient outcomes.

2024 $M	**1097**	**110**	**98**	**90**	**82**
Top 5 Industry Use Cases in Healthcare	Clinical workflow and resources optimization	AI-enabled customer service and self service	Augmented compliance and risk	AI-powered quality and compliance	Augmented claims processing
5-Year CAGR	**27.9%**	**31.4%**	**24.2%**	**28.4%**	**33.7%**
What It Does	Enhancing medical images by augmenting them with additional data or clarity, aiding more accurate diagnoses. By leveraging GenAI, this use case enables clinicians to attain accuracy in image diagnostics, along with fastness in image analytics.	Hyper-personalized educational content and communications and faster query response. This use case ensures enhanced patient experience and continued engagement with the system, leading to better care outcomes.	By leveraging AI, organizations can streamline regulatory compliance by continuously monitoring patient data privacy regulations such as Health Insurance Portability and Accountability Act (HIPAA), detecting potential breaches, and minimizing legal risks, all while ensuring the security of sensitive medical records in real time.	GenAI is used to synthesize new operational guidelines from approved sources (e.g., research studies) to help adapt the organization to emerging trends. In this highly adaptive regulatory environment, it is vital healthcare providers get real-time updates.	Leverages GenAI capabilities to analyze flagged claims to identify root causes, enabling staff to edit and resolve issues before submission. This enhances the efficiency of current processes and boosts staff productivity, helping to eliminate patients' waiting time.
Business Metrics	▸ Diagnostic accuracy ▸ Time to diagnosis	▸ Patient satisfaction ▸ Care plan adherence	▸ Compliance rate ▸ Data breach incident rate	▸ Protocol and policy adoption rates ▸ Operational efficiency	▸ Claims management efficiency ▸ Costs associated with claims management processes

Increasing investment in GenAI and ML in the healthcare sector represents an opportunity for a transformative shift in capabilities, enabling the optimization of patient care, diagnostics, and treatment planning. These advancements enhance the reliability of medical systems, allowing for more accurate predictions and personalized care options. As innovation continues, AI and GenAI will play a critical role in reshaping healthcare, from streamlining administrative processes to unlocking the potential of real-time patient monitoring and advanced data analysis, ultimately improving outcomes and driving the future of precision medicine.

Source: IDC's Worldwide AI and Generative AI Spending Guide 2024 | August (Version 2, 2024) Forecast

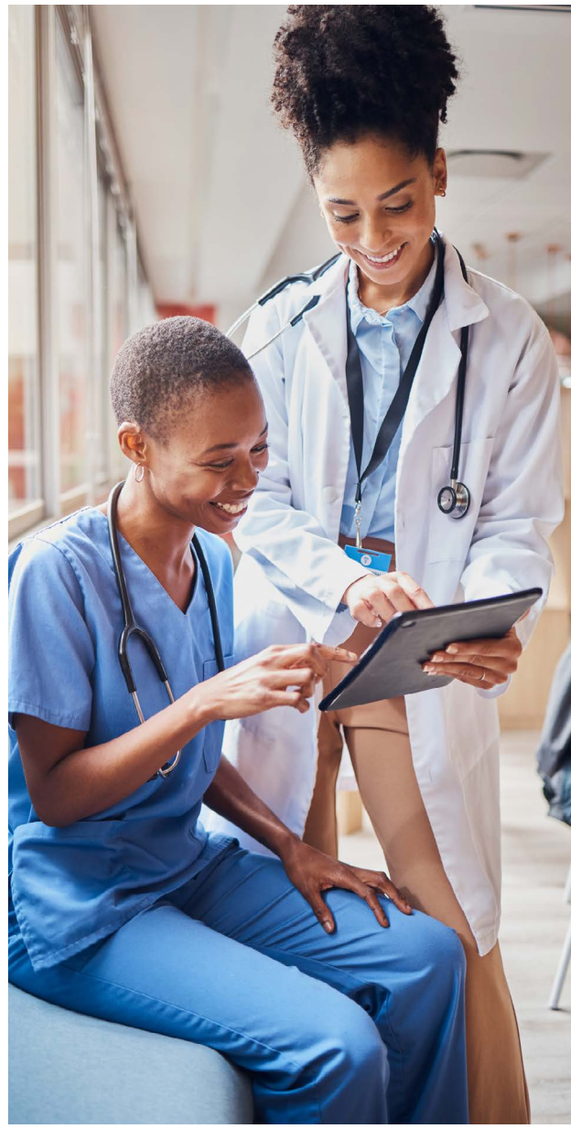
Key Peer Insights from Healthcare IT Decision Makers

