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Unlocking Business Agility Through Private Cloud Modernization in Asia/Pacific

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*The Asia/Pacific markets covered in this InfoBrief are Australia, Greater China (mainland China, Hong Kong, Taiwan), India, Indonesia, Japan, Korea, Malaysia, New Zealand, Philippines, Singapore, and Thailand.

Executive summary

Customer focus demands flexibility

Customer expectations are at an all-time high. Meeting them requires infrastructures to be dynamic, fast, and reliable. To support critical customer-facing applications, organizations need a more versatile approach to infrastructure deployment.

A **multi-hybrid cloud strategy** is emerging as the best solution. It enables a "fit-for-purpose" modern architecture while enabling seamless migration across the cloud continuum as business and customer demands change. This means organizations must avoid architectural and financial lock-in, which has historically hindered agility and long-term value creation.

Modernization requires a cloud-native approach

IT teams face multiple pressures: rapid advances in AI, resource drain from legacy systems, growing security risks, and relatively static budgets. These challenges are creating a perfect storm of inefficiencies and operational risks.

To address these issues and ensure that IT teams deliver expected efficiencies, the underlying infrastructure – compute, storage, and networking – must be sufficiently flexible and agile to meet current and future performance demands. This calls for a fundamental reset in procurement strategies, taking into account critical attributes such as:

- Independent scaling: Components can be resized as demand changes.
- Cost efficiency: Refresh at a component level, not the entire stack.
- Open ecosystem: Vendor-neutral foundation supporting multiple virtualization, cloud, and AI stacks.
- Simplified operations: Centralized, software-driven management that automates provisioning, patching, and life-cycle tasks.
- AI-ready and designed for modern workloads: Optimized for data-heavy AI, microservices, and mixed workloads.

The path forward

Modernizing the core means transforming it into the on-premises anchor of a multi-hybrid cloud architecture. It must enable seamless movement of applications into and out of private and public clouds, as the business demands, without adding complexity for IT teams. It must embed high levels of automation, freeing IT teams from routine maintenance to focus on strategic initiatives. Systems should integrate easily with existing environments while remaining scalable and configurable, providing flexibility for both general and specialized workloads.

Private cloud solutions need to be flexible, simple, and highly automated, delivered through an open environment.

Market trend: The imperative to modernize

Organizations across Asia/Pacific face mounting pressure to modernize their technology environments. Historically, cost and time constraints have resulted in sub-optimal implementations that eventually became legacy systems, creating technical debt and operational inefficiencies. Over time, all infrastructure ages into legacy, making **continuous modernization a business necessity.**

Moving forward, enterprises must ensure that new infrastructure does not replicate past mistakes. Modern platforms must be:

- Flexible
- Scalable
- Cost-efficient
- Reconfigurable

Today's critical drivers – AI and multi-hybrid cloud architectures – demand a more manageable way to deploy and operate compute, storage, and networking resources. These systems must be able to support new workloads while enabling re-platformed and cloud-repatriated applications.

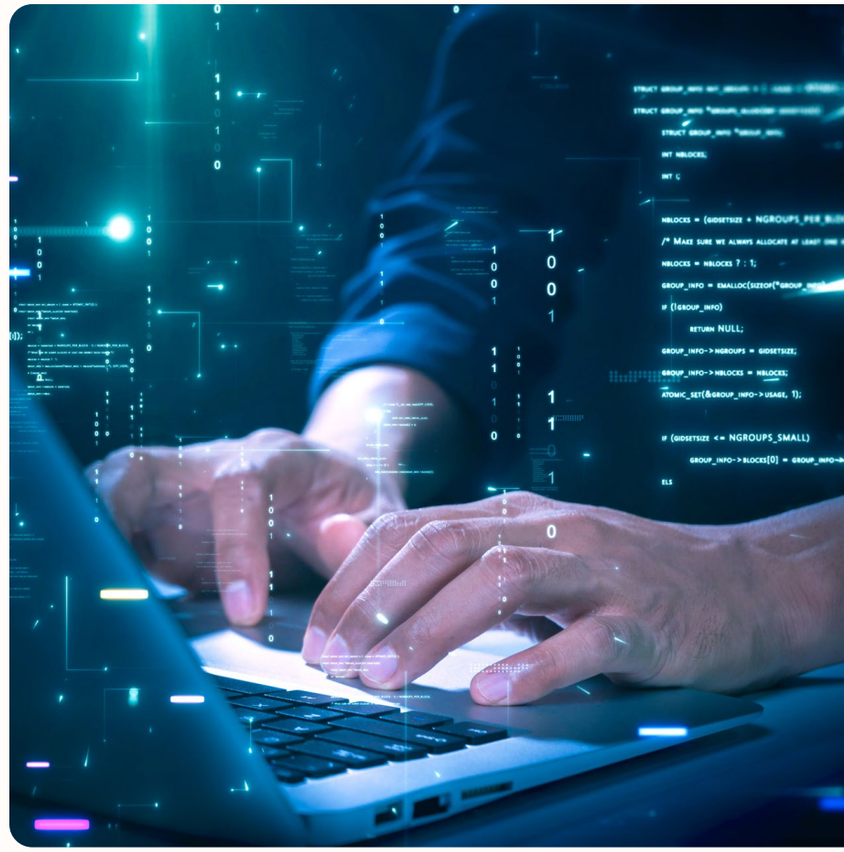
With IT teams already stretched thin by the scale of demands, automation is essential. Modern infrastructure should deliver higher levels of automation across the entire stack, allowing virtualization and containerization in an open and easily managed environment. Underpinning this is a need to deploy **AI-ready infrastructure.**

