HCLTech | Supercharging Progress™

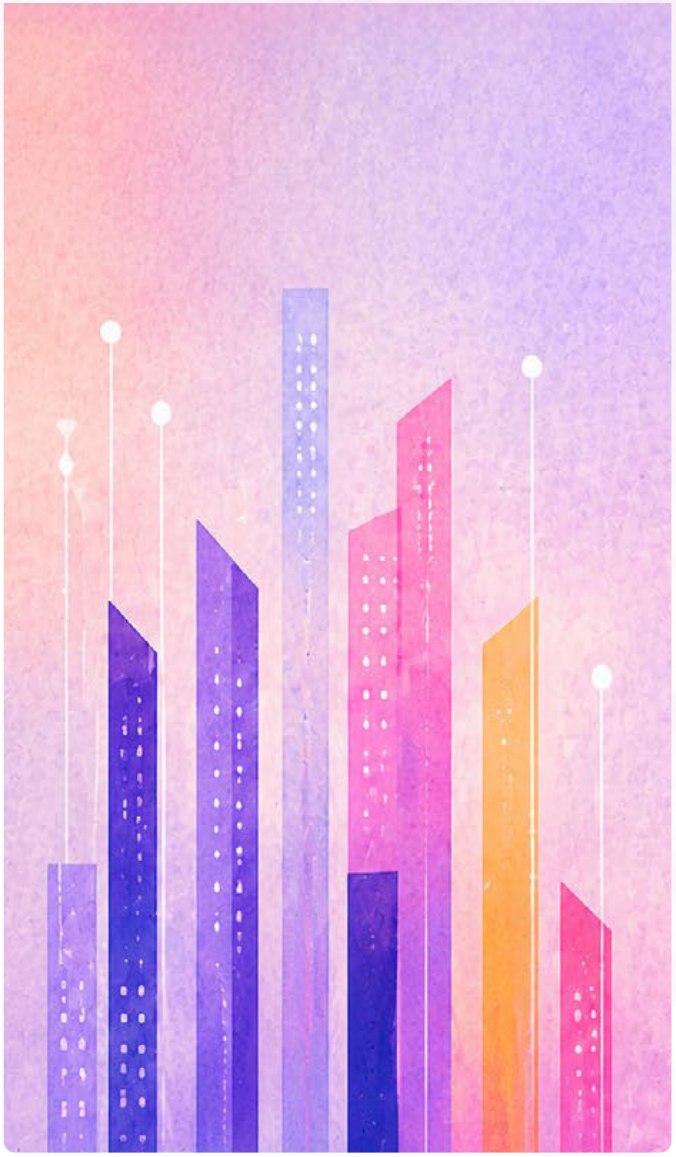
The reality of scaling enterprise AI in Singapore

Overview

Execution is the constraint in Singapore's AI market: Value realization is not keeping pace with progress, despite strong investment and leadership focus. Omdia and HCLTech research shows organizations are struggling to convert AI activity into consistent, enterprise-level outcomes, with results often remaining localized rather than scalable.

> AI ambition in Singapore is outpacing the foundations required to deliver consistent enterprise value.

The issue lies in execution maturity—operating models, governance and foundational capabilities are not keeping up with ambition. Even in an advanced market, this gap is limiting durable impact. This summary focuses on where execution is breaking down and what is required to close the gap between AI ambition and measurable value.



Market setting: Strong intent, uneven conversion to value

Singaporean organizations are deploying AI with clear commercial intent. The most frequently cited business drivers include improving operational efficiency, automating complex workflows, enhancing decision-making, increasing employee productivity and strengthening customer experience.

AI is firmly positioned as a lever for business performance, not just operational efficiency. However, leaders are increasingly realistic about the barriers keeping them from fully operationalizing their plans. Nearly two-thirds of respondents (63%) agree that simply adding AI to existing automation initiatives is unlikely to generate sufficient ROI. There is also strong agreement (66%) that focusing solely on the most obvious or easiest AI use cases yields disappointing results, reinforcing the view that meaningful value requires deeper transformation. This reflects a shift from experimentation to value accountability.

The result is that the mechanisms required to translate that ambition into repeatable business outcomes remain unevenly developed. These constraints prevent AI from scaling beyond localized gains into enterprise wide outcomes.

