

SLAUGHTER AND MAY /

DIGITAL INFRASTRUCTURE

Looking Back, Looking Ahead



DIGITAL

Part of the Horizon Scanning series

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INTRODUCTION

The digital infrastructure sector continues to attract record levels of investment, a laser focus on development of new solutions and, with all of that, increasing regulatory scrutiny. As cutting-edge technologies drive demand and innovation, the sector, underlying assets and industry players are, in many cases, well placed to withstand broader macroeconomic and geopolitical pressures.

We saw that reflected in 2023 in a very active year of transactional and advisory work. In this publication, we take a brief look back at some of the key themes and trends that we saw shaping the sector from our work in 2023, and share our thoughts on what lies ahead.



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DATA CENTRES

Against a backdrop of capacity and sustainability challenges, the data centre industry continued to thrive in 2023 driven by consistently increasing demand and the attractive investment opportunities it offers.



Demand continues to grow

This was driven by a response to a multitude of factors including the exponential growth of **AI, cloud hosting, edge computing** and the ongoing roll-out of **5G technology**. As a result, 2023 saw developers racing to expand existing centres or to build new ones, with hyperscaler demand in particular driving the market. Locations that were traditionally thought of as secondary attracted significant investments in data centre development, as large global hubs experienced power and land constraints and more countries legislated for greater data sovereignty.



Private equity and private capital continue to dominate M&A activity

Q3 alone saw **Blackstone** announce plans to create a new \$7bn data centre venture with Digital Realty, **Starwood Capital** allocate a significant chunk of its latest fund to the sector, Australia's largest pension fund invest in **Vantage's EMEA businesses** and **KKR** acquire a stake in **Singtel's** data centre business. The year saw a growing number of greenfield investments in emerging markets (particularly in the APAC region), as well as investment in assets in the construction or development phase, as investors sought opportunities with higher returns. For **more traditional** players, **partnerships with private equity or infrastructure funds** presented an opportunity to **spread the cost and risk** of large data centre investments.



Power supply constraints create challenges

The **rising costs** and **constrained availability** of **grid** and **low-carbon** power have become critical factors in data centre placement. **Moratoria** on the construction of new centres in Ireland, the Netherlands and Singapore due to clean power concerns demonstrate close monitoring by governments around the world and increasing pressure on operators to look for sustainable solutions. Unsurprisingly, the market for in-progress developments with "committed" power became frenetic at times.

TELECOMS AND CONNECTIVITY

The telecoms sector saw continued consolidation, while a global push for satellite, cellular and fibre connectivity presented investment and partnership opportunities.



M&A cools off, but some exceptions buck the trend

M&A activity decreased in line with wider markets, as operators looked to mitigate the impact of higher interest rates by **de-leveraging**, although some deals bucked that trend. We advised Vodafone on its €5bn disposal of Vodafone Spain.

Consolidation in the market **continued**, as operators grappled with high deployment costs, funding challenges and the need for economies of scale. We are advising Vodafone on the combination of Vodafone UK and Three UK.



A global push for connectivity

A global push for connectivity continued, with the UK and the EU targeting deployment of **5G to all populated areas** by 2030 and Dish Wireless delivering on its commitment to provide 5G to 70% of the US population.

The race to **close connectivity gaps** provided partnership opportunities for a variety of industry players. In particular, **private investors partnered with service providers** to plug the capital required to fund costly fibre networks: connectivity assets continue to present an attractive opportunity for infrastructure investors looking for steady returns from low-risk assets, notwithstanding the global interest rate environment.

For example, the UK Infrastructure Bank's £250m debt investment in Nexifibre (a joint venture between InfraVia, Liberty Global and Telefonica) will support the planned roll-out of fibre to up to 7 million homes in the UK.

TELECOMS AND CONNECTIVITY

Network operators looked for ways to free up capital and to diversify their offerings and revenue streams.



Release of capital from assets

Many players continued to **free up capital** tied in high-value static assets, for example by selling or leasing towers and re-investing that capital in the business. The challenges of this separation and sale and of negotiating the bespoke ongoing commercial arrangements between the operator and asset owner should not, though, be underestimated.

