Access Partnership

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New Year's Letter 2024

Overview: As globalisation and nationalism come into conflict, the future of the technology sector will be defined by the choices made over the next 12 months. Access Partnership CEO Greg Francis assesses the state of play.

Before too much current sparks a housefire we expect a fuse to trip; equally we need international relations that soothe, before too much heat forges the kind of big change from which losers – always one of the great powers – lose big. Our emerging state system may not be fully formed as we look out over 2024, but the technology sector does not need to wait for peak multipolarity before defining its role within it.

That will be hard because our sector has placed a lot into globalisation, which is at odds with the nationalism of the moment. The emerging order nonetheless demands that our sector make choices: around where our products launch first, which channels we use, how strategic our offering is allowed to become, where our talent is, where we get our physical inputs, where they get put together, and where we get data to train what looks to be one of the great tools of modern transformation: generative AI.

The challenge for governments is no less difficult because the technology solutions they let in should be consistent with their position in the emerging system. These decisions pit sovereignty against growth, between the star towards which a country looks for security and the markets with which it hopes to trade. Where these directions are not the same, governments must either be two-faced or inward-facing. Is it then any surprise that aspirational metropoles in the Middle East are working with purveyors of both US and Chinese AI, or that the original maharani of non-aligned states will, whatever the technology, self-reliantly build her own?

In 2024, as half the planet's population changes or revalidates its leadership, Access Partnership will meet the need for adaptability. Where in years past we'd have conceived one policy framework to scale across many markets, we will continue in that but with increased tailoring that preserves access to technology for all countries while recognising the orbits into which, by necessity or ideology, they are drawn. Like the sector whose output we strive to make accessible and fair, we recognise that in 2024 bespoke policy solutions have the best chance of surviving the shifting geopolitical tectonics, and we'll make them in the expectation that this time around, all-too-human events that we coldly call inflammations can be salved, even cured with the help of technology, and that the forces which challenge the frayed *Pax Americana* will preserve at least the innovation of that era for all who will still want or need it.



Greg Francis
CEO

1 Generative AI's impact on the workforce



Marcus Ng
Director, Economics Strategy

Overview: Generative AI's potential will continue to appeal to businesses, governments, and investors. Despite early moves by some policymakers, the AI governance debate continues. Against this background, what impact will it have on the workforce?

- **The demand for custom generative AI tools will drive a mad dash for in-house talent**
- **Generative AI will become an essential tool for invention and innovation**
- **The call for inclusive generative AI will be increasingly loud**

The demand for custom generative AI tools will drive a mad dash for in-house talent

Rising demand

There will continue to be a rise in demand for custom generative AI applications that are language- and enterprise-specific and can support knowledge-intensive activities in expert domains, such as healthcare and finance.

This rise in demand will drive a dash for in-house AI talent that will overshadow the already high demand for AI skills. The global demand for AI jobs increased 11.3 times between 2015 and 2022, compared to 3.7 times for IT sector roles in general.[1] Even India, one of the most populous nations in the world with a tech industry employing 4.6 million workers, is running out of talent; current demand for AI talent exceeds its supply by 50%, with this gap expected to widen over the next few years.[2] In part, this demand for talent is driven by companies vying to bring such roles in-house, rather than rely on outsourcing, amid concerns over data protection and in a bid to stay ahead of their competitors.

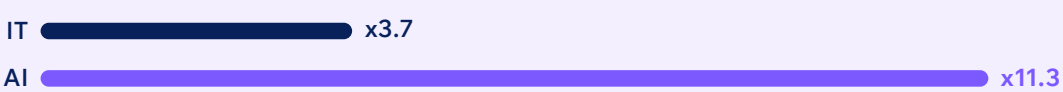
> Demand for talent is driven by companies vying to bring such roles in-house, rather than rely on outsourcing, amid concerns over data protection and in a bid to stay ahead of their competitors.

Cautious ambition

The business use cases of generative AI applications expanded over the past year, but the fact that only one-third of businesses reported using generative AI regularly means that we have only seen the tip of the iceberg.[3] Nonetheless, should the high demand for AI skills lead to candidates with limited experience being hired for senior roles for which they may be unqualified, this could lead to poor outcomes that moderate these ambitions.



Growth in global job demand, 2015-2022



Generative AI will become an essential tool for invention and innovation

Accelerating discovery

The use of generative AI as a creative and problem-solving tool will grow significantly, throughout the innovation process and across all industry use cases. The potential of generative AI goes beyond content creation and enhancing efficiency; it can help accelerate the process of scientific research and discovery by reducing the cost of research.

Scientific breakthroughs often involve curiosity, creativity, and trial and error, but the methodical process of iterative questioning and answering is costly and time-consuming. Generative AI can help develop and test hypotheses, leveraging its capabilities to interrogate vast datasets to field and answer research questions based on the data on which it has been trained. For example, generative AI has been used in the development process to create new designs for medicines, significantly reducing the costs and time required from years to weeks.[4]

The potential of generative AI goes beyond content creation and enhancing efficiency; it can help accelerate the process of scientific research and discovery by reducing the cost of research.

AI's potential reaches far beyond pharmaceutical research. There have already been increasing references to AI and machine learning in research papers across varied disciplines, such as biology, physics, and mathematics, as well as the social sciences.[5]

Inspiring innovation

However, three issues are likely to remain front of mind for any inventor and innovator:

1. Bias and the opacity of input training data, leading to biased and inaccurate AI-generated outputs;
2. Plagiarism and copyright infringement in input training data; and
3. Intellectual property rights on AI-generated outputs.[6]

Policymakers in major economies around the world have been considering the right degree of intervention around AI governance. While the principles that countries have proposed have similarities, including with the OECD Principles on trustworthy AI (such as on human-centred values and fairness, transparency and explainability, safety, and accountability), their approaches to regulation vary.[7,8]

The above-mentioned principles and regulations are cognisant of the three issues, but there remains uncertainty as to how these will be addressed. The issues have practical implications for businesses and users' ability to trust the outputs of AI applications, as well as what it means for incentives for human innovation. These issues will require a swift resolution if AI use in invention and innovation is to grow.



The call for inclusive generative AI will be increasingly loud

The far-reaching potential of AI

There will be increased scrutiny by governments, civil society, and the community regarding the distributional impacts of generative AI on the workforce and society more broadly. This means that more pointed questions will be asked concerning which population groups are most affected and whether they are receiving sufficient support to upskill, transition, and access the technology.

While AI has been around since the 1950s, the draw of deep conversations with ChatGPT and the siren calls of Bard put generative AI in front of all our minds in 2023. That such technology could be accessible to anyone with an internet connection and the ability to write in their natural language (albeit largely limited to English) was a first in a long time. At the same time, the applications built on top of this technology had use cases that were practical for many users. This means that it has a wide potential user base that many people could benefit from. It will be important to make sure that the workforce and society are ready for an AI-powered future.



