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Investor Presentation | Asia Pacific

ASEAN Telecoms & Data Centers: Beneficiaries of the New Computing Paradigm

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We are at a historic inflection in AI infrastructure build-out, driven by Nvidia GPUs and the rise of agentic AI frameworks like OpenClaw. ASEAN sits at a unique intersection of this megatrend: abundant land, competitive power, strategic subsea cable connectivity. and growing sovereign AI mandates.

This presentation provides investors with a practical "Data Centers 101," including AI data centers' anatomy and economics, the value chain, Singtel's AI infrastructure positioning, and the potential emergence of orbital data centers as a long-tail disruptor.

Related Report:

ASEAN Telecoms and Media: Beneficiaries of New Compute Paradigm (19 Mar 2026)

Data Centers: Transforming Power into Computing

Scarce inputs
Land, grid interconnect, power price, water, permits and fiber access.

→

Facility layer
Shell, substations, UPS, generators, cooling and physical security.

→

IT layer
Racks, servers, GPUs, storage, switching and customer workloads.

→

Monetization
MW leased, price per kW, power pass-through, cross-connects and services.

1. MW is the core capacity unit, but revenue is a function of leased load, price, power structure, and utilization.
2. AI shifts the bottleneck from space to power density, cooling, and networks.
3. Equity exposure is a supply chain, not only data center landlords.

KPI bridge

Capacity → Leasing → Utilization → EBITDA → ROIC

Revenue depends on contracted capacity, billing model, power pass-through, ramp schedule, interconnection services. and customer mix.

24x7
Mission-critical workload expectation

MW
Primary capacity unit sold or built

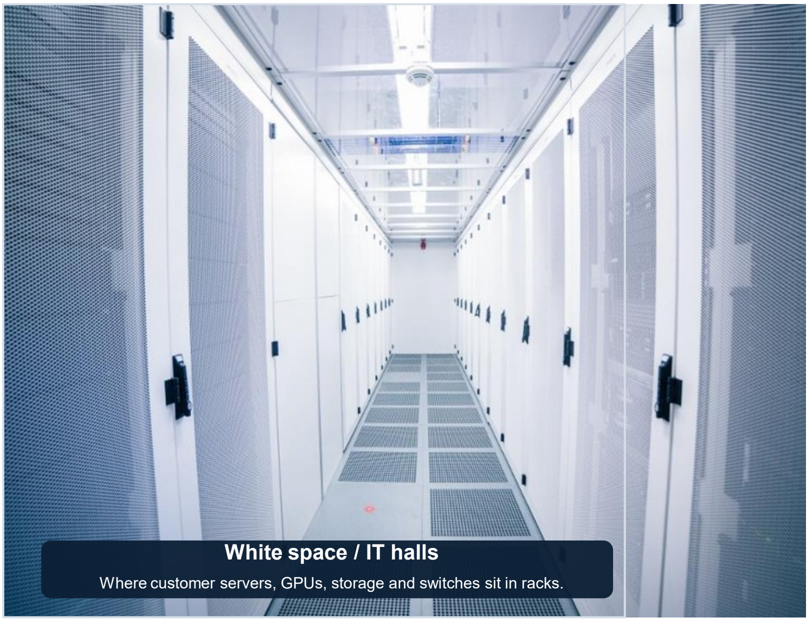
PUE
Efficiency bridge between IT load and site power

ROIC
The investor lens on growth capex

Source: Morgan Stanley Research.

Data Centers: The DC Anatomy

A data center is not just a shell building.
It is a tightly engineered system that makes IT equipment reliable, dense and connected.


White space / IT halls
Where customer servers, GPUs, storage and switches sit in racks.

Power train
UPS cabinets, batteries, switchgear and generators bridge grid outages and keep racks online.

Thermal management
Chillers, CRAH/CRAC units, airflow containment and liquid loops remove heat from dense racks.

