DELL Technologies

intel

AI in Action:
Singapore Edition

MOXIE INSIGHTS

OVERVIEW

In technology, talk is cheap. Enthusiasm often supersedes execution as businesses clamber on-board the latest marketing bandwagon, kick-starting a hype cycle of emotions and expectations.

Today, AI is the focal point of such enthusiasm in Singapore. But the true test of potential lies in side-stepping the rhetoric to assess practical applications and real-world implementations.

In this dynamic and rapidly evolving field, an authoritative and balanced approach is required to consider how organisations can harness the benefits of AI.

Unique *Moxie Research* – in association with Moxie Insights, Dell Technologies and Intel – explored the landscape of AI adoption in Singapore, notably in the context of significant initiatives, business challenges and future opportunities.

Findings from leading IT executives assessed how AI is linked to strategic business priorities, highlighted practical implementations of AI and detailed common deployment roadblocks. This is in addition to documenting the infrastructure foundations to maximise AI and sharing examples of AI best practice and use cases.

January 2025

MOXIE INSIGHTS

METHODOLOGY

Moxie Research provides market intelligence that is local, relevant and current with proprietary data rigorously tested against comprehensive methodologies. The value of *Moxie Research* is dependent on the methodology.

Our approach is:

Meticulous

We follow strict frameworks and standards to ensure research is objective and accurate.

Systematic

We action logical and practical approaches that create consistency and quality.

Informed

We interpret data and insights from a position of knowledge, understanding and context.

Credible

We empower an executive audience with our authority impacting the most influential minds in business and technology.

Our methods are:

1. **Quantitative**

   Extensive research surveys (online and phone) with targeted respondents following stringent evaluation criteria and objective questioning to provide accurate data.

2. **Qualitative**

   In-depth one-on-one interviews and group discussions to provide non-numerical data, understanding executive insights and market context.

3. **Analysis**

   Accurate interpretation of data and insights gathered to deliver informed and reliable conclusions aligned to a rigorous set of standards.

BREAKDOWN

Survey respondents shaping this research represent the most instrumental and influential end-user executives in Singapore – research was conducted between December 2024 and January 2025.

Survey respondents

- 252

Persona

Breakdown by executive position:

- CIO 11%
- CTO 32%
- CDO 3%
- CISO / CSO 3%
- President 3%
- Vice President (VP) 6%
- IT Director 33%
- IT Manager 22%
- Other 4%

(Total is more than 100% as some executives hold multiple positions)

Breakdown by company size (employee headcount):

- 1-200 11%
- 201-500 21%
- 501-1000 42%
- 1001-5000 18%
- 5000+ 8%

Breakdown by industry sector:

- Education 2%
- Financial Services 21%
- Government 2%
- Health 3%
- Manufacturing 38%
- Media / Entertainment 4%
- Mining 2%
- Oil and Gas 4%
- Professional Services 4%
- Real Estate 1%
- Retail 7%
- Telco 4%
- Transport 2%
- Travel / Leisure 1%
- Utilities 4%
- Other 1%

Location:

- Singapore

AI Sentiment

2025 will see AI rise to even greater prominence in Singapore as businesses position for full-scale deployments – triggered by plans to either transform, innovate or modernise.

According to *Moxie Research*, 90% of organisations will allocate additional funding and budget to AI projects during the next 6-12 months.

Underpinning this will be executive-level decisions setting business strategy, assessing technology stack capabilities and identifying impactful solutions and use cases.

Within this timeframe, 80% of companies are prioritising the development of an AI strategy and roadmap by building a cross-functional team (76%) and setting clear AI business objectives (79%).

An increased focus on change management will form part of that strategy for 72% of organisations, alongside investment in foundational AI education and training (80%) and strengthening governance and ethics frameworks (80%).

Based on *Moxie Research*, selecting the right technology stack and infrastructure capable of powering AI initiatives will dominate decision making in 2025 – cited as an increased priority for 82% of companies. This is in addition to evaluating data readiness to maximise AI (81%).

