

Digital Infra Leaders Summit

APAC 2024 EXECUTIVE SUMMARY

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Exclusive invitation-only executive-level workshops held alongside major events, the Digital Infra Leaders Summits have become a highlight on the calendar of digital infra CEOs and industry VIPs.

Held in Singapore in December 2024, alongside ITW Asia, the APAC Digital Infra Leaders Summit brought together 30 of the most influential stakeholders in APAC data centres and connectivity to tackle the main industry challenges the region's digital infra sector faces.

Having each completed a short, anonymised survey ahead of the workshops, analysis of the results was used to help structure and stimulate debate and discussion during the session.

In this Executive Summary, we share with you the main take homes from the session as well as the outcomes of the sentiment analysis

Participating organisations:













































Key discussion areas included:



- Evolving investor sentiment in digital infrastructure asset classe
- Key industry growth drivers and headwinds
- Strategic priorities for the upcoming year
- Priorities for capex allocation
- Business model evolution
- M&A expectations and drivers
- Collaborative activities that should be considered
- The short- and long-term impact of satellite technologies
- The impact of AI on both growth and internal processes
- Ensuring access to affordable, sustainable power

Interested in participating in future workshops?

Contact Digital Infra Leaders' Summit Director, Laura Graves to enquire about eligibility and availability.

E: lgraves@techoraco.com

Digital Infra Leaders APAC Summit 2024 Top 10 takeaways



- 1. Investor optimism in APAC digital infrastructure is high, fuelled by demand from AI workloads, cloud and content localisation
- 2. While AI-related infrastructure is attracting substantial investment, uncertainties around actual demand, coupled with efficiencies in data centre technologies are raising questions about potential data centre over supply
- New Al-related digital infrastructure monetisation models remain unproven, whilst some carriers are reporting lower-thanexpected adoption of Al-driven services, adding to the more cautious outlook
- Legacy fibre networks are unsuitable for AI and cloud use-cases, creating investment potential for networks that can "scale-on-demand" and be "built-to-change"
- 5. There is also increased demand for connectivity to regions with more power and land availability for data centre deployments, as traditional locations grapple with power shortages
- 6. Whilst data centre workloads are moving to markets with power, sensitive data will remain in-country. Countries with natural power generation resources are poised to benefit as balancing power requirements with a net zero agenda and aversion to nuclear intensifies challenges
- 7. There is a consensus that traditional energy sources are needed to supplement renewable energy in the short to medium term, but they will increasingly face pressure from investors and customers
- 8. Inter-regional capacity shortages persist, with delays in new cables like Bifrost adding pressure. Proactive collaboration between carriers on larger regional projects is key to cost sharing and competition/ bargaining power with hyperscalers
- 9. Demand for subsea route diversification is expected to remain, given geopolitical dynamics in APAC
- 10. There is the potential for operators to explore backwards integration for margin expansion and energy security in the future

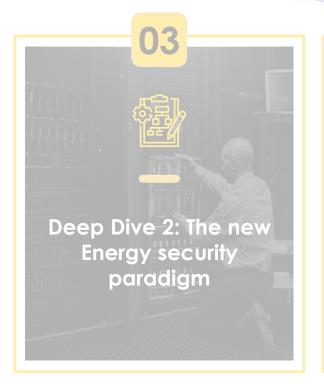


Agenda







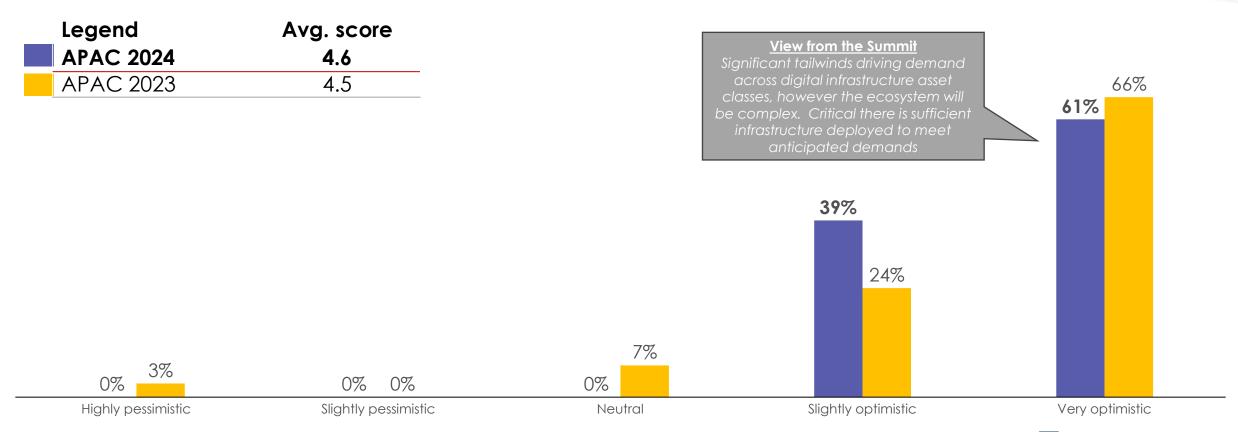




Optimism has slightly increased since last year



How optimistic are you on the outlook for the <u>digital infrastructure</u> sector in APAC?





Optimism ranks similarly to MENA and North America



How optimistic are you on the outlook for the <u>digital infrastructure</u> sector in APAC?

Legend APAC 2024	Avg. score 4.6			
APAC 2023	4.5			
Africa 2024	4.0			71%
Europe 2024	4.3			66%
MENA 2024	4.6			61% 61%
North America 2024	4.6			
3% ^{5%}	10%	17% 10%	39% 35% 37% 24%	40% 42%

Neutral

Note: n (APAC, 2024) = 18; n (Africa, 2024) = 20; n (Europe, 2024) = 24; n (NA, 2024) = 21; n (APAC, 2023) = 29; n (MENA, 2024) = 41; May not add up to null responses provided

Slightly pessimistic



Very optimistic

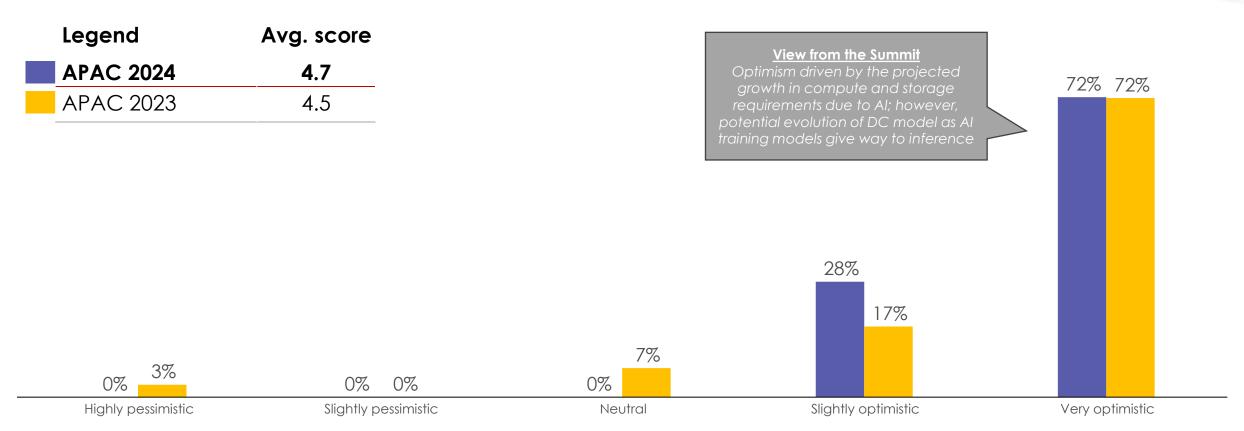
Slightly optimistic

Highly pessimistic

High optimism in the data centre industry



How optimistic are you on the outlook for the <u>data centre</u> sector in APAC?



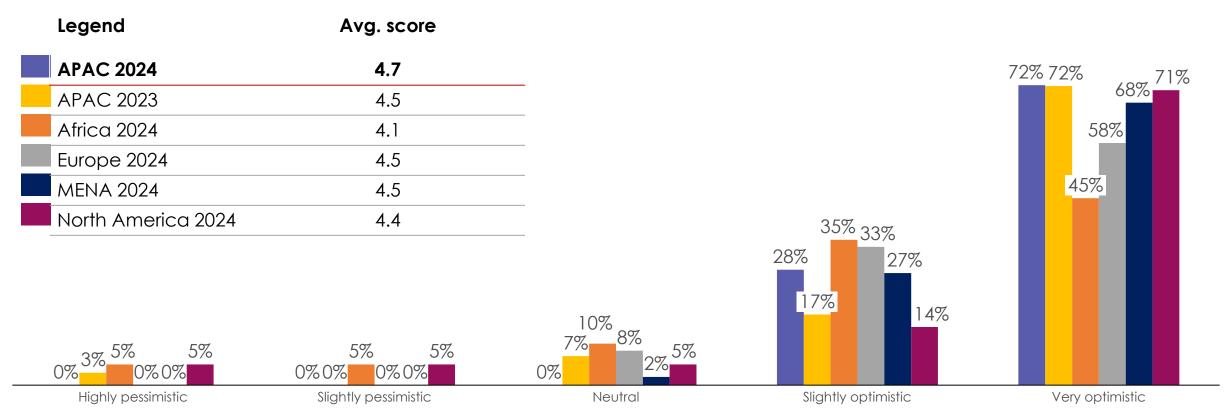
Note: n (APAC,2023) = 29; n (APAC, 2024) = 18; May not add up due to null responses provided



Optimism in APAC towards DCs rank higher than other regions



How optimistic are you on the outlook for the data centre sector?