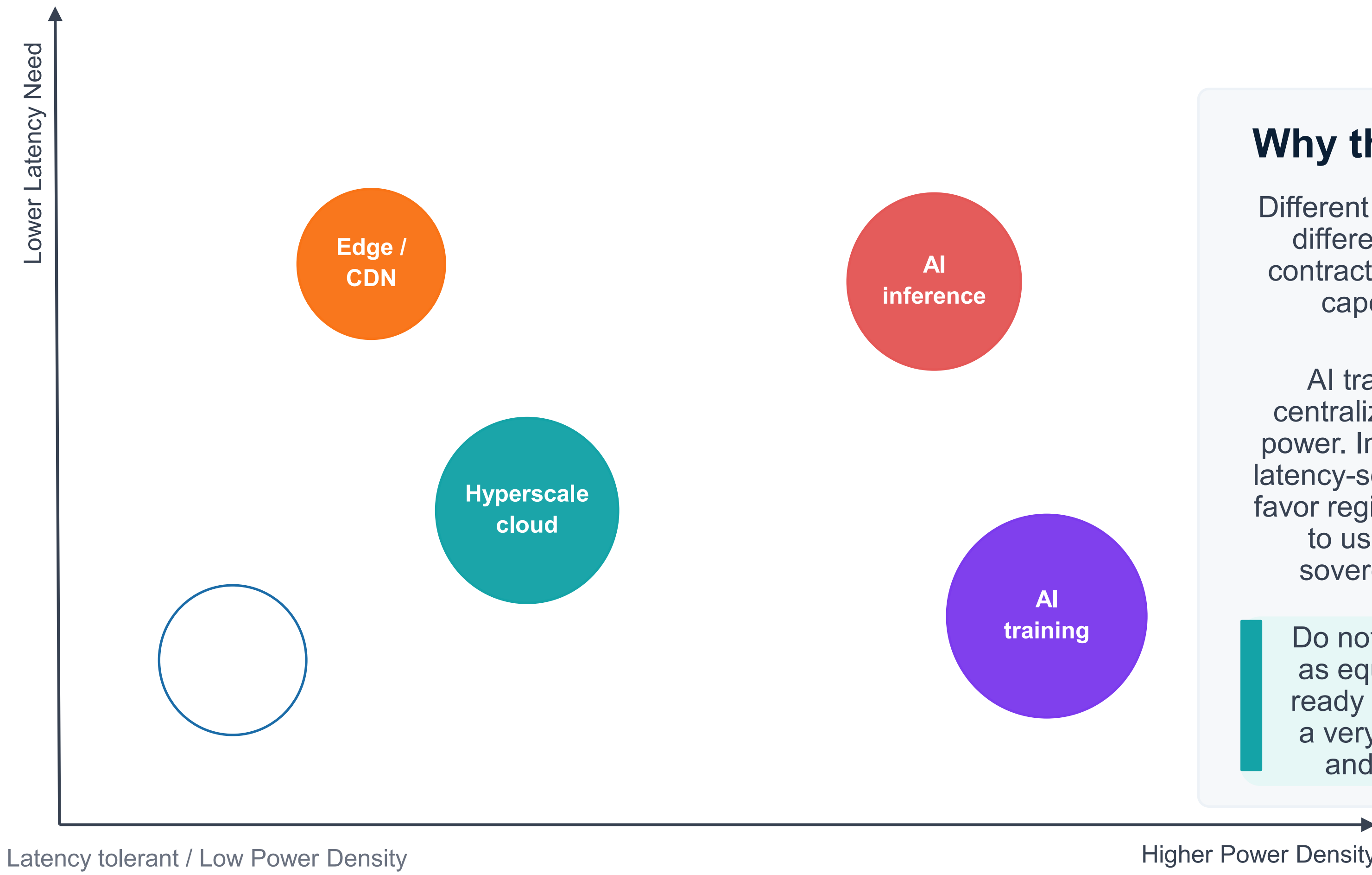
Connectivity
Meet-me rooms, fiber, cross-connects and cloud on-ramps make the facility valuable to tenants.

Controls & security
24x7 monitoring, access control, fire suppression and SLAs protect uptime and compliance.

The hardest assets to replicate are often power access, cooling design, network density, and operating track record – not the building shell.

Source: Morgan Stanley Research.

Data Centers: Workload Management



Why this matters

Different workloads imply different siting logic, contract structures, and capex intensity.

AI training can be centralized near cheap power. Inference is more latency-sensitive and may favor regional hubs closer to users and data sovereignty zones.

Do not treat every MW as equal. A leased AI-ready MW may require a very different capex and cooling spec.

Source: Morgan Stanley Research.