APJ* top 3 C-suite technology priorities over the next 12 months

1. Technology modernization
2. Improve customer-focused digital experiences
3. Improve IT support

AI

Underpinning these priorities is a need to deploy AI infrastructure.



*APJ – Asia/Pacific (including Japan)

Source: *Worldwide C-Suite Tech Survey* 2025, IDC, n = 300 APJ

The importance of a hybrid cloud strategy

Right-sizing workloads is now critical for all organizations. A multi-hybrid cloud approach offers the best balance of flexibility and control. However, the rapid shift to cloud has left many organizations with gaps in their on-premises environments. To avoid creating new problems during repatriation, applications must be re-platformed to cloud-native architectures (virtualized and containerized) to deliver maximum efficiency and interoperability.

Organizations need to reconsider their approach to virtualization to ensure that the past mistakes of vendor lock-in and escalating costs do not resurface. There is more than one approach to this; regardless of the approach, applications must take on the cloud-native characteristics previously mentioned.

AI is inevitable – and complex. As AI adoption matures, organizations will realize that they do not require huge GPU farms of their own but will need to focus on training and inferencing. This means dedicating part of the new on-premises environment to AI-specific private cloud stacks.

Cloud migration remains a top priority. Nearly half of all organizations **(46%) cite cloud migration as their number 1 infrastructure modernization strategy,** but not all are taking the right hybrid cloud approach.

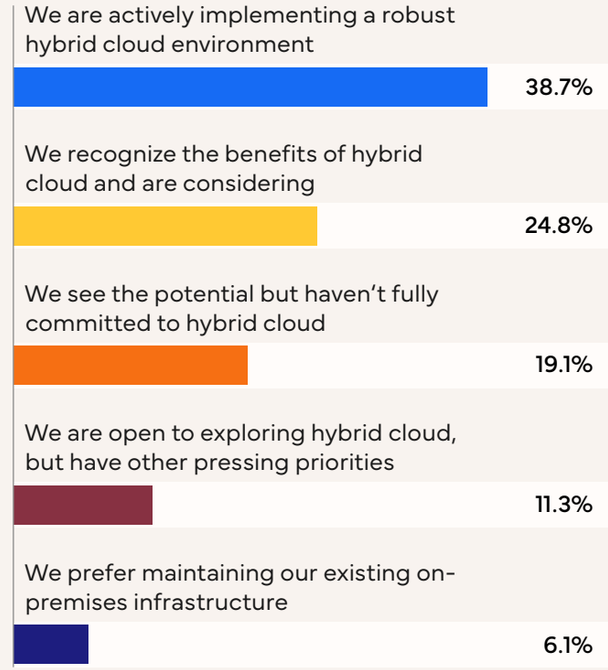
Key challenges to hybrid cloud success

Skills shortage: Infrastructure teams are sorely under-resourced, with funding shifted toward upstream roles such as AI, development, and security. This means that new systems must be embedded with automation across the full stack to compensate.

Security and resiliency: Security is a huge concern of the C-suite. Avoiding downtime has proven to be a challenging approach, so funding rapid recovery is a far more acceptable strategy. Complexity is the enemy of security; hence, new systems must smoothly integrate with existing environments and include intrinsic security controls.

Cost pressures: Many organizations increasingly favor consumption-based pricing models, as these align better with new budgeting processes that have evolved since the emergence of cloud. These models also reduce upfront investment risks.