2023 saw **Deutsche Telekom, Vodafone and Virgin Media O2** (amongst others) raising capital by selling down stakes in their respective towers joint ventures, whilst **Austria's A1 Telekom** announced plans to spin off its tower business as a separate company.

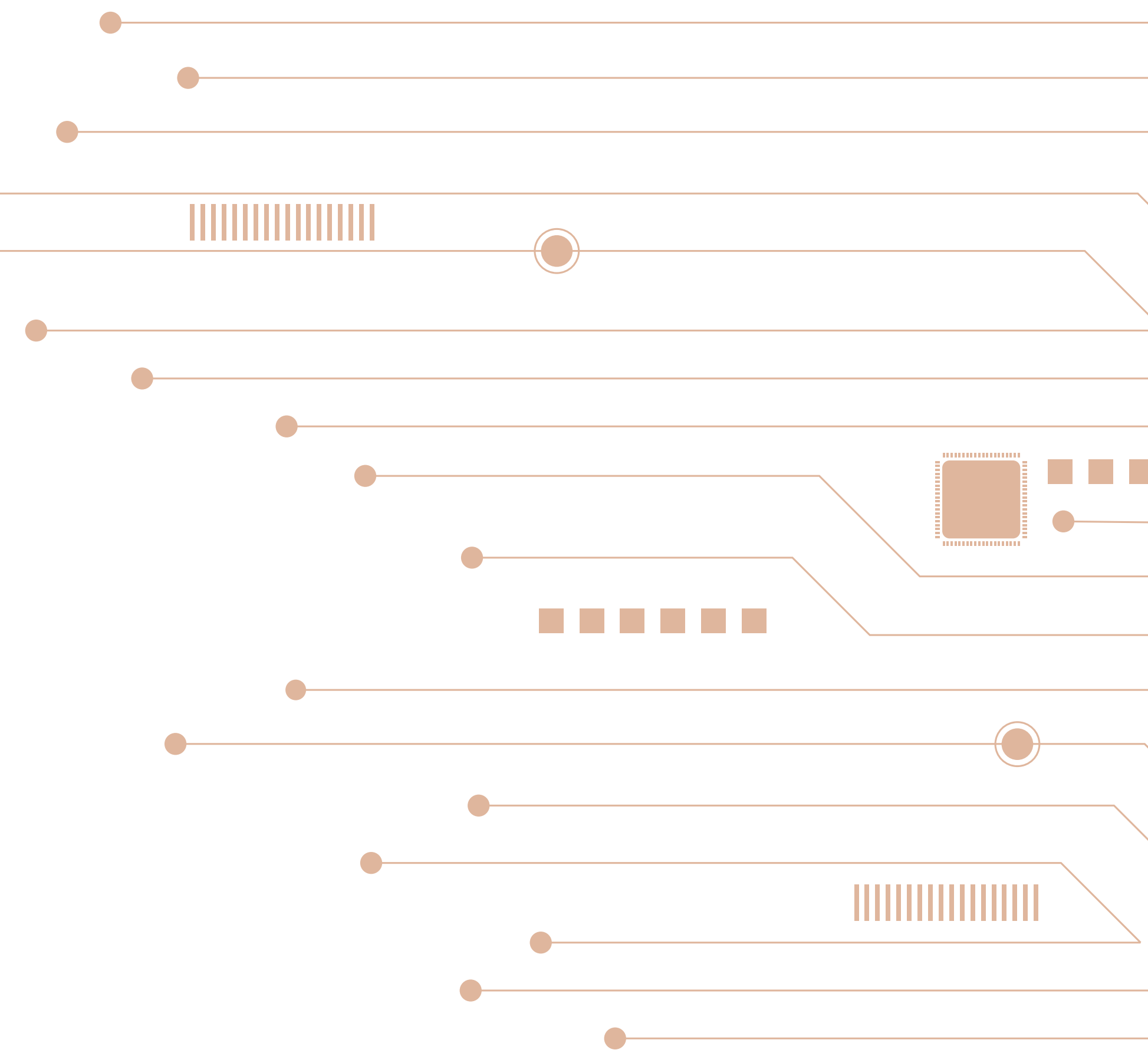


Diversification of core offerings

Operators continued to look for ways to **diversify their core offerings**, generate **new streams of revenue** and provide **innovative digital services**, in particular as the traditional telco business model remained under pressure and the market for machine-to-machine (M2M) connections and internet of things (IoT) continued to grow.