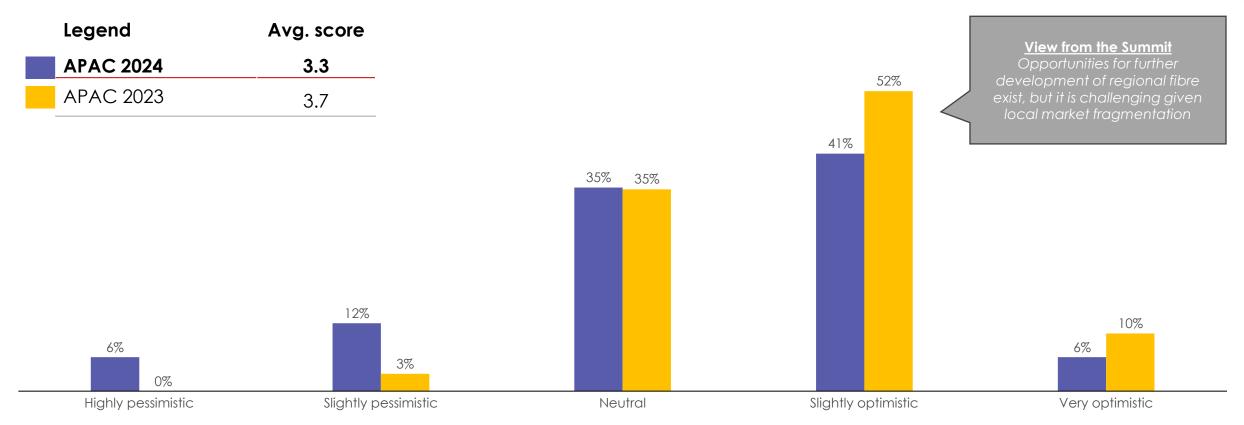




Optimism in terrestrial fibre has decreased



How optimistic are you on the outlook for the <u>terrestrial fibre</u> sector in APAC?



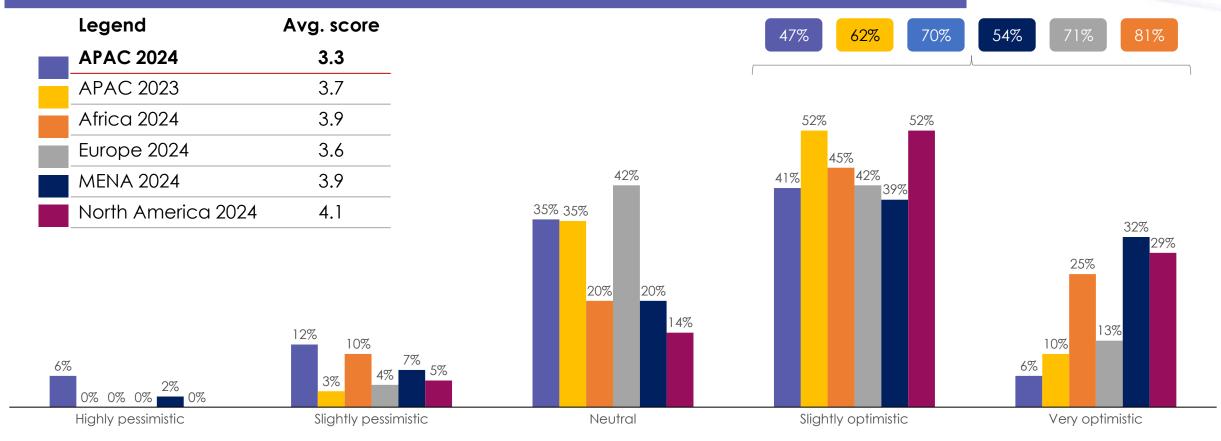
Note: n (APAC,2023) = 29; n (APAC, 2024) = 18; May not add up due to null responses provided



Relative to other regions, terrestrial fibre optimism is low



How optimistic are you on the outlook for the terrestrial fibre sector?

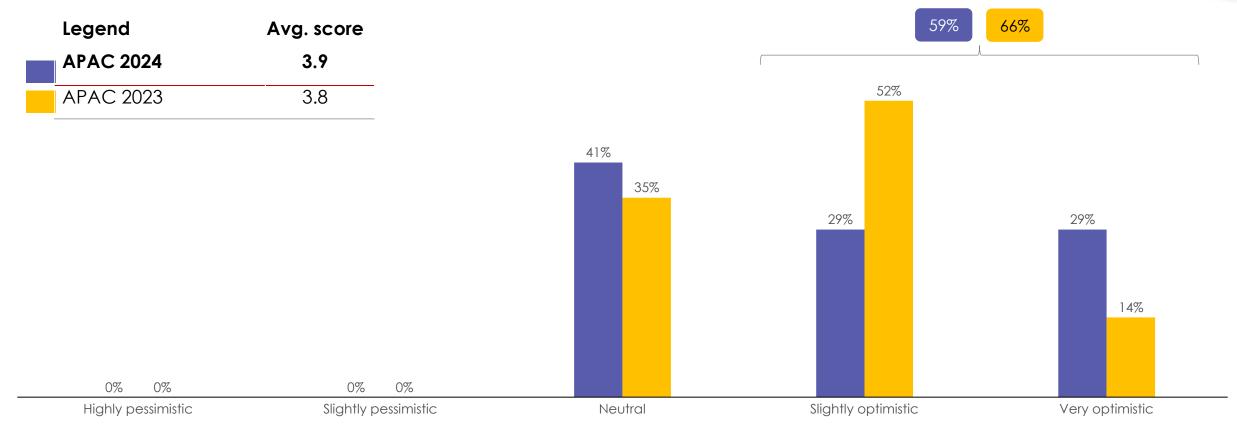




And subsea? 60% of all respondents are slightly or very optimistic about subsea...



How optimistic are you on the outlook for the subsea cable sector in APAC?



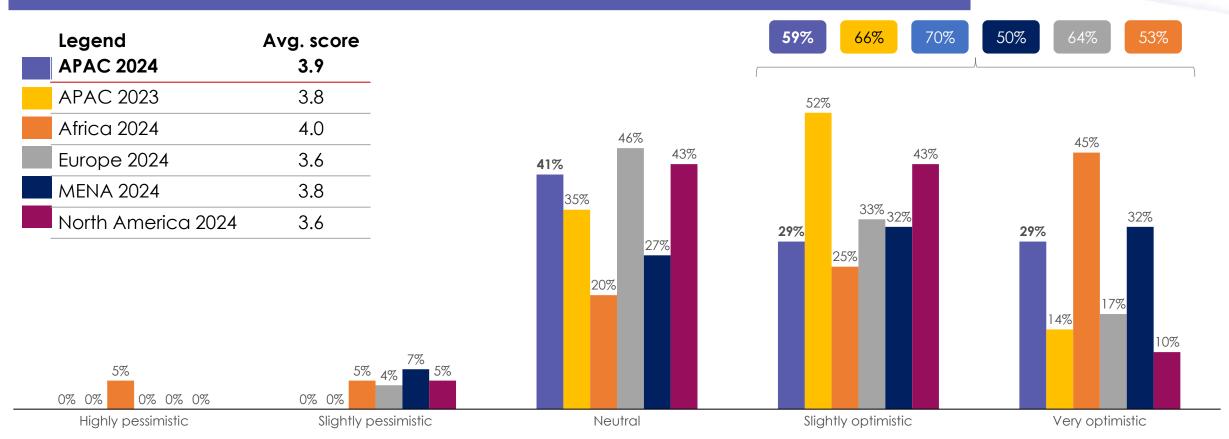
Note: n (APAC, 2023) = 29; n (APAC, 2024) = 18; May not add up due to null responses provided



... ranking below MENA and Africa in optimism for subsea cables



How optimistic are you on the outlook for the <u>subsea cable</u> sector?

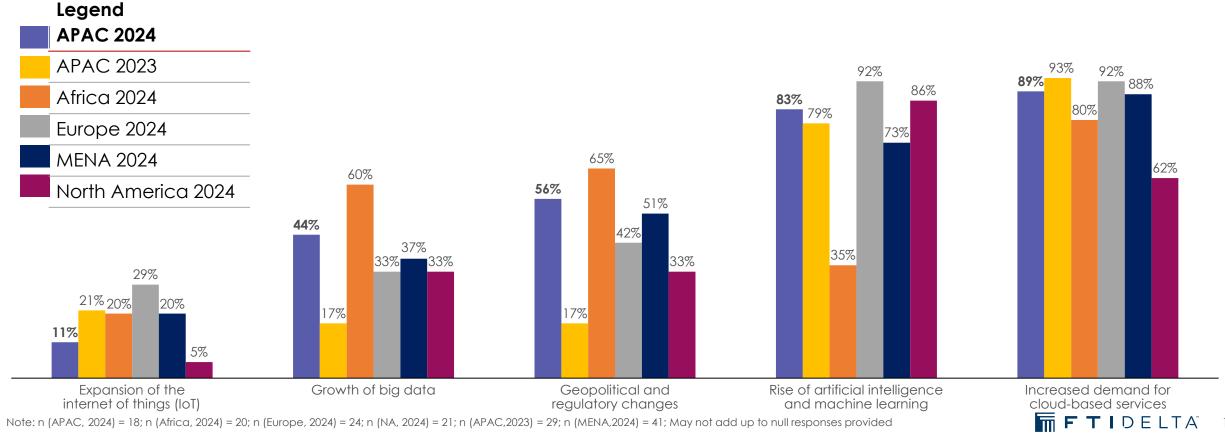




Looking into the future, cloud services, AI & ML, Geopolitical & regulatory changes and Big data are the main growth drivers



In your opinion, what are the key drivers for the growth of the <u>digital infrastructure</u> market in 2024-2025? (% of respondents that agree the area is a key growth driver)

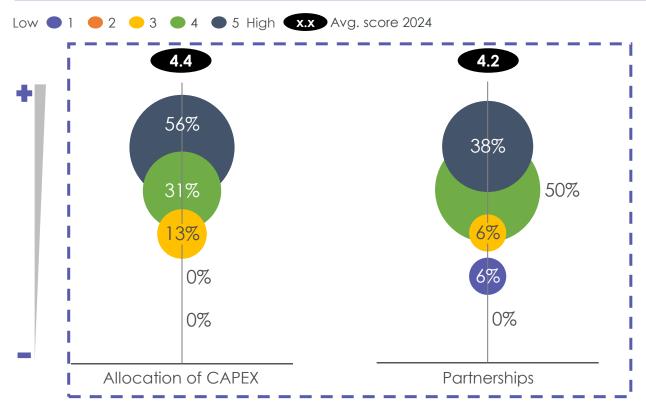


How to realise the AI opportunity? Everything BUT talent?