Data Centers: Business Models

Retail colocation Many enterprise customers	Operator sells smaller blocks plus connectivity. Higher interconnection revenue; more operational complexity.	Power/cooling	Security	Cross-connects
Wholesale colocation Large tenants / hyperscalers	Operator sells MW-scale suites or buildings. Longer leases; lower customer count; pre-leasing matters.	Large MW suites	Long leases	Ramp schedules
Build-to-suit / hyperscaler-owned Single tenant or owner-operated	Hyperscaler controls design and capex. Third parties may provide land, power shells or JVs.	Tenant design	Custom power	Dedicated campus
GPU cloud / AI factory Compute as a service	Provider controls facility and GPUs, then sells ca or API/compute access to enterprises and AI labs	GPUs	Orchestration	AI services

Source: Morgan Stanley Research.

ASEAN Data Centers: Formation of Data Center Clusters

Connectivity

Fiber routes, subsea cables, cloud on-ramps

Power

Availability, price, reliability, emissions

Land

Campus scale, zoning, noise buffers

Demand

Enterprises, cloud regions, data sovereignty

Climate

Water, ambient temperature, natural disasters, wars

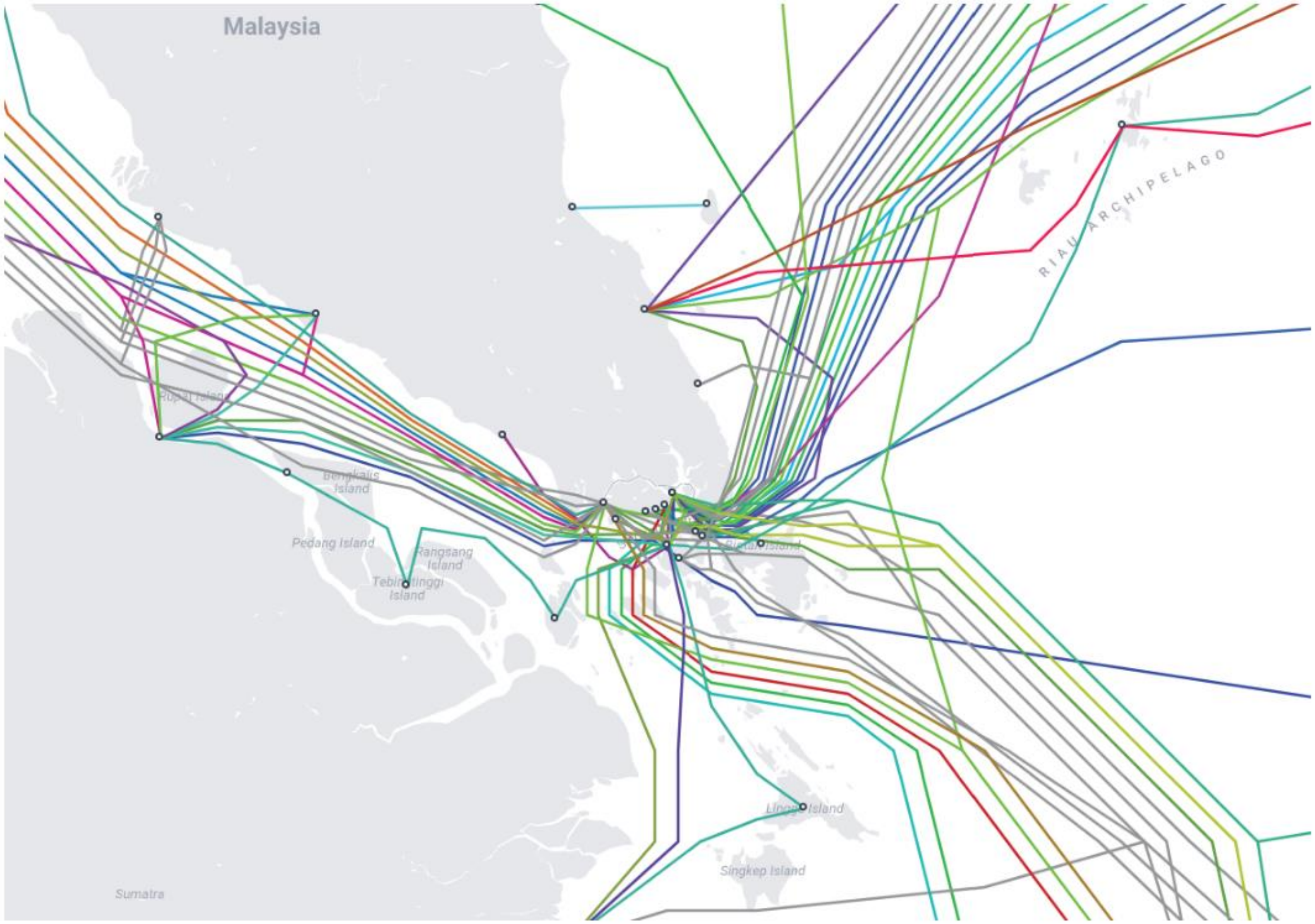
Policy

tax incentives, permitting, regulation