The aim is to identify high-impact AI use cases for 77% of organisations, with a view to deploying small pilot AI projects at a minimum (79%).

Sentiment shared in this research mirrors all of the countless temperature checks on AI appetite in Singapore, whether at government, business or consumer level.

Appetite is strong and excitement is high. The nation is winning the AI arms race.

According to the *AI Preparedness Index (AIPI)* by the International Monetary Fund (IMF), Singapore ranked as the most prepared nation for AI in the world.

The country scored 0.80 ahead of Denmark (0.78) and the United States (0.77) to place top among the highest-rated in the list.

The AIPI assesses the level of AI preparedness across 174 countries, based on a rich set of macro-structural indicators that cover the countries' digital infrastructure, human capital and labour market policies, innovation and economic integration, and regulation and ethics.

In Singapore, excitement in AI is not confused with execution however, an area in which the country continues to shine.

Singapore's second National AI Strategy (NAIS 2.0) was officially launched in 2023 following an initial roll-out in 2019. The framework seeks to attain the twin goals of excellence and empowerment in AI.

To achieve this, efforts under NAIS 2.0 will be directed towards three systems and 10 enablers:

System 1 — Activity Drivers

Enablers: Industry, Government, Research

System 2 — People and Communities

Enablers: Talent, Capabilities, Placemaking

System 3 — Infrastructure and Environment

Enablers: Compute, Data, Trusted Environment, Leader in Thought and Action

To support this and further catalyse AI activities, the Singapore Government announced an investment of more than $1 billion over the next five years into AI compute, talent and industry development – announced as part of Budget 2024.

Mirroring findings in *Moxie Research*, businesses are aligned to the ambitions laid out in NAIS 2.0. This is chiefly in relation to the government's commitment to shape AI strategy, increase AI compute capabilities and foster AI talent.

The full-scale use of AI within organisations is pioneered and powered by both business and technology.

According to *Moxie Research*, internal AI champions are primarily found among the C-suite for 59% of companies, driven top-down by either the CEO (20%) or senior management (39%). Balancing and supporting this progressive attitude are IT departments, also viewed as internal AI champions for 63% of organisations.

For 82% of organisations, leadership at this level equates to not only championing AI initiatives but actively driving AI strategy internally and externally.

Such alignment among business and technology leaders is encouraging other departments to find a voice in the AI conversation, evident by an equal share of support across divisional departments such as finance and accounting (26%), human resources (19%) and business operations (19%).

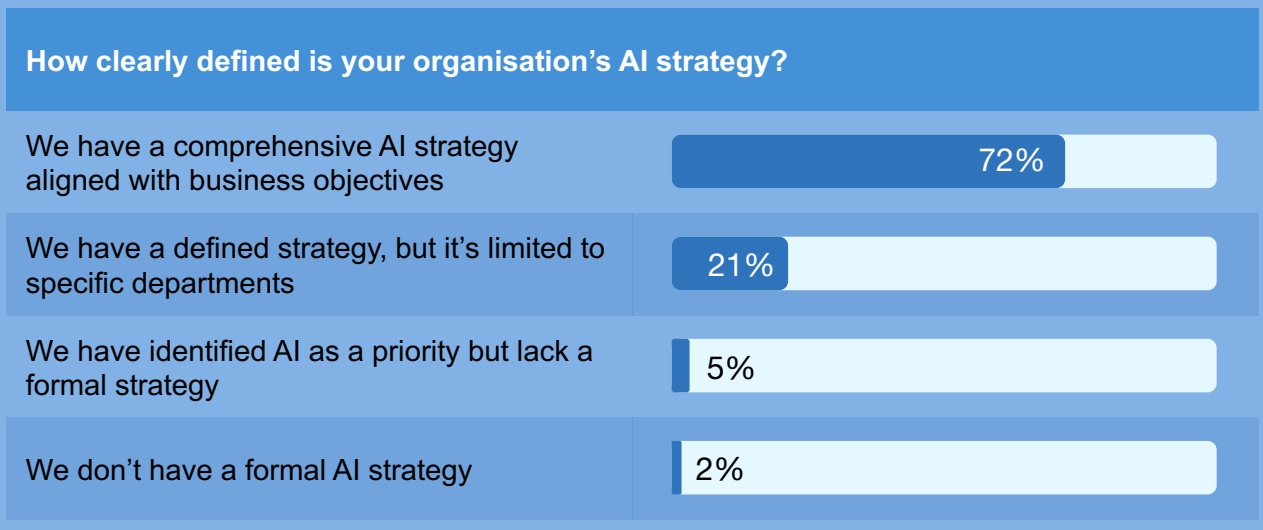
This is alongside product development (16%), sales and marketing (15%) and customer service (13%) teams.