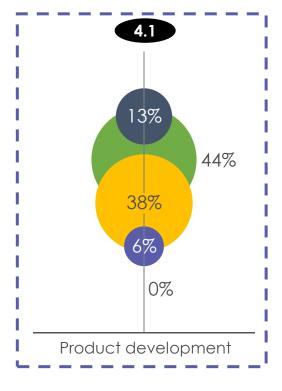


How relevant are the following in your leadership focus today with regards to Al

(score 1-5 with 1 being lowest and five being highest focus)



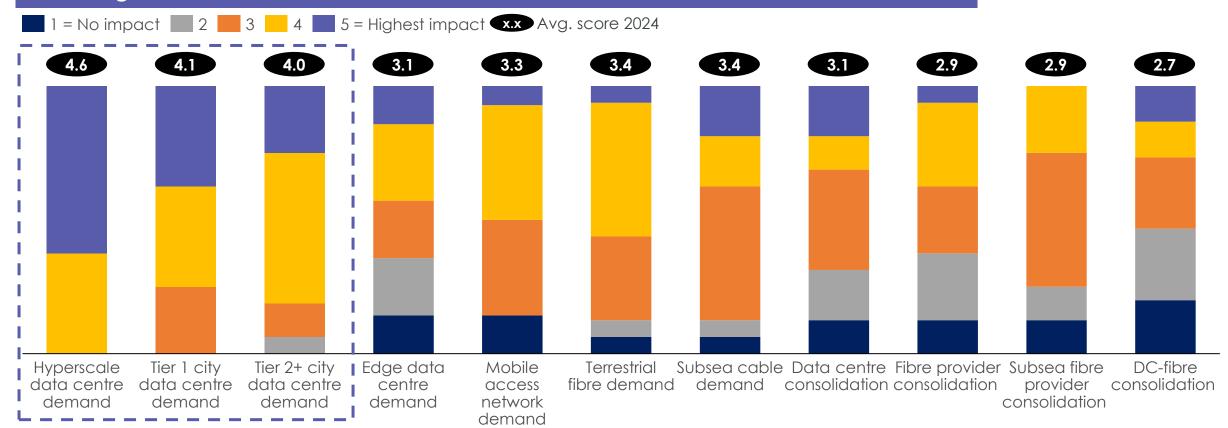




You believe AI will have the greatest impact on hyperscale DC, Tier 1 and Tier 2+ city DC



To what extent do you believe the growth in AI / generative AI will impact the **following** (score 1-5, with 1 being no impact and 5 being highest impact)



Note: n (APAC, 2024) = 18; May not add up to 100% due to rounding and/or null responses provided



Summary of discussion



01

Al trend will continue to grow, but not everyone may emerge winners



- Al-driven infrastructure is attracting a significant amount of capital, but questions remain on eventual payoff
- Efficiencies in datacenter technologies and AI workloads may result in overcapacity
- Within the region, some carriers are seeing lower-than-expected take-up of Al-related services (e.g., GPUaaS)

02

Proactive collaboration needed to support infrastructure regionalization



- Cross-border infrastructure development provides greater access to capital sourced regionally
- Potential for more ambitious projects with attractive risk profiles and upside (e.g. India, Southeast Asia)
- Trends towards outsourced workloads to countries with power, while keeping sensitive workloads within borders
- Need for carriers need to proactively collaborate on larger regional projects or lose out to hyperscalers

03

Innovative ways to overcome energy availability are needed



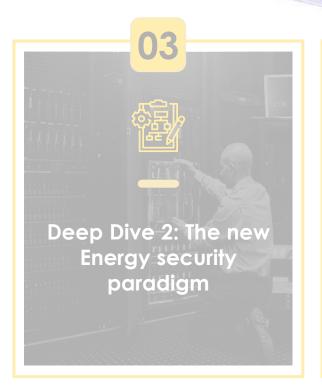
- Highly challenging but key to balance needs for power, net-zero agenda, and aversion to nuclear (e.g. Japan)
- Increasing bets on geographies with natural power generation advantages (e.g. gas, geothermal)
- Investors are looking to bring power to a geography vs bringing a geography to power (e.g. Singapore)

Agenda











Infrastructure focus: Overall sector perspective





General investments in the digital infrastructure sector



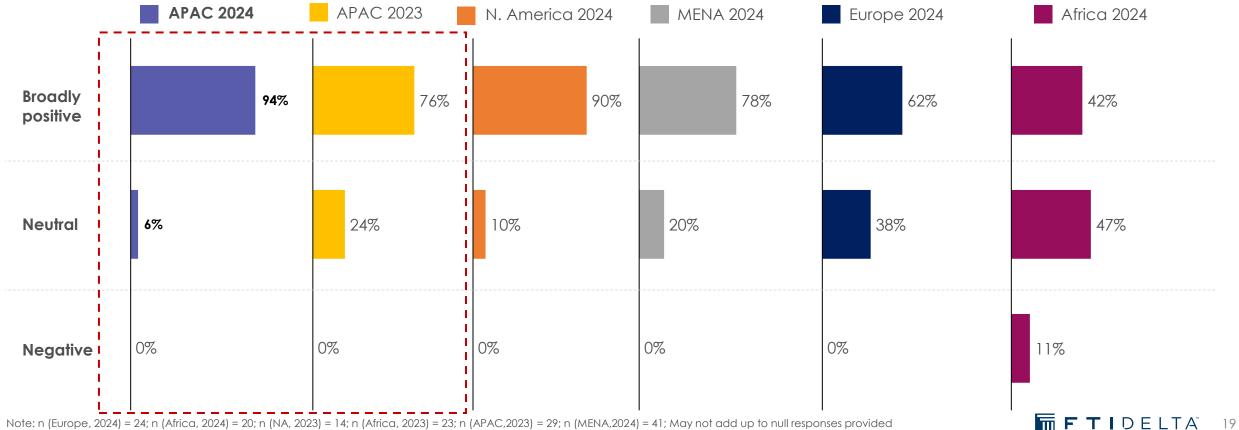




Investor sentiment has increased in APAC over the past 12 months



To the best of your knowledge, in APAC, what is the overall investor sentiment, considering capital to be deployed in digital infrastructure over 2024-2025?

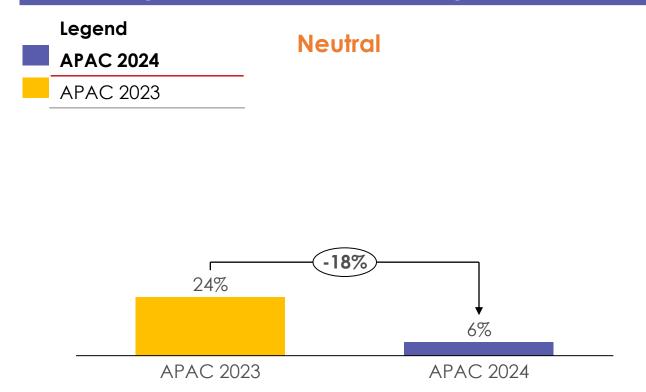


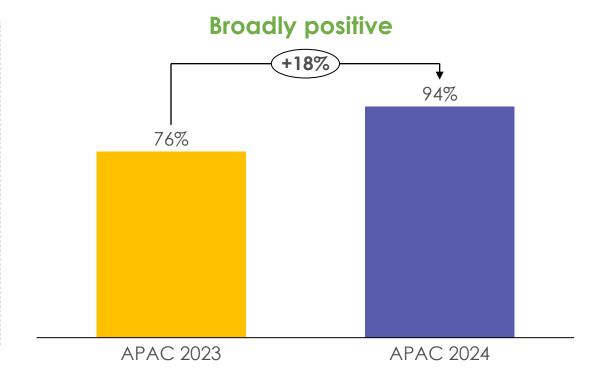


There has been a 18% shift from "neutral" to "positive"



To the best of your knowledge, in APAC, what is the overall investor sentiment, considering capital to be deployed in digital infrastructure over 2024-2025?





Explanations provided by the participants on the following slides

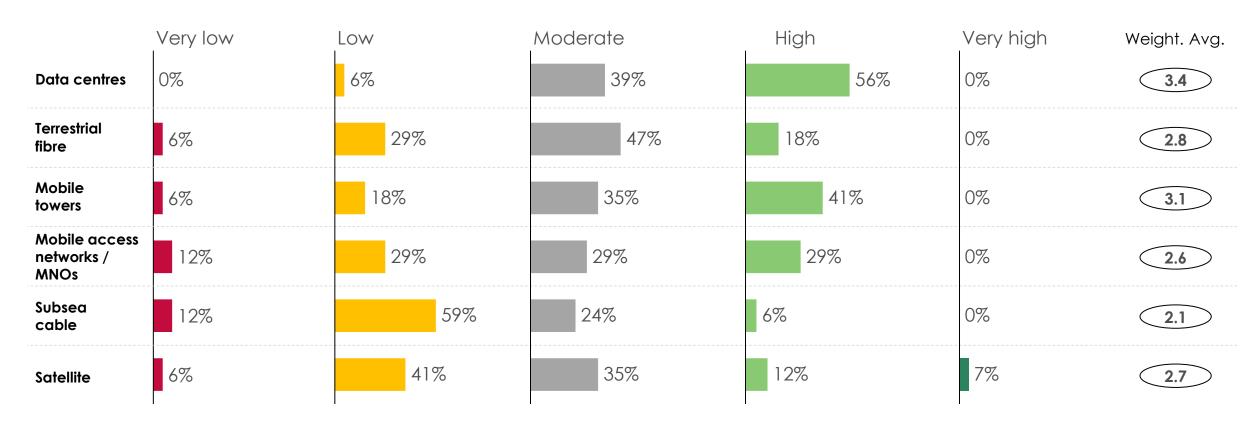


There is a diverse view when it comes to anticipation of M&A



What level of digital infrastructure industry M&A are you anticipating for 2024?