The best locations maximize connectivity and customer access while minimizing power, land and permitting risk.

Source: Morgan Stanley Research.

ASEAN Data Centers: Singapore Is a Submarine Cable Hub



Source: TeleGeography, Morgan Stanley Research.

ASEAN Data Centers: Key Changes in the Stack

Power density moves from room-level planning to rack-level thermodynamics

Traditional enterprise rack	5-15 kW
AI GPU rack today	40-200 kW
Next-gen AI platforms	hundreds of kW+

Cooling progression for higher density racks

Air → Direct-to-chip → Immersion

GPUs / accelerators	Compute engines
HBM memory	Model state + throughput
High-speed networking	Cluster scale-out
Power distribution	High-current delivery
Liquid cooling loop	Heat removal

Training

Massive, centralized clusters; economics tilt toward cheap power, high utilization and low-latency intra-cluster networking.

Inference

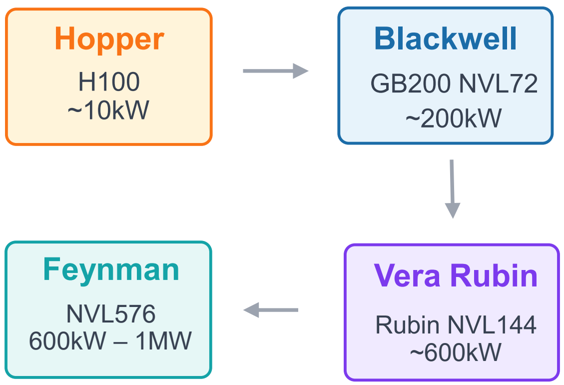
Workloads can be more distributed; latency, data sovereignty and proximity to enterprises matter more.

The winners are not only builders of square footage. They are operators with secure power, liquid-cooling expertise, dense fibe
to commit to high-density capacity.

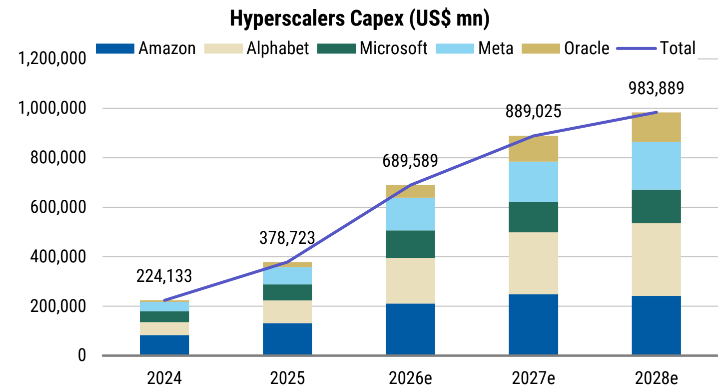
Source: Morgan Stanley Research.

