F5 regional CXO roundtable series

Singapore edition

Architecting the AI-enabled enterprise

Key takeaways | April 30, 2025

Lessons from Singapore CXO roundtable

An actionable path to scaling AI for business outcomes
30 April 2025, Singapore

Executive summary

Enterprises face growing pressure to scale AI from isolated pilots to enterprise-wide deployment. On 30 April 2025, the Singapore CXO Roundtable convened over 25 senior leaders from healthcare, finance, logistics, insurance, government, and media to explore practical strategies for accelerating AI adoption, focusing on impact, governance, scalability, and talent. Hosted in Singapore— a recognized AI innovation hub with robust government support and a thriving start-up ecosystem—the discussion identified persistent barriers: fragmented data ecosystems, inconsistent governance, talent shortages, and unclear ROI pathways. These challenges continue to limit the enterprise-wide value AI can deliver.

This report captures the roundtable discussion as a set of actionable priorities for CXOs seeking to scale AI effectively.

- **Strategic imperatives:** Embedding AI into core business functions and decision-making to drive competitive advantage.
- **Critical challenges:** Addressing foundational gaps in data integration, governance, and talent availability.
- **Implementation plan:** Designing modular, secure, and interoperable AI architectures for enterprise-wide deployment.
- **Success metrics:** Defining measurable outcomes across ROI, operational efficiency, and compliance.
- **Next steps:** Prioritizing actions to operationalize AI and deliver sustained impact.

1. Strategic imperatives for scaling AI

The roundtable identified five priorities that serve as key enablers for scaling AI across the enterprise.

1.1 Institutionalize AI across the business

Insight: AI is often limited to isolated use cases, hindering enterprise-wide impact.

Recommendation

- Shift from siloed initiatives to integrated deployments in customer service, operations, risk, and internal workflows.
- Treat AI as a core capability, not a side experiment.

Actions

- Consolidate isolated AI initiatives to align with enterprise goals.
- Embed AI capabilities across business functions.
- Position AI as a strategic priority in organizational planning.

1.2 Prioritize high-impact, low-risk use cases

Insight: Prolonged proofs of concept delay value realization; customer-facing and data-rich functions offer immediate impact.

Recommendation

- Focus on operational deployments in areas like fraud detection, forecasting, and chatbots to deliver tangible value.
- Align AI initiatives with business impact in customer experience, marketing, automation, and compliance.

Actions

- Identify use cases with high ROI and low risk for rapid deployment.
- Prioritize customer-facing and data-rich functions for AI adoption.
- Select projects based on strategic alignment and scalability.

1.3 Invest in data infrastructure first

Insight: Fragmented data systems and poor data quality limit AI scalability.

Recommendation

- Ensure data quality, governance, and integration readiness prior to committing significant resources to major AI initiatives.
- Address fragmented systems to enable scalable and secure AI workflows.

Actions

- Assess data infrastructure for quality and integration challenges.
- Strengthen data governance to support AI deployment.
- Unify fragmented systems to enable enterprise-wide AI.

1.4 Strengthen AI governance and enforcement

Insight: Governance frameworks exist but are inconsistently enforced, creating compliance and accountability gaps.

Recommendation

- Standardize governance to address decentralized adoption and varying risk appetites.
- Implement real-time monitoring, prompt injection protection, and intent-based policy enforcement for autonomous AI operations.

Actions

- Evaluate governance frameworks for enforcement weaknesses.
- Deploy observability tools like token-level telemetry, drift monitoring, and auditable dashboards.
- Establish Cross-Functional AI steering committee) e.g. Chief Risk Officer for risk mitigation, Compliance Officer for regulatory alignment) to ensure accountability for AI decisions and oversight.

1.5 Address AI talent scarcity

Insight: A critical shortage of skilled AI professionals, with specialized roles like prompt engineers commanding salaries from $200K to over $1M, constrains progress.

Recommendation

- Retrain existing teams, acquire startups, and automate development to build AI capabilities.
- Invest in strategies to mitigate reliance on scarce talent.