Key Findings

- AI initiatives in healthcare focus on clinical excellence, operational efficiency, and financial optimization. Initial AI projects, such as financial counseling using ML, have shown significant improvements in accuracy.
- AI spending is currently a small percentage of overall IT spend but is expected to increase in the near future. Successful AI use cases include nursing chatbots and call center automation, improving efficiency and user experience.
- Data scientists are crucial for developing and implementing AI solutions across multiple demographics. Master data management is essential for ensuring data readiness and patient data integration.
- AI technologies are expected to transform healthcare by enhancing productivity and enabling intelligent automation.
- The adoption trend is moving toward ready-to-use AI solutions with minimal customization for faster time to value. Key challenges faced by the industry include awareness of AI capabilities and data quality for model training.

> AI in healthcare is not just about innovation; it's about **integrating data readiness** with cultural adoption. Navigating these complexities ensures we **maximize AI's potential to enhance clinical outcomes and operational efficiency,** ultimately **improving patient care.**

– Data, AI/ML and Intelligent Automation Lead at an integrated healthcare SP



AI Adoption in Retail — A Functional View

Retail companies in Asia/Pacific say they are currently using AI (82%) and GenAI (63%) within their retail companies.

The retail industry is set to boost investment in AI and GenAI to improve operational efficiency across business functions and customer experiences. These technologies will enhance areas such as personalized customer recommendations, inventory management, and predictive demand forecasting. AI-driven applications, such as dynamic pricing and automated customer service, will streamline operations, reduce costs, and optimize decision making. By leveraging AI, retailers can increase precision, minimize errors, and deliver more timely and tailored shopping experiences to customers.

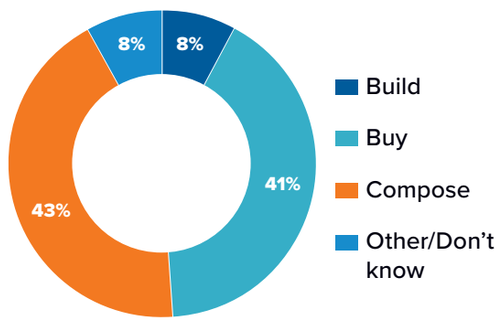
GenAI Adoption Approach

Retail companies are increasingly opting to compose AI solutions (43.3%), as this approach allows for flexible customization and seamless integration into their existing systems for applications such as personalized marketing, dynamic pricing, and inventory management. A smaller proportion (41.5%) prefer to buy prebuilt AI solutions, recognizing the challenges of developing complex AI in-house. Only 7.6% of retailers plan to build their AI from scratch, largely because of the high costs and expertise required. Retailers often rely on external vendors to fill AI skill gaps, particularly for tasks such as data security and systems integration. To ensure successful AI adoption, retailers need to focus on scalable, secure infrastructure that enhances customer engagement and operational efficiency.

Top Retail GenAI Use Cases by Function

For retail organizations, enhancing customer service through AI-driven contact centers and personalized engagement tools is poised to significantly improve customer experiences and drive business value. Additionally, leveraging AI in supply chain logistics for freight volume forecasting and load balancing will enhance operational efficiency, while AI-enabled recruitment, talent acquisition, and contract management tools in HR and procurement functions will improve decision making and resource allocation.

GenAI Adoption Approach in Retail (%)



Compose: fine-tuning an existing GenAI model (usually open source) on top of an enterprise AI platform

Build: developing a foundational model using institutional data

Buy: leveraging enterprise applications with GenAI capabilities or native GenAI applications

Extent to which Asia/Pacific retailers believe GenAI will disrupt their competitive position or business operating model in the next 18 months

43%	42%
Disrupting Now	Will Disrupt in next 18 Months

Top Retail GenAI Functional Use Case Areas in the Next 18 Months

01	**HR: Recruitment and Talent Acquisition**
02	**Procurement: Contract Management**
03	**Marketing: Web Marketing —** Personalized digital assistant and personalized offers
04	**Customer Service: Contact Center**
05	**Supply Chain: Logistics/Global Trade —** Freight volume forecasting, optimizing load balancing, and distribution

Top Business Objectives from GenAI Functional Use Cases in Retail - Implemented or Plans to Implement Within 18 Months

01	New sales/channel expansion or capabilities
02	Improved pipeline management
03	Better forecasting and customer analytics
04	Improved account planning
05	Increase revenue through growth of new customers

Source: IDC WW AI Use Case Survey, July 2024 (Asia/Pacific n = 919, Asia/Pacific, Retail. n = 125.)

