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# FINANCING THE FUTURE
# BUILDING ASIA PACIFIC'S SUSTAINABLE DIGITAL BACKBONE

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# FOREWORD

— Luke Stephens, Vice President, Treasurer, AirTrunk

Asia Pacific's digital economy is surging, powered by artificial intelligence (AI), cloud, and mobile growth. As a result, demand for hyperscale infrastructure is accelerating at an unprecedented speed.

Data centre capacity across the region is set to double by 2028[1]. Yet a supply gap of 15GW is already emerging[2]. Meeting this escalating need will require hundreds of billions in capital and fast.

Adding to the challenge is that Asia's data centres are not scaling in isolation: rather, the region competes globally for capital and within the wider infrastructure asset class and in particular fibre, transport and energy.

With debt investors adopting a global approach in their data centre capital allocation ensuring APAC remains attractive from a "relative value" investment standpoint is key to attracting a sufficient level of capital to support this build out.

To attract global capital, the region must align with global expectations: strong credit, pricing discipline, and sustainability – not only in emissions, but in its impact on land, water, and communities.

A stark challenge confronts Asia's data centre industry: scale digital infrastructure and embed sustainability at the core. Without decisive action, the region risks locking in high-emission systems and losing out to more investor-friendly markets.

This paper explores the convergence of three forces: surging digital demand, the urgency of sustainability, and shifting investor priorities. Success lies in aligning all three. It's about what gets built, and how it's financed, governed, and measured.

[1] Moody's Ratings: APAC data centers: Dispersed growth, unique challenges: August 2025
[2] McKinsey: AI Power: Expanding data center capacity to meet growing demand October 2024

Two priorities stand out: energy and broader sustainability transition to decarbonise operations; and social impact to ensure infrastructure delivers inclusive and long-term value.

Both are examined in depth in the pages that follow – each with its own breakout analysis, frameworks, and case studies.

Asia must move fast. That requires:

- Data centre operators embedding ESG into their capital strategies and showing measurable impact
- Investors backing transparency, innovation, and long-term value
- Governments creating rules that link capital to climate and community outcomes

AirTrunk is sharing this analysis to spark industry-wide action. Meeting Asia's digital demand is beyond the capacity of any single data centre operator; it instead, requires collective responsibility and a commitment to building sustainably for the long term.

Capital and climate now converge by necessity, not choice. Elevating the role of data centres and innovating how they are financed – with sustainability and social value at the core – will attract the capital needed to build a digital economy that's resilient, inclusive, and climate-aligned.

## Executive Summary at a glance

Asia's digital infrastructure is expanding rapidly, but growth must be aligned with climate and community goals to remain investable.

Sustainable finance is the key to unlocking low-carbon, high-efficiency digital infrastructure at scale.

Data centres must be repositioned as strategic infrastructure to attract global capital and compete with more mature markets.

ESG performance, pricing discipline, and transparency are now prerequisites for investment – not optional extras.

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# ASIA'S DIGITAL SURGE: THE CASE FOR BUILDING CRITICAL INFRASTRUCTURE RESPONSIBLY

Asia Pacific's digital future hinges on how we finance it. The region is racing ahead – driven by AI, cloud computing, and data-heavy industries – but data centre supply is struggling to keep pace. By 2028, Asia is expected to host nearly a third of global data capacity[3]. Meeting this demand will require around US1trillion[4], but global capital is finite, and competition for investment is fierce.

Global sustainable debt issuance totalled around US$900 billion in 2023. Yet less than a third flowed to Asia Pacific[5], and only a fraction targeted digital infrastructure.

This highlights a critical truth: capital will not chase scale alone, it will chase credibility, governance, sustainability, and impact.

As demand grows, data centres are elevated from technical assets to strategic infrastructure central to economic resilience, digital sovereignty, and competitiveness. Yet rapid expansion will intensify pressure on land, water, energy, and biodiversity, with energy the most acute challenge. Electricity demand is forecast to more than double by 2030, but only a third is expected to be met by renewables. Without sustainability-linked capital allocation, these pressures will compound.