ASEAN Data Centers: Rise of the New Computing Paradigm

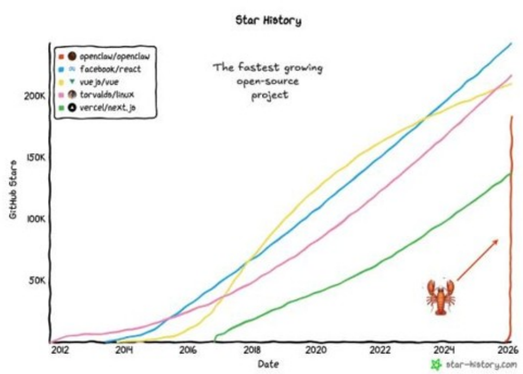
Evolving AI Hardware Stack



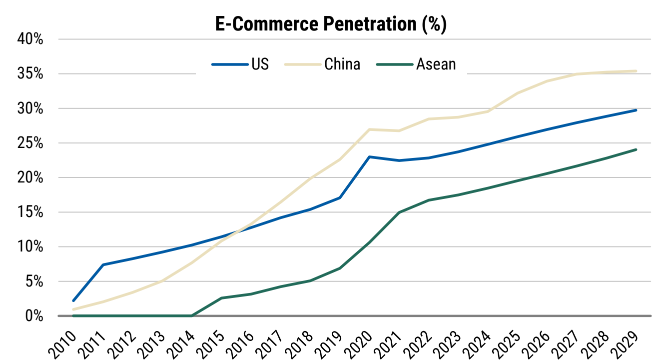
Surge in Global Hyperscalers' Capex



Rise of Agentic AI

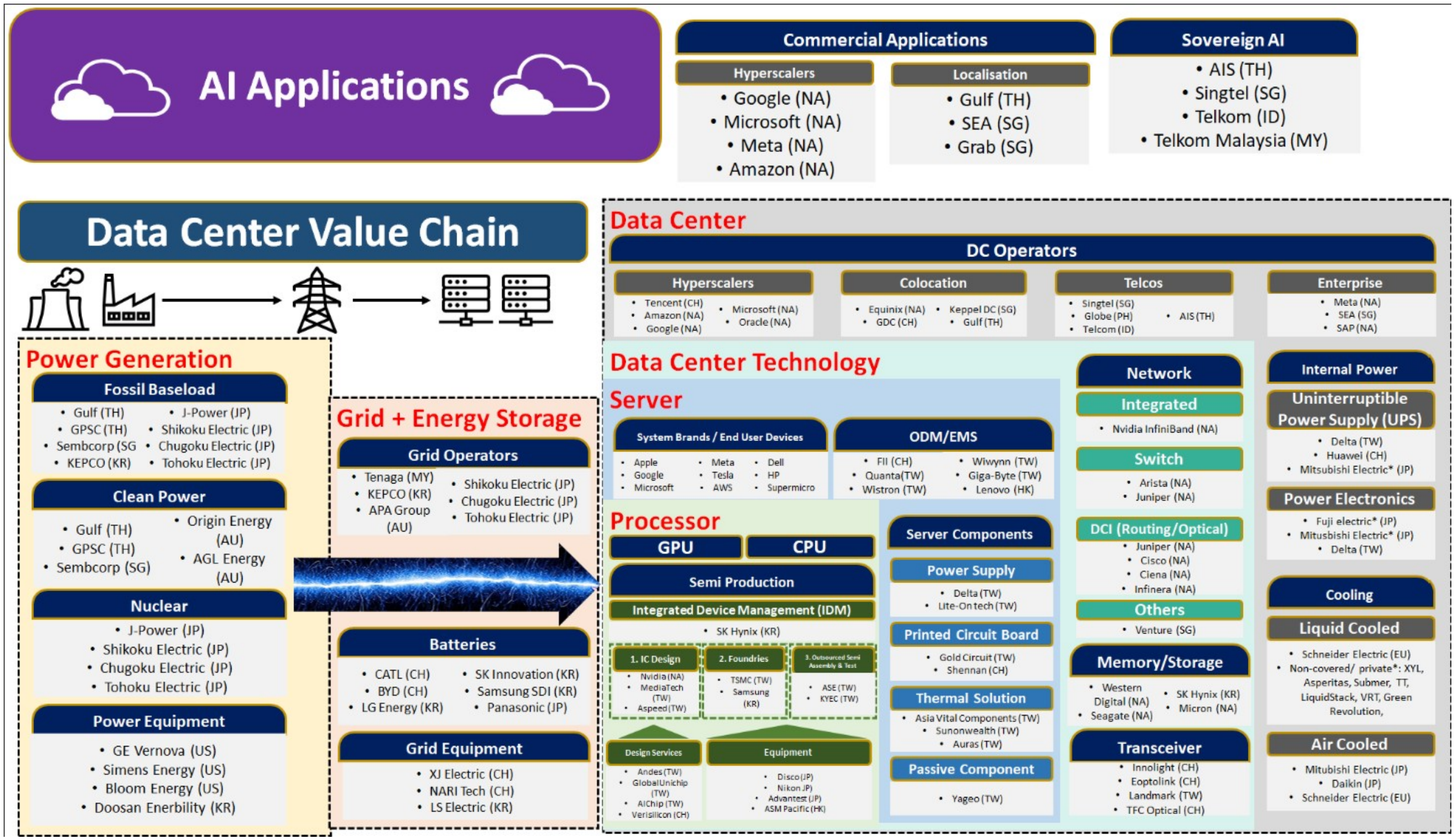