While AI has been around since the 1950s, the draw of deep conversations with ChatGPT and the siren calls of Bard put generative AI in front of all our minds in 2023.

A future-ready workforce and society

A future-ready workforce and society will need to be prepared for new ways of operating, including by uplifting their existing stock of skills and equipping them with new skills in the context of AI. Strengthening the existing basic skills of reading, writing, and critical thinking will be important, as these will be essential skills to engage with and interpret outputs from generative AI tools – particularly given that generative AI tools remain susceptible to errors of data and ethics.

Future-ready skills fall into three groups:

1. Those to develop and manage AI;
2. Those to work with AI; and
3. Those to live with AI.[9]

The priority that a country, industry, or firm should attach to investing in each group will differ. At a country level, only a few entities will likely have the resources to develop generative AI foundational models, although there is likely to be more innovation at the application layer. On the other hand, to ensure that the economic opportunity from the application of generative AI can deliver widespread benefits, all countries will require their populations to achieve some minimum level of digital literacy, including some "fluency" in using AI.

The adoption of the UN Sustainable Development Goals (SDGs) in 2015 included a pledge to ensure that "no one will be left behind".[10] Given the potential for this AI to deliver both wide-spread benefits, as well as widen the digital divide, its inclusive development will be as important as ever.

2 The EU AI Act and the future of AI regulation



Bensen Koh
Policy Manager, Fair Tech Institute



Rory Gilliland
Policy Analyst, Europe

Overview: After taking the world by storm this year, 2024 will be a pivotal moment for AI's regulatory future. Countries globally are enacting legislation in response, but how much global cooperation can be achieved?

- **Global policy debate will address allocation of responsibilities within the AI ecosystem**
- **Safeguards for public sector AI use will inform early AI regulations**
- **The EU AI Act will not set the global standard**

Global policy debate will address allocation of responsibilities within the AI ecosystem

Managing risk

As policymakers consult domestic AI players and become more familiar with the AI value chain, they increasingly realise that the "developer-deployer" and "build vs buy" dichotomy does not accurately represent the complex realities of the AI industry. Most organisations will not create AI solutions from scratch but build them on top of tools or services provided by others.

This complex supply chain requires careful analysis by policymakers to identify the right entity that should be responsible for mitigating specific risks to ensure safety and effectiveness. For example, risks related to data subject rights are better mitigated by entities with a direct relationship with the data subjects. Conversely, risks of embedded biases are best mitigated by the entities that oversee and manage the datasets and training of the AI model.

> Risks related to data subject rights are better mitigated by entities with a direct relationship with the data subjects.

Concern over competition issues

Policymakers recognise that only a few entities have the data, computing, financial resources, and AI expertise to build their own Large Language Models (LLM) or foundation models. Such concerns have manifested through the G7 Communique on Digital Competition, where G7 antitrust authorities highlight the risk of anti-competitive behaviour. The communique also highlights that massive resources are needed to develop large-scale AI and warns that "incumbent tech firms" could control access to resources to reduce competition or adopt anticompetitive behaviour, such as bundling, tying, exclusive dealing, or self-preferencing, to harm rivals. The way we understand and define the AI ecosystem will shape competition policy.

Categorising the AI ecosystem

Policymakers have already started developing more nuanced ways of categorising entities in the ecosystem. In July, Singapore released advisory guidelines on the use of personal data in AI systems that went beyond the developer-deployer dichotomy to differentiate between custom AI procurements (where the customer participates in the design) and Commercial Off-the-Shelf (COTS) solutions.

In September, Japan released draft AI business operator guidelines that included up to five different categories. The first two (AI algorithm developers and AI training implementers) differentiate between algorithms and training. The next two (AI system/service implementers and service providers that utilise AI) are similar to Singapore's distinction between custom and COTS systems, with safeguards for the latter focusing on data protection and input/output management, rather than the AI system itself. The final category (entities that use AI in their business operations) distinguishes between entities that use AI for external-facing service functions, as opposed to internal operations.

Most recently, 16 countries, including the US and UK, released Guidelines for Secure AI System Development that promote an AI lifecycle design approach recognising the distinct roles of different companies in the AI value chain and corresponding variations in their risks and responsibilities. Building on this work, 2024 will see more definitions of where responsibility lies and the first court cases connecting levels of liability to different roles and responsibilities in the value chain.

Safeguards for public sector AI use will inform early AI regulations

Public sector progress

Many jurisdictions, including Australia and South Korea, have found it difficult to move ahead with their draft AI regulations due to strong opposition from stakeholders and political opponents. Even the EU AI Act once looked in potential jeopardy due to Germany, Italy, and France's views on foundation models.

By contrast, there has been far less resistance against the development of safeguards for public sector AI use. Australia's AI taskforce is scheduled to release safeguards for government AI use by early 2024. The recent US Executive Order directs federal agencies to use AI safely and promote such practices in the private sector. Japan promulgated a draft agreement for the use of generative AI in government agencies, while New Zealand issued its Generative AI Guidance for the Public Sector (2023).

Informing future regulations

Public sector safeguards will set key precedents. As governments gain experience using AI tools and implementing safeguards, their risk mitigation approach will evolve and improve. Over time, the risk appetite of the public may gradually decrease, even as regulators gain confidence and credibility to push regulations or best practices to the wider industry. By the end of 2024, public sector safeguards will find their way into regulation of the broader economy, requiring the same safeguards to apply in the private sector.

As governments gain experience using AI tools and implementing safeguards, their risk mitigation approach will evolve and improve.



The EU AI Act will not set the global standard

Larger risk appetite

Many countries' draft AI regulations are less conservative compared to the EU AI Act and don't have a category for "banned" AI applications. South Korea's AI Bill has a more flexible approach towards facilitating high-risk AI solutions. Australia's responsible AI paper had less rigid risk tiering. Others, like Thailand's draft AI Bill, have an entirely different focus, prioritising the growth of their domestic AI ecosystems. Equally, the recent US Executive Order centres on standards development, funding and innovation, and promoting US leadership on AI policy.

Evidence from Asia

Policymakers in Asia responded[11] poorly to the EU's lobbying efforts concerning the AI Act back in July. Singapore and the Philippines shared their view that AI regulations at this stage would be premature and could stifle innovation. South Korea said that while the EU AI Act was an important reference, it would be closely following the G7 Hiroshima AI Process. None of the other seven countries that the EU engaged (including Japan and India) have taken any significant steps toward greater alignment with the EU AI Act.

> More countries are actively seeking to lead the global discourse on AI policy.