AI Strategy

The clarity of an organisation's AI strategy can vary significantly based on a range of internal and external factors such as maturity, objectives and understanding, plus geographic market, industry sector and company size.

While strategies will continually evolve and transition from ideation to implementation, businesses in Singapore are already building structured and scalable plans of work.

Based on *Moxie Research*, high levels of strategic maturity are already evident in the area of AI.

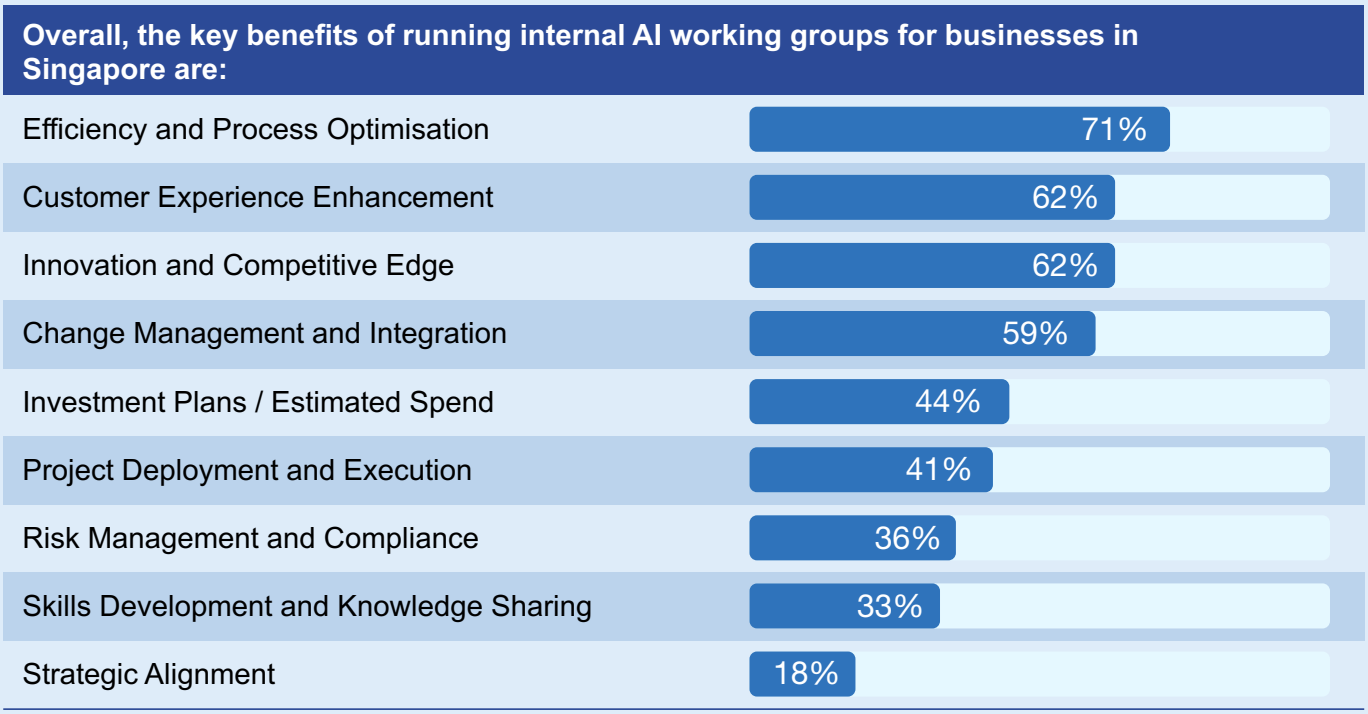


Regardless of maturity, 92% of businesses are running internal AI working groups to shape strategy and drive adoption, with a further 6% currently considering this as a viable option to accelerate initiatives.