Source: IDC FERS Wave 1 – 2024 Asia/Pacific n = 300, Asia/Pacific Retail n = 35

Retail Priorities For AI In Asia/Pacific – Industry Use Cases

AI investments in retail are vital for driving DX, expanding sales channels and improving operational efficiency. AI-powered advanced customer analytics and automated pipeline management enable retailers to enhance forecasting accuracy, streamline account planning, and optimize resource allocation.

2024 $M	**919**	**320**	**279**	**120**	**117**
Top 5 Industry Use Cases in Retail	Digital commerce	Augmented planning and logistics	AI-enabled customer service and self service	Augmented fraud analysis and investigation	Smart campaign and content marketing
5-Year CAGR	**31.5%**	**29.7%**	**30.9%**	**31.8%**	**31.9%**
What It Does	Enhances ecommerce search accuracy with image-based capabilities, personalized experiences, and real-time data. Dynamically generates personalized coupons via SMS, email, and user interface (UI) changes, while offering virtual try-on features for customers to visualize products online.	AI-driven planning optimizes inventory management and product delivery, ensuring efficient restocking and timely shipments. By analyzing real-time sales data, this use case improves supply chain efficiency, reduces stockouts, and enhances customer satisfaction with faster and accurate order fulfillment.	AI enhances customer service by providing real-time assistance through virtual shopping assistants and chatbots, answering product inquiries, tracking orders, and resolving issues. This use case enables seamless self-service, improves response times and customer satisfaction during online shopping experiences.	Retailers leverage AI to analyze transaction data in real-time, detecting fraudulent patterns in online payments and flagging suspicious activities such as unusual purchasing behavior or unauthorized account access, enabling proactive fraud prevention and safeguarding customer payment information.	Utilizes AI to optimize marketing by analyzing customer purchasing patterns and payment behaviors to deliver personalized, targeted campaigns. It dynamically adjusts content based on real-time data, enhancing engagement, driving conversions, and maximizing ROI on promotional efforts.
Business Metrics	▸ Conversion rate ▸ Average order value	▸ Inventory turnover ▸ Order fulfillment time	▸ Customer satisfaction score ▸ Response time	▸ Fraud detection rate ▸ Chargeback rate	▸ Customer engagement rate ▸ Campaign ROI

The retail industry is undergoing a transformative shift driven by increasing investment in GenAI and AI agents. These technologies enhance customer experience, optimize inventory management, and streamline operations. AI agents are now critical for businesses, offering personalized recommendations, predictive inventory planning, and dynamic pricing strategies. By processing vast amounts of data, AI agents can identify consumer trends, enabling retailers to tailor their offerings and make data-driven decisions that improve efficiency and profitability.

Source: IDC's Worldwide AI and Generative AI Spending Guide 2024 | Aug (Version 2 2024) Forecast

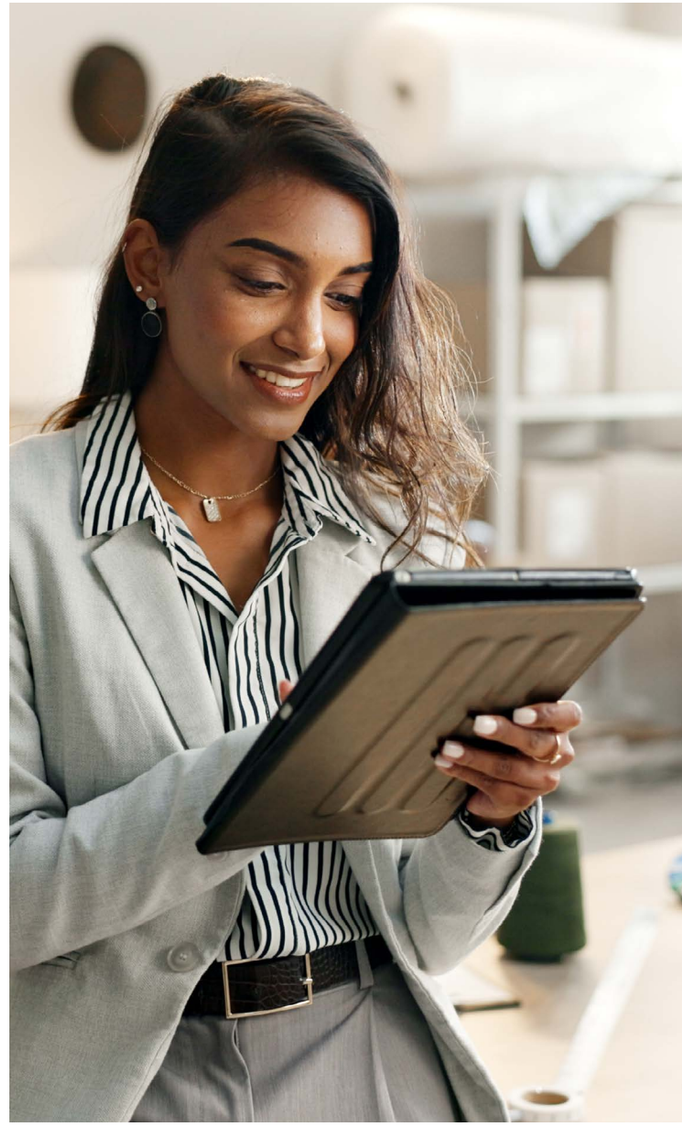
Key Peer Insights from Retail IT Decision Makers