(Very low, Low, Moderate, High, Very High)





What did you tell us?



What is the overall investor sentiment, considering capital to be deployed in digital infrastructure over 2024-2025?

Ample growth headroom with demand exceeding capacity

Developing countries with room to improve / increase demand in digital fiberization & infrastructure

APAC is a growth market, with a large population that will overtake other regions

Plenty of capital still waiting to be deployed into DCs in APAC

Still a fragmented industry and there is a lot of private equity eyeing into this industry

Capital is evidently flowing into the DC sector and deals are being concluded



Infrastructure focus: Data centres

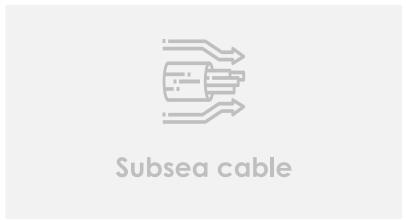




General investments in the digital infrastructure sector







Data centre attractiveness for remains high



How attractive do you see digital infrastructure classes in APAC for investment over the **next three years?** (score 1-5, with 1 = low, 5 = high)

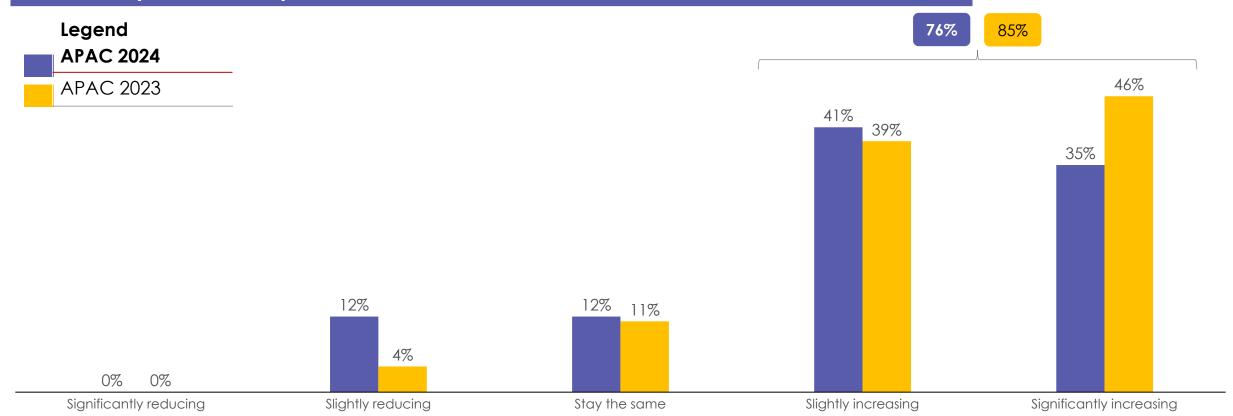
— APAC 2024 — APAC 2023 — Africa 2024 — Europe 2024 — MENA 2024 — North America 2024 4.6 3.3 2.9 Subsea fiber National/international Data centers FTTH Mobile towers Mobile small cells long distance fibre



...with attractiveness still expected to increase steadily over the next three years, but with a little more caution than last year



How do you see the attractiveness of data centre investment in APAC evolving over the next three years vs. today?



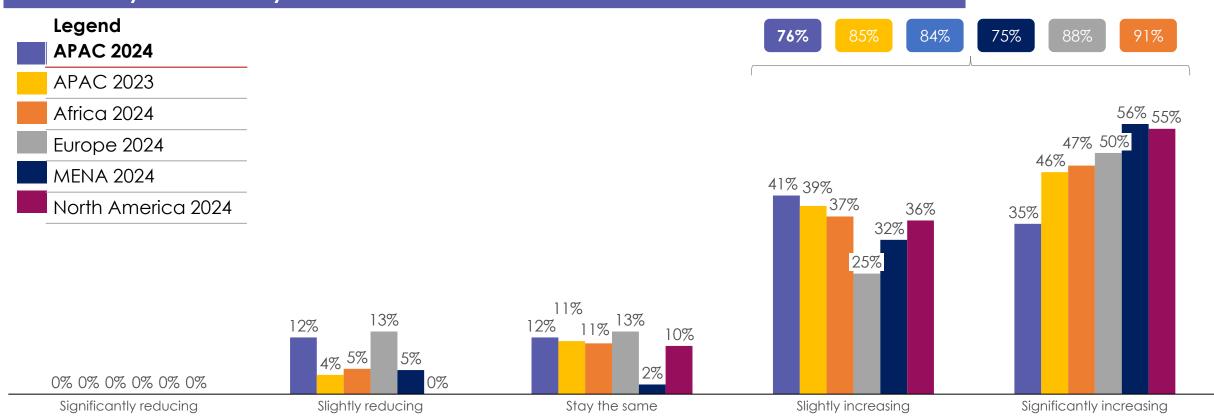
Note: n (APAC, 2023) = 29; n (APAC, 2024) = 18; May not add up due to null responses provided



Still, the increase in attractiveness is marginally less than other regions



How do you see the attractiveness of data centre investment in APAC evolving over the next three years vs. today?

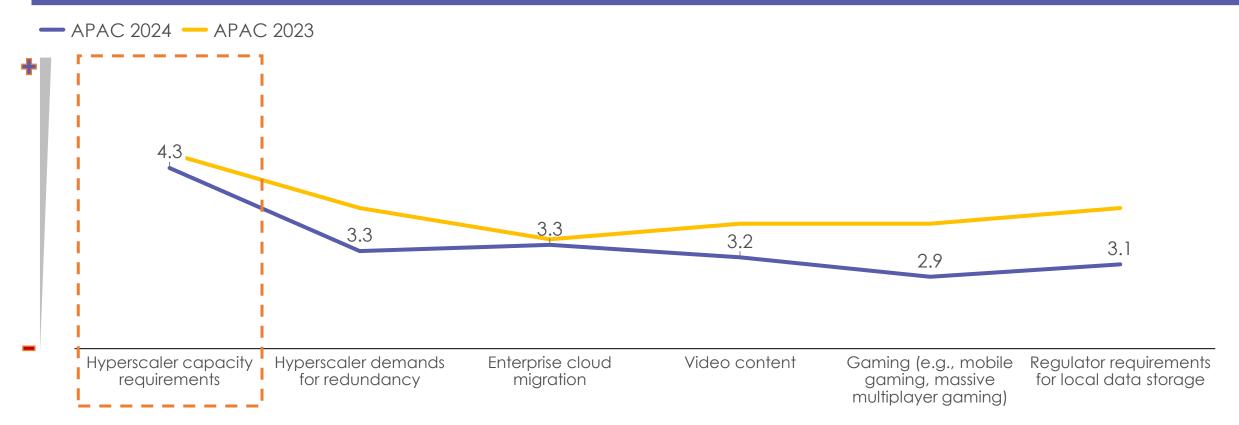




You see that hyperscaler capacity requirements are driving up data centre demand capacity



How will the relevance of the following data centre demand capacity factors change over 2024-2025? (5 – very relevant, 1 – not relevant)



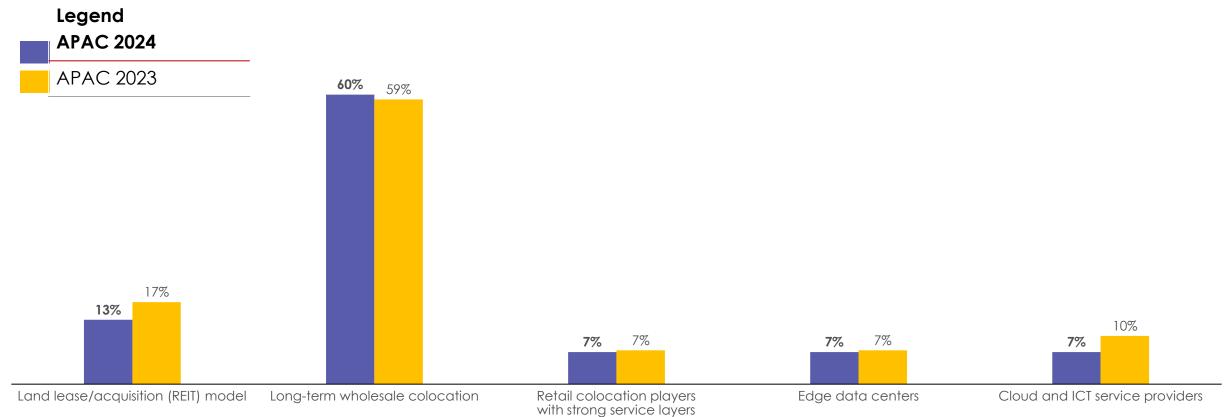
Note: n (APAC, 2024) = 18; May not add up to 100% due to rounding and/or null responses provided



Long-term WS colocation is still expected to attract the most capital



Which part of <u>data centre</u> market value chain will attract most capital in 2024-2025?

