Digital Infrastructure Strategy for a Data-Driven Future Enterprise

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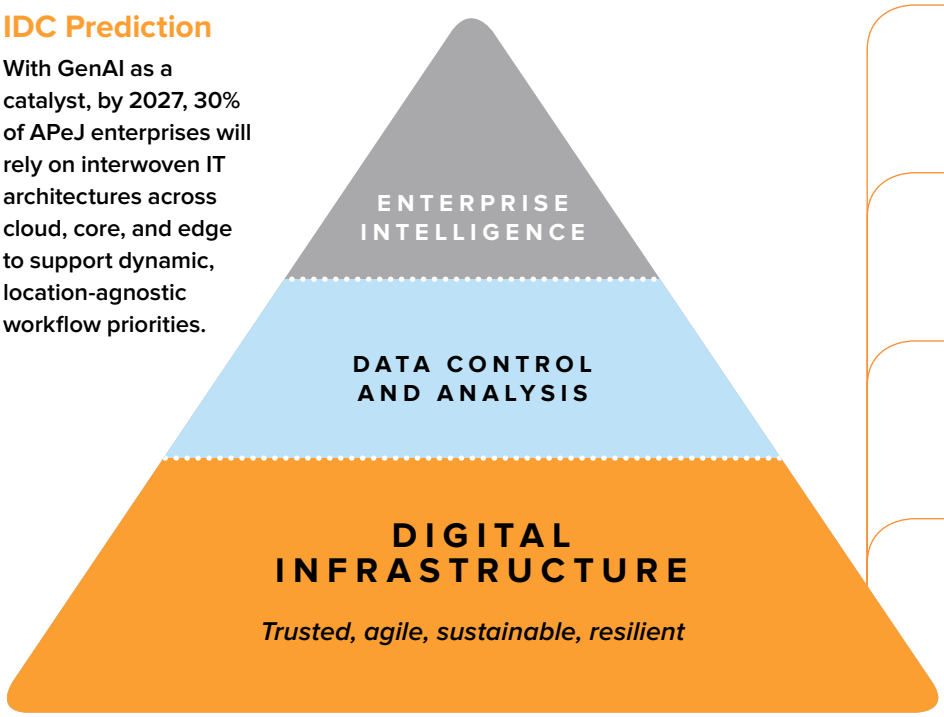
Integrated IT Architecture Across Cloud, Core, Edge

IDC Prediction

With GenAI as a catalyst, by 2027, 30% of APeJ enterprises will rely on interwoven IT architectures across cloud, core, and edge to support dynamic, location-agnostic workflow priorities.



AI-ready infrastructure
Optimized for emerging AI and other high-performance, data-intensive workloads

Autonomous operations
Leverage AI, observability, and automation to manage, scale, and secure infrastructure consistently

Hybrid and multicloud
Deployment of applications and data to meet specific business and operational requirements and constraints

Edge-optimized
Support enterprise edge computing and data management requirements from increased IT and OT convergence

Source: IDC, 2024

Digital Infrastructure: The Foundation for your Enterprise AI Story

We are at the threshold of a new phase of tremendous business growth powered by rapid advances in AI. IDC predicts that "by 2025, 10% of A1000 companies will exploit innovative business models to double their monetization potential of generative AI".[1] Digital infrastructure is the foundation necessary to win the AI race. IDC defines digital infrastructure as interconnected compute, storage, network, and management resources deployed across datacenters, colocation and hosting facilities, edge locations, and public cloud platforms and services intended to drive infrastructure resiliency, business innovation, and resource optimization. Asia/Pacific respondents in the *IDC Future Enterprise Resiliency and Spending Survey,* Wave 1, (Q1 2024) identified "infrastructure modernization and implementation" as the top technology-focused area related to enterprise AI initiatives where they needed support from their external services providers. This shows how important it is to set up the right digital infrastructure foundation for enterprise AI initiatives.