The stakes are high: financing must embed sustainability into infrastructure, aligning capital flows with climate outcomes, social value, and long-term resilience.

Against this backdrop, the financing challenge becomes even more acute. Building data centres requires significant investment, and land, energy, and technology costs are rising fast.

With global private capital finite, Asia's data centres must now compete not only within the infrastructure asset class – roads, ports, hospitals – but also across regions that are more mature, ESG-aligned, and better understood by investors.

Asia is home to the world's fastest-growing digital economy, and that growth imperative presents a powerful investment case. Yet growth alone doesn't guarantee capital. Investors are increasingly selective, prioritising markets and investments that demonstrate:

- **Creditworthiness:** financial resilience and reliability
- **Pricing discipline:** a clear grasp of risk and opportunity
- **Sustainability performance:** transparency and long-term value creation

Asia's ability to attract funding will depend on how well it aligns with these expectations. Without swift action, capital will flow to other markets, locking in a high-emissions system that clashes with climate goals.

### Call to Action

To compete, Asia's data centre operators must first get investment-ready by aligning with global investor standards. That means proving financial resilience, demonstrating pricing and structuring discipline, and delivering credible ESG performance. Only by meeting these baseline expectations can operators attract capital – and be positioned to innovate financing structures and scale them consistently across the industry.

[3] Ember Energy: From AI to emissions: Aligning ASEAN's digital growth with energy transition goals: May 2025
[4] World Economic Forum: ASEAN takes major step toward landmark digital economy pact: November 2025
[5] UN Trade & Development World Investment Report 2024 Chapter III Sustainable finance trends

# TRANSFORMING FINANCE STRUCTURES TO SCALE IMPACT

Sustainability isn't new to Asia's data centre operators. It's already shaping how facilities are designed, built, and financed. But investor expectations are changing fast. ESG can't just be a box to tick – it's now a key part of how capital is raised, how performance is judged, how sites are compared, and how long-term value is created.

Creditworthiness is increasingly tied to transparency, emissions exposure, and adaptability. Pricing discipline increasingly reflects an operator's ability to manage environmental risk, comply with regulations, and use resources efficiently and responsibly – and to demonstrate how strong ESG practices translate into better financial performance.

This shift is changing how projects get financed. Green loans, transition bonds, and sustainability-linked debt are increasingly used as platforms for investors to assess ESG performance and transparency. While not every loan will take these forms, they are powerful tools for unlocking capital, improving transparency, building trust, and driving smarter growth.

Other models should be adopted. For example, asset recycling – moving mature facilities into institutional portfolios – can free capital for Asia's digital buildout. Applied to data centres, this allows reinvestment in new projects with stronger ESG credentials. Embedding sustainability-linked covenants ensures both recycled and new assets deliver measurable environmental and social outcomes.

Asset-backed securitisation (ABS) offers another pathway to unlock capital by packaging long-term data centre revenues into investable securities. Embedding sustainability-linked commitments ensures projects deliver measurable ESG outcomes. ABS converts predictable lease income into ESG-aligned returns for investors while providing operators upfront capital – an approach not yet explored in infrastructure

Equally, renewable PPAs and offtakes are becoming a core ESG lever, turning data centre demand into bankable cashflows that accelerate Asia's energy transition.

By embedding ESG metrics into financial agreements, data centre operators can hardwire accountability, transparency, resilience, and innovation into their business models.

Asia's opportunity is vast, but competition for capital is intense, and investors are selective – seeking markets with clarity, discipline, and impact. Success will require operators, investors, and governments to align capital with climate goals, community outcomes, and long-term performance.

**The next phase**

is smarter financing: using green loans, sustainability-linked debt, and blended finance to lead, not just comply, and proving that ESG integration delivers real impact and lasting value.