Hybrid cloud approaches in APJ



Source: *AP IT Services Survey* 2025, IDC, n = 560

Market trend: Virtualization migration landscape and alternatives

Leading organizations across Asia/Pacific are moving from a cloud-first strategy to a multi-hybrid cloud approach as this provides greater financial control and operational flexibility. Many organizations currently find themselves locked into costly cloud contracts that may not be delivering the value anticipated, prompting a wave of **workload repatriation.**

Cloud-native is the desired end state. Achieving this will require a robust virtualization and containerization strategy. However, the markets have discovered that reliance on a single proprietary virtualization vendor introduces challenges, and many now seek to redress this.

A simple lift-and-shift approach to moving workloads to the cloud is no longer sufficient. Workloads moved hastily to the cloud have become difficult to repatriate due to skill shortages and evolving technologies. **A private cloud architecture based on disaggregated infrastructure offers a more sustainable solution – enabling independent scaling of compute, storage, and networking resources.**

Addressing the key challenges is critical. Modern infrastructure must be able to deliver:

- Observability and automation to simplify operations
- Seamless integration with existing environments to reduce security and compliance risks
- Intrinsic security controls to mitigate threats during transformation

Top 3 cloud journey challenges today

1. Observability and operations
2. Cloud architecture and workload migration
3. Hybrid/multi-cloud integration

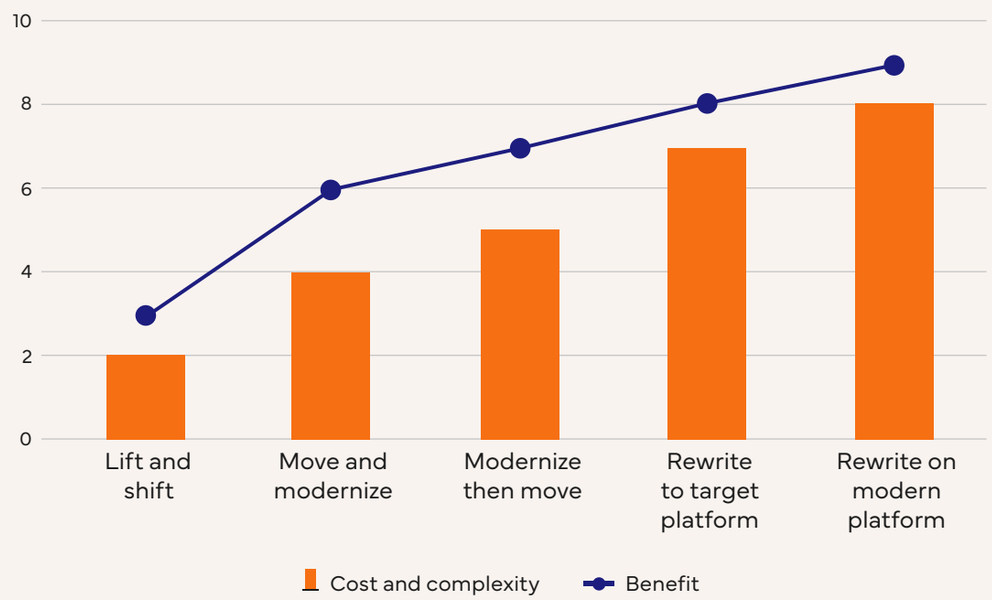
Top 3 infrastructure transformation challenges

1. Integration with legacy systems
2. Cybersecurity and compliance risks
3. Managing multi/hybrid environments effectively

Source: *AP IT Services Survey* 2025, IDC, n = 560

Ensuring portability through choice

The cost/complexity and benefits of different application modernization approaches



Note: Data is ranked on a scale of 1–10, where 1 = least costly/complex/beneficial and 10 = most costly/complex/beneficial.

Source: *IDC PlanScape: Application Modernization Approaches*, #US52933325

IDC's analysis of cloud adoption strategies reveals that many organizations initially adopted a "lift and shift" approach to migrate applications to the cloud quickly. While this strategy delivered short-term gains, these benefits diminished over time.

Organizations now recognize that a complete rewriting of applications for a modern platform, though more complex and costly, offers the best long-term value. The chart shows that the returns for organizations are three times greater than that of a lift-and-shift approach.

IDC data also shows that 94% of organizations plan some form of cloud repatriation, spanning a range of three-tier architecture applications. Ensuring these are suitably re-platformed, virtualized, and containerized will be critical to ongoing success and to avoid early legacy and technical debt issues.