[1]Source: IDC FutureScape: Worldwide AI and Automation 2024 Predictions — Asia/Pacific (Excluding Japan) Implications

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Digital Infrastructure for the AI Age

As AI becomes an important part of enterprise business strategy, enterprises must plan their digital infrastructure journey in a way that adequately services their data and AI needs. IDC's Digital Infrastructure Framework is built on four pillars that provide a structured, scalable, and sustainable path to competitive differentiation in the AI age:

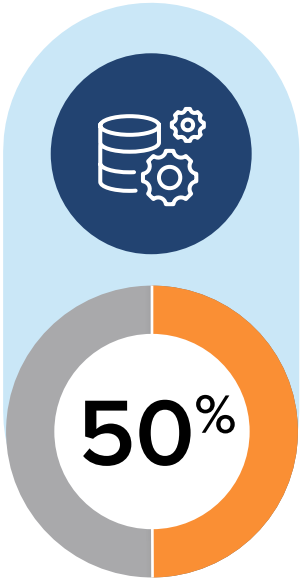
- **AI-Ready Infrastructure**
  AI-ready infrastructure is designed to support high-performance, large-scale needs of emerging data and computationally intensive workloads, including AI applications. The enterprise AI-ready infrastructure journey will be driven by advances in key building blocks, such as confidential and quantum computing, advanced co-processors and accelerators, and high-performance network fabrics, among others to optimize for scale, performance, cost, and sustainability.

- **Autonomous Operations**
  Autonomous operations leverage AI/ML-powered analytics and software-defined automation to enable self-healing, self-driving, and self-service infrastructure that will be a critical enabler of future-ready digital infrastructure environments.

- **Edge-Optimized Infrastructure**
  Edge-optimized infrastructure accommodates the distributed nature of enterprise computing and data management requirements, which are essential for IT and OT convergence and real-time decisioning at remote locations, and supports zero trust environments and zero touch operational models.

- **Hybrid and Multicloud**
  IDC's research suggests that the future of enterprise IT in Asia/Pacific is unequivocally hybrid — spanning public clouds, private cloud environments, private noncloud IT and edge environments. Hybrid and multicloud interoperability and policy-driven, workload-specific deployment automation are crucial for digital business agility and success across multicloud architectures.

Enterprise initiatives spanning these four pillars should be executed through a digital infrastructure center of excellence (CoE), which provides collaborative governance and strategic coordination across IT, cloud, line-of-business, DevOps, and data science teams. This helps tech debt avoidance, improves agility, builds resilience, promotes trust, drives sustainability, and informs coordinated engagement with strategic vendors and ecosystem partners. The CoE is, thus, key to aligning digital infrastructure operating models and KPIs with strategic goals and business outcome priorities.



50% of Asia/Pacific enterprises identified data as the most important digital infrastructure challenge in the successful adoption of GenAI.[2]

Crafting Your Digital Infrastructure Journey

The modern enterprise's digital infrastructure journey spans the breadth of public clouds, dedicated private cloud environments, private noncloud IT and edge environments. It must accommodate both the realities of the enterprise's

[2] IDC Future Enterprise Resiliency and Spending Survey, Wave 1 (Q1 2024)

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data gravity and the business expectations from the distributed data assets. It encompasses the full life cycle of transformation, operations, and continuous improvement. And the journey must be executed in a manner that supports continuously evolving organizational security, compliance, and transparency requirements.

IDC recommends the following considerations as enterprises plan their digital infrastructure journey:

- **Network + cloud**: Take an integrated approach to digital infrastructure that spans both the network and cloud environments. This approach ensures seamless connectivity and data flow across various platforms, enabling scalable AI operations and facilitating efficient data processing and analytics. By integrating on-premises, noncloud IT infrastructure with public and private cloud solutions and edge environments, the enterprise can leverage the benefits of each while maintaining control and flexibility.
- **Security@core**: Incorporating robust security mechanisms and governance frameworks is crucial to protect sensitive data and maintain compliance with regulatory requirements. This includes capabilities such as zero trust infrastructure, highly automated AI-enabled SecOps, granular and adaptive security controls, and robust data and AI governance mechanisms, among others.
- **All about the data**: The quality of outcomes from an enterprise's intelligence and decisioning layer depends on the effectiveness of the underlying data architecture and digital infrastructure. The digital infrastructure technology selection process must incorporate considerations for seamless integration and interoperability not just across technology solutions, but also across the data and intelligence layers.
- **Virtuous life cycle of services**: Finally, adopting an end-to-end, life-cycle view of the necessary infrastructure services that spans professional, managed, and continuous optimization services as a continuum is vital for the success of the AI strategy. Professional services provide the initial digital infrastructure design and implementation expertise; managed services ensure seamless ongoing operations, maintenance and support; and continuous optimization services refine, refresh, and enhance the infrastructure to meet evolving business needs and technological advancements. This holistic approach ensures the enterprise's digital infrastructure remains resilient, efficient, and aligned with its AI goals.

In summary, a well-rounded digital infrastructure strategy informed by the above considerations can help enterprises power their AI initiatives and meet evolving business demands in a scalable, secure, and efficient manner.

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