# SCALING SUSTAINABLE FINANCE TO ATTRACT INVESTMENT

Embedding ESG and introducing new financing models is essential, but it's only the foundation. The real test is scaling – moving beyond isolated initiatives to system-wide standards applied consistently and with greater ambition.

To secure the investment Asia's digital infrastructure needs, financing must tie capital directly to measurable outcomes, extend to emerging markets, and be backed by transparent data and policy frameworks.

Financial discipline, honest reporting, and resilience are now non-negotiable. Operators must prove they can manage risk, price realistically, and deliver ever more ambitious environmental and social results.

This is what must shift:

### Tie capital to measurable performance

Embed sector-specific ESG KPIs into all financing agreements. Tools like green loans and sustainability-linked debt should not just link funding to outcomes but continuously raise performance thresholds.

### Expand access in emerging markets

Scale blended finance and outcome-based structures to ensure capital reaches markets where it's needed most, balancing flexibility with risk discipline.

### Close the ESG data gap

Strengthen assurance, comparability, and transparency to build investor confidence and accountability across the industry.

### Capital is ready to move

but only if the industry demonstrates credible, climate-aligned, and socially inclusive infrastructure. Success depends on smarter financing, consistent reporting, and purposeful building that raises the bar on outcomes.

# CALL TO ACTION: ELEVATE, INNOVATE, ATTRACT

Asia's data centre industry has a major opportunity, but it won't win global investment by doing business as usual. To stand out, the sector must lead on sustainability, financing innovation, and long-term value. Traditional models focused on speed and short-term returns are no longer fit for purpose.

Investors now demand long-term value, strong ESG performance, and clear accountability. Acting cohesively and consistently in applying financing standards is not just good governance – it is what will make Asia a more compelling investment destination.

This is what needs to happen:

**Shift from pure growth to investment-ready discipline**

Align with investor expectations on creditworthiness and pricing discipline.

**Drive consistency through standardised data centre ESG principles**

Ensure sustainability-linked finance tools – such as green loans, transition bonds, and blended finance structures – are anchored in clear, comparable ESG standards that apply across all markets, enabling investors to assess performance with confidence.

**Scale financing models**

Deploy instruments such as sustainability-linked loans, asset recycling, and asset-backed securitisation as platforms to unlock capital and enhance ESG transparency.

**From ESG box-ticking to measurable standards**

Establish transparency, comparability, and governance across the industry.

**From fragmented reporting to trusted data**

Close the ESG data gap to build investor confidence and accountability.

By coupling financing innovation with renewable offtakes and PPAs, Asia's data centres can both attract capital and directly underwrite the clean energy buildout the region urgently needs. When investors see harmonised ESG metrics, reliable reporting, and financing models that tie capital directly to performance, they gain confidence that risks are managed and returns are credible. This collective discipline signals maturity, reduces uncertainty, and positions Asia as a region where capital can scale with impact.

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# CASE STUDY:

## AirTrunk – Scaling Sustainable Data Centres Through Performance-Linked Capital

### Financing with Purpose

AirTrunk, a leading hyperscale data centre specialist, has taken a practical approach to embedding sustainability into its financing strategy. In 2021, it became the first in Asia Pacific to convert its corporate loan into a Sustainability-Linked Loan (SLL), tying capital to how its data centres actually perform – like energy use and emissions – rather than just what was promised in their design.

Its first A$2.1 billion SLL was the first to link loan terms to operating Power Usage Effectiveness (PUE) – a real-world efficiency metric. Since then, AirTrunk has grown its ESG-linked financing to A$18 billion, with 100% of its debt now tied to sustainability targets.

### Designing for Impact Over Time

AirTrunk has expanded its KPIs to cover energy efficiency, water use, renewable energy procurement, and gender pay equity. Each refinancing has raised the bar, including a landmark A$16 billion sustainability-linked deal in 2025 featuring Singapore's largest green loan for a data centre.

