Future of telco

How today's telco leaders can envision and create the future of connectivity

KPMG Australia

KPMG.com/au/telco

Foreword

Today's market conditions are creating challenging times for telco players. Even though consumer revenue has been historically high, margins are being squeezed because of the ongoing requirement for infrastructure and spectrum investment to meet consumers' insatiable demand for data and the anticipated demand driven by various 5G Enterprise use cases. Competition has been heating up from both traditional and non-traditional players. Customer expectations and the market have been shifting. And a looming recession and regulatory pressures have been creating uncertainty.

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To address these significant concerns, leading telco players across the globe have been taking big steps to redefine their business and operating models. This report discusses what they've been doing and how they've been doing it.

We discuss four future telecoms business models that are currently emerging around the world and identify the key capabilities that we believe.are required to succeed in each model. This report offers practical steps to help today's telecoms leaders envision and create the future.

Supported by case studies and based on KPMG professionals' experience working with leaders in the field, this report lays out paths that can help with future growth for telcos and clearly articulates the risks and rewards that can be expected along the way.

We hope this report provides telco leaders and decision-makers with a clear vision of the future, a greater understanding of the journey, and practical steps to help accelerate and sustain the transformation.

We welcome the opportunity to discuss these findings further with you and your team. Please reach out if you have any questions or would like to discuss further.

The future of telco is upon us. We look forward to exploring it together.

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Signals of change

While change is constant in the telco sector, the factors driving change are constantly shifting. In this section, we identify and drill down into some of the most significant market factors that should currently be on telco leaders' minds.

1. Traditional business models continue to be challenged

Traditionally, telcos have made their money by moving bits through the air and across wires in their networks.

And while doing so is still central to their mission, telcos need to figure out ways to capture an increased share of the revenue that is generated by the bits flowing through their network to keep pace with the investment required in their network(s), making their business more profitable. Telcos have been trying to break into higher value-added services for years, including heavy investments in areas such as professional services, media/content, and digital advertising.

But the track record for such investments has been decidedly mixed. Now, other options are emerging. For example, telcos and vendors are collaborating to deploy private 5G networks to enterprise and government sites, like university campuses, mining sites and agribusinesses, providing the opportunity for telcos to then monetise different aspects of that system – from apps to cyber security to hardware maintenance.

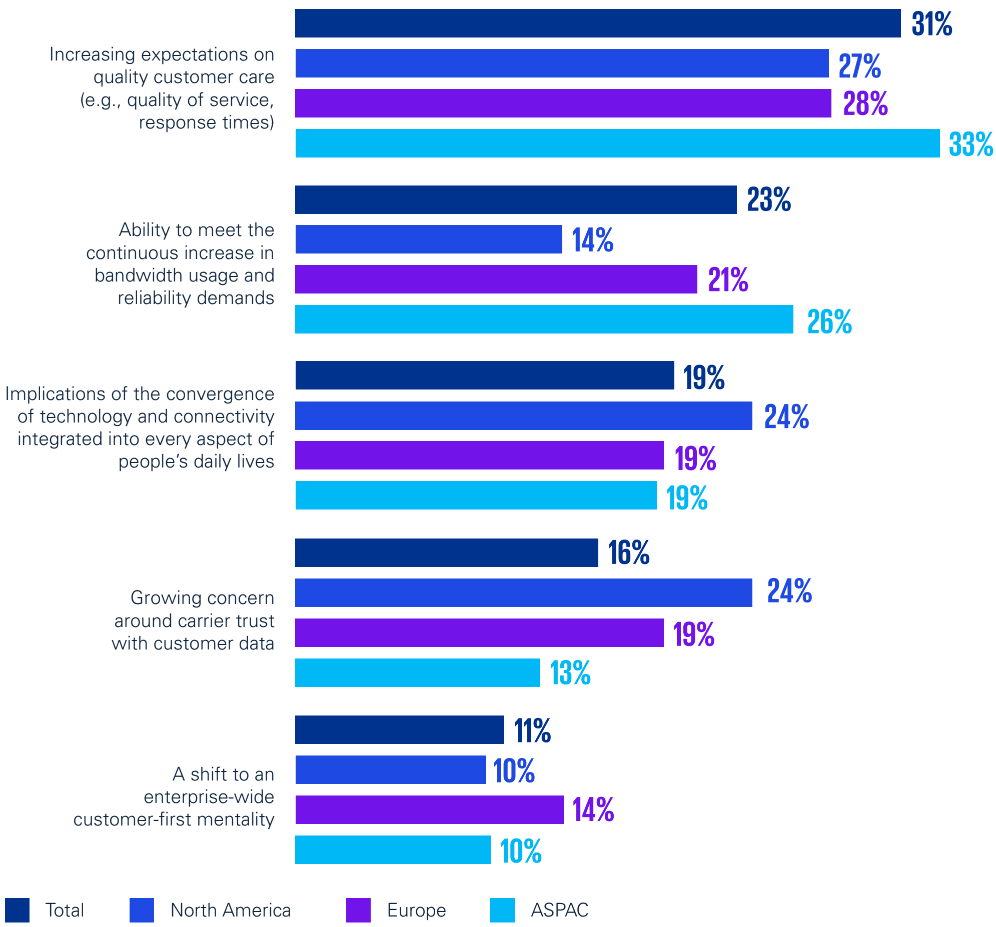
A primary concern with this idea is that hyperscalers are also investing in private networks on their own given their deep pockets, e.g. AWS Private 5G. Tier 1 telcos could also double down on their fibre play, possibly even taking control of tier 2 and tier 3 players who could bring more agility and local market knowledge to accelerate their growth and penetration in the SMB market, or conversely tier 2 and 3 players form alliances to achieve the same outcome. Again, the primary obstacle is that hyperscalers could decide to make the investment and crowd the telcos out.