Circling towards consensus

More countries are actively seeking to lead the global discourse on AI policy. Japan has strongly pushed the Hiroshima AI Process and secured G7 agreement to 11 new guiding principles. In November, 28 countries, led by the UK and including the US, EU, and China, signed the Bletchley Declaration, committing to develop AI safety principles. This was swiftly followed by the new Guidelines for Secure AI System Development by the US, UK, and 16 other countries.

The US has also stepped up its harmonisation efforts with Asia, establishing a "crosswalk"



between the NIST (National Institute of Standards and Technology) framework and Singapore's AI Verify framework, as well as starting discussions with Japan on a similar "crosswalk". Furthermore, the upcoming ASEAN (Association of Southeast Asian Nations) AI guide (driven by Singapore) is reportedly closely aligned with the NIST framework. Rather than a single framework setting the worldwide standard, we will see various harmonisation workstreams gradually circle toward a global consensus.

3 Brazil's growing role as a tech leader



Geusseppe Gonzalez
Head of LATAM, Emerging Markets

Overview: With the G20 heading to Rio de Janeiro next year, South America's largest economy is set to assume growing importance in the wider tech landscape. Could it hold the key to uniting leading superpowers with emerging markets?

- **Brazil will lead the Global South to coordinate the first global AI framework**
- **The world's first digital central bank will be launched**
- **Brazil will produce the first Chinese-Latin-American tech unicorn**

Brazil will lead the Global South to coordinate the first global AI framework

Leadership opportunities
The annual G20 summit returns to Latin America next year to be hosted for the first time by Brazil on 18-19 November 2024. The summit will take place during Lula's second year of government in his third stint as president. It will likely present a reinvigorated position for the country, potentially setting out an outline for economic leadership of the Global South. As Lula himself has stated: Brazil is back.

> The G20 meeting is a critical opportunity for Brazil to influence the regional and global agenda, as this is probably Lula's last time in power.

Global harmonisation on AI
Lula aims to influence a global agenda around a narrative that contrasts with the G7 approach. The G20 meeting is a critical opportunity for Brazil to influence the regional and global agenda, as this is probably Lula's last time in power and his opportunity to leave a global legacy.

In 2024, Lula's government will lead efforts regarding the first global AI framework, seen as a tool to reduce hunger, mitigate poverty, and create new jobs. These themes are consistent with Lula's ongoing concerns, but now include emerging economies' big tech and AI under the leadership of Brazil and its allies across the globe. Brazil will succeed at coordinating a number of authorities and stakeholders, establishing common ground for AI development and using the G20 event to launch a vision of AI for the Global South. The spillover effect of this will be investment and an increased number of AI-related patents.



The world's first digital central bank will be launched

A changing landscape

One of Lula's main goals is to increase the regional integration of economies, particularly in BRICs and emerging economies. This is nothing new in terms of Lula's approach if we consider that some of his first measures back in 2003 were to establish a plan for economic growth and stability, coordinated with regional organisations and international banking. The difference lies in the geopolitical landscape Brazil faces and the technologies at hand.

The Brazilian central bank has already announced that the country will launch a digital currency in 2024 to enhance international trade, tokenise internal markets, and obtain efficiency gains for the economy.

The Brazilian central bank has already announced that the country will launch a digital currency in 2024 to enhance international trade, tokenise internal markets, and obtain efficiency gains for the economy. This has brought interest from international organisations, as the Brazilian model could challenge some of the current players.

The arrival of DREX

Back in 2020, when the official Pix app was launched, it was taken as a sign of potential disruption for financial institutions, even though the system allowed banks to agree on merchants' costs and transfer fees. The authorities have now confirmed the launch of DREX, the Digital Real Electronic X.

Against this backdrop, Brazil will try to outperform its counterparts' efforts. This will entail leading and proposing the entire digitisation of the Central Bank as a way to promote international digital trade, leveraging the vibrant FinTech ecosystem, robust connectivity, and the success of previous experiences. Such an endeavour follows previous ventures and might propel the Brazilian FinTech industry to new heights. Regulations and policies specifically applied to the digital currency can be expected, as well as a new set of FinTech disruptions that will transcend borders.



Brazil will produce the first Chinese-Latin-American tech unicorn

China's growing influence

Over the last decade, conversations surrounding foreign investment and technological development in Latin America have involved a new stakeholder: China. From manufacturing to health and connectivity, Chinese investment in the region has increased to the point that most jurisdictions in LATAM take annual FDI from the Asian giant for granted.

Nevertheless, Brazil is part of a different geopolitical conversation. Its role in the region, and the Global South, involves trading with China, the EU, and the US. In the case of the latter two, Brazil's role has been challenged in Latin America because of investments mainly concentrated in infrastructure and technology. The country gets almost half of LATAM's Chinese FDI, and the political composition of the region combines populist governments from both ends of the political spectrum – most of which are also getting increased FDI from the Chinese.

> Chinese investment has proven beneficial for many economies, with some countries in the region having demonstrated an openness to investment that is hard to match.

A Brazilian tech unicorn?

Chinese investment has proven beneficial for many economies, with some countries in the region having demonstrated an openness to investment that is hard to match. Such investment has to bear fruit, either because the ROI is attractive enough or because some countries in the developed world do not have trade barriers to Brazilian tech.

As a result, taking into account the abiding technology transfer between them, as well as the symbiotic relationship China has managed to develop in Brazil, it's only a matter of time before Brazil produces its first tech unicorn. The key point, however, will be that most of its technology will come because of Chinese influence as much as the vision of Brazilian entrepreneurs. Such a development would create an interesting landscape in which emerging markets start to play the role of incubators for second-generation Chinese technology outside China, which will be hard to sanction or limit given Brazil's geopolitical influence and its willingness to promote disruption on a global scale. This could have disruptive consequences for several key areas, including FinTech, AI, HealthTech, and AgTech.

4 The US-China rivalry's impact on global trade



Abhineet Kaul
Director, Economics Strategy



Jacob Hafey
Policy Manager, US

Overview: With a presidential election less than 12 months away, political positioning in the US will have global ramifications. China, meanwhile, is navigating its own domestic concerns. How will the countries caught in the middle navigate the resulting turbulence?

- **The US's stance on China will harden as we move into the next election**
- **Domestic considerations will shape China's response**
- **Global South countries will avoid taking sides for as long as possible**

The US's stance on China will harden as we move into the next election

Deepening distrust

The relationship between the US and China has been characterised by a complex interplay of cooperation and competition. Since introducing export controls on advanced semiconductors and semiconductor manufacturing equipment (SME) in October 2022, the Biden Administration has redoubled its efforts to restrict China's access to the world's most advanced chips through close coordination with countries including Japan and the Netherlands, both of which released their own semiconductor export controls in 2023. The increased attention received by AI and machine learning technologies this year also opened a new dimension to bilateral tensions, culminating in an Executive Order restricting US investment in China's semiconductor and AI sectors in August and an expansion of the 2022 export controls in October aimed at limiting Beijing's access to AI chips.