Echoing the sentiment shared among business units, strong levels of collaboration currently exist across departments for AI projects.

For 70% of organisations, AI projects are fully cross-functional through a unified AI strategy while 19% of businesses have departments collaborating on selective cross-functional AI projects.

For 8% of companies surveyed, some departments collaborate but AI projects are not widespread while AI projects are isolated within specific departments for only 3%.



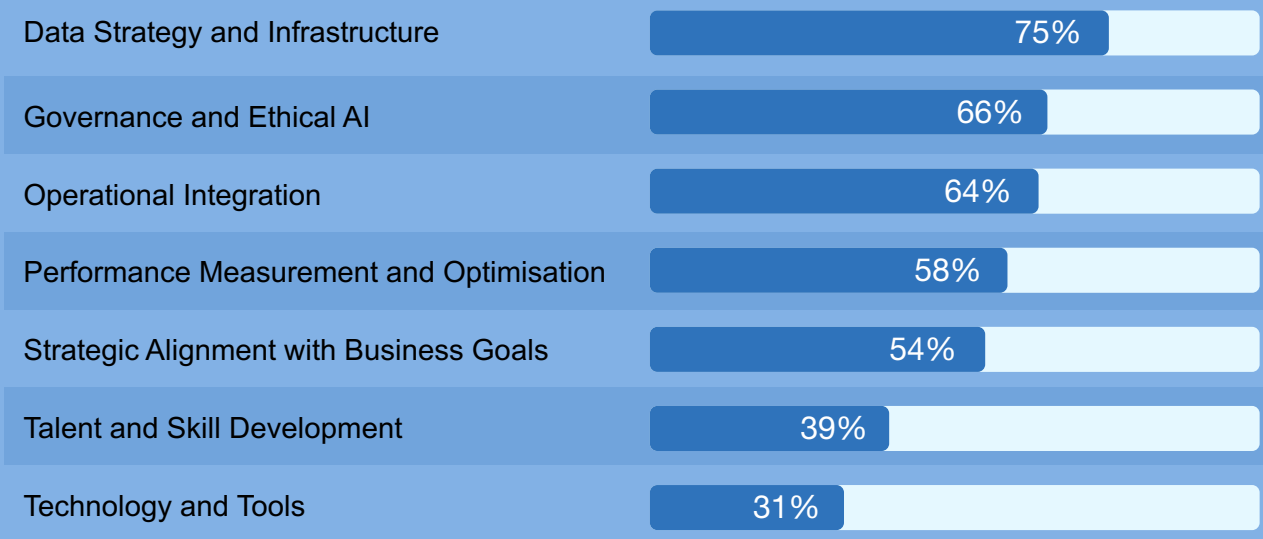
Strength from a strategic standpoint doesn't guarantee success in AI, however. Organisations are cognisant that market forces beyond company control also exist, such as sovereignty and regulation considerations.

The impact of future industry disruption should also not be discounted as businesses battle to keep pace in an increasingly competitive landscape, whether in Singapore, Southeast Asia or further afield.

But 72% of organisations are at least controlling the controllable outcomes by dovetailing AI actions with business objectives – this is mission-critical foundational work.

The pillars upon which AI strategies are being built in Singapore are also in sync with the systems and enablers documented in NAIS 2.0, notably in the areas of compute, data, trust and talent.

What are the key pillars underpinning your AI strategy? (select all that apply)



Findings from *Moxie Research* highlight that for the majority of organisations in Singapore (75%), there is no AI strategy without a data strategy. This underscores the underlying role of data in the development and deployment – and by extension, success – of AI systems.