2. Escalating customer expectations

Expectations for both consumer and commercial customers have been intensifying. For consumers, that means wanting better and more flexible service, greater transparency in billing, and enhanced ease of use. On the commercial/B2B side, clients are looking for increasingly sophisticated connectivity and data solutions without the traditional requirement to contact a call centre or a sales rep.

Recognising these customer signals, many telcos are focusing on the quality of experience. For example, they are creating more automated and intentional experiences. In our view, this means simplicity of choice and the ability to seamlessly transact are becoming paramount. Virtual self-care models can provide a rapid response to emerging network issues and pre-empt outages. Self-care can also give carriers greater reliability and lower legacy array cost structures because humans aren't responding to calls about network quality. Indeed, our research shows that 56 percent of telcos globally have invested in creating robust virtual self-care models.[1]

Which (customer-related) factor has the greatest potential to change the landscape for the telecommunications sector?



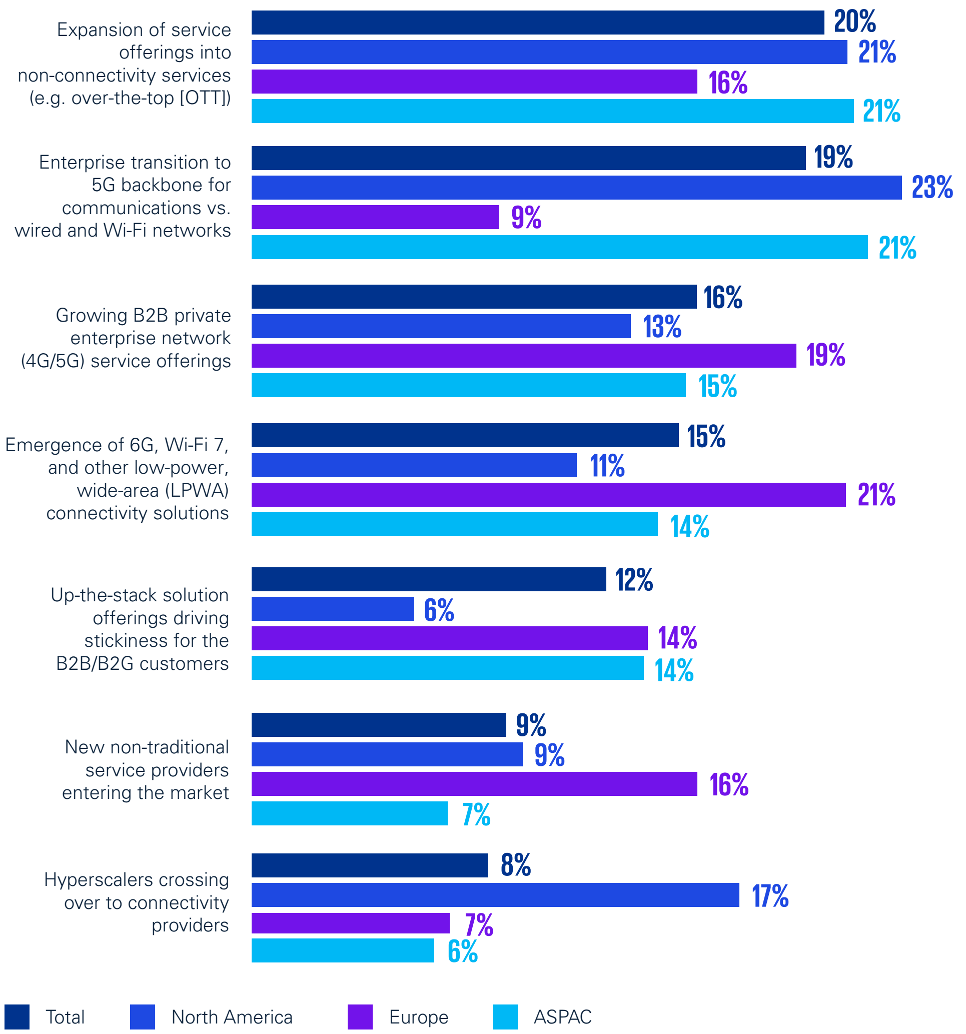
Base: 308 customer-centric strategy decision-makers at telecommunications organisations; 51 at organisations in North America, 58 at organisations in Europe, and 199 at organisations in ASPAC