> The increased attention received by AI and machine learning technologies this year opened a new dimension to bilateral tensions.

The shape of new restrictions

Maintaining a competitive edge over China is one of the increasingly few areas of US policy that receives consistent bipartisan support. Going into an election year, the rhetoric surrounding China from both parties will become more aggressive, with the Biden Administration set to further expand its semiconductor and SME export restrictions by October 2024 at the latest.

In July, the Bureau of Industry and Security solicited opinions on potential rule changes targeting cloud computing, noting how certain Infrastructure as a Service (IaaS) functions have been used to circumvent its existing licensing regime.[12] The US will further expand its export controls on advanced semiconductors, potentially targeting cloud computing infrastructure used to circumvent existing restrictions.

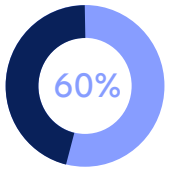


Domestic considerations will shape China's response

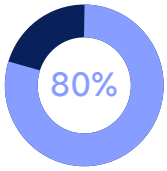
Tit for tat with rare earths

China has responded to the actions of the US by introducing its own export regulations on rare earth resources frequently used in high-tech products. China produces approximately 60% of the world's germanium products, 80% of gallium, and refines 90% of the global supply of graphite. It has imposed licensing restrictions on the export of the first two (used in chipmaking processes) and requires export permits for the latter[13] (used in the manufacturing of batteries and fuel cells). In November, the Ministry of Commerce issued a notice requiring exporters to report transactions of over 70 additional rare earth minerals and oxide products.[14] While China has largely continued to facilitate scoped exports under a presumption of approval, future escalations of trade restrictions by the US or others can be expected to prompt the Chinese government to clamp down further on rare earth exports.

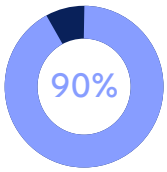
China's share of global rare earth resource production



Geranium products



Gallium products



Graphite products

Economic headwinds

However, China is facing several sources of economic uncertainty, including a slump in the property market, high municipal debt levels, and slowing economic growth. In response, the Chinese government has taken steps this year to encourage foreign investment, such as seeking to ease requirements on cross-border data flows and providing tax incentives to "high and new technology enterprises".[15] In 2024, it will be these economic challenges, and the trade balances with global trading partners, that will shape how China responds to further US trade sanctions more than any other factor.



Global South countries will avoid taking sides for as long as possible

Increasing multipolarity

The increasingly narrow avenues of bilateral engagement will further push China towards regions such as Latin America, the Middle East, and Africa, where it has benefitted from taking a "no strings attached" approach to aid and investment. Despite the trade restrictions mentioned above, China has remained the largest trading partner[16] of countries including Brazil, Argentina, Saudi Arabia, Egypt, South Africa, and Nigeria. Chinese telecom company Huawei, which has been subject to US export controls since 2017, remains[17] one of the largest providers of 5G equipment for Brazil and Mexico. Rather than acquiesce to demands from the US regarding transparency, IP protection, and human rights guarantees, China will deepen its engagement with non-Western countries and encourage domestic research and development endeavours to enhance its self-reliance.

As a result, the US and China will competitively seek to deepen their engagement with non-Western countries, both bilaterally as well as through multilateral arenas such as the I2U2 group, the Indo-Pacific Economic Framework (IPEF), the Belt and Road Forum, and the Regional Comprehensive Economic Partnership (RCEP).

Potential beneficiaries?

The trade tensions between the US and China have contributed to an increasingly complex regulatory environment for companies with global supply chains, especially those with significant business operations in the two countries. For governments and businesses in emerging markets, this will entail re-evaluating their dependence on their key partners, with a focus on maximising the opportunities while still balancing their relationship with the US and China.

Countries in the Global South, such as Mexico, India, Vietnam, Indonesia, and Poland, have sought to capitalise[18] on this trend. For example, Mexico recently overtook[19] China as the US's largest trade partner. Another notable example is the plan by



Apple[20] to expand its investment in India to approximately USD 40 billion over the next four to five years. As a result, governments and businesses will focus on supply chain resilience,[21] building more flexibility and redundancy into their operations and pivoting from "just-in-time" to "just-in-case" models. At the same time, investing in geographical diversification for production is now considered a means of managing risk.

5 The Global South is the new epicentre of internet governance innovation



Lim May-Ann
Director, Fair Tech Institute

Overview: Unserved and underserved communities are set to drive the future of connectivity as the internet continues to penetrate new markets. The rise of the Middle East as internet governance convenors will be a key issue in 2024, but can nations overcome the political sensitivities?

- **Internet ecosystem evolution will be driven by demands from the Global South**
- **Saudi Arabia, the centre for Internet governance**
- **Internet governance discussions will continue to fragment**

Internet eco-system evolution will be driven by demands from the Global South

Growth potential

The first offerings of top-level domain (TLD) names – .com, .edu, .gov, .mil, .org, and .net – were the drivers of the initially embryonic and then explosive growth of internet business use through the 1990s and 2000s. This was followed by the introduction of generic TLDs (gTLD), such as .aero, .asia, .biz, .cat, .info, .name, .post, .pro, .tel, and .xxx, as more businesses and organisations expanded their use of the internet. More recently, the growth of domain names, and indeed of the domain name industry, has been propelled by the introduction of internationalised domain names (IDNs) to support local use of the internet, and in particular local language use. This trend highlights the emergent dominance of the Global South, both in numeracy and now potentially in global rule setting.

> The global offline population declined by around 100 million people in 2022 to approximately 2.6 billion.

Evidence of demand

The Broadband Commission's 2023 State of Broadband report[22] supports these conclusions, stating that the global offline population declined by around 100 million people in 2022 to approximately 2.6 billion. Demand for connectivity has shifted to the under-connected Global South and from emerging to substantial and sustained demand. The report recommends policymakers take stock of the lessons learned during the COVID-19 pandemic, where connectivity's pivotal role in everything from health to education to transactions was thrown into stark relief, as well as prioritising investing in digital public infrastructure. The report predicts that this investment will result in a tipping point in the "cost/return equation", *feeding* GDP growth rather than following it.



Saudi Arabia, the centre for internet governance

A controversial host

2024 will be a turning point and a test for the maturity of internet governance as the Internet Governance Forum (IGF) is hosted by Saudi Arabia. There have been calls to boycott the IGF or change the host country because of various opposition to Saudi Arabia's record on freedom of expression, diversity, and women's rights.[23] Internet governance forums have traditionally been about creating a safe space for dialogue, discussion, and diversity in the online world, rather than requiring a consensus on ideology or being a referendum on a country's political track record. The Global South is now set to test this uneasy balancing act.