Business challenges constraining AI execution in Singapore

56%

Coordination challenges across IT, data, cybersecurity and business teams

49%

Difficulty aligning AI initiatives tightly with business strategy

44%

Establishing appropriate success metrics

AI-led application and data modernization is a prerequisite for value realization.

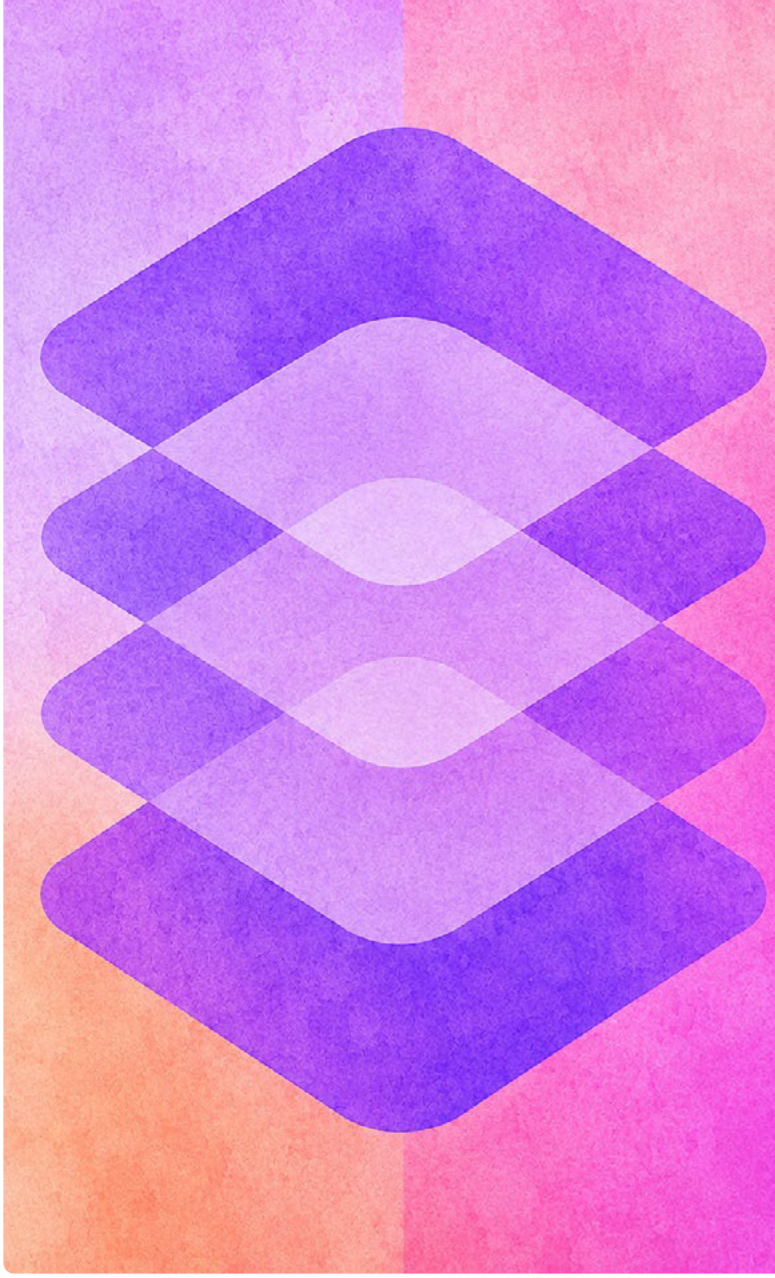
Nowhere is the execution gap clearer than in the state of application and data foundations. From an application standpoint, 79% of Singaporean leaders say they will rely on AI tools to unlock the productivity and efficiency needed to execute application modernization initiatives. Traditional modernization approaches are increasingly viewed as incapable of keeping pace with the scale, complexity and speed required for AI-enabled business models. At the same time, more than four in five organizations (81%) believe that both legacy and already-modernized applications require significant overhauls to support AI functionality.

Top data constraints

74%
Data estate modernization

67%
Data management and governance

63%
DataOps/MLOps readiness



Crucially, organizations are not waiting for modernization programs to be completed before pursuing AI value. Many are already using AI to accelerate data modernization itself, with 65% reporting that they use AI to enhance data quality, 51% using predictive analytics to guide modernization priorities and 51% also citing that they optimize data storage and retrieval with AI-based solutions.