Data is the fuel for AI in the sense that AI systems – notably those based on machine learning (ML) – rely on data for training, validation and testing. A lack of data quality will prevent AI models from learning or making accurate predictions.

Proper data cleaning, deduplication and enrichment processes also contribute to the delivery of reliable and trustworthy outputs, enhancing performance and scalability capabilities as a result.

The availability of relevant data that is high-quality and well-structured will also allow organisations to better comply with compliance and ethics standards.

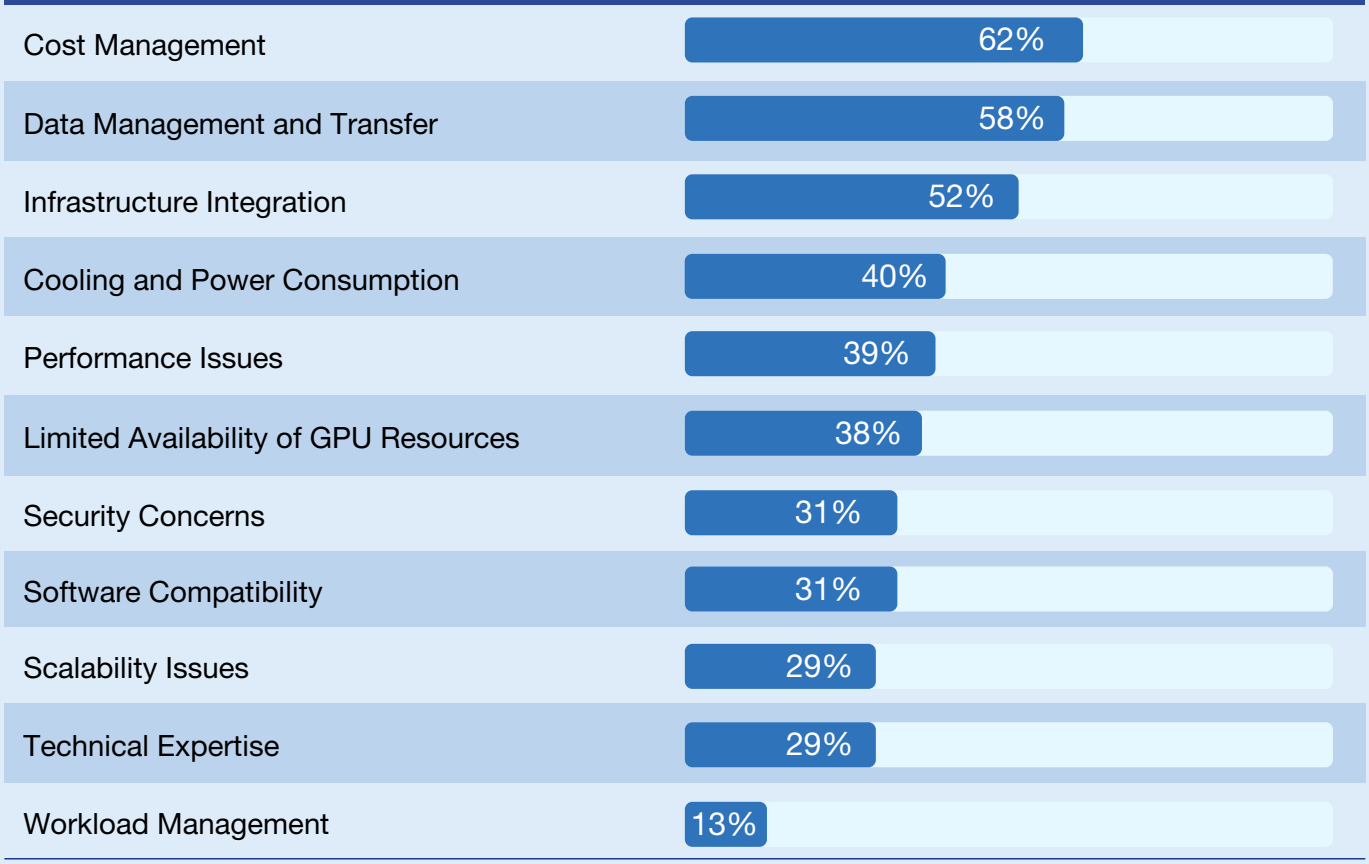
For data to be the differentiator, data infrastructure that is modern and scalable must also be deployed in tandem.