Source: IDC Asia/Pacific *Enterprise Infrastructure Survey* 2025, n = 675

Market trend: Winning the AI race

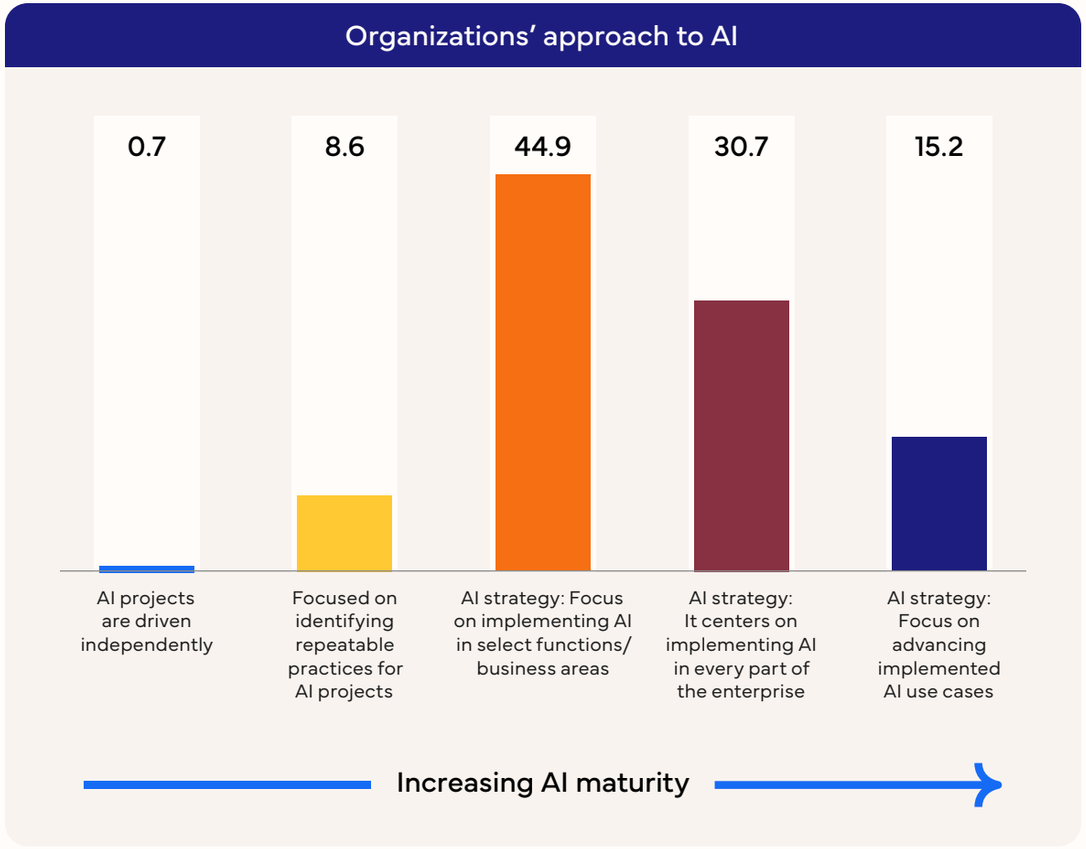
AI has become the focus of the C-suite. Their strategy is one of "first to market", where speed, efficiency, and productivity are critical. As organizations mature in their AI journey, requirements evolve, and many are realizing that a hybrid cloud strategy offers the most cost-effective way to deliver on the AI promise.

Many AI processes require specialized compute environments, specifically, the need for graphics processing units (GPUs) and accelerators. This means part of the on-premises infrastructure must be architected not only for today's AI needs but also for future use cases.

Beyond infrastructure challenges, there is a range of concerns around data trapped in older systems with outdated data structures. Legacy systems create technical debt through issues such as rogue data, data sprawl, poor hygiene, duplication, inconsistent data silos, manual data entry and manipulation, and hoarded or decayed data with no business value. These problems degrade analytics, hinder AI readiness, and increase risk.

AI-related risk is also a rising concern, where the need to ensure data integrity and availability throughout the AI life cycle is driving organizations to rethink data security and how that is architected to ensure availability in the event of a compromising event.

Additionally, data and digital sovereignty regulations require critical data to remain geo-fenced. This places public cloud infrastructures at a disadvantage due to the challenges of tracking and auditing such data. On-premises or co-located infrastructure avoids this issue, but does place the onus of governing and securing the data on the technology buying organization. For many organizations in Asia/Pacific, this is an acceptable trade-off.