KPI design is collaborative – bringing together internal teams, banks and financiers, sustainability structuring agents, independent reviewers, and auditors to ensure targets are credible and continuously improved.

### Connecting Finance to Community Outcomes

AirTrunk reinvests margin incentives that come if they exceed the set ESG targets into a Social Impact Fund. This fund supports STEM education, digital inclusion, biodiversity & conservation, sustainable innovation, and disaster relief – linking financial performance to community benefit across the markets where AirTrunk operates.

### Embedding Accountability

To manage complexity and maintain trust with stakeholders, AirTrunk has built strong governance around its financing:

- Regular internal ESG reviews
- Independent audits and third-party verification
- Financier oversight of KPI performance and social impact fund disbursements
- Public reporting through its annual Sustainability Report and Net Zero 2030 roadmap

By aligning capital with measurable outcomes, AirTrunk has turned sustainability into a strategic lever, not just a commitment.

#### Outcomes at a Glance

- **Environmental:** Improved energy and water efficiency through AI-driven cooling and circular design
- **Financial:** Lower cost of capital and stronger investor confidence
- **Business:** Greater ability to win business and enter new markets
- **Social:** Direct investment in community programs
- **Governance:** ESG embedded into treasury and capital planning
- **Reputation:** Stronger stakeholder trust and social licence
- **Talent:** Higher employee engagement and attraction
- **Leadership:** 80% of executive bonuses linked to sustainability outcomes

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# REFLECTIONS:
# BUILDING CREDIBLE, IMPACTFUL, SUSTAINABLE FINANCE

Priyanka Jain, Senior Manager of Treasury at AirTrunk, shares what it takes to embed ESG into capital structures in a way that delivers real-world impact:

> " Sustainable finance isn't just about structuring deals – it's about driving real change across the organisation. Simplicity, humility, and continuous improvement are the foundations of credible, high-impact sustainable financing."

Drawing from AirTrunk's experience, here are 10 practical lessons for operators looking to lead with integrity:

### Strategic Foundations

**1. ESG is risk management**
Future-proof the business, don't just tick boxes

**2. Start early**
Engage financiers to build trust and momentum

**3. Design KPIs that matter**
Focus on measurable environmental and social outcomes

### Execution and Governance

**4. Collaborate across teams**
Co-design KPIs with treasury, sustainability, and operations

**5. Monitor and adapt**
Review regularly to stay on track

**6. Govern with rigour**
Use third-party verification and financier oversight

**7. Report with integrity**
Transparency builds investor confidence

### Culture and Leadership

**8. Reinvest with purpose**
Use margin incentives to support community programs

**9. Stay humble**
Learn from others, share your playbook, and refine your approach

**10. Lead with purpose**
ESG performance is a long-term advantage

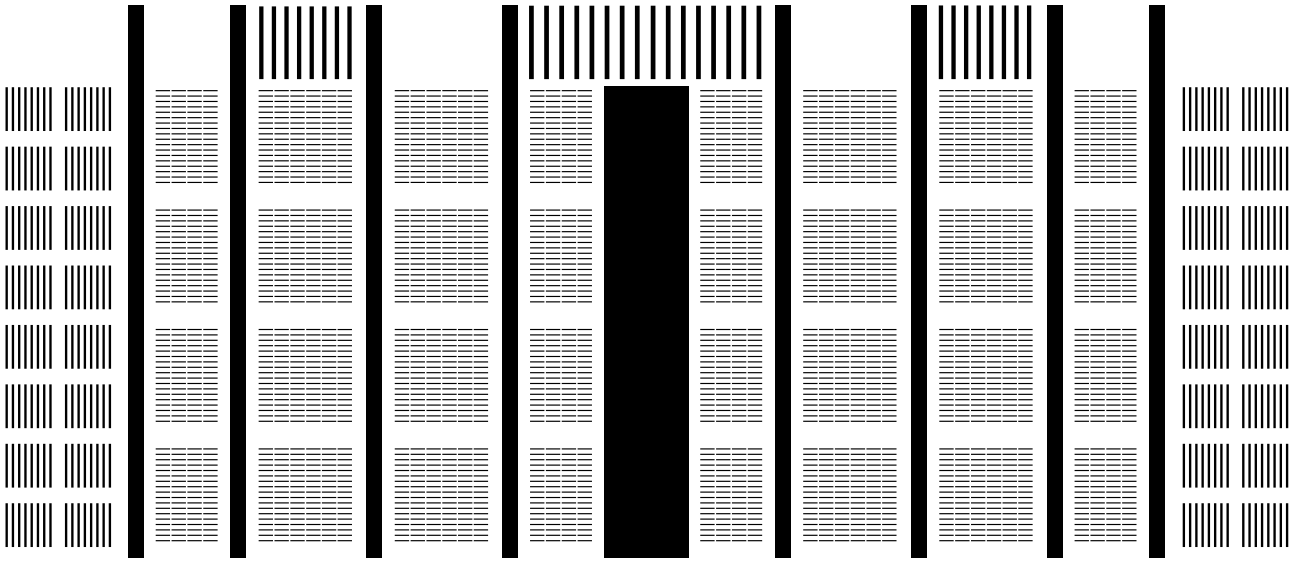
> " The biggest lesson is that sustainable finance must be dynamic and collaborative. It's not just about capital; it's about delivering the outcomes that matter to society."
>
> — Priyanka Jain, Senior Manager of Treasury, AirTrunk

# HOW DATA CENTRES CAN POWER THE ENERGY AND SUSTAINABILITY TRANSITION

Data centres are projected to consume around 1,000 terawatt-hours of electricity globally by 2030[6], driven by AI, cloud, and digital demand. In Asia, where growth is fastest, this surge is putting pressure on existing energy grids. At the same time, most countries in the region have committed to net-zero pathways and are accelerating the shift toward renewable energy.

The additional load from data centres makes this transition more complex, but it also creates a powerful incentive to scale clean energy investment and grid innovation. If managed responsibly, the sector can become a catalyst for faster adoption of renewables and stronger energy resilience.

This means ESG shouldn't just be something reported after the fact. It needs to be built directly into how renewable projects raise and use money – with clear, measurable promises written into loan agreements, investor updates, and capital plans.



[6] International Energy Agency Energy and AI report 2025

Each of the following levers can be translated into KPIs that directly influence financing outcomes, helping operators secure better terms and attract long-term capital.

## Sustainable Finance as a Strategic Lever

Green bonds and sustainability-linked loans can be structured as platforms to embed ESG KPIs and demonstrate transparency. This ties capital directly to performance, ensuring funding flows to projects that deliver measurable impact.

This is how they connect:

### 01 Energy Efficiency by Design

KPIs around PUE, cooling efficiency, and energy intensity can be built into SLLs. Meeting or exceeding these targets can reduce cost of capital and improve investor confidence.

### 02 Water Stewardship and Circular Design

Water use and recycling metrics can be tied to ESG-linked financing. These KPIs demonstrate environmental responsibility and reduce exposure to regulatory and reputational risks, making projects more bankable.

### 03 Power Purchase Agreements (PPAs)

A PPA is a long-term deal where a data centre commits to buy renewable power. For energy providers, guaranteed demand gives steady revenue and confidence to build (and secure financing) more renewable capacity.

### 04 Community-Centric Innovation

Social KPIs – covering education, inclusion, and local partnerships – can be built into financing agreements. This strengthens stakeholder trust and aligns infrastructure with broader development goal.

### 05 Grid Flexibility and Demand Response

Data centres need to run 24/7 but can support grid stability by adjusting power use during peak demand. Investing in battery storage makes this easier – storing power when demand is low and releasing it when demand spikes. KPIs around load shifting, peak shaving, and battery use can show this flexibility, and meeting them can qualify operators for incentive-based financing.