AI Stack

With AI sentiment and strategy checked, business focus shifts to the technology stack and the importance of modernisation.

For many organisations, this is centred on getting their IT house in order to overcome escalating financial, technical and operational concerns.

According to *Moxie Research*, the top challenges organisations in Singapore face when deploying and managing AI projects are:



While the issue of cost is unsurprising given ongoing economic, societal and geopolitical factors, escalating expenses are causing companies to reassess IT environments in the pursuit of efficiencies.

For example, the unpredictable cost of running large-scale AI projects in the cloud is placing strain on limited budgets which in turn is restricting experimentation, hindering success and accelerating burn rates.

The sheer cost of cloud compute also extends to data ingress and egress fees plus scaling charges which leads to high operational expenses and unreliable budgeting.

In response, 69% of organisations in Singapore are prioritising the roll-out of “modern, scalable data infrastructure optimised for AI” in 2025.

Almost a quarter (23%) are tackling data infrastructure that supports AI in certain areas but remains bound by limitations.

Many important considerations exist regarding the various hardware infrastructure components required to run an effective AI system. This includes high performance computing and high-speed networking, plus scalable, high-capacity, and low-latency storage.

At present, 71% of companies are using hybrid infrastructure as the primary technology stack upon which AI systems and solutions run, while 50% of organisations are using on-premises infrastructure to run AI workloads.

According to Enterprise Strategy Group, 88% of organisations identify with the statement, “Hey, look, all things being equal, we prefer to run AI on-premises”.

In 2025, AI will evolve from enthusiasm to execution in Singapore – this will be a year of scale as projects move into full production. But while AI continues to generate a tremendous amount of market hype, the focus must now shift beyond efficiency and productivity.

Where will AI make millions of dollars worth of impact? That's the question businesses in Singapore must now ask to maximise the potential of this transformative technology.

At Dell Technologies, we are building an AI ecosystem to help organisations answer that question – through modernised technology infrastructure which powers new use cases and unlocks new value.

Through our strategic partnerships in our ecosystem, we are delivering end-to-end AI solutions at speed and scale across hardware and software, spearheaded by an expanding network of specialised ISVs in Singapore.

SUMASH SINGH
Senior Director, ISV (APJ),
Dell Technologies

Cost aside, the importance of data and infrastructure in delivering successful AI projects cannot be understated.

Yet 58% of organisations in Singapore remain hindered by an inability to overcome data management and transfer challenges, as well as poor levels of infrastructure integration (52%) – as outlined by *Moxie Research*.

Consequently, the modernisation of legacy systems, processes and technologies now represent a leading priority for businesses seeking to maximise the potential of AI.

Findings follow the objectives outlined in NAIS 2.0 which states that successful AI value creation requires "robust and conducive infrastructure" and a facilitative environment, where all stages of the AI lifecycle are well supported.

Based on *Moxie Research*, 86% of organisations currently use graphics processing units (GPUs) to support AI and ML initiatives. In Singapore and beyond, this is now the direction of travel.

Insights published by Gartner outline that demand for high-performance AI chips in data centres is heightening.

Revenue from AI semiconductors globally totalled $71 billion in USD during 2024, representing an increase of 33% from 2023.

In 2024, the value of AI accelerators used in servers – which offload data processing from microprocessors – totalled $21 billion and will increase to $33 billion by 2028.

What are some of the primary benefits of using GPUs to support AI and ML initiatives? (select all that apply)	
Enhanced Performance	68%
Data Processing and Feature Engineering	65%
Accelerated Training of Machine Learning Models	64%
Improved Cyber Security	63%
Real-Time Inference and Low Latency	57%
Scalability in Cloud Computing Environments	36%
Support for Edge AI Applications	23%

With double-digit growth forecast for the next four years, market focus remains on the use of high-performance GPUs for new AI workloads.