Source: IDC *Future Enterprise Resiliency & Spending Survey*, Wave 5, 2025, n = 300 APJ

AI infrastructure strategies for today and tomorrow

Modern AI infrastructure must support **data-intensive workloads, microservices, and mixed environments** through fast compute refresh cycles, high-performance shared storage, and scalable networking—all under a unified framework.

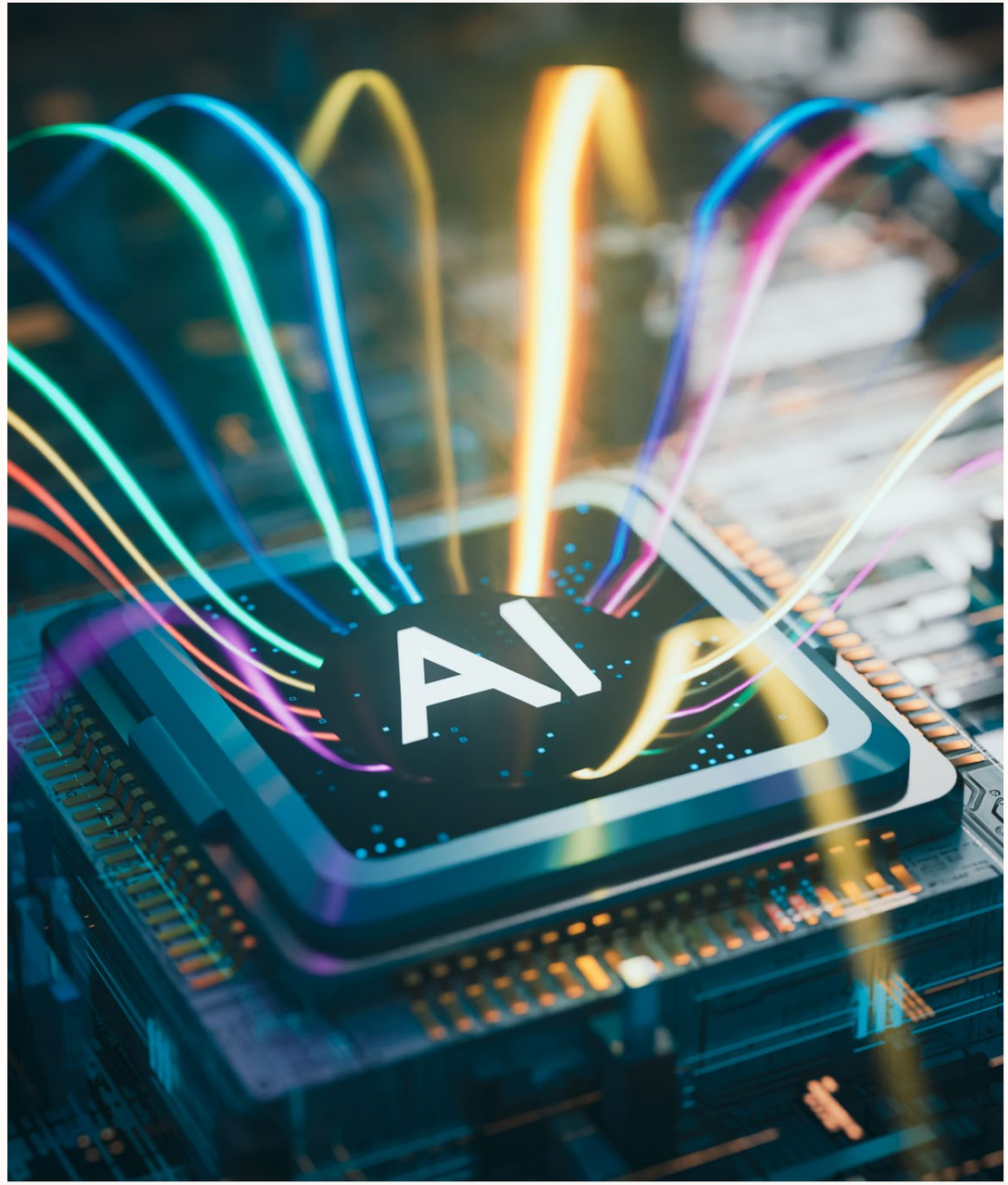
As AI strategies mature, workloads shift from training to inferencing. Training requires specialized, high-cost GPU resources, while inferencing typically relies on conventional central processing units (CPUs), which are more affordable and can be repurposed for other workloads if business needs change.