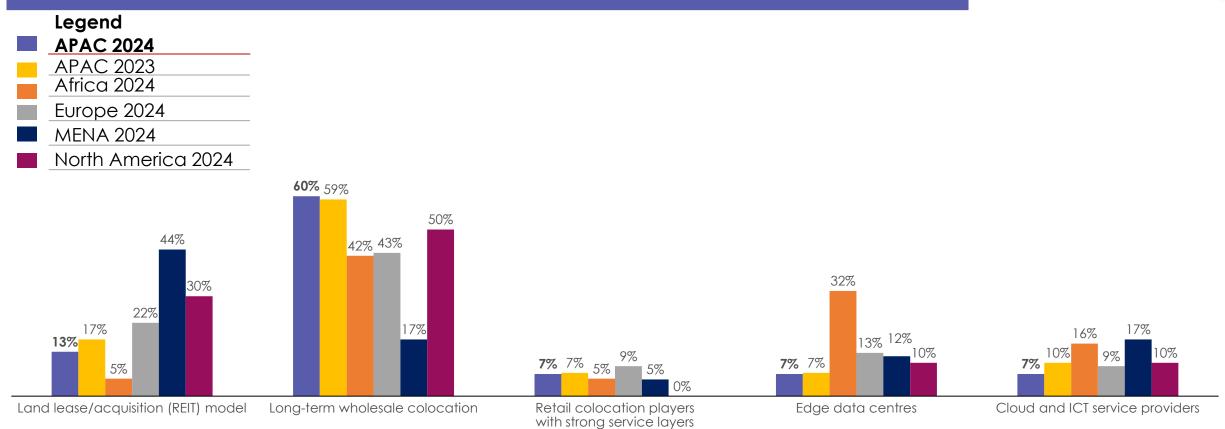




Driving a significant change from REIT to WS colocation



Which part of <u>data centre</u> market value chain will attract most capital in 2024-2025?

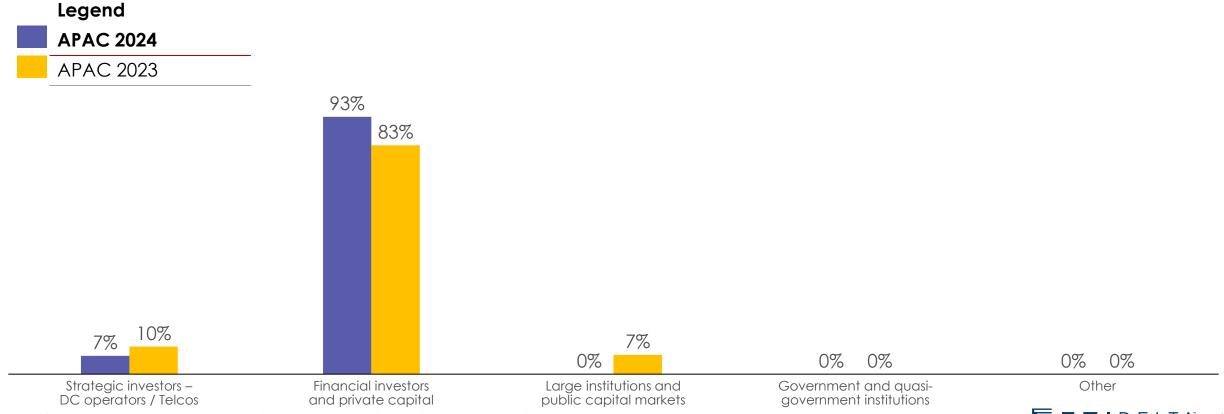




Financial investors continue to be seen as main providers of financing



What do you see as the main providers of capital for <u>data centres</u> in APAC in 2024-2025?

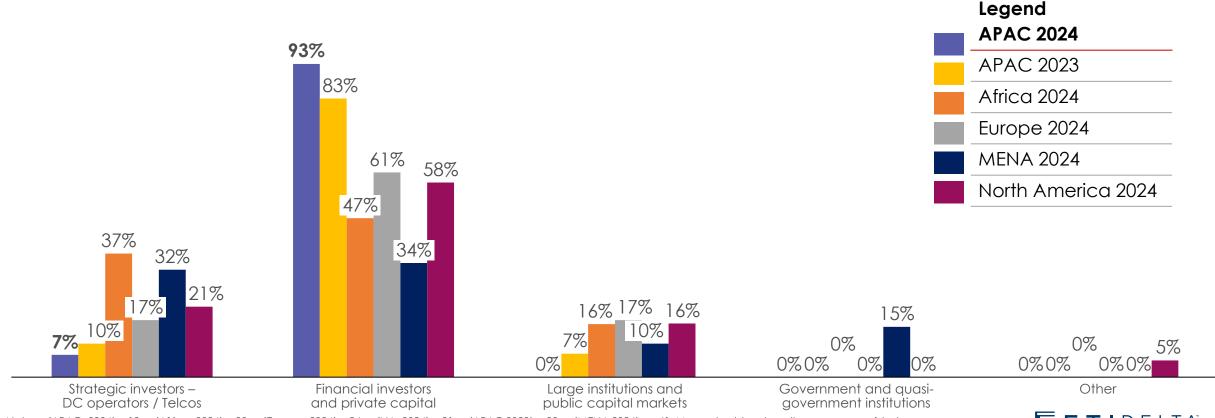




A pattern that remains consistent across the world different regions



What do you see as the main providers of capital for data centres in APAC in 2024-2025?



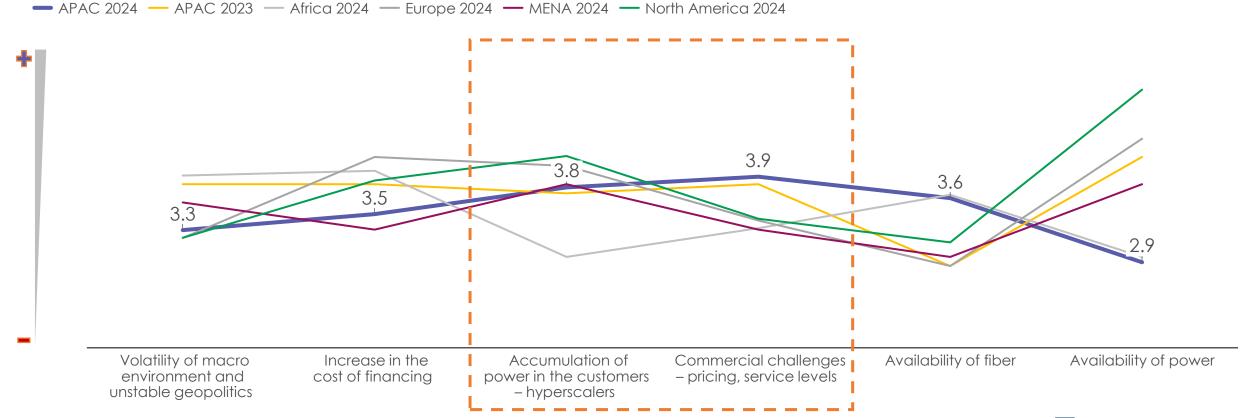


Accumulation of power in hyperscalers, and commercial challenges are the greatest challenges





(score 1-5, with 1 = not challenging, 5 = very challenging)





Geographical presence, footprint and scale elements of the DC business model are expected to change the most



In your opinion, which parts of the DC business model will change the most in 2024-2025?





Infrastructure focus: Terrestrial fibre and subsea cable

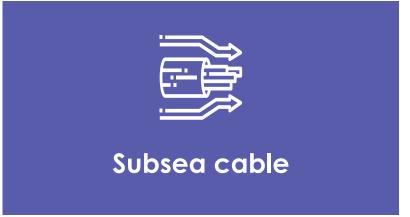




General investments in the digital infrastructure sector





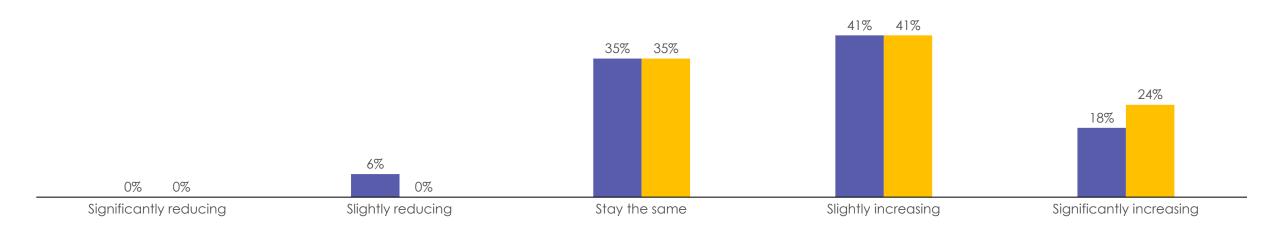


60% of respondents think that attractiveness of both subsea and terrestrial fibre investment is increasing



How do you see the attractiveness of terrestrial or subsea fibre investment in APAC evolve over the next three years vs. today?







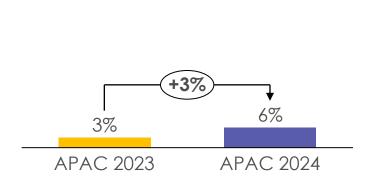
60% of respondents see attractiveness of terrestrial fibre investment increasing...



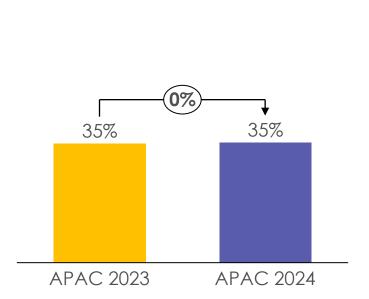
How do you see the attractiveness of <u>terrestrial fibre</u> investment in APAC evolving over the next three years vs. today?