According to *Moxie Research*, GPU demand in Singapore is also on the rise.

To meet such GPU demand, the NAIS 2.0 framework has committed to actively crowding in a significant amount of compute to Singapore to support growing AI needs, especially in areas of national interest.

To this end, the government is continuing to deepen substantive partnerships with major compute players to secure local access to compute capacity.

AI Solutions

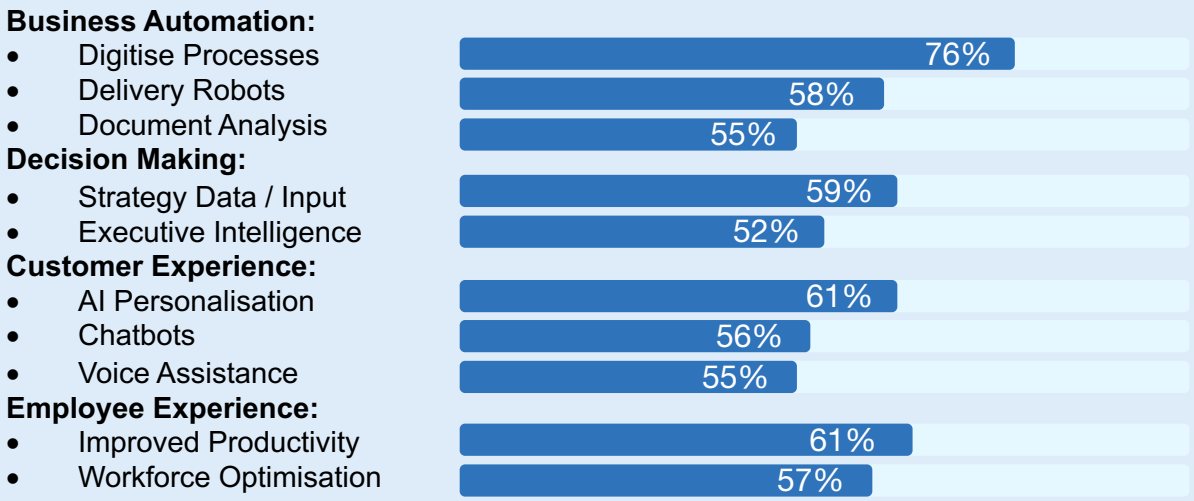
In technology, hype cycles are followed by peaks of expectation and subsequent troughs of impatience as executives seek return-on-investment (ROI).

AI is no different as businesses attempt to prove and realise value amid a widening of scope and an increase in initiatives.

In 2025, organisations will prioritise extracting tangible business value from their AI initiatives, predominantly through establishing dedicated AI committees led by CIOs or Chief AI Officers.

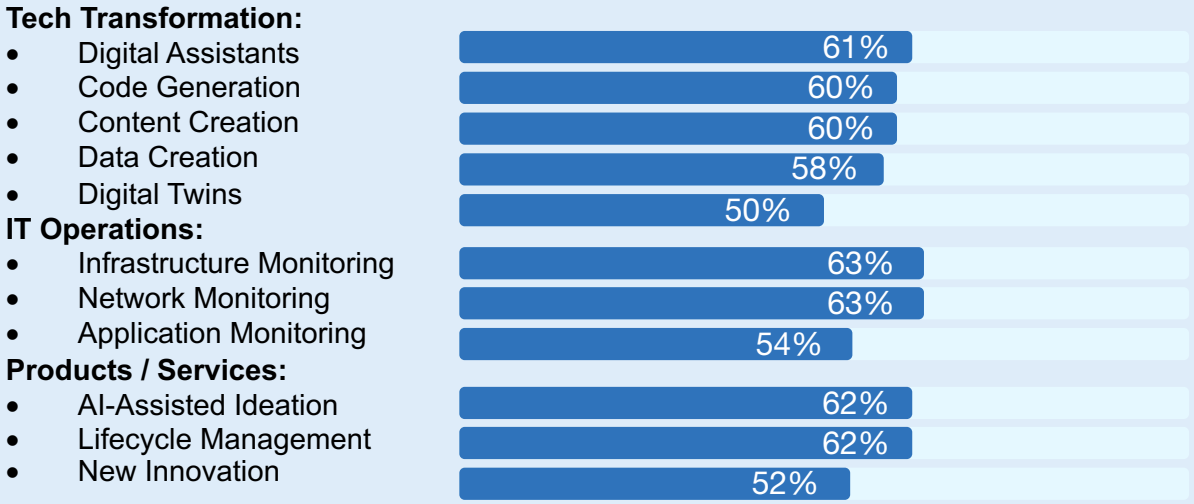
Across Singapore, AI-related use cases supporting organisational objectives are already underway at varied levels of scale and maturity. According to *Moxie Research*, business use cases primarily span automation, decision-making and experience.