### 06 Embodied Carbon Reduction

Beyond operational emissions, data centres can track and reduce embodied carbon in construction materials and supply chains. KPIs around lifecycle emissions, low-carbon procurement, and circular construction practices can be built into financing terms.

As data centres scale across Asia, the question isn't whether they can support the energy and wider sustainability transition – it's how. An answer lies in how ESG is embedded into financing. When sustainability targets are built into loan terms and investor disclosures, capital flows to projects that deliver real impact. These six levers show how operational performance can be translated into financing KPIs, turning ESG from a reporting exercise into a strategic tool for attracting investment and accelerating clean energy deployment.

# AIRTRUNK INITIATIVES

AirTrunk embeds sustainability into every facet of its hyperscale data centre strategy, leveraging innovative design and operational practices to deliver measurable environmental and social impact.

All of AirTrunk's financing is structured as sustainability-linked, with key performance targets tied to energy efficiency, water stewardship, renewable integration, social impact, and embodied carbon reduction. The initiatives below represent some of the commitments embedded within these SLL targets.

## 01 Energy Efficiency by Design

AirTrunk continues to provide strong energy efficiency performance across its portfolio, maintaining an industry-leading portfolio PUE of 1.32 in FY25. Advanced cooling technologies, including direct-to-chip liquid cooling at JHB1 in Malaysia, enable AI-ready workloads while minimising energy intensity. These efficiency metrics are embedded in AirTrunk's sustainable financing, which tie financing terms to power and water usage improvements, incentivising continuous innovation.

## 02 Water Stewardship and Circular Design

AirTrunk measures and optimises water productivity through its Net Water Usage Effectiveness (nWUE) metric and has implemented Malaysia's largest recycled-water scheme for data centres to reduce potable water reliance. Its sustainability strategy aligns with frameworks such as the Taskforce on Nature-Related Financial Disclosures (TNFD), embedding biodiversity and water considerations into reporting and financing.

## 03 Power Purchase Agreements (PPAs)

Through its sustainable financing platform, AirTrunk has secured renewable PPAs across Asia Pacific, including Malaysia's first data centre VPPA under the Corporate Green Power Programme, long-term solar PPAs in Australia, and hourly renewable matching solutions in Hong Kong using landfill gas certificates. These agreements provide predictable demand that enables new renewable capacity to come online.

## 04 Community-Centric Innovation

AirTrunk's ESG commitments extend beyond environmental KPIs to social impact. Its Social Impact Program, funded through margin incentives from SLLs, supports initiatives in STEM education, digital equity, biodiversity & conservation, sustainable innovation, and disaster relief. Partnerships with organisations across the region reinforce AirTrunk's commitment to inclusion and community engagement.

## 05 Grid Flexibility and Demand Response

As a founding partner of the 24/7 Carbon-Free Energy Coalition, AirTrunk advocates for grid-friendly infrastructure and hourly renewable matching. The company is exploring battery storage and load-shifting technologies to support local grids and manage peak demand, aligning with KPIs in its financing agreements.

## 06 Embodied Carbon Reduction

AirTrunk announced an industry-first embodied carbon ratio (ECR) threshold, committing to a maximum threshold of 2.8 tCO2 e/kW of capacity for all new data centres. The company is committed to achieve Net Zero emissions by 2030 for Scope 1 and Scope 2 and reduce Scope 3 by driving progressive embodied carbon reductions across all builds.

## About AirTrunk

AirTrunk is a hyperscale data centre specialist creating a platform for cloud, content and large enterprise customers across the APJ region. The company develops and operates data centre campuses with industry leading reliability, technology innovation and energy and water efficiency. AirTrunk's unique capabilities, designs and construction methodologies allow it to provide customers with a scalable and sustainable data centre solution at a significantly lower build and operating cost than the market.

For more information on AirTrunk, visit airtrunk.com