US-China- Tech Diffusion Cycle



Source: Company data, Morgan Stanley Research.

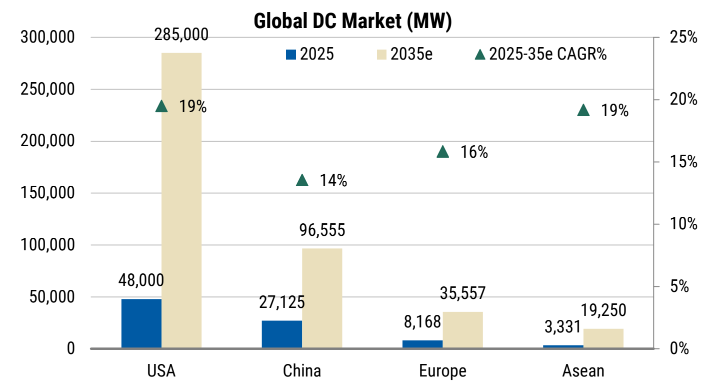
ASEAN Data Centers: Global AI Infrastructure Supply Chain Players



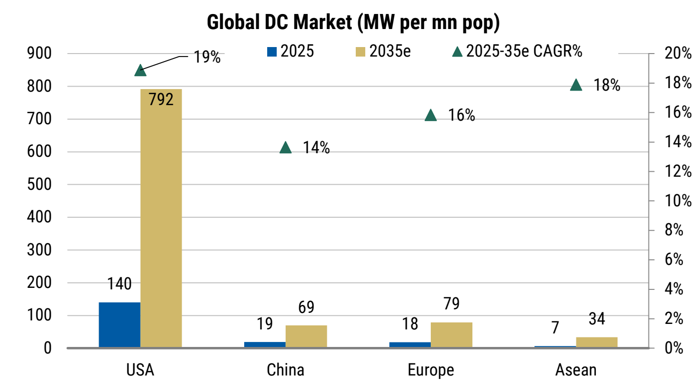
Source: TeleGeography, Morgan Stanley Research.