At the end of last year, O2 Telefónica and French mobile communications provider Transatel signed a long-term cooperation agreement to offer IoT and M2M applications for industrial companies in Germany, leveraging O2 Telefónica's powerful network and Transatel's mobile broadband connectivity.

Similarly, Vodafone has recently announced a 10 year strategic partnership with Microsoft, which will include investment in Vodafone's IoT connectivity platform with the goal of floating it as a separate business, as well as significant collaboration in the Generative AI space.



CHALLENGES AND OPPORTUNITIES

We expect many of the key trends and themes observed in 2023 to continue in 2024, with macroeconomic, geopolitical and environmental factors presenting challenges and opportunities.



Consolidation and upside in a tricky telecoms market

We expect challenging operating conditions, along with **high inflation** and **interest rates**, to drive **continued consolidation** in the telecoms sector, particularly as altnets and other challengers grapple with rising costs and as operators seek synergies to release investment in infrastructure. Managing this consolidation whilst undertaking necessary business-wide transformation activity will require significant focus. **Valuation challenges** in the telecoms sector may also present **significant upside opportunity** for financial investors, in particular if interest rates begin to fall.



Competing demands for data centre placement

We expect that **rapid growth** in the sophistication and deployment of **Generative AI** will see more data centres using **GPUs**, in turn driving demand for super-sized data centres built with **significant dedicated power sources** (often, necessarily, in remote locations). At the same time, **edge computing** and day-to-day deployment of **edge AI tools** will likely drive continued demand for (and investment in) **data centres** closer to users.



Sustainable solutions

Heightened focus on the decarbonisation of digital markets will continue to drive sustainable, **on-site solutions** for data centres (including, in some cases, even contributing energy back to the grid). We expect to see infrastructure players **partnering** with energy providers and governments to find solutions that harness the power of **sustainable energy sources** (including hydrogen and derivatives). Some are predicting that, despite AI contributing to the demand for power, AI efficiency programmes around power usage management and directed cooling could also provide a partial solution.

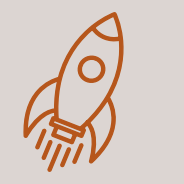


A return to growth

Digital infrastructure operators are often resilient to **inflationary pressures**, and we expect **infrastructure equity and debt deals** to continue to present attractive opportunities for investors this year, particularly as interest rates begin to stabilise. For example, some experts are predicting data centre capex to rebound to 11% growth this year.

CHALLENGES AND OPPORTUNITIES

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The final frontier

Ever-increasing opportunities for **private investment** in the space sector are set to continue, particularly for **patient capital** to fund R&D of capital-intensive products and for investment in the growing **commercial-satellite constellations** sector. As private investment in a previously state-dominated sector grows, governments and regulators across the globe will need to grapple with complex **legal** and **jurisdictional** questions.



Spectrum will continue to be a critical asset

We expect the **liberalisation of spectrum** to continue this year, accelerating the global race to 5G. As regulators continue to facilitate **private network deployments** and use cases for spectrum assets increase, we anticipate active **secondary spectrum markets** and attractive opportunities for **partnerships** between industry players to acquire and monetise spectrum assets.



NetCo and PropCo to the fore?

As the cycle of TowerCo deals comes to fruition, we expect telecoms operators to look harder at monetising other network and data assets in a similar fashion, for example through NetCo and PropCo-style transactions. These transactions have been less common to date, as the operational complexities of implementing them are typically thought to be greater than on TowerCo deals. The wave of TowerCo secondary transactions may also continue as initial investment holding periods come to an end.