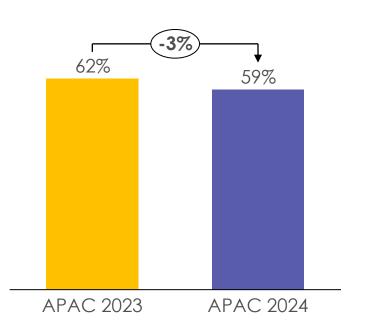
Decreasing



Stay the same



Increasing



Note: n (APAC, 2023) = 29; n (APAC, 2024) = 18; May not add up to null responses provided

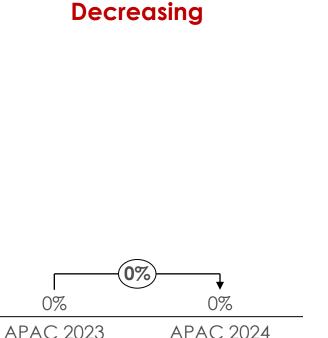


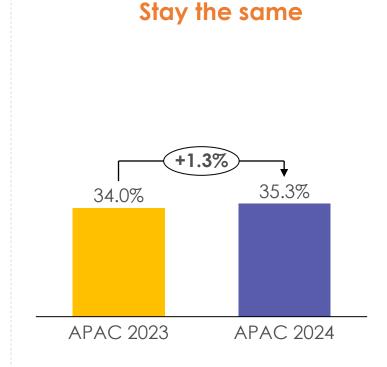
... and subsea fibre attractiveness remains the same vs last year

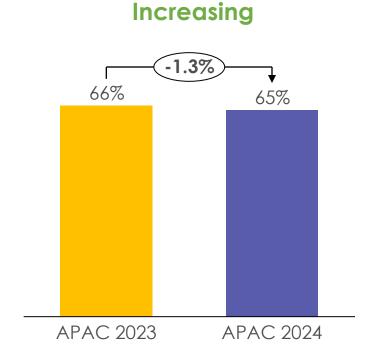


How do you see the attractiveness of subsea fibre investment in APAC evolving over the next three years vs. today?









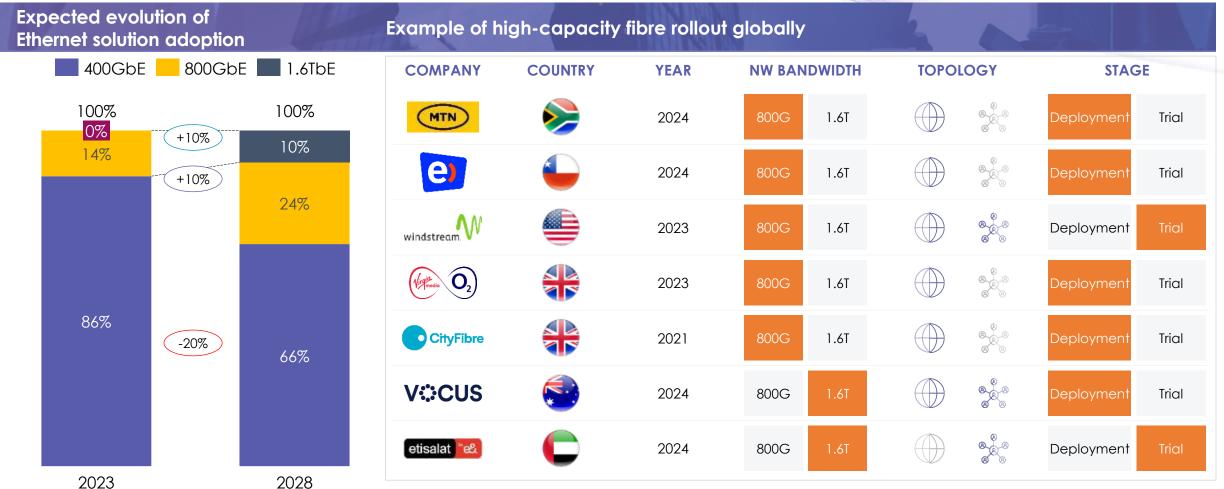
Note: n (APAC, 2023) = 29; n (APAC, 2024) = 18; May not add up to null responses provided



There is increasing adoption of more advanced fibre optics technologies to support higher bandwidth requirements



Legend
Backbone Metro

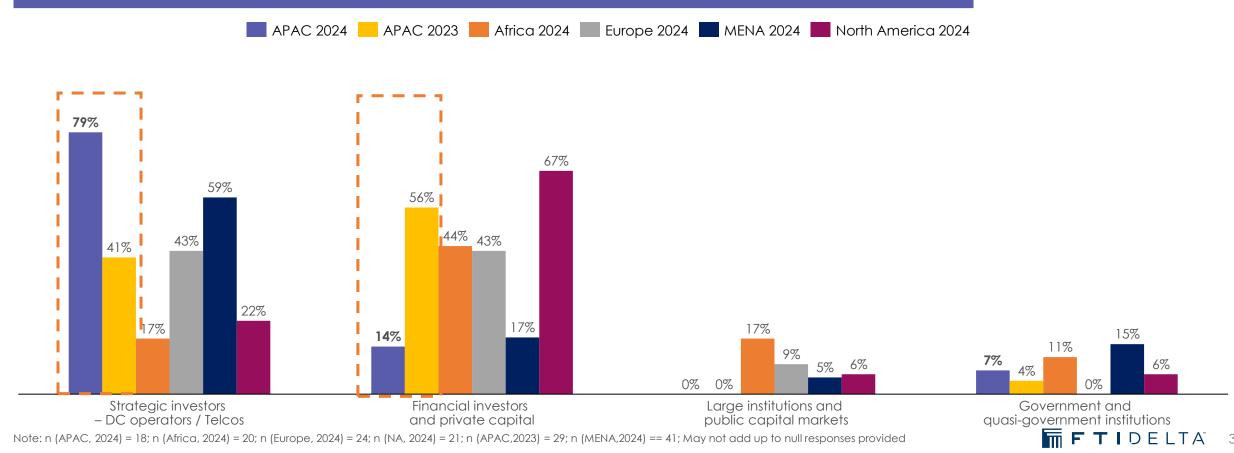


Source: Frost & Sullivan, news clippinas, FTI Delta analysis

For terrestrial fibre, primary sources of capital are expected to be primarily strategic

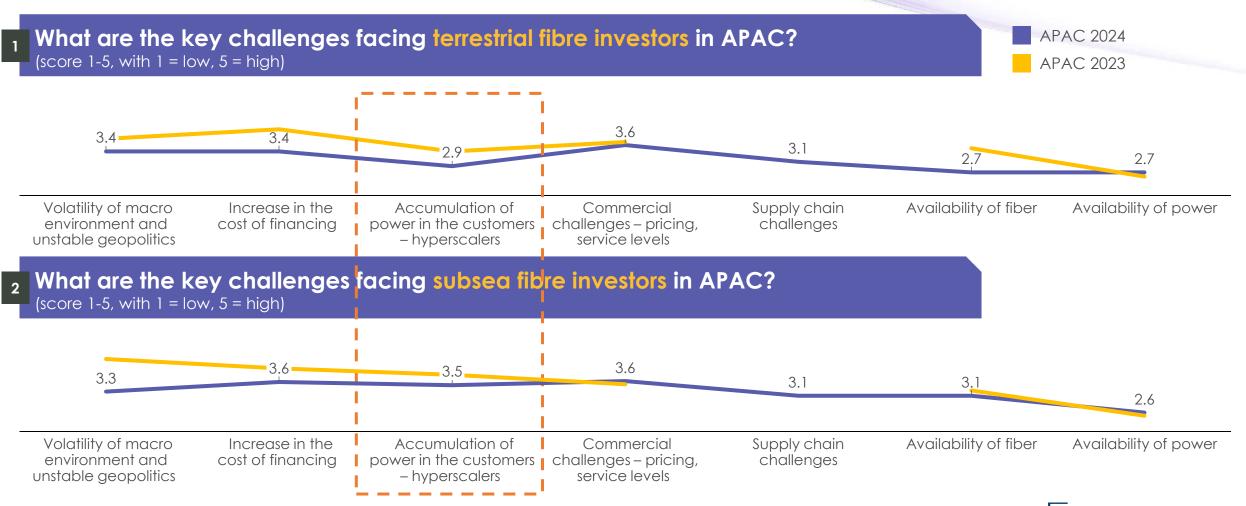


What do you see as the main providers of capital for terrestrial fibre in APAC 2024-2025?



Accumulation of power in hyperscalers is a larger challenge in subsea vs terrestrial



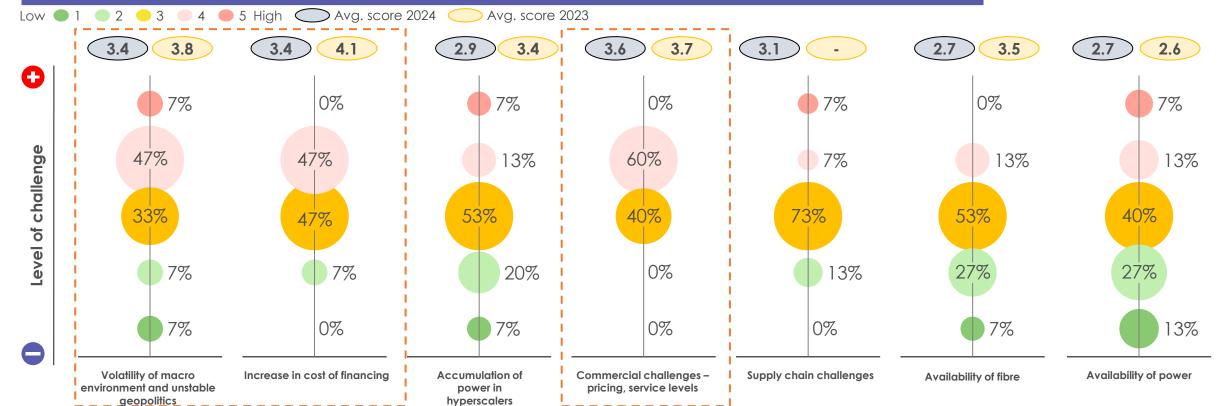


<u>Deep dive</u>: For terrestrial fibre, increase in the cost of financing, volatile geopolitics, and commercials are the key challenges



What are the key challenges facing terrestrial fibre investors in APAC?