ASEAN Data Centers: Emerging AI Infrastructure Hub

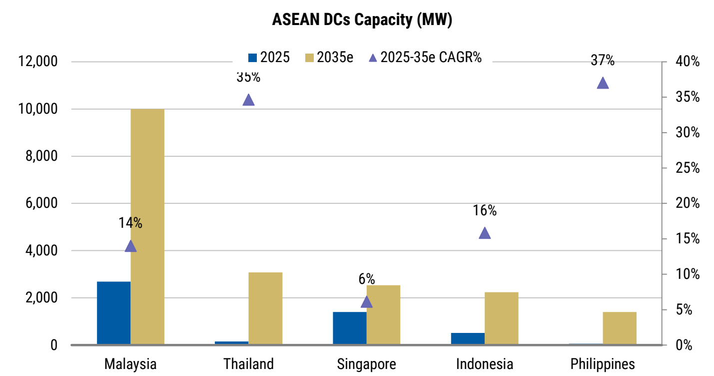
Global DC Market Growing Double-Digits



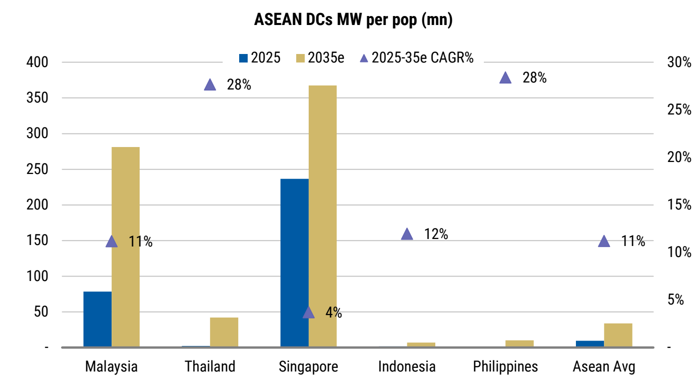
US Remains Most Saturated DC Market



MY>TH>SG in terms of DC Capacity



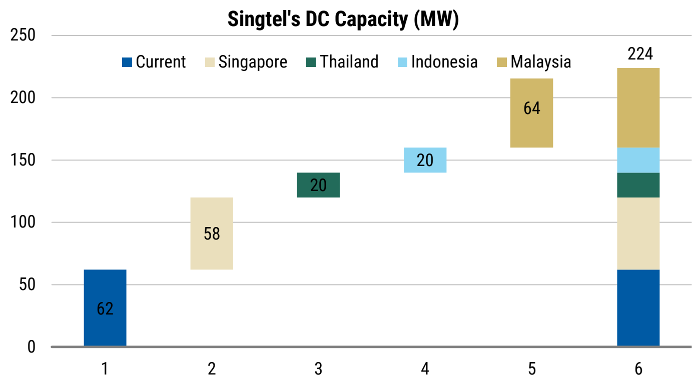
Singapore Remains Most Saturated DC Market



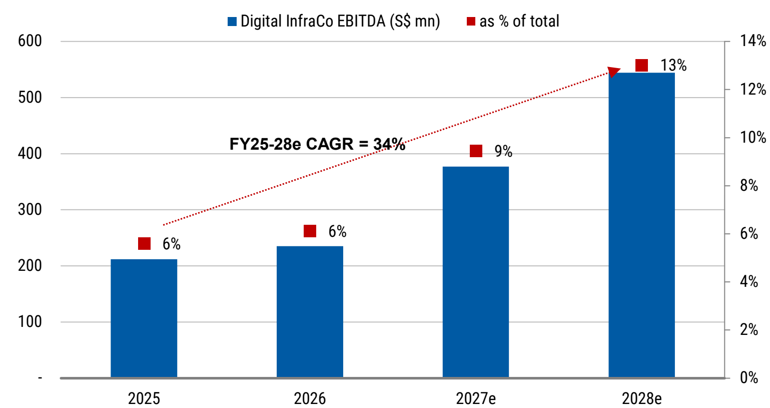
Source: Company data, Morgan Stanley Research.

ASEAN Data Centers: Singtel – The Leading AI DC Platform

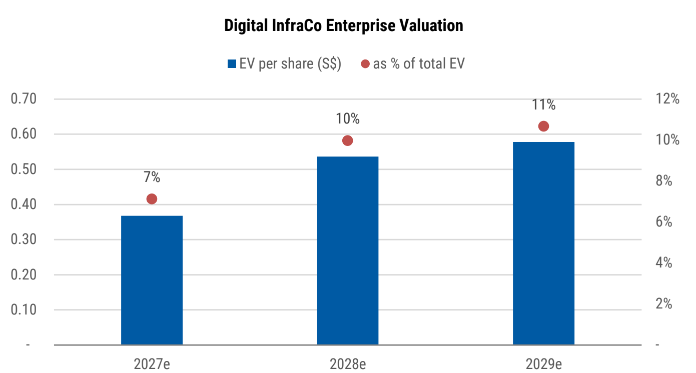
Singtel's First Phase Organic Pipeline



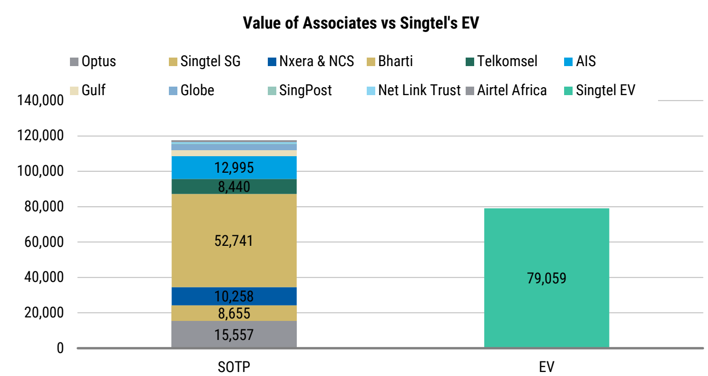
Singtel's Digital Infraco's EBITDA grow >30%



Singtel's Digital InfraCo to be >10% of SOTP



Singtel's Digital InfraCo Not Priced In



Source: Company data, Morgan Stanley Research. Note: We have not included STT GDC's contribution in Singtel's Digital Infraco

ASEAN Data Centers: Singtel Scaling through Acquisition of STT GDC

Overview of STT GDC

Operational scale and footprint acquired by the consortium.