Source: A commissioned study conducted by Forrester Consulting, April 2022

[1] Connected Enterprise Telco Survey 2022, a commissioned study conducted by Forrester Consulting on behalf of KPMG

3. Hyper-competitive hyperscalers

As the landscape evolves, there will likely be more direct competition between telcos and hyperscalers. This should be a concern to telcos given how much money these hyperscalers spend, their in-house talent, and their outsized ambitions. The competitive dynamic between hyperscalers and telcos is changing quickly. To address this change, some telcos are forming partnerships with hyperscalers to help get the most out of their networks and services, as when Microsoft and AT&T came together to unite their 5G and edge computing efforts. Locally, both Telstra and Optus have formed strategic alliances with Microsoft and AWS respectively to combine the power of their networks and hyperscaler cloud platforms.

Which (competitive) factor has the greatest potential to change the landscape for the telecommunications sector?



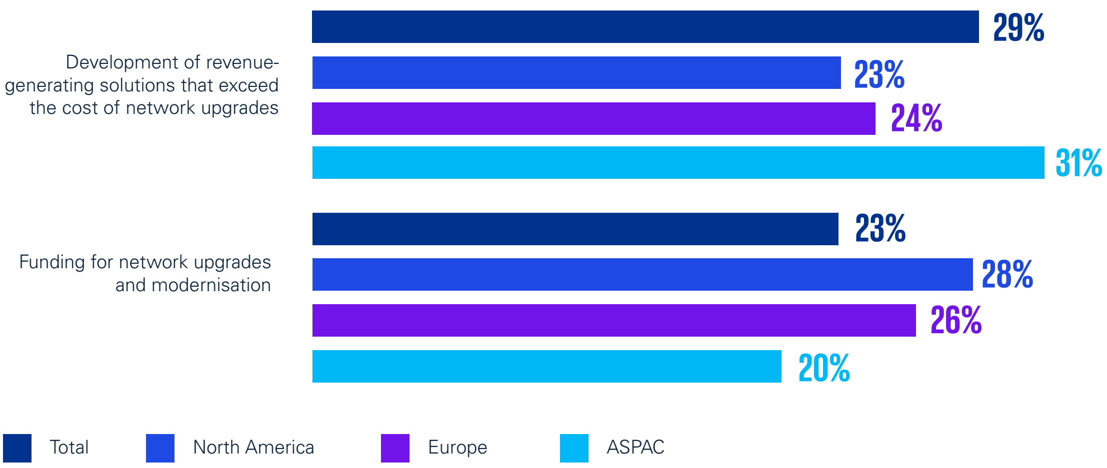
Base: 316 customer-centric strategy decision-makers at telecommunications organisations; 53 at organisations in North America, 58 at organisations in Europe, and 205 at organisations in ASPAC

