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Data Centers: Asia Communacopia + Technology — Key Takeaways: AI Infrastructure: Powering the Next Intelligence Cycle

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Presenters: Mark Fong, CEO (Empyrion Digital), Yaniv Ghitis (Chief Commercial and Investment Officer, Digital Edge), Stephen Watts (CEO, PaleBlueDot AI)

Bottom Line: **1) Power as the key bottleneck** affecting construction timelines and delivery capability, with public-private partnership on grid infrastructure builds needed to bridge the gap. **2) AI compresses timelines**, with single-tenant GPU customers signing contracts in 6 weeks vs. 4–6 months for traditional hyperscalers. **3) Data center operators preserving fungibility to cater toward both traditional and AI-first customers**, e.g. hybrid air/liquid cooling, variable rack densities, and delaying data hall fit-out to the last possible moment. **4) Supply would sell out within 3–6 months at current demand levels if it existed**, but expansion is constrained by power, permitting, water, and increasingly community acceptance. **5) Geopolitics** raises compliance overhead but has not dampened underlying demand. **Japan, India, the Philippines** flagged as key upside growth markets.

Key Takeaways

Power as the key bottleneck

- While **GPU shortages should normalize by 2028–2029**; power is the key constraint affecting construction timelines and delivery capability, because resolving grid infrastructure issues requires 5 to 10 years.
- **Public-private partnership is the key to answer who bears responsibility for infrastructure builds**: Governments should take the lead given power's nature as a national utility, with private operators and hyperscalers increasingly investing directly in power generation and renewables to bridge the gap while contributing through utility tariffs. Malaysia was highlighted as a market where government-utility collaboration is working effectively.
- **Power efficiency (PUE) vs water tradeoff**: Different markets demand tailored approaches based on local resource scarcity and pricing. Digital Edge highlighted

its Mumbai facility as a case study where it is sourcing treated wastewater from a nearby purification plant rather than potable water. The site features the largest water-based chiller plant in its class and delivers PUE below 1.25.

- Empyrion foresees that the **four pillars of infrastructure builds (power, water, connectivity, permits) are being joined by a fifth: community acceptance**. Operators who successfully engage local communities will gain a competitive edge.

How shifting customer mix is affecting data center operators

- **Single-tenant AI customers vs. traditional multi-tenant — different lead times**: Empyrion noted that single-tenant GPU customers show commitment on orders 15–24 months before construction starts, locking in bespoke designs early. Traditional multi-tenant customers, by contrast, expect only 3–6 months of lead time and more standardized infrastructure. Empyrion aims to delay data hall fit-out to the last possible moment to cater to both groups.
- **Hyperscalers vs. neoclouds — radically different commercial speed**: New AI-first customers and neoclouds are pushing for modular and prefab designs to compress delivery timelines. They also move faster commercially, with Empyrion noting new contracts can close in 6 weeks vs. 4–6 months with hyperscalers. As a GPUaaS provider who transforms energy into tokens, PaleBlueDot cited a Japan project that delivered 6,000 GPUs in 89 days. Speed to fulfill the demand has become a key differentiator from a customer perspective.
- **Operator response — modularity, fungibility**: The panel agreed that hybrid air/liquid cooling is now the default design choice to support both GPU-intensive AI and traditional cloud workloads in the same facility. Digital Edge engineers its facilities to support rack densities from 20kW to over 1MW — a wide envelope that avoids over-optimizing for AI at the expense of other workload types.

Growth outlook

- **Biggest upside markets**: **India** is expected to grow rapidly, supported by favorable demographics, deep engineering talent, and proximity to the Middle East. Digital Edge is already executing on this thesis via its 300MW Navi Mumbai campus. **Japan** was also flagged as a standout with government-backed initiatives driving aggressive expansion; alongside the **Philippines** with reduced red tape and scalable power.
- **Training vs inference**: PaleBlueDot noted that c.70% of its AI compute demand is now inference. Company expects the demand to continue to scale as application-layer consumption has yet to be fully realized.
- **Boldest predictions and forward-looking themes**: Empyrion framed the AI-driven demand surge as **non-zero-sum** where traditional cloud workloads continue to grow alongside new GPU and AI-first demand, expanding total market size rather than redistributing it. On the supply side, **consolidation among DC operators** is expected to improve efficiency and reduce power/chip constraints.

Geopolitics

- **Regulatory shifts have caused operational adjustments** (e.g. enhanced due diligence now extending beyond direct customers to ultimate end-users and supply chain participants) **but have not deterred underlying demand momentum, with demand resilience across regions**. Empyrion commented that supply would sell out within 3–6 months at current demand levels if it existed.

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