To optimize costs, IDC recommends leveraging AI infrastructure for intermittent, non-critical workloads when it is not actively used for AI model training. Examples include:

- Data conversion between formats
- Data cleaning
- Periodic analytics and reporting

This approach is only feasible for businesses that have other workloads that, like AI model training, can run intermittently, or can be paused and restarted when an AI workload requires access to the infrastructure. Most standard applications and services do not meet these conditions.

Source: IDC *PlanScape: AI Infrastructure Cost Optimization*, IDC #US51835924



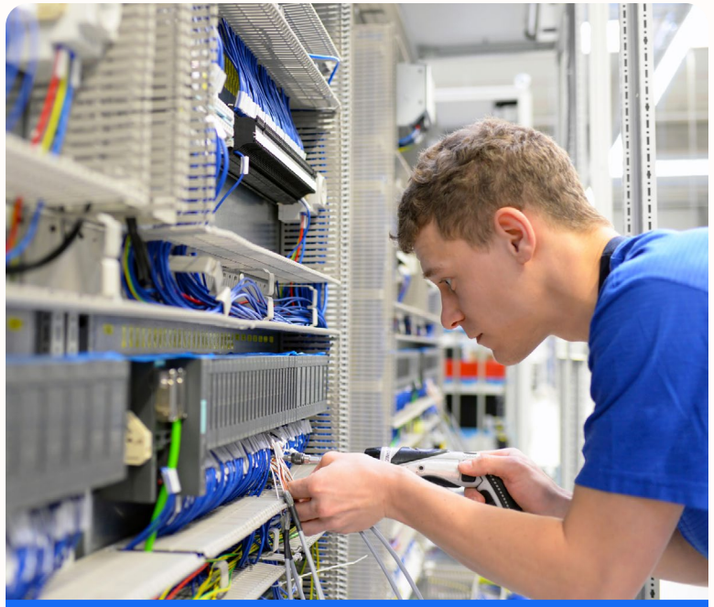
Legacy concerns and the growth of technical debt

Asia/Pacific is only beginning to experience the impact of technical debt, and it is set to grow.

In 2024, excessive technical debt was the second biggest driver of digital infrastructure overspending, yet by 2025, only 30% of organizations had proactively embedded modernization into their IT strategy.

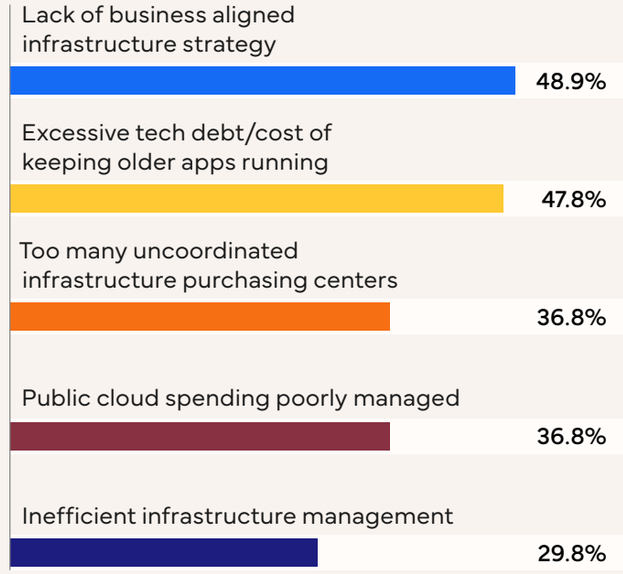
The rising cost of keeping older systems running and the challenges of transitioning to cloud-native architectures are forcing many organizations to strategically address modernization. This is also the key technical requirement the C-suite expects from the office of the CIO.

Modernization may require re-platforming to cloud-native architectures, or repatriating workloads from the cloud. In either case, success depends on a cloud-ready infrastructure that is flexible. Decoupling resource domains enables organizations to refresh compute, storage, or networking on their own cadence, instead of replacing full stacks just to upgrade one later. This approach lowers both capital and operating costs through better consolidation, fewer systems per rack, and more efficient power, cooling, and storage footprints.



Less than one-third of Asia/Pacific organizations have a proactive plan to retire older systems.

Most important factors causing overspending on digital infrastructure



Sources: IDC *Future Enterprise Resiliency & Spending Survey*, Wave 3, 2025, n = 300 APJ; IDC *Future Enterprise Resiliency & Spending Survey*, Wave 3, 2024, n= 152 APJ

Essential guidance

Align modernization with business goals

CIOs must ensure infrastructure modernization initiatives directly support strategic business and technology objectives.

Prioritize a cloud-agnostic architecture

Select the modernization approach that will future proof critical applications.

