STTelemedia
Global Data Centres

Navigating Infrastructure Choices in a Hybrid World: On-Premises, Cloud, or Colocation?

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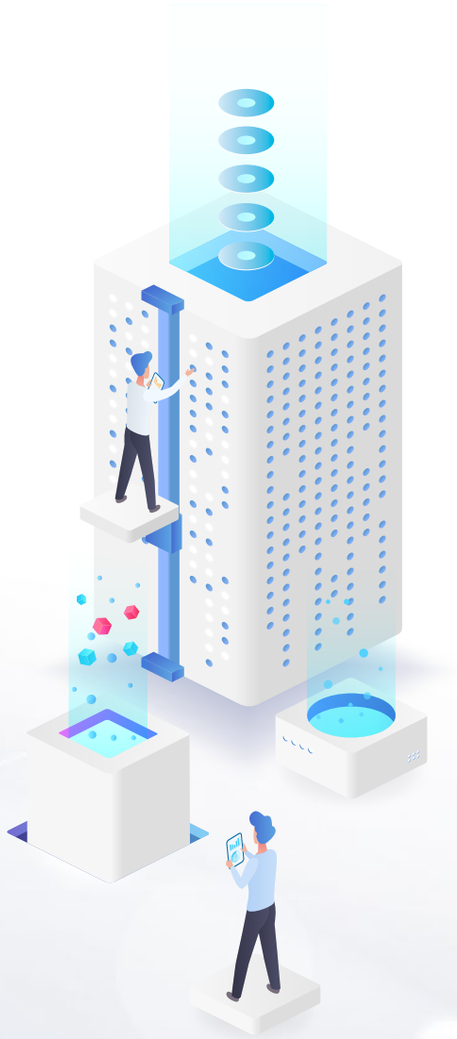
Bridging Legacy and Cloud:

The Strategic Case for Colocation in Hybrid IT

For IT and business leaders across Southeast Asia, digital transformation brings exciting opportunities – but also highlights the limitations of legacy traditional infrastructure.



The region's data centre market is growing at double-digit rates, fuelled by hyperscale cloud growth, evolving data localisation requirements, and surging demand for cloud and digital services. Yet despite this momentum, many enterprises remain tied to legacy on-premises data centres built for a very different business landscape.

These in-house facilities once promised control and predictability. Today, they often stand in the way of growth:

- Rising operational costs from frequent hardware upgrades and increasing power use
- Physical and technical limits to scaling infrastructure
- Compliance demands, with new regulations mandating strict data residency and security standards
- Sustainability challenges as older facilities struggle to meet rising ESG expectations

Facing these pressures, a growing number of enterprises in Indonesia are turning to colocation — a hybrid-ready, sustainable and scalable alternative that combines on-premises control with flexibility. This guide will explore why colocation is emerging as the preferred choice for enterprises modernising their infrastructure without losing control.

The Modern Infrastructure Dilemma

The reality for many IT leaders today is not a simple choice between on-premises data centres or cloud computing. Instead, the landscape spans a spectrum of hosting options:

On-premises (in-house):

Infrastructure is fully owned, operated and maintained within an organisation's facilities. This provides complete control, but poses challenges to scalability, sustainability and regulatory compliance.

Public cloud:

On-demand cloud computing managed by a third-party provider, where the IT infrastructure is maintained by the provider and delivered as virtual services. This offers speed and agility, though long-term costs can be unpredictable and data residency requirements may present hurdles.

Colocation:

Customer-owned hardware is hosted in a third-party data centre, supported by purpose-built infrastructure with resilient power, advanced cooling, diverse connectivity and robust security. Positioned as a middle path, it blends the control of on-premises solutions with the flexibility to scale with evolving needs, while ensuring compliance and cost-efficiency.

In markets like Indonesia, where regulations and digital adoption are evolving quickly, enterprises require IT solutions that can adapt and scale while balancing risk and cost.