50
data centers

~673MW
in operation

12
markets

Footprint by market

Operational count / presence; asterisk = upcoming or pipeline market.

India 23	UK 11	Singapore 6
Philippines 5	Thailand 2	Japan 1
Vietnam 1	Indonesia 1	Malaysia*
Germany*	Italy*	S. Korea*

Capacity / footprint bridge

A fast path from regional pipeline to a global AI data-center platform.

Nxera base	STT operating	STT pipeline	Combined platform
>400MW medium-term pipeline	+673MW current capacity	+~1.7GW pipeline across markets	~2.8GW design capacity / 12 markets

Transaction snapshot

EV S$13.8bn; S$6.6bn cash for 100% of STT GDC. Singtel contributes S$740mn for 25% stake.

Equity-accounted; no dividend impact. Expected close in 2H26 per management.

Additional Singtel capex: ~S$400-500mn over the next three years.

Why it matters for Singtel

- **Capacity access:** scarce operating MW + pipeline
- **Customer base:** global hyperscalers and blue-chip enterprises
- **Footprint:** 12 markets anchored by SG, India and UK
- **Value read-through:** ~4% Singtel EV uplift based on MSe

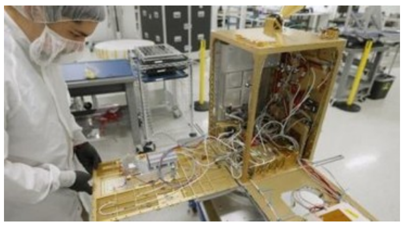
Strategic read-through: access to constrained capacity, multi-market customer relationships and geographic optionality, while retaining a partnership-led model.

Source: Company data, Morgan Stanley Research.

ASEAN Data Centers: Moving Computing to Space

Think small GPU satellites/modular computing containers linked optically

1 Hardware in orbit

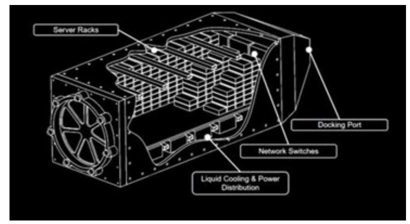


H100-class GPU demonstrator

2 Launch & deploy

Reusable rockets + rideshare missions

3 Modular computing



GPU containers dock to power/cooling

4 Long-term scale

Distributed nodes first; GW platforms later

Why space?
Terrestrial bottleneck is power. Orbit offers abundant solar energy and radiative heat rejection.

What has to work?
Launch cost, radiation shielding, thermal design, orbital debris, security and replacement cycles.

Investor framing
A long-duration call option on AI power scarcity — not a near-term substitute for terrestrial DCs.

Core idea: move the demand source (computing) closer to abundant solar power instead of bringing scarce power to computing.

ASEAN Data Centers: Key Diligence Checklist

Ten questions to ask before underwriting data center-driven earnings growth

- **Capacity bridge** — What is operational, under construction, power-secured and merely planned?
- **Power** — What grid connection dates, PPAs, redundancy design and utility dependencies are in place?
- **Leasing** — How much is pre-leased, to whom, for how long, and with what ramp schedule?
- **Pricing** — Is billing per kW, per kWh, shell-and-power, or bundled service? Is power passed through?
- **Capex/MW** — What is the all-in cost per MW and how exposed is it to electrical/cooling equipment inflation?
- **Cooling** — What rack density can the facility support today and after retrofit?
- **Utilization** — How long from commissioning to stabilized EBITDA?
- **Funding** — How are projects financed - balance sheet, JV, project debt, asset recycling?
- **Customer risk** — What is tenant concentration and credit quality?
- **Returns** — What is the stabilized EBITDA, ROIC and downside if leasing is delayed?

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