Key Findings

- AI use cases include personalized promotions, quick assist recommendations, supply chain safety, distribution center pick paths, and automated marketing campaigns.
- The AI spend commands a considerable portion of its total technology budget, with significant investments in safety initiatives.
- The industry faces challenges in data readiness, talent availability, and aligning AI projects with business value.
- They are focusing on building internal AI capabilities and upskilling existing talent with an aim to enhance customer experience and productivity through AI, with a cautious approach to large-scale investments.
- AI culture in the sector is driven by executive leadership, but broader organizational buy-in is still developing.

In an era where AI is not just an option but a necessity, the journey of retailers underscores the **pivotal shift from high-value, ambitious AI projects to pragmatic, data-driven initiatives**. This strategic pivot, inspired by a blend of FOMO and the **pressing need for productivity and customer experience enhancements**, marks a new chapter in retail, emphasizing the importance of starting small to scale fast in the AI domain.

– Strategy Leader at an Australia-based retail firm offering diversified products and services



Essential Guidance for Technology Buyers

Top AI Platform Trends

01 LLM Integration with enterprise systems

02 Ubiquitous and unified AI (across cloud, core, and edge)

03 Mix and match of AI tools and vendors around capability clusters

04 GenAI feature stores as standard libraries to expedite model build

05 Emergence of AI system architecture with advanced AI frameworks as agentic workflows

06 Spread of AI certification to ensure responsible AI

Tech Buyer Guidance

1. Assess your foundational AI readiness

Evaluate your company's current IT, data, and workflows and skills capabilities for AI. How does this compare with industry best practices? Does this align with your business strategy?

2. Data is key

Prioritize enterprise initiatives for data governance, sharing, and integration. Understand the value of this data, as this provides the foundation for AI and your larger business strategy.

3. Build a robust data value chain

Partner with internal functions, suppliers, vendors, and customers to build the larger data value chain (data sourcing, engineering, curation, security, etc.) that fuels business AI success.

4. Align the build, buy, and compose mix with the business transformation roadmap

Plan AI use cases based on your technology readiness and business requirements. Establish conservative ROI expectations and monitor carefully. Understand the skills and technology linkages between AI use cases, as these will inform the next generation of AI-enabled opportunities.

5. Pricing

Building AI models from scratch is hard to justify, given the rapidly evolving vendor capabilities and increasingly optimized storage and processing technologies. If commercial models are not suitable for enterprise use, look for open-source models that allow for better talent attraction, faster development, and reduced costs.

6. Assess the IT requirements to support the AI life cycle

Develop enterprise standards and capabilities to support AI model life cycles (ingesting, training, tuning, generation, and monitoring) as well as AI model governance.

7. Build for the future

AI must be able to scale for future business needs and not be constrained by current use cases. Evaluate the scalability of enterprise capabilities across layers of the technology stack: infrastructure and compute, data, foundational models, orchestration, and application. Adopt modular and open standards–based architectures.

8. Multimodal, multi-agent AI

The future of AI is multimodal and multi-agent. Build your target stack to support all types of data: text, audio, and video. Rather than adopt a single AI model that tries to do everything, it is better to adopt models for particular domains or use cases.

9. Accelerate AI development with external expertise

Leverage leading IT SPs for readiness assessment, roadmap design and planning, model and custom application development, workforce training, and skill transfers.

Source: CIO Quick Poll Survey, January 2024, IDC's Asia/Pacific Data, AI, GenAI and Insights Survey, July 2024; IDC's FERS Survey Wave 4 and 7, Asia/Pacific, April and July 2024

Message from the Sponsor

In a world driven by increasingly massive amounts of data, the partnership between humans and machines becomes more important than ever. Dell Technologies and NVIDIA can help you leverage AI to drive innovation and achieve your business goals.

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IDC Custom Solutions

IDC Research, Inc.
140 Kendrick Street, Building B, Needham, MA 02494, USA
T +1 508 872 8200

idc.com @idc @idc