Comparing Hosting Models:

Key Considerations

Decision Criteria	On-Premises	Public Cloud	Colocation
Cost Structure	High CapEx for facility construction and supporting infrastructure; rising OpEx for maintenance and staffing	Pay-as-you-go OpEx; costs can grow unpredictably with usage and egress fees	Predictable OpEx model covering space, power, cooling and managed services
Physical access	Direct on-site control	No physical access; managed by provider	Secure access to hardware hosted in an offsite, purpose-built facility
Scalability and flexibility	Limited by procurement protocols and space constraints	Dynamic, on-demand scaling	Modular design and purpose-built; infrastructure deployment is customised to business needs and growth. Enables rapid IT scaling without disruption or unpredictable costs
Reliability	Requires in-house expertise and resources	High uptime with SLAs and disaster recovery. Access to your data and services relies entirely on a stable internet connection	Internationally certified for industry-grade reliability, backed by 24/7 monitoring and support. Robust SLAs ensure clear performance, uptime and operational standards

Decision Criteria	On-Premises	Public Cloud	Colocation
Downtime and maintenance	Managed entirely by internal teams. Risks of outages rise if resources or skills are insufficient	Managed by provider with no direct control from end users. Achieving higher resilience typically requires multi-AZ or regional deployments, adding cost and complexity	Facilities are maintained 24x7 by trained professionals, with built-in redundancies for power and cooling systems to minimise downtime
Security and compliance	Self-managed; certifications and audits are resource-intensive to maintain. Facilities often lack the physical safeguards of purpose-built data centres	Security and compliance vary by provider, region, and service model; limited visibility for customers	Hardware is hosted in purpose-built facilities with 24/7 physical security and monitoring. Providers maintain global and local certifications
Hybrid readiness	Complex and resource-intensive; requires custom integration and additional investment	Suited for cloud-native workloads but offers limited control. Enterprises risk dependency on a single provider unless they implement a multi-cloud strategy, which adds cost and complexity	Designed for hybrid-IT environments, with secure, low-latency interconnects to multiple cloud providers and carriers. Offers flexibility to integrate on-premises and cloud workloads without lock-in
Sustainability	Limited by legacy infrastructure and resources	Depends on cloud provider's investments in efficient infrastructure; customers have no control	Efficiency-engineered facilities deliver shared optimisations in power, cooling and resources, enhancing overall performance

Balancing Strengths and Trade-Offs for Your Business

Every enterprise faces unique pressures – whether cost control, compliance, speed to market, or creating room for innovation. While the previous comparison table highlights how on-premises, cloud and colocation stack up against these factors, it is important to weigh them against the conditions that matter most to your organisation when making infrastructure decisions:

On-Premises (In-House):
Suited for organisations operating at a large base load, typically with highly stable workload requirements that are unlikely to change significantly over the mid- to long-term. They may require direct, on-site access and/or strict security clearances that cannot be met in third-party facilities. However, **high capital costs, limited scalability and significant internal resources to manage compliance standards are barriers.**

Public Cloud:
Excellent agility and scalability, ideal for fluctuating workloads and innovation. **Long-term costs can be unpredictable; vendor lock-in is a risk.**

Colocation:
A forward-looking solution that combines operational oversight with the reliability of enterprise-grade facilities, offering cost predictability, robust security, high-performance connectivity and the flexibility to support hybrid cloud environments.

Remember, there is no “one-size-fits-all” answer.

The best infrastructure approach depends on your organisation’s growth plans, regulatory environment and workload needs.

Why Colocation Is the Strategic Choice

Colocation as the Sustainable Alternative

Many in-house data centres were not designed with sustainability in mind. Ageing infrastructure often relies on inefficient cooling and unoptimised energy consumption – making it challenging for enterprises to align with today's ESG commitments.

Colocation provides a more sustainable pathway. By consolidating workloads into purpose-built facilities, enterprises benefit from shared efficiencies that reduce both energy consumption and environmental impact.

Optimised energy efficiency: Modern colocation facilities employ advanced cooling and energy management technologies, such as liquid cooling and AI-driven optimisation, to achieve lower Power Usage Effectiveness (PUE). Since 2020, STT GDC has improved our PUE by over 11%, reaching a global average of 1.47.

Renewable energy integration: Colocation providers are increasingly sourcing for renewable energy. By partnering these providers, enterprises can decarbonise their IT operations without building the capability in-house. Today, more than 78% of our operations are powered by renewable energy.

Reduced hardware (and carbon) footprint: Advancements in shared critical infrastructure – power, cooling, and connectivity – avoids redundancy and minimises wasted capacity, supporting carbon reduction efforts. Since 2021, STT GDC has reduced its global carbon intensity by over 66%, on track towards its goal of carbon neutrality by 2030.

Alignment with ESG reporting: Sustainability frameworks and transparent reporting from colocation partners make it easier for enterprises, particularly those in regulated industries, to demonstrate measurable results in environmental impact. STT GDC publishes a yearly environmental report detailing its year-on-year progress.