Actions

- Retrain internal teams to develop AI expertise.
- Explore acquisitions of AI-focused startups to enhance capabilities.
- Adopt automation tools to streamline AI development processes.

2. Critical challenges

While strategic imperatives set the direction, the roundtable also identified systemic challenges that must be addressed to enable sustained AI scale-up.

2.1 Data laws and high compliance costs

Mitigation: Develop strategies to navigate data regulations and manage compliance costs.

Action: Align AI initiatives with regulatory requirements to ensure scalability.

2.2 Short-term ROI pressures

Mitigation: Treat AI as strategic infrastructure requiring sustained investment, not isolated projects.

Action: Balance short-term ROI with long-term AI maturity goals.

2.3 Uneven AI readiness

Mitigation: Address gaps in AI readiness to enable scalability beyond Singapore.

Action: Prioritize use cases and hybrid architectures that support broader adoption.

3. Implementation plan: Scalable AI architecture

Overcoming these challenges requires a modular, secure architecture built for scale and integration.

3.1 Design principles

Modularity : Use containerized, API-first designs to support multiple AI models and deployment environments (cloud, on-prem, hybrid).

Interoperability : Ensure integration with legacy systems and workflows.

Security : Treat agentic AI and APIs as live threat surfaces, prioritizing cybersecurity.

Observability : Incorporate explainability, performance monitoring, and compliance auditability through token-level telemetry, drift monitoring, and auditable dashboards.

3.2 Architecture components

Data layer

- High-quality, governed data systems to support AI deployment.
- Secure pipelines for scalable AI workflows.

AI layer

- Modular models including GenAI, predictive analytics, and machine learning.
- Agentic models for AI-to-AI orchestration (e.g., MCP protocol).

Governance layer

- Real-time monitoring for compliance and performance.
- Auditable dashboards for accountability and observability.

Integration layer

- API-driven interfaces to connect AI with legacy systems.
- Support required for cloud, on-prem, and hybrid environments.

3.3 Implementation steps

Initiate with use cases: Start with high-impact, low-risk deployments in fraud detection, forecasting, or chatbots.

- **Build data foundations:** Ensure data quality and integration to support AI scalability.
- **Deploy governance tools:** Implement real-time monitoring and observability mechanisms for compliance.
- **Scale with modularity:** Adopt containerized, API-first architectures to integrate AI across functions.
- **Secure and monitor:** Prioritize cybersecurity and observability for autonomous AI operations.

4. Success metrics

With the right foundation in place, AI initiatives should be evaluated using clearly defined metrics across impact, efficiency, and governance.

- **Business impact:** Revenue growth and customer experience improvements.
- **Operational efficiency:** Enhanced automation and process improvements.
- **Compliance and governance:** Consistent enforcement and accountability.

Action: Establish processes to track ROI, scalability, and compliance outcomes.

5. Next steps

Translating strategy into sustained value depends on decisive, near-term actions.

- **Embed AI as a core capability** across customer service, operations, and workflows.
- **Strengthen data and governance** to enable scalable AI.
- **Build hybrid, modular, secure architectures** to support diverse AI models and environments.
- **Address talent shortages** through retraining, acquisitions, and automation.
- **Focus on high-impact use cases** to deliver immediate value while ensuring long-term scalability.

These reflections from the roundtable shed light on how enterprises can move toward strategic, enterprise-wide adoption of AI.

Attendees

Name	Company	Designation
Anupam Shrivastava	SGX Group	Head of Enterprise Monitoring, ITSM Solution & Automation
Bernard Lee	YTL Power International	Group Chief Information Officer
Craig Turrell	Standard Chartered	Head, AI and Design GCFO Data & Analytics
Debi prasad Mishra	Great Eastern	VP - Data & AI Solution Architect
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Kaushik Raghavan	United Overseas Insurance Limited	Chief Information Officer
Leonard Ong	Synapxe	Director — Cyber Defense
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Neha Joshi	SPH Media	Vice - President, Head of Data
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