Avoid vendor lock-in

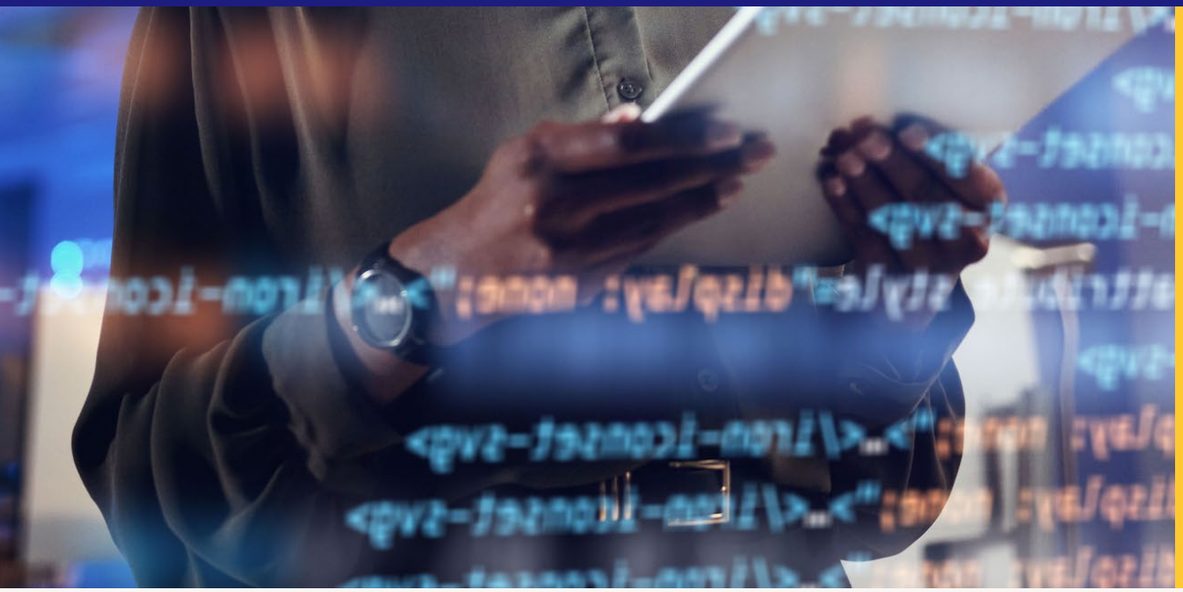
Ensure purchasing decisions do not lock the organization into restrictive technology or financial practices. New systems should be open, scalable, and can evolve with the organization's needs.

Enable flexibility for rapid innovation

The pace of AI is accelerating — from machine learning, to GenAI and emerging agentic models, to the next, yet-to-be-defined wave. Deploying a flexible infrastructure that can evolve quickly will be critical.

Embed observability and automation

Invest in solutions that deliver ease of integration, and include automation capabilities that simplify operations and improve efficiency.



Market Insights

India

Strategic imperatives for modernization

A hybrid cloud architecture delivers the most strategic benefits for enterprises, yet fewer than half of organizations in India have adopted this approach. IDC research shows that the top three infrastructure goals for Indian organizations are:

- Achieving sustainability objectives
- Modernizing data to build GenAI capabilities
- Accelerating innovation through digital infrastructure

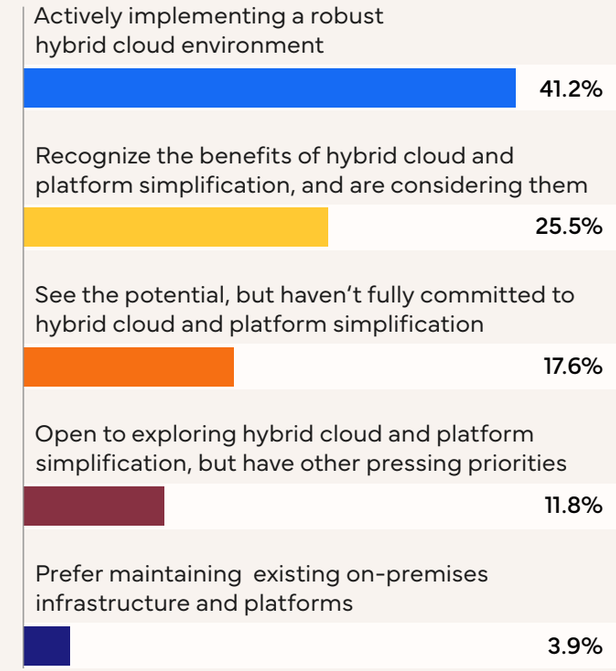
Aligning infrastructure strategy with these priorities significantly increases the likelihood of success.