> Internet governance forums have traditionally been about creating a safe space for dialogue, discussion and diversity in the online world.

Opportunities for dialogue

The 2024 IGF will be a litmus test of the community's collective maturity, offering an opportunity to evolve its approach. The key question in an age of fragmentation is whether the community is ready. It may be easier to refuse and reject than to build trust. However, as the Global South's voice grows, the emergent shift in demand and power needs to be recognised and respected. If the community is to continue, it must learn to grow together or risk the fragmentation of global internet norms and communities.



Internet governance discussions will continue to fragment

A balancing act

Internet governance platforms have generally coalesced in a number of key discussion forums. International forums, such as the IGF, the Internet Corporation for Assigned Names and Numbers (ICANN) meetings, and RightsCon (to name a few), have been at pains to ensure Global South representation and inclusivity. In addition, Global South countries are active participants in these processes, be it through hosting events or the active participation of relevant stakeholders from civil society, academia, or the public sector. However, accommodating all voices will lead to louder demands that power no longer be concentrated in a few organisations, and with a few privileged individuals.

Internet governance mechanisms traditionally have structures in place to maintain a balance among stakeholders, ensuring representation for all persons who need, want, or should be part of the decision-making process, as well as seeking to prevent any inadvertent bias or unfair advantage to certain groups. This advantage – a core tenet of the multi-stakeholder approach – now needs to be revisited to be re-recognised by all.

In some instances, the solution to the current challenges may mean invoking a process of creative destruction, as has been the case in the past wherein internet governance systems were, of necessity, shifted from how they had been originally set up. In its original setup, the internet's address book (IP addresses) was managed by the Internet Assigned Numbers Authority (IANA), care of two persons: Jon Postel and Joyce Reynolds. This highly limited decision-making approach eventually evolved, with IANA functions managed contractually and stewardship provided through ICANN, with the transition of core technical components of internet governance completed in 2016.[24]

Addressing different political weights

Moving forward, balances between developed countries and developing nations, which oftentimes will have different approaches towards internet governance, must be established. To achieve this, many organisations have taken a leaf from multilateral systems, setting up advisory committees such as ICANN's Governmental Advisory Committee (GAC),[25] a group of different nations that advises ICANN on a consensus basis.

Creating a balance between stakeholders that manage the differences between political, economic, and technological powers is needed so that the Global South and its marginalised communities, however they are defined, are not left out of this process structurally. The list of various internet governance forums' host countries over the years is a good example of how these platforms can structurally demonstrate the principles of inclusivity and equal opportunity.

China's role

China is forging a new state-led approach towards internet safety through its World Internet Conference (WIC),[26] establishing itself as an alternative platform to participate in the development of a safe cyberspace for all. However, due to the polarised US-China relationship, participation in the WIC and its outcomes have become tricky for countries and companies to navigate. Participation alone may be misconstrued as an endorsement of China, creating an unnecessary albatross around a given country's neck. In an increasingly multipolar world, it will be impossible for the rest of the world to ignore China's approach to internet governance.

This adds a further vector of tension to the discussions to be hosted by Saudi in 2024. The year ahead needs to mark a turning point where coordination outweighs consensus and facilitation outweighs fragmentation.

6 The evolution of GDPR



Lydia Dettling
Policy Manager, Europe

Overview: With a major review scheduled for 2024, the EU will use the months ahead to reflect on where the GDPR stands moving forward. Is an overhaul needed to improve enforcement, and how will the bloc react to alternative approaches?

- **The 2024 GDPR review will enable EU institutions to take stock of its successes and failures**
- **The EU will not seek to join the Global CBPR Framework**
- **Global discussions on the need for internationally recognised data protection standards will grow**

The 2024 GDPR review will enable EU institutions to take stock of its successes and failures

GDPR 2.0?

Nearly eight years after its adoption, the GDPR's impact on society is unquestioned. But like any law, as our society develops, the GDPR must also evolve to reflect changing circumstances or risk becoming a drag on innovation. EU policymakers are acutely aware of this issue and have continuously undertaken various initiatives to provide guidance and resolve the deficiencies of the GDPR, especially when it comes to the regulation's effective enforcement. Nevertheless, fundamental challenges persist, requiring serious evaluation and action.

By May 2024, the European Commission will undertake a comprehensive review and report on the application of the GDPR, sparking rumours of a "GDPR 2.0". However, questions remain over whether the GDPR really needs a complete overhaul, and concerns persist over whether there is the political will to make the amendments identified by the comprehensive review. One area recognised as needing attention is the facilitation of international data transfers. In particular, the need to establish a more reliable and futureproof legal framework and adequacy decision with the US.

While the review is unlikely to result in a total upheaval of the GDPR, legal guidance and further examinations of possible alternative solutions will emerge in 2024, paving the way for possible legal amendments in the coming years.

By May 2024, the European Commission will undertake a comprehensive review and report on the application of the GDPR.



The EU will not seek to join the Global CBPR Framework

Watching on closely

While the EU is unlikely to propose solutions within the next year, we can already consider alternative approaches. The Global Cross-Border Privacy Rules (CBPR) Forum, established in 2022,[27] provides an alternative model for international data flows by facilitating the free flow of data for certified entities between signatories by enabling interoperability between data protection frameworks of the signatory jurisdictions. The UK, US, Australia, Canada, Japan, Korea, Mexico, the Philippines, Singapore, and Chinese Taipei are already part of the forum.

While the EU is unlikely to join this voluntary certification scheme anytime soon – it doesn't want anything to dilute the sanctity of the GDPR – a move towards a more flexible, multinational system of mutual recognition and reciprocity is certainly noteworthy.

There is emerging international recognition regarding the potential benefits of an international agreement that establishes baseline and commonly agreed standards and protections on certain crucial aspects of data transfers. This includes public sector bodies and fair access to data. Establishing such standards will enable the recognition and reciprocity of national legal frameworks and the development of fairer, clearer, more efficient data transfer agreements or frameworks between jurisdictions. The EU will learn from the CBPR in 2024, taking note of its successes for future discussions on alternative international regimes.

The EU will learn from the CBPR in 2024, taking note of its successes for future discussions on alternative international regimes.



Global discussions on the need for internationally recognised data protection standards will grow

The importance of adequacy decisions

To ensure the EU remains competitive, open, and influential in the global arena, the GDPR provides several mechanisms to enable businesses and organisations to transfer data between the EU and third countries. The most cost-effective and least burdensome method, however, is an adequacy decision by the EU with a third country. This enables the continued seamless flow of data while upholding the protection of citizens and their data without further obstacles or actions on behalf of businesses.