Colocation shines for IT leaders seeking to modernise while balancing legacy constraints with cloud ambitions:

Cost-efficient:
Predictable operational expenses without large capital outlays or hidden cloud costs.

Hybrid-ready:
Enables low-latency, private connections to cloud providers and network ecosystems for true hybrid IT environments.

Resilient and secure:
Facilities built to Tier III+ standards, with tested disaster recovery protocols, and strong compliance certifications.

Compliance-aligned:
Meets local and global regulations, simplifying audit and risk management.

Sustainability-focused:
Shared infrastructure and energy-efficient designs reduce carbon footprint, supporting corporate ESG and national decarbonisation targets.

A Practical Checklist for IT Leaders

Choose Infrastructure That Evolves with Your Business

The true advantage of colocation is a foundation that grows with your organisation.

Adding capacity without disruption, staying compliant with changing regulations, and integrating smoothly with cloud platforms enables long-term competitiveness.

When evaluating infrastructure options, consider:

- Does the solution offer cost predictability across refresh cycles?
- Can it scale quickly without major disruptions?
- How well does it meet regulatory and audit requirements?
- Does it integrate seamlessly with cloud and partner ecosystems?
- What is the provider's sustainability roadmap and energy efficiency commitment?

For many Indonesian enterprises, colocation checks all these boxes – delivering a secure, compliant and sustainable foundation for hybrid IT success.

Industry Spotlight: BFSI and Compliance Readiness

For Indonesia's Banking, Financial Services, and Insurance (BFSI) sector, infrastructure decisions are inseparable from regulatory alignment. Key regulations under its Financial Services Authority (OJK) set strict IT risk management requirements and mandate that sensitive data remain within Indonesian jurisdiction. Institutions must also retain digital records for up to 10 years for audit purposes, making secure and resilient infrastructure non-negotiable.

In addition, sustainability has become a core part of regulatory expectations. Under POJK Sustainable Finance regulations, financial institutions must integrate environmental and social principles into operational decision-making and report ESG performance transparently.

To meet these expectations, BFSI organisations in Indonesia increasingly rely on colocation partners that offer:

- Data sovereignty and protection, ensuring information is stored and processed in Indonesia
- Audit transparency, aligned with both local requirements (POJK, IDX) and international standards
- Industry certifications such as Tier III and PCI DSS accreditation, which are required for facilities handling financial data and transactions
- Operational resilience, including consistent uptime and disaster recovery readiness
- Sustainability-aligned operations that support ESG reporting and long-term environmental commitments

Colocation providers with these built-in certifications and frameworks reduce the compliance burden, freeing IT teams to focus on innovation, digitalisation, and customer experience while remaining aligned with regulations.

Why Choose STT GDC?

Selecting the Right Infrastructure Model Is Only Part of the Equation

Equally critical is partnering with a provider that can deliver what you need, at scale. STT GDC offers a trusted, future-ready colocation environment tailored for enterprise modernisation:

Scalable and resilient campus with a dedicated 150kV on-site substation. It will comprise eight data centres designed for high-density AI workloads, with a combined IT load of over 250MW

Sustainable by design, STT Jakarta's facilities are built to LEED Gold Standard, SS 564 certified and supported by renewable energy initiatives, contributing to STT GDC's global goal of achieving carbon-neutral operations by 2030

Operational excellence, certified to global and local standards including: Uptime Tier III, ISO, PCI DSS, TVRA, POJK compliance, supported by 24x7 onsite professionals

Strategically located in Cikarang's Greenland International Industrial Centre (GIIC), a purpose-built data centre zone in Greater Jakarta, with strong connectivity to Jakarta and regional hubs

Carrier-neutral network offers diverse fibre routes, multiple carriers, internet exchange (IX), internet service providers, and campus interconnectivity.

Future-proof, AI-ready infrastructure designed to support high-density workloads and advanced cooling solutions

Deep local expertise and knowledge of Indonesia's regulatory landscape, paired with global best practices backed by STT GDC's international platform of over 100 data centres across 12 countries.

For a deeper look at our global platform and capabilities in Indonesia, a comprehensive overview can be found here.

Ready to Explore Your Next Step?

With a clear understanding of the ideal infrastructure model, the next step is choosing the right partner.

In our final report, we break down the essential traits of a strategic colocation partner – one that not only meets today's operational demands but also drives long-term business growth.

Reach out to STT GDC to:

- Reassess your infrastructure strategy aligned with future business goals
- Discover how colocation supports your hybrid cloud ambitions
- Schedule a guided tour of our Jakarta campus to see our facilities in action

Contact Us

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