LAWS AND REGULATIONS

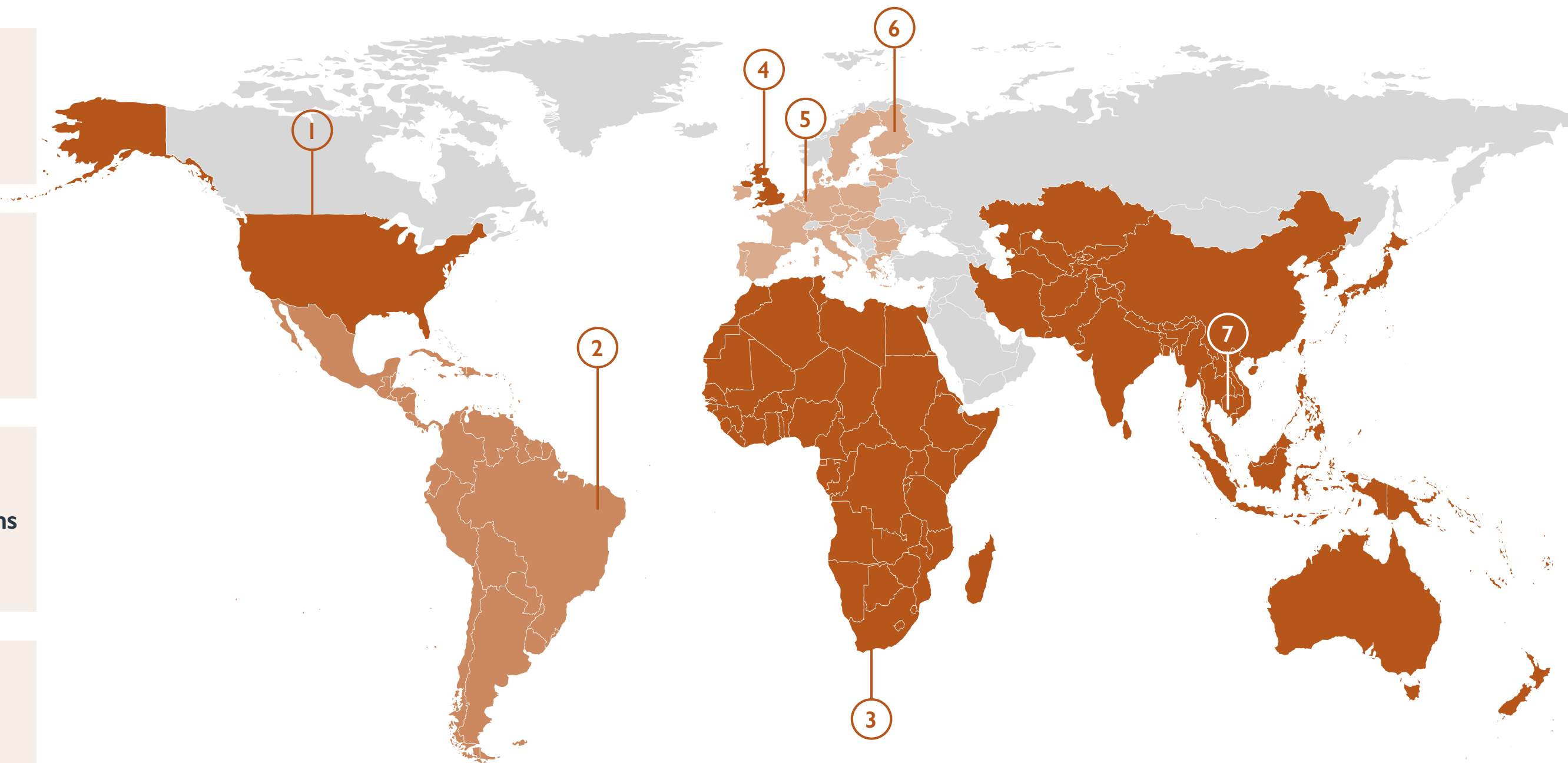
Governments and regulators across the globe are grappling with the challenge of regulating critical digital infrastructure while maintaining a regulatory landscape that attracts investment and allows open digital borders. We'll be keeping a close eye on the key milestones and trends below, and would be delighted to discuss them with you.