During the first review of the GDPR in 2020,[28] the European Commission explicitly recognised that adequacy decisions are "the most comprehensive, straightforward and cost-effective solution for data transfers" and are "an essential tool for EU operators to safely transfer personal data to third countries". The Commission thus committed to intensifying dialogue with selected third countries in view of possible new adequacy findings. Despite this, the reality and practical application of adequacy decisions do not align with the value and priority placed on facilitating international data flows.

EU-US relations

In 2023, the third EU-US Data Privacy Framework was once again challenged in court. It is a decade since Max Schrems filed his first complaint – 10 years of EU businesses, citizens, and regulators operating without legal certainty and with increased costs regarding their closest and most important partner.

The need to address this issue ultimately facilitates the development of international data transfer mechanisms through a system of mutual recognition and reciprocity of standards. These may include international agreements on fair access to data by government and national security services.

Workable solutions

Aside from the agreements with 11 countries adopted under the 1995 General Data Protection Directive, which were carried over under the GDPR and the agreement with the UK upon its departure from the EU, the bloc has only concluded two other adequacy decisions since it entered into force. The first was with Japan in July 2018, followed by a second with South Korea in December 2021. This, along with the failure of two – perhaps three – data-sharing frameworks with the US, is a clear illustration of a systemic flaw with the EU's General Data Protection Regulation when it comes to adequacy decisions.

This flaw in the GDPR has resulted in a situation where the EU sets and evaluates an artificial and unachievable standard of equivalence. While an adequacy decision does not require identical provisions and protections as guaranteed by the GDPR, a level of protection that is comparable or essentially equivalent must be provided by the third country. Differences are bridged through the negotiation of additional safeguards. In practice, however, we can see from the example of the EU-US data-sharing framework that this "bridge of additional safeguards" merely acts as a band-aid, covering but not resolving the underlying legal differences between the two jurisdictions. To provide a workable solution, a fundamental change is needed that enables more flexibility to recognise and work with the reality of third countries' legal regimes.

7 Consumer protection: The next battleground for digital pioneers



Meghan Chilappa
Policy Counsel, Data Governance



Yamel Sarquis
Policy Manager, Data Governance

Overview: With technologies emerging and advancing at a rapid pace, tech players are under unprecedented scrutiny for how it impacts consumers' daily lives. The digital policy arena will be a key battleground in 2024. Can authorities join forces to expand their footprint?

- **Regulators will not delay their ambition to regulate tech titans**
- **Increased cooperation with divergent goals risks confusion**
- **The Global South will follow Europe's approach to regulating consumer protection**

Regulators will not delay their ambition to regulate tech titans

Keeping pace with technological progress

The growth of the digital economy presents unique consumer protection issues and opportunities. Lawmakers around the world have discussed and debated policy solutions to "rein in Big Tech", but technological developments are outpacing the legislative process.

In 2024, policymakers will continue to debate, propose, and, in some jurisdictions, enact legislation aiming to protect digital consumers. They will attempt to address the growing number of issues captured under consumer protection while continuing to aggressively target the biggest companies. These issues include, but are not limited to, data privacy, digital payments, marketing and advertising, and fraud.



In 2024, policymakers will continue to debate, propose, and, in some jurisdictions, enact legislation aiming to protect digital consumers.

Emerging trends

While many questions remain, a few trends are clear. Policymakers will continue to wrestle with consumer protection in the digital arena, discussing whether to amend older laws or enact new ones. They have also begun debating new and emerging technologies, like AI, and their impacts on consumer protection and competition.

Around the world, the actions of policymakers show us that tech regulation will be a key focus area over the next few years. In the US, both political parties want to regulate online platforms. The bipartisan Digital Consumer Protection Commission Act would create a new commission to combat and target Big Tech's practices, including privacy and competition. The Consumer Financial Protection Bureau (CFPB) has also proposed regulating tech giants' digital payments and smartphone wallet services, saying they rival traditional payment methods in scale and scope but lack consumer safeguards.

The EU's Digital Markets Act (DMA) came into force this year, targeting Big Tech "gatekeepers" with various interoperability, fairness, and privacy demands. In line with this trend, the UK's Digital Markets, Competition and Consumers Bill (DMCC) will likely be enacted in 2024. The Bill focuses on consumer protection, digital markets, and competition, aiming to crack down on rip-offs, protect consumer cash online, boost competition in digital markets, and provide stronger enforcement powers for the Competition and Markets Authority (CMA).

These policy actions illustrate that regulators are reacting aggressively to large technology companies and that many policy battles against Big Tech show no signs of slowing.

Increased cooperation with divergent goals risks confusion

Cross-border efforts

When it comes to going after the tech giants, consumer protection authorities collaborate closely – both within country-level government agencies and across borders. We predict that different regulators within and across countries will continue coordinating to go after similar companies for what they perceive as a lack of consumer safeguards. In some instances, government agencies have shown a willingness to work with industry on certain issues, like loot boxes[29] for the video game industry, to develop harmonised standards. These closer partnerships are inevitable given the cross-cutting nature of consumer protection issues (touching on data protection, privacy, competition, etc.).

Expanding consumer protection

In the US, the Federal Trade Commission (FTC) is pursuing several partnerships to expand its consumer protection footprint both domestically and abroad. The FTC recently signed a cooperation agreement with the consumer protection authorities of four Latin American countries to combat fraud within and outside the US. In addition, the FTC is also partnering with the DOJ's Consumer Protection Branch more frequently. At the state level, meanwhile, Attorneys General are working on consumer protection enforcement actions in conjunction with the FTC. This trend is only set to accelerate.

The EU's Consumer Protection Cooperation (CPC) Network also pursues EU-wide cases. Through the CPC, Ireland's Competition and Consumer Protection Commission (CCPC) acted as co-lead with the Swedish Consumer Agency in two coordinated actions on WhatsApp and TikTok.

> Closer partnerships are inevitable given the cross-cutting nature of consumer protection issues.

Agencies teaming up

Amid growing concern from consumers and policymakers, partnerships (country- or region-specific) may form, for example, between data protection and competition authorities. In the past, data protection authorities in the Asia-Pacific and Latin American regions have also established closer relationships with consumer protection authorities.

However, a complicated landscape at the country level, with multiple sector regulators utilising distinct laws to achieve different policy goals, will create confusion and create regulatory challenges for all technology businesses. For some consumer protection matters, particularly evolving issues related to AI or "dark patterns",[30] it remains unclear for industry whether specific agencies will target certain issues or if these will fall under the purview of data protection authorities.

The Global South will follow Europe's approach to regulating consumer protection

Copy and paste

Emerging markets are likely to continue borrowing from digital policy pioneers. Such was the case with the General Data Protection Regulation (GDPR), which triggered a global "copy-and-paste" effect, with developing countries adopting its principles wholesale. Fast-forward to 2024 and we see the same pattern unfolding in consumer protection.