Source: A commissioned study conducted by Forrester Consulting, April 2022

4. A possible global recession

Inflation and interest rates are likely to continue to rise and a recession is looming. In many markets, rising interest rates will likely raise the cost of capital, potentially impacting telcos' borrowing capacity and access to fresh capital. Added to pressures from higher supply chain costs and margin accretive commercial actions in highly competitive markets, and for some telcos with weaker balance sheets, this could lead to a higher risk of potential financial distress. Not surprisingly, many telcos are re-examining their capital plans, and several aspects – from infrastructure upgrades to IT modernisation – are being reassessed and reprioritised. The impact of this may have ripple effects on other priorities. Slowing down the rollout of 5G may leave the advantage open to competitors. Delaying the upgrade of the vehicle fleet to electric may lead to missed net zero and ESG targets. Putting off equipment upgrades may impact the overall resilience of the network. In some extreme cases, telcos near or under financial distress may seek consolidation or even bankruptcy, potentially creating important consequences across the entire telco ecosystem. As a result, some telcos have set up joint ventures (JVs) with competitors to share the costs of deploying costly network equipment and expand their reach. Examples include AT&T's October 2022 announcement to create a multi-billion dollar JV with an unnamed infrastructure partner, and Vodafone's recent announcement of a JV with Altice – although not direct competitors in this market – to support fibre infrastructure in Germany. Locally, we have seen the sale of mobile infrastructure as telcos free up investment held in these strategic assets. Nearly three-quarters of telco leaders in our global survey say they are already investing in or planning to invest in JV network operating models.[2] That has allowed telcos to start to differentiate based on the services they provide, rather than just the connectivity.

Which (economic) factor has the greatest potential to change the landscape for the telecommunications sector?



Base: 315 customer-centric strategy decision-makers at telecommunications organisations; 53 at organisations in North America, 58 at organisations in Europe, and 208 at organisations in ASPAC
Source: A commissioned study conducted by Forrester Consulting, April 2022

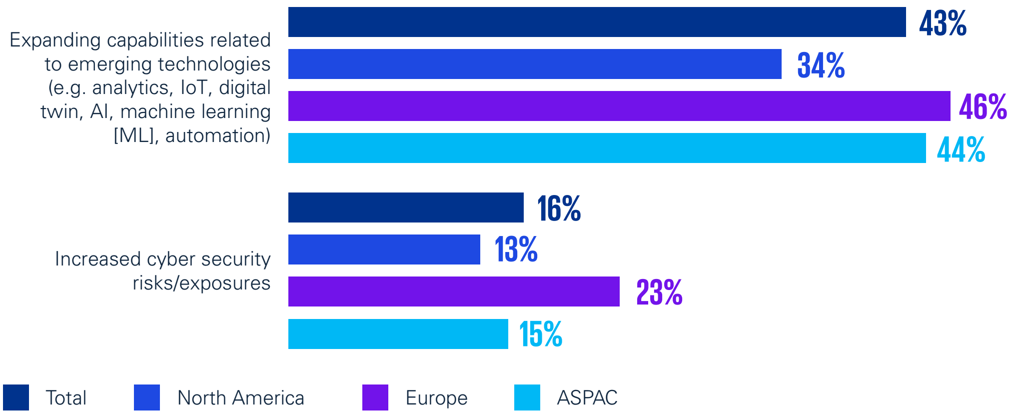
[2] Connected Enterprise Telco Survey 2022, a commissioned study conducted by Forrester Consulting on behalf of KPMG

5. Technology can create new opportunities – and threats

In our view, the most important – and costly – technology investments will continue to be network upgrades. 5G has been central to telcos' efforts to satisfy the bandwidth needs of residential consumers, but the cost of deploying it has been prohibitive. As for 6G, it requires the same massive investment as 5G and is still estimated to be three to five years off. In addition, telcos should continue to focus on how best to use evolving tools like AI and machine learning for service and operating improvements. The technological disruptor that fewer telco leaders are talking about is the ongoing advancement in low-Earth orbit (LEO) satellite connectivity.