Specific to business, outline the AI-related use cases that are currently supporting your organisational initiatives today:



From a technical standpoint, AI innovation is also in play across a range of technologies for a combination of transformation and modernisation purposes.

Specific to technology, outline the AI-related use cases that are currently supporting your organisational initiatives today:



Measuring success in AI represents an ongoing focus for organisations seeking to link use cases with outcomes.

Whether tactical or strategic deployments, future investment is often reliant on an organisation's ability to document the impact and performance of AI initiatives.

Moxie Research highlights that in Singapore, 73% of companies already have a systematic process in place for measuring and analysing AI performance.

Behind this core group of AI front-runners, 19% of businesses assess AI initiatives periodically with a few key metrics while 6% occasionally evaluate AI projects but on an inconsistent basis.

In 2025, 75% of businesses will focus efforts on building internal skills and increasing in-house capabilities to maximise the benefits of AI. This will not be at the detriment of outsourcing however with specialist third-party IT vendor partnerships considered crucial to unlocking value and delivering growth.

To succeed, a combination of internal and external expertise is required.

When delivering AI initiatives and projects, where do you source your skills and expertise from?

	In-house team	Outsourced to partners	Both in-house and outsourced
Architecture Design	67%	20%	13%
Business Strategy	61%	26%	13%
Data Analysis	45%	34%	21%
Data Management and Migration	39%	33%	28%
Data Security	52%	25%	23%
Governance	53%	30%	17%
Operations	53%	32%	15%
Project Management	55%	28%	17%
Solution Development	49%	31%	20%
Solution Implementation	56%	22%	22%

In response, AI ecosystems are being assembled with expert partners to service a market bolstered by new technologies and bound by new rules of engagement. This is an economy of interconnected solutions and services created with the sole purpose of feeding insatiable market appetite.

Based on *Moxie Research*, businesses in Singapore are partnering with global and local leaders in the AI space – chiefly IT vendors and independent software vendors (ISVs) for 67% and 58% of organisations respectively.

Demand for data specialists is also high (51%), as well business advisory and consultancy firms (46%).

The most important business characteristics that organisations seek when working with an AI third-party partner is the ability to manage end-to-end AI projects from strategy to implementation – referenced by 62% of businesses surveyed.

A collaborative and flexible approach is also important (59%) alongside an ability to provide end-to-end AI solutions starting at the data and infrastructure layers (57%). Deep AI skills by solution set (51%) and industry sector (48%) are also at a premium.

ABOUT DELL TECHNOLOGIES

Dell Technologies (NYSE: DELL) helps organisations and individuals build their digital future and transform how they work, live and play. The company provides customers with the industry's broadest and most innovative technology and services portfolio for the AI era.

ABOUT INTEL

Intel (Nasdaq: INTC) is an industry leader, creating world-changing technology that enables global progress and enriches lives. Inspired by Moore's Law, we continuously work to advance the design and manufacturing of semiconductors to help address our customers' greatest challenges. By embedding intelligence in the cloud, network, edge and every kind of computing device, we unleash the potential of data to transform business and society for the better. To learn more about Intel's innovations, go to newsroom.intel.com and intel.com