The technical challenges limiting AI adoption reinforce this dependency: 40% of Singaporean respondents say integration challenges across multiple AI systems limit them, 37% cite data quality and accessibility issues and 37% also cite performance and reliability concerns at scale. These are foundation-level constraints, not model-level shortcomings, and they directly limit the ability to deploy AI reliably at scale.

The message is clear: In Singapore, AI-led application and data modernization is not a supporting initiative; **it is the primary pathway to value realization.**

Scaling AI beyond pilots to close the adoption-to-outcomes gap

Scaling AI into core enterprise operations remains difficult. As AI systems move from pilot environments into production, the same technical challenges intensify—integration complexity, data limitations, performance variability and cost unpredictability.

What differentiates stalled initiatives from those that scale is rarely the sophistication of the model. Instead, it is the presence of repeatable deployment patterns, standardized platforms, disciplined cost management and operating models designed for continuous AI delivery rather than one-off projects. What is missing is not capability but a platform driven operating model to scale AI consistently across the enterprise.

Responsible AI and governance as value protection mechanisms

As AI becomes more embedded in decision-making and mission-critical processes, Singaporean organizations increasingly view Responsible AI as a value protection and execution-shaping mechanism, not merely a compliance obligation. Governance is now shaping how fast AI can scale, not just how safely it operates. Most respondents (77%) rate their Responsible AI maturity as somewhat or very mature.

These concerns directly influence execution. The majority of Singaporean organizations (81%) report that Responsible AI considerations moderately or significantly affect AI deployment decisions, shaping architecture choices, timelines and scope.

Notably, many organizations expect to rely on external expertise to strengthen governance, particularly in third-party auditing (42%) and framework development and policy creation (40%). This reinforces that trust and governance are prerequisites for scaling AI—not parallel considerations.

Top governance barriers

49%
Insufficient process for monitoring and auditing of AI systems

44%
Identifying and mitigating algorithmic bias

35%
Ensuring model transparency and explainability

Operationalizing GenAI and Agentic AI: High interest, real execution complexity

Interest in agentic and autonomous AI is especially strong in Singapore. Many organizations already report using generative and Agentic AI in software development (93%), IT operations (86%) and operational environments (77%), driven by goals such as automation, efficiency and error reduction.

Nearly three-quarters of Singaporean leaders (70%) believe that all competitors in their industry will be using autonomous AI systems for mission-critical work within the next 12 months.

Singaporean organizations' short AI operationalization timelines intensify the challenge of ensuring that agentic systems can be tested, monitored, governed and integrated safely in production environments. This compresses decision timelines while increasing execution risk. The result is a widening gap between interest in autonomy and readiness to operationalize it responsibly.

Partner-enabled execution to address speed and capability constraints

The Singaporean data makes clear that enterprises do not expect to navigate these challenges alone. A strong majority (86%) reports seeking external consultation to bridge AI skill gaps and accelerate execution. The areas where deeper partnerships are most needed include AI infrastructure and hardware (33%), AI development and MLOps platforms (33%) and AI monitoring and governance (33%).

Perceptions of the AI ecosystem itself reinforce this reliance. Singaporean respondents agree the pace of change in the AI ecosystem is daunting (86%), the vendor landscape is overwhelming (79%) and the maturity gap between solutions is so wide they need help separating vaporware from real solutions (77%), driving demand for pre-validated, end-to-end solutions and trusted system integrators. In this context, partnerships are less about delegating responsibility and more about compressing time-to-value while reducing execution risk. This is driving demand for integrated, end to end platforms rather than fragmented point solutions.

Conclusion

The Singaporean enterprise AI story is no longer about whether to adopt AI. It's about executing with discipline, protecting value and scaling impact. For executive teams, this shifts the question from "how fast to deploy AI" to "how to build foundations that sustain value."

Organizations that align AI strategy with AI-led application and data modernization, scalable operating models, responsible governance and partner-enabled execution will be best positioned to close the gap between experimentation and enterprise impact.

Those building integrated platforms and repeatable operating models—not isolated use cases—will lead the next phase of AI. And in the next phase of enterprise AI in Singapore, specifically, execution maturity—not ambition—will determine which organizations capture lasting value.

HCLTech | Supercharging Progress™