Given the current level of competition and the aggressive plans from some key players, the promise of global connectivity through LEO satellite constellations is coming closer to reality. And this is one of the only technologies in development today that could fundamentally increase telcos' customer base, including rural populations and private enterprise networks. The entry of this kind of new competitor with global reach and different unit economics could up-end the industry's investment and business strategy. Traditional telcos should explore how to embrace this technology before it can erode their existing connectivity play.

Which (technological) factor has the greatest potential to change the landscape for the telecommunications sector?



Base: 315 customer-centric strategy decision-makers at telecommunications organisations; 53 at organisations in North America, 57 at organisations in Europe, and 205 at organisations in ASPAC
Source: A commissioned study conducted by Forrester Consulting, April 2022

6. Fulfilling the ESG agenda

In our recent CEO survey, executives responded that the economic downturn required them to turn away from their ESG initiatives, with 50 percent saying they were pausing or reconsidering their existing or planned ESG efforts over the next six months.[3] In our view, that move could backfire. As the financial sector moves to get behind ESG, we anticipate telcos will find that more significant proportions of their corporate loans and debt vehicles are tied to ESG metrics.

For example, since 2019, Verizon has been the US Telco leader to offer green bonds and to date a total of US$4 billion in green bonds have been issued, with proceeds focused on renewable energy investments. Verizon paid over US$20 million in underwriting fees to minority- and women-owned firms in 2021 and over US$5 million in fees to such firms in 2022 in connection with its fourth green bond.

The higher cost of energy is another impetus for decarbonisation, forcing many telcos to consider how they might accelerate their energy decarbonisation plans and efficiency investments. Almost three-quarters of telco leaders say they are investing in decarbonising their business.[4]

In Australia, a telco's direct investments in renewable energy will provide for renewable energy generation equivalent to 100% of their energy use by 2025. One strategy to help telcos be more energy efficient is consolidating real estate and retrofitting facilities. Massive office parks and commercial buildings could be sold, and leases could not be renewed. Those that remain in the network could be retrofitted to meet the business's new requirements and enhance their environmental footprint. Another oversized agenda item is expected to be to retrofit or consolidate central offices or telecom exchanges.

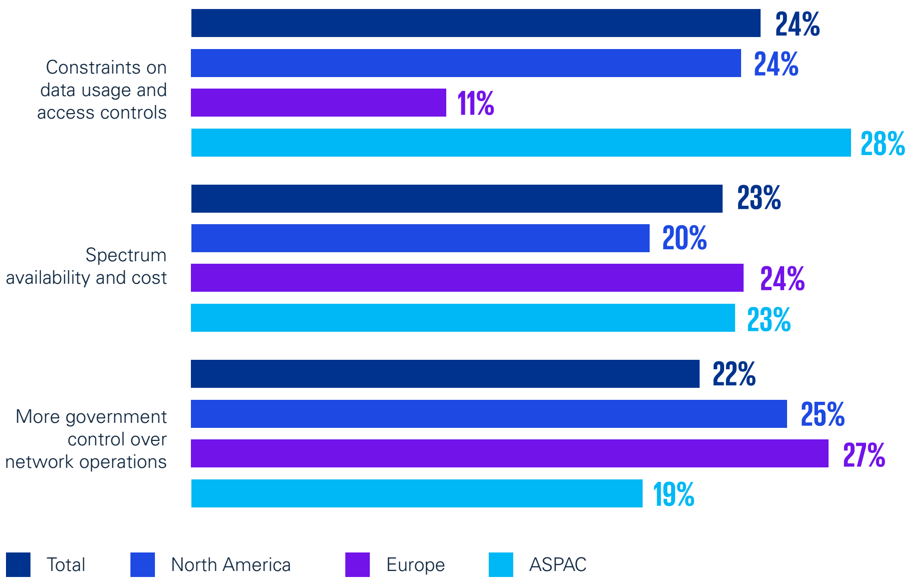
[3] KPMG 2022 CEO Outlook, KPMG International, October 2022
[4] Connected Enterprise Telco Survey 2022, a commissioned study conducted by Forrester Consulting on behalf of KPMG