1 US agencies will propose regulations to help authorities identify AI systems being developed by foreign organisations via cloud-based infrastructure services

2 A push for connectivity continues across Latin America: this year, Brazil's telecoms regulator is set to consider regulations for the provision of direct-to-device satellite service

3 Spectrum liberalisation continues across the African continent, with South Africa set to debate an Electronic Communications Amendment Bill that would enable spectrum sharing

4 The UK government will continue to consult on proposed measures to bolster the security and resilience of UK data infrastructure



5 The EU will continue to debate its Gigabit Infrastructure Act, which aims to facilitate cheaper and easier deployment of high-speed fibre and 5G in the EU

6 The EU's Energy Efficiency Directive will set minimum energy performance standards and energy reporting requirements for certain data centres

7 APAC jurisdictions continue to enact local data storage requirements, with Cambodia's controversial draft data protection law set to follow suit

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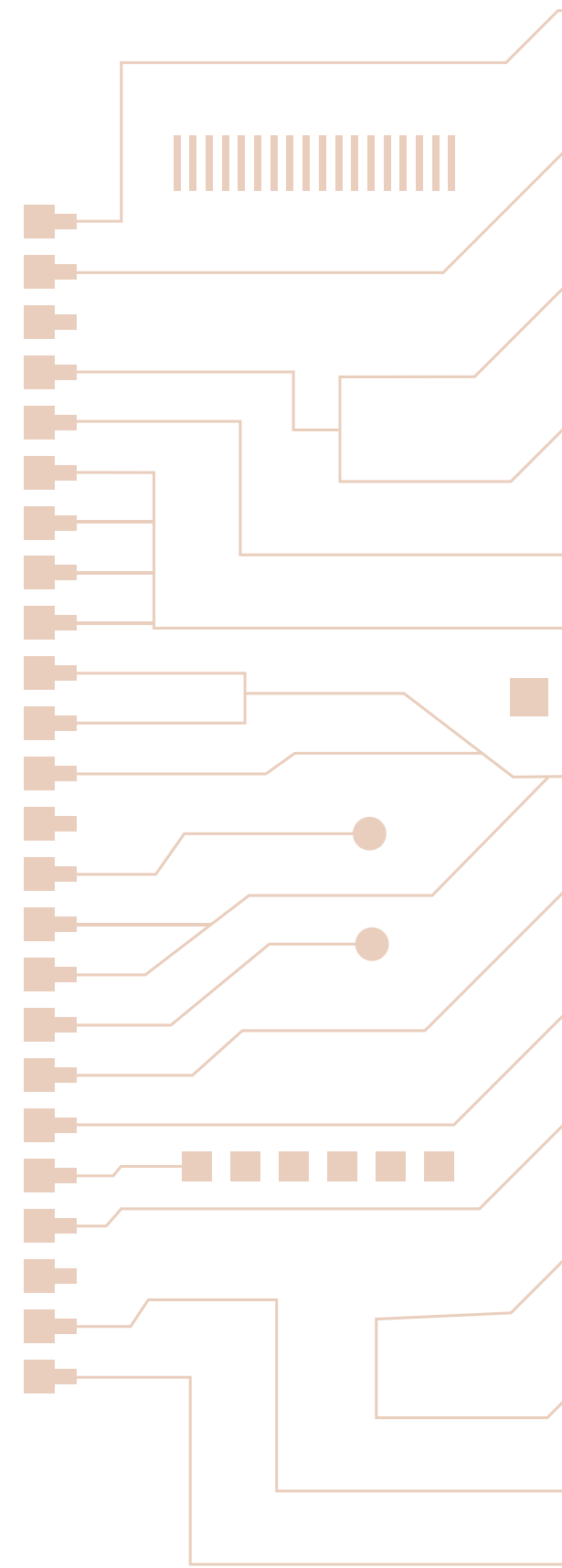
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