(score 1-5, with 1 = not challenging, 5 = very challenging)



Note: n (APAC, 2023) = 29; n (APAC, 2024) = 18; May not add up to null responses provided



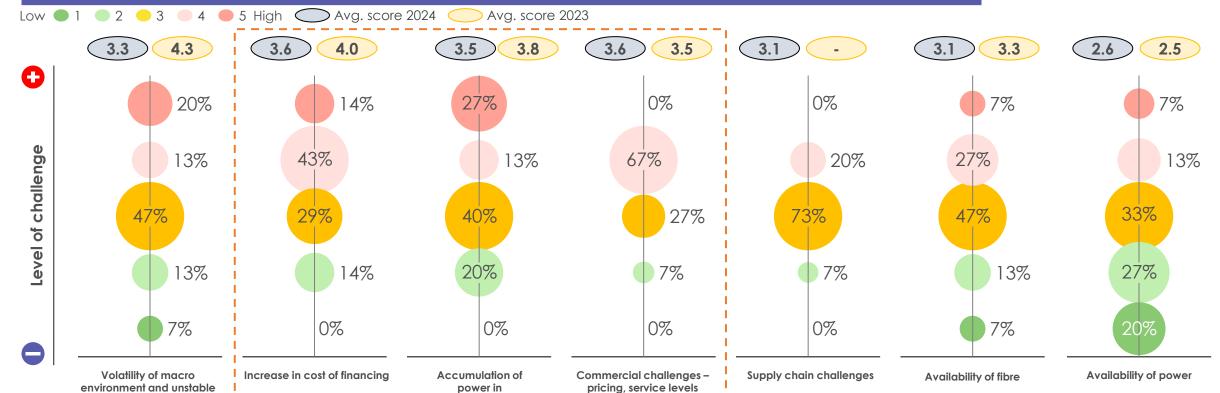
<u>Deep dive</u>: For subsea, increase in the cost of financing, power of hyperscalers and commercials are also key challenges



What are the key challenges facing <u>subsea cable</u> investors in APAC?

hyperscalers

(score 1-5, with 1 = not challenging, 5 = very challenging)



Note: n (APAC, 2023) = 29; n (APAC, 2024) = 18; May not add up to null responses provided



geopolitics

Summary of discussion



01

Strong optimism in digital infrastructure is driven by Al trends and demand



- Investor optimism is fueled by anticipated demand from AI workloads, cloud and content localization
- However, optimism is balanced by increased financing costs, IRR expectations, and barriers to entry
- There is potential for new digital infra. monetisation models for AI use-cases, but remains to be proven
- Skepticism exists around actual demand levels from AI workloads and ability for supply to keep pace

02

Terrestrial fibre investments are evolving but face distinct challenges



- Potential for increased fiberisation from new DCs, but requires power infrastructure challenges to be resolved
- Legacy fibre networks unsuitable for Al/cloud use-cases; potential for new fibre investments
- Fibre networks need to 'scale-on-demand' and be 'built-to-change' to accommodate Al/cloud needs

03

Demand for diversified subsea routes to grow, but hyperscalers remain a challenge



- Demand for subsea route diversification is expected to remain, given geopolitical dynamics in APAC
- Increased demand for connectivity to regions with more power and land availability for DC deployments
- Inter-regional capacity shortages persist, with delays in new cables like Bifrost adding pressure
- Partnerships and consortiums are becoming essential for cost sharing and negotiating power in subsea builds

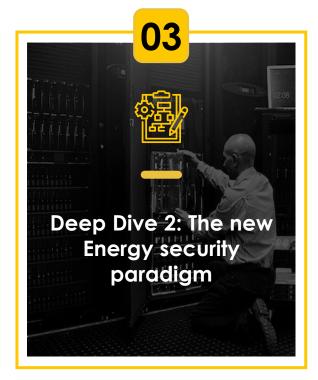


Agenda









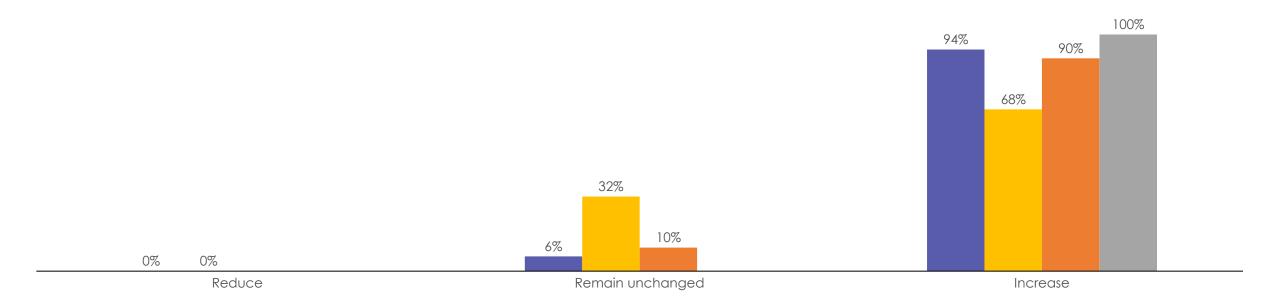


Unsurprisingly, expectations are that power supply will increase and still be relevant



How will the relevance of power supply for digital infrastructure change over 2024-2025?

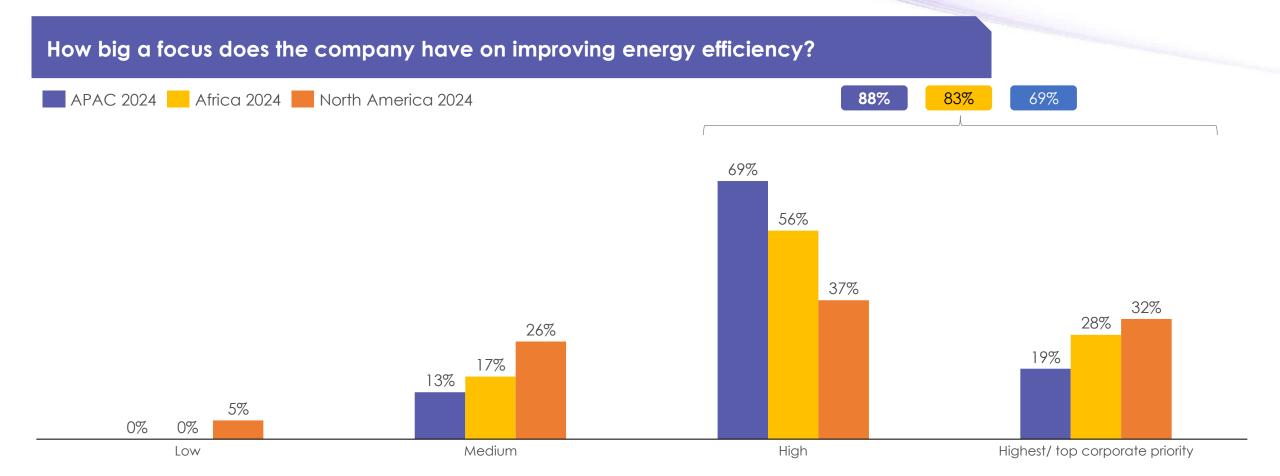






88% of respondents reaffirm to focus on improving energy efficiency



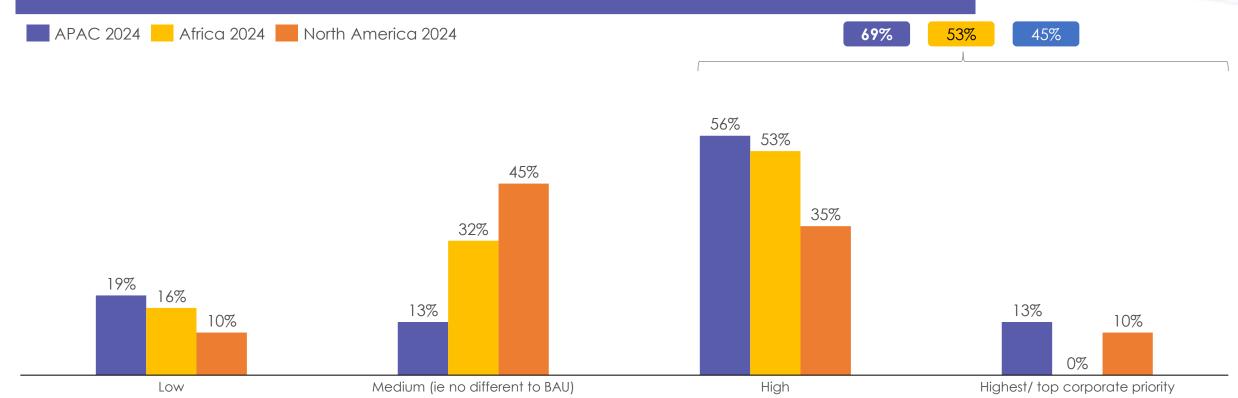




~70% of respondents believe adapting to a green energy supply is high priority





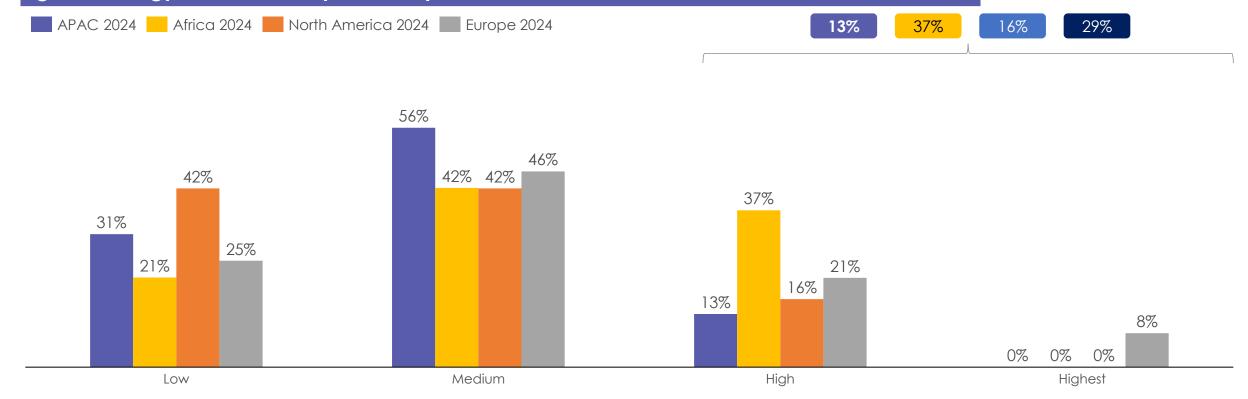




Few have high confidence that there is sufficient access to affordable green energy



What level of confidence do you have today that you will be able to access sufficient green energy at affordable prices for your current business model?