A multi-hybrid cloud enables organizations to place workloads where they best align with business priorities, whether on-premises or in the cloud. This flexibility supports sustainability initiatives and optimizes resource utilization.

AI strategies in India span operational requirements for edge, core, and cloud operations, which necessitate a unified architecture for efficiency. Only a hybrid cloud architecture can deliver this level of integration.

Innovation thrives on elasticity and scalability. Hybrid environments support rapid experimentation and quick termination of initiatives that do not meet expectations, making them far better aligned with the demands of innovation than any other architecture.

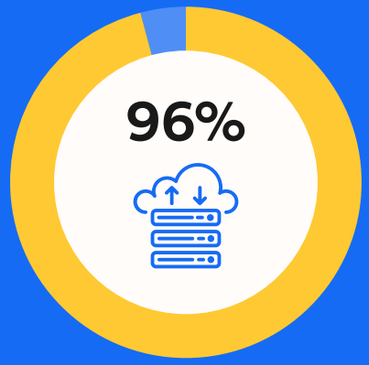
Hybrid cloud approaches in India



Sources: *AP IT Services Survey* 2025, n = 70; IDC Asia/Pacific *Enterprise Infrastructure Survey* 2025, n = 150

India

Cybersecurity drives cloud workload recalibration



An impressive 96% of Indian organizations are planning some form of cloud repatriation.

The surge in cloud workload recalibration among organizations in India is driven primarily by cybersecurity concerns, along with power and space limitations, and performance and latency requirements. These factors strongly influence decisions about where workloads should reside.

To ensure success, organizations must design new environments that

- Reduce risk without introducing new vulnerabilities
- Optimize on-premises architectures for economic use of power and space
- Enable configurability and scalability to support evolving workload demands

Top drivers for repatriation from public cloud

1. Cybersecurity considerations
2. Adequate power and space availability
3. Performance and latency requirements

Source: IDC Asia/Pacific *Enterprise Infrastructure Survey* 2025, n = 150

India

Addressing cloud limitations through strategic repatriation

A significant 96% of organizations in India are planning some form of cloud repatriation, driven by key challenges associated with public cloud infrastructures, including:

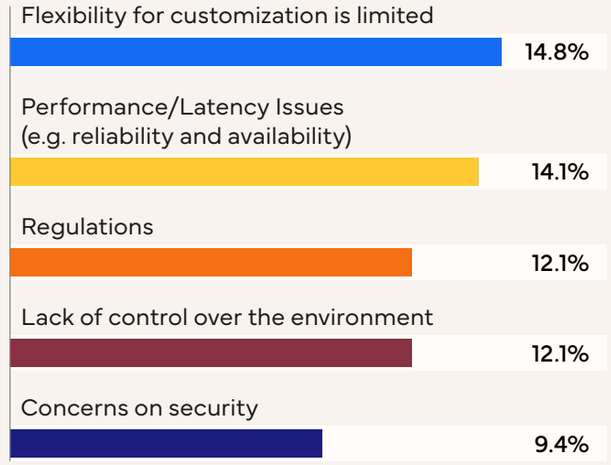
- Limited flexibility for customization
- Lack of control over the environment
- Regulatory compliance challenges
- Performance and latency issues
- Security concerns

A major hurdle in adopting a multi-hybrid cloud strategy is the lack of alignment across security controls, which increases complexity - and complexity is the enemy of security.

Relocating critical workloads helps address this issue. In India, AI and GenAI life-cycle platforms top the list of applications being repatriated. Moving these workloads to a suitable platform allows businesses to

- Simplify security management
- Enable required levels of customization
- Improve performance and interoperability
- Mitigate most, if not all, of the key challenges posed by public cloud infrastructures

Infrastructure challenges organizations face with their public cloud service providers



Source: IDC Asia/Pacific *Enterprise Infrastructure Survey* 2025, n = 150

About the IDC analyst

Simon Piff

Senior Vice President

Simon Piff is the Research Vice President for IDC's Asia/Pacific region, based in Singapore. With nearly 30 years of experience in the Asia/Pacific IT landscape, he has worked across a broad spectrum of technology domains, including cloud computing, business intelligence, datacenter management, security, and automation. Simon currently leads IDC Asia/Pacific's Future of Digital Infrastructure research program. His remit spans data management, security, cloud architectures, and the foundational layers of digital infrastructure — storage, compute, and networking.

More about Simon Piff →

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