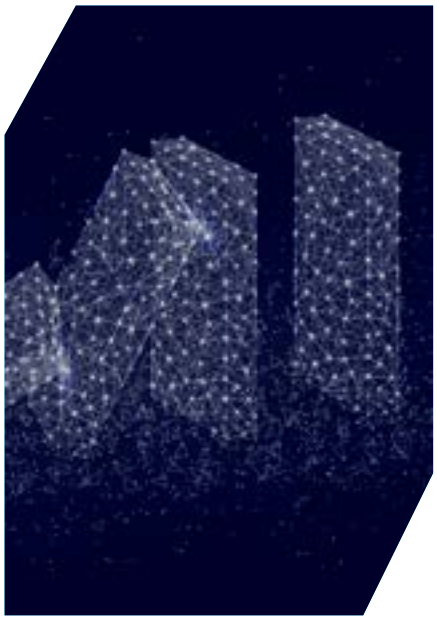
Brazil's proposed Digital Market Act, inspired by the EU's DMA, aims to level the playing field for new entrants. In 2023, legislators held public hearings (alongside EU representatives) and hosted prolonged debates in Congress to promote discussions that enable consumer protection by making it easier for new platforms to enter the market. However, critics have raised caution that broad, open-ended principles with no local tailoring have generated lack of clarity and guidance in the text's application and created uncertainty for all stakeholders. This highlights the perils of a one-size-fits-all approach in sensitive areas like consumer protection and fair competition.

Brazil's proposed Digital Market Act, inspired by the EU's DMA, aims to level the playing field for new entrants.

In the same vein, India's Consumer Protection Act (2019) and Competition Act (2002) have also been subject to amendment discussions. While safeguarding consumer rights and promoting fair competition are crucial, imitating pre-emptive European restrictions could stifle India's burgeoning startup ecosystem and innovative sectors. Flexibility and dynamism are key to attracting investment in infrastructure and fostering innovation. A domino effect triggered by European regulations may not lead to the desired outcomes of innovation and economic growth.

The risks ahead

While the influence of European-inspired digital market regulation is likely to persist in 2024, stakeholders in emerging economies must be cautious. Blindly copying regulations designed for different contexts and maturity levels could jeopardise domestic innovation, impeding economic growth and inadvertently harming consumer protection.



8 The year of mega-constellations



Ivan Suarez
Head of Space and Spectrum Policy



Declan Dundas
Policy Analyst

Overview: The race to control Low Earth Orbit is accelerating, raising concerns about sustainability and space debris. As the private sector comes to the fore, how can regulators close the existing governance gap?

- **Competition will shift the power balance of the LEO ecosystem**
- **Tensions between multilateral and national space governance mandates will increase significantly**
- **GSO operators will pursue acquisitions, multi-orbit offerings, and regulatory solutions**

Competition will shift the power balance of the LEO ecosystem

Satellite landscape evolution

2024 marks the beginning of a new era in Low Earth Orbit (LEO) competition. Many projected satellite systems have set 2025 as the year they begin revenue-generating operations. Surviving 2024 will therefore be make-or-break for start-ups. At the forefront of this transformation stands SpaceX, boasting approximately 5,399 Starlink satellites already in orbit with another 8,086 planned. Combined with the arrival on the scene of Amazon's Project Kuiper, slated to launch 1,500 of its planned 3,000 satellites by 2026, we are about to enter a new era of global connectivity. Several other companies will also enter the satellite broadband connectivity market, with different start-ups and more mature companies developing business models to fill connectivity gaps and address niche markets, which could drive down prices.

Earth Observation is another space market experiencing rapid growth, with products becoming used for a range of clients beyond security and military applications. Images with better resolution, higher revisit rates, and improved price points are multiplying use cases and enlarging their addressable markets, making geospatial data a hot topic for climate change risk mitigation. Something similar will happen in the IoT market. As regulatory frameworks are revamped and companies complete their constellations, a thriving and competitive segment with various connectivity products and a diversity of business models will emerge.

Increased activity across these sectors will force new entrants to focus on their market segmentation to minimise direct competition. Where satellite



operators end up in direct competition, the downward pressure on prices will force consolidation. What currently looks like a Wild West where anyone can stake a claim will have its first casualties before the end of 2024.

Tensions between multilateral and national space governance mandates will increase significantly

Shifting dynamics

Accompanying the acceleration in mega-constellation deployments is a surge in regulatory pressures. The International Telecommunication Union (ITU) faces the challenge of reconciling diverse technical specifications and ensuring sustainable practices. Proposed sustainability studies within the ITU are poised to generate a wave of regulatory pressures, forcing a revaluation of current governance frameworks to accommodate the unique challenges posed.

As mega-constellations redefine the celestial landscape, the ITU took the significant step of adopting a resolution focused on space sustainability. Resolution 219[31] lays the groundwork for this shift, aiming to facilitate the enduring and responsible utilisation of radio-frequency spectrum and associated satellite orbit resources. With the World Radiocommunication Conference 2027 (WRC-27) cycle about to commence, a fundamental shift in governance is anticipated. This will emphasise the international cooperation needed to manage critical space resources effectively but is also likely to revive the discussion of multilateral mandates to govern orbital activities through one or several institutions.

Amid these tensions, the private sector has emerged as a proactive force in shaping the future of space sustainability by developing guidelines and policies. Initiatives like the World Economic Forum (WEF) Space Debris Mitigation Guidelines and the Astra Carta exemplify industry's commitment to addressing space debris challenges. These efforts promote collaboration, shared responsibility, and diverse perspectives.

Governance gap

The tension between multilateral mandates on space governance is exacerbating strained international relations. As nations strive to assert their interests in the rapidly evolving space domain, finding common ground becomes increasingly challenging. Additionally, operators are increasingly turning to national governments to request protection as a new era of competition begins.

Despite strides in space governance, a significant gap remains. Existing reporting structures, such as the ITU's satellite filing system, fall short when confronted with the scale of mega-constellations. Current systems operate on a per-satellite basis, making it challenging to comprehensively address constellations. International space law also grapples with contemporary sustainable challenges, with notifications to the United Nations Office for Outer Space Affairs (UNOOSA) lacking enforceable compliance requirements.

National governments and space agencies will play a pivotal role in regulating the space economy. Collaborative efforts, such as debris tracking and collision avoidance programmes involving organisations like the North American Aerospace Defense Command (NORAD) and the United States Space Surveillance Network, underscore the necessity for effective communication and cooperation.

GSO operators will pursue acquisitions, multi-orbit offerings, and regulatory solutions

M&A and multi-orbit interest

Whenever a space industry executive is asked about the main trend in the sector, consolidation is usually the answer. Recent mergers include Viasat and Inmarsat, Dish and Echostar, and Eutelsat and OneWeb. Such deals are becoming increasingly common as companies aim to drive down their costs through economies of scale, supply chain consolidation, and vertical/horizontal integration to compete with the likes of SpaceX, Project Kuiper, and emerging players.