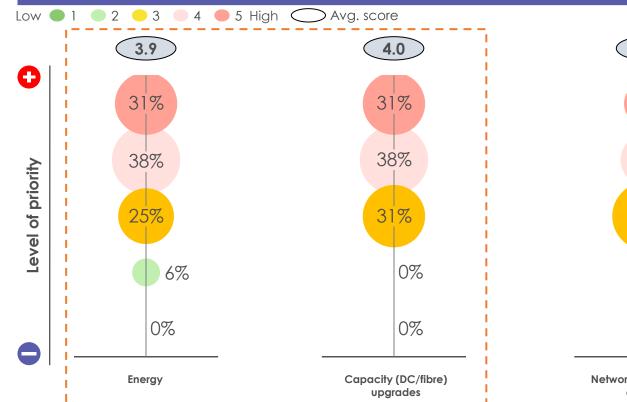


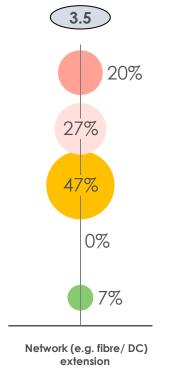
Energy and capacity upgrades are the top priorities for CAPEX allocation

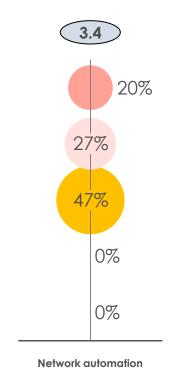


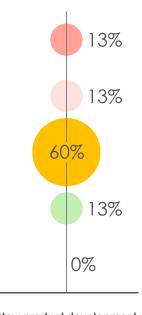
What level of priority are the following areas receiving for CAPEX allocation

(score 1-5, with 1 being lowest priority and 5 being highest priority)









3.3

New product development

Note: n (APAC, 2024) = 18; May not add up to 100% due to rounding and/or null responses provided

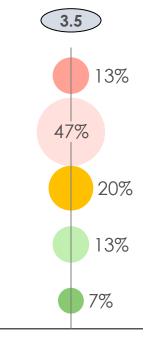


Working with utility partners, signing with IPPs, and investing in own generation are critical to avoid power becoming a limiting factor



To avoid power becoming a limiting factor in your growth, what will be the most important strategies (score 1-5, with 1 = low and 5 - high)





Moving to non-traditional locations with more available power

FTIDELTA

Summary of discussion



01

Development of power infrastructure remains a key challenge for the region



- Power requirements are expected to grow in tandem with continued DC demand from AI, cloud, and content
- Development of adequate power infrastructure remains a key focus to meet this increased demand
- Political instability, weak regulations, and cost barriers are slowing infrastructure deployment in key markets

02

Green power is important, but requires rapid evolution of policies & regulations



- Availability of renewable energy varies across regions; high costs & regulatory barriers remain limitations
- There is consensus that traditional energy sources are needed to supplement renewable energy in the short-medium term, but will increasingly face pressure from investors and customers
- DC operators are investing in their own renewable power generation (e.g. solar), but still face regulatory hurdles

03

The future of energy supply will reshape digital infrastructure ecosystems



- Hyperscalers will play a big influence in energy supply topologies by driving demand & dictating supply locations
- An increase in low-latency Al use-cases (e.g. inferencing) may shift the power demand to the edge
- The impact of AI on internet economics and future business models remains uncertain
- Potential for operators to explore backwards integration for margin expansion, energy security in future

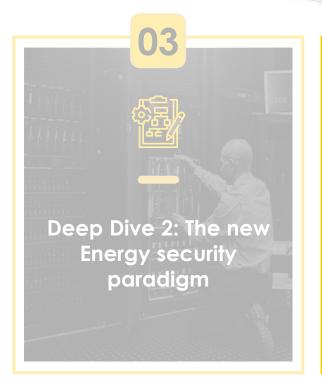


Our agenda today











Sustainability and power supply management are the key priorities for APAC





Within the digital infrastructure sector, what is the top priority for the next 12 months to ensure continued growth?

Last yea	r
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Funding and business models for to achieve target IRRs sufficient to counter increased costs for borrowing

Supply chain returning to pre-pandemic levels

Ensuring consistent supply of capacity

Ensuring reliable and sufficient supply of power

Meeting sustainability targets and requirements

Governments being able to meet power capacity needs

This year

Availability of power preferably green energy

Evolving technology which translates into adaptive product offerings

Scalability and deep focus on Sustainability

Creating speed, scale and certainty for our customers

Availability of power

Ability to accumulate fibre access & capability



Capturing demand from AI and resolving green power requirements offers the greatest potential for future value creation



As an investor / operator in the digital infrastructure industry, where do you see the greatest potential for future value creation and how are you addressing these opportunities?

Last year

Creating a DC platform which can cater to the growing and evolving needs of AI capacity

Identifying the demand for digital ecosystem and focus on the ecosystem creation, rather than the infrastructure itself

Enabling "Everything as a Service" through automation

Being more intentional w.r.t. sustainability throughout the full lifecycle of digital infrastructure assets

Edge data centres across tier 2 cities in APAC

Harnessing the scale required by global cloud companies in their data centre builds

This year

To involve and contribute to the digital evolution and development around the globe

Investing in future inventory and designing to new requirements required for Al

Innovation in design and operating at scale

Al workloads and green energy adoption

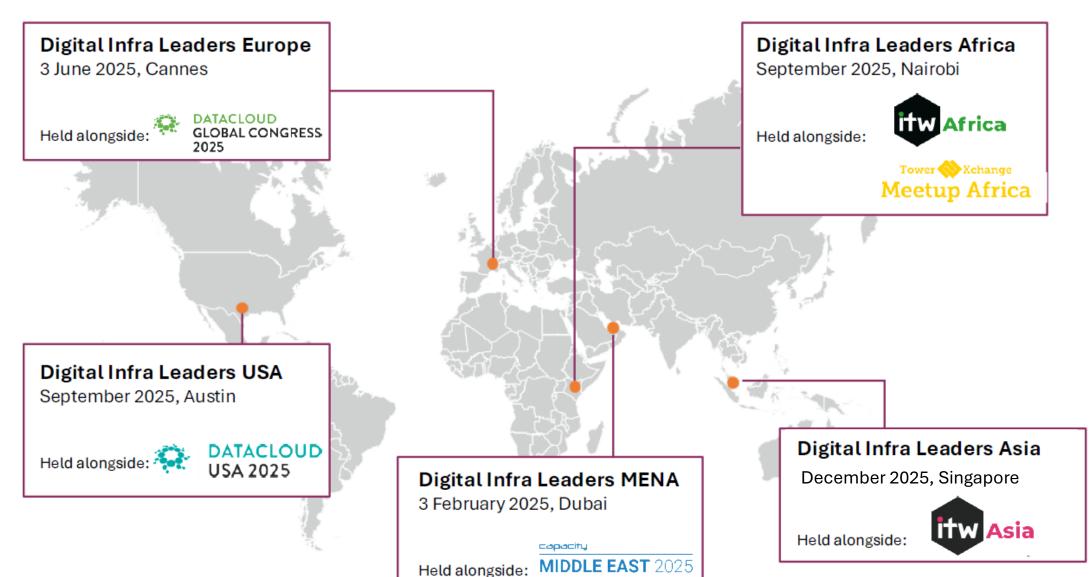
Power hubs and combined DC campuses

Renewables supply and integration





2025 calendar





About the organisers

With deep and long-standing networks spanning the entire digital infrastructure community, the Digital Infra Leaders Summits are a collective effort of techoraco's Capacity Media, Datacloud, the GLF, ITW and TowerXchange



Capacity Media is the premier and most trusted source of information and networking for those #KeepingTheWorldConnected, made up of the global connectivity and digital infrastructure communities.

Through our world-renowned series of large scale and regional events, awards, our print products such as Capacity Magazine, our daily digital news coverage, Capacity TV channel, and executive podcasts; Capacity Media is your authority on the latest developments shaping the industry of tomorrow.

Our eminent events portfolio includes International Telecoms Week (ITW), the Capacity series, Metro Connect and the Global Carrier Awards. Join us in our mission to connect people and communities across the global digital infrastructure industry.

https://www.capacitymedia.com/



International Telecoms Week (ITW) is the world's largest annual meeting for the global connectivity community to meet, learn and conduct business. Uniting decision makers from across the telecoms and ICT Infrastructure ecosystem, this is a must-attend event for anyone who is enabling and pioneering the future of communication.

In 2023, we expanded our horizons and bringing you ITW Africa! The only event in Africa where you can meet the entire infrastructure value chain, including cloud, finance, satellite, and carrier providers.

www.internationalteleomsweek.com



Datacloud exists to facilitate the growth of the global IT infrastructure ecosystem. From investment, to design, through to operation, our network reaches the full life cycle of the data centre, cloud, edge, finance, and big tech industries.

Through our state of global events we provide thought-leadership directly from the most senior leaders in our space, and unique networking opportunities around the world.

We understand the importance of data infrastructure in modern society, and we believe in the power of connections

https://datacloudseries.com/



TowerXchange is the market leader in telecom tower industry market intelligence. Our premium data sets and industry reports are trusted by towercos, MNOs, investors, equipment vendors and solution providers.

Our annual series of Meetups represent the most important date on the calendar for tower industry professionals and have been assembling CXOs and the who's who in diaital infrastructure for over a decade

www.towerxchange.com



The GLF is a membership organisation that provides a single voice to the broader digital ecosystem, ensuring alignment amongst international connectivity leaders for industry transformation. Our mission is to provide leadership to the industry that is #KeepingTheWorldConnected based on the principles of interoperability, connectivity, and value creation.

www.itwalf.com