GSO Operators are long-standing businesses, reinforced with solid commercial portfolios across their global target markets. In 2024, operators will become even more collaborative, strategic, and innovation-savvy.

> GEO operators insist that existing limits are adequate to guarantee the protection of their systems.

Companies such as Intelsat, SES, and Viasat are taking steps towards multi-orbit satcom offerings and strategies, while others, such as Globalstar, plan to renew their LEO constellation. Executives from these companies have described themselves as orbit-agnostic and are making significant investments in this direction.

Debates on coexistence

WRC-23 became a battleground for international debates on whether current EPFD limits are appropriate, focusing on proposals to study RR Article 22. On the one hand, GEO operators insist that existing limits are adequate to guarantee the protection of their systems, while mega-constellation LEO operators would like these limits revisited to improve quality of service.

These contentious proposals highlight the intricate challenges associated with managing mega-constellations and emphasise the need for global governance structures (beyond Radio Regulations) to adapt to the evolving space landscape. This may require global commercial and political consensus, as well as guidance on what we want the future of space communications to look like.

While GSO operators will maintain a defensive posture against attempts by LEO operators to shift the regulatory landscape in their favour, at least one GSO operator will either have drastically changed their business strategy or established a close partnership with an existing LEO operator by the end of 2024.



9 The 6G Hope: Will it cost operators less than 5G?



William Webb
Chief Technical Officer

Overview: Predicting the emergence of 6G once seemed a simple task based on previous generations of cellular technology. However, will efficiency increasing and demand beginning to plateau, how will 2024 shape the landscape for the next decade?

- **Mobile data growth rates will be lower in 2024 than in 2023**
- **No significant new 5G applications will emerge**
- **There will be more coverage of operator cost savings than enhancement or expansion**

State of play

2024 may seem too soon to be talking about 6G given that its predecessor still feels like a relatively new offering. But with the first 5G deployments beginning service in 2018, it is now five years old in leading countries. That qualifies it as more of a mature technology than a new concept. While 5G continues to evolve, much attention is now focused on what will succeed it.

Back in 2022, predicting the emergence of 6G would have seemed fairly easy. Each generation of cellular technology has been broadly 10 times faster than the previous generation, had 10 times more capacity, and arrived 10 years later. On this basis, 6G would become widely deployed around 2030 and deliver average data rates of about 2 Gbps.

> Each generation of cellular technology has been broadly 10 times faster than the previous generation, had 10 times more capacity, and arrived 10 years later.

However, in the last year or so there has been an increasing realisation that the 5G vision was flawed. Its higher data rates are yet to yield any new applications or revenue streams for mobile operators, while its complexity and use of higher frequency bands have required significant capital investment. Mobile operators are now reducing their network investment, and key suppliers, such as Ericsson and Nokia, are suffering as a result, with significant cost savings announced.

Over the last year, it has also become increasingly apparent that mobile data growth rates are slowing. Instead of expanding by 50-60% a year, data rates are now growing by around 20-30% a year. Logically, this fall will continue absent any new drivers because the biggest driver of data usage by far is video, and there are only so many hours in the day that consumers will want to watch video on a handset. As more and more users get close to this limit, the overall growth in mobile data usage will slow. This could imply that data usage will reach a plateau before 2030, which would make delivering increased capacity an unimportant element of 6G.

These trends have led to increasing doubt regarding whether 6G will be 10x faster and whether it will be delivered in 2030. Mobile operators have been much more vocal than during the equivalent formative period in 5G, broadly stating that they want 6G to only be a software update and not require new network equipment – and this has been especially true for base stations. With the rising costs of deploying dense networks requiring increasing numbers of base stations, mobile operators are also more interested in features that reduce their costs than those that deliver wider capabilities to consumers. Consequently,



operators are in no hurry for 6G's arrival, suggesting they may prefer to wait until well into the 2030s.

That said, mobile operators generally do not play a leading role in the development of mobile standards; equipment manufacturers normally drive this process. Manufacturers would prefer a solution that required hardware replacement and delivered 6G sooner, as that boosts their revenues. Equally, manufacturers recognise that if they develop a solution beyond the requirements of their customers, that may undermine sales.

Although 6G remains some way off, the next few years will determine the direction of standards, which will ultimately set in stone the form that 6G takes.



Although 6G remains some way off, the next few years will determine the direction of standards, which will ultimately set in stone the form that 6G takes.

Big questions

The key question for 6G is whether the "10x vision" or the "software only" vision comes to pass. In practice, standards are full of compromises and options, meaning there can be elements of both. The question therefore hinges on which direction the standard leans towards.

This decision will be strongly influenced by three factors:

- Whether mobile data growth rates continue to slow.
- Whether any new applications emerge that require 5G.
- Geopolitics and national incentives.

Behind this is an even bigger uncertainty: the future of mobile operators and industry suppliers. For example, a software-only future would indicate that there is limited growth potential and that the industry was tending towards becoming more of a utility.



Predictions

As 6G is still six or more years from realisation, predictions for 2024 need to cover leading indicators rather than hard data, such as 6G base stations sold.

On these leading indicators, we predict that:

1. **Mobile data growth rates will be lower in 2024 than in 2023 by around 3-5% per year (so a growth rate of 25% might fall to 20-22%).**

2. **No significant new 5G applications will emerge.**

3. **There will be more coverage of cost savings by mobile operators than of network enhancement and 5G expansion.**

Our 6G prediction is that, during 2024, the "software-only" vision will gain the upper hand. Measuring this directly will be very difficult, but one indication may be that there is less press interest in 6G because the vision itself is less interesting for journalists. This would be contrary to a normal trend that would see ever-growing mentions as the concept developed and a launch date drew progressively closer.



Other indicators include the level of interest in “10x features” compared to that in “software-only” features. For example, one of the key areas in 10x 6G has been the use of THz frequencies – bands above 100 GHz that have huge capacity but very limited range. To make these more usable, there has been much research into intelligent reflective surfaces that can bounce signals around obstacles. Conversely, an area of greater interest to software-only 6G has been the possible use of AI to optimise networks, delivering more capacity from existing resources. We would expect to see interest in THz and associated technologies fade during 2024, while the excitement around using AI and similar will grow (although to some degree this may be more of a reflection of the general growth in interest in AI).

2024 will not be definitive for 6G, but the next 12 months will go a long way towards establishing both what form it will take and when we can expect it to arrive.

3-5%

Expected fall in mobile data growth rates compared to 2023

5G

No notable new applications to emerge

2024

More coverage of cost savings than enhancement or expansion



About Access Partnership

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