7. Telcos likely can't avoid stricter regulations indefinitely

Australian telcos have invested heavily into preparing for and responding to data privacy and related policies such as Privacy Legislation Amendment, Consumer Data Rights (CDR) and Trusted Digital Identity Framework (TDIF). Similarly, global carriers have had to sink millions into complying with the General Data Protection Regulation (GDPR). As these policies evolve and mature, carriers will need to continue to establish more robust data privacy and cyber security controls across their networks, applications, and operations to maintain compliance. We are confident that cyber and data privacy will continue to receive funding and attention, particularly as local telcos respond to recent cyber events and the new Federal Government's plans to overhaul the country's cyber security posture. However, there also remains continuing uncertainty over the Australian regulatory requirements as government and regulators work to finalise their positions, and as a result, we believe telcos will take a wait and see approach. That means they will be less likely to entertain early adoption to regulatory requirements and keep policy development at bay until time conditions permit.

On the international front, an interesting development is how telcos are trying to unite globally to force big tech to begin paying their fair share for network access. In Europe, for example, telcos are encouraging regulators to establish fees that companies must pay to help support infrastructure enhancements, given their outsized use of the system. If these rules pass, some fees could also be used to fund increased privacy requirements.

Which (political) factor has the greatest potential to change the landscape for the telecommunications sector?



Base: 308 customer-centric strategy decision-makers at telecommunications organisations; 51 at organisations in North America, 55 at organisations in Europe, and 202 at organisations in ASPAC
Source: A commissioned study conducted by Forrester Consulting, April 2022

Strategic imperatives

As the signals of change put pressure on traditional telco business models, we see various strategic imperatives emerging related to each one. One of the primary challenges telco leaders face is to decide how they will address the changes in order to enhance their future growth potential.

1. Doubling down on network

The key imperative to achieving success in this business model requires telcos to double down on core connectivity and network infrastructure.

It requires sticking to what made them great and focusing on delivering connectivity at scale, speed, and high availability. We believe this is the most straightforward path. It leverages existing capital assets and infrastructure investments. It requires very little change in operating or business models. The competitive landscape is (comparatively) established. Customer expectations are well understood. The challenge is that this model is likely doomed to commoditisation and continuously squeezed margins without new growth in the network.

To be sure, part of the allure of the connectivity play is that costs can be hammered down through scale. Yet connectivity players should still find new paths to grow and increase network traffic if they hope to make the model sustainable. Some of that volume will undoubtedly come through the adoption of new technologies. The rollout of 5G (and eventually 6G) will unleash a range of new apps and Web 3.0 technologies that will help drive network traffic.

The adoption of the Internet of Things (IoT) and smart devices connected to the burgeoning virtual reality (VR) metaverse will bring exponential volume, while new connectivity technologies like LEO networks could open up new geographies and customer markets. New revenue models will also be essential. Some connectivity players are already starting to focus on becoming connectivity 'wholesalers' – essentially providing infrastructure and Connectivity as a Service (CaaS) to a range of emerging virtual and asset-light players. This is helping connectivity players lock in volumes and drive higher utilisation of their capital assets.

2. Focus on digital front-end play

This is a continuation of the Virtual Network Operator (VNO) model, which means the key strategic imperative is for telcos to focus on deploying an efficient, low cost and seamless digital front end as they seek to further sweat their network assets and drive margin and profitability across their networks. This will further enable MVNOs and additional 'asset-light' models, allowing the telco to scale up or down as volumes and demand requirements evolve, thereby helping to improve overall margins, reduce costs and drive simplicity.

For example, in Australia we've seen major corporates including Commonwealth Bank (CBA), Origin and AGL leverage their customer base as NBN Co and mobile resellers; and globally, cable providers such as Comcast, Spectrum Charter and others have launched MVNOs piggybacking on conventional carrier networks. And small MVNOs like Kore Wireless, Jasper Wireless and others have set up solution-specific MVNOs for IoT and other services. These players focus highly on customer experience, but mainly at the front end. They are customer acquisition specialists and excel at sales and marketing. Invariably, they rely heavily on connectivity wholesalers for infrastructure and hyperscalers for services and to deliver the core. With fewer assets on the balance sheet, they tend to achieve higher margins and better valuations. The challenge here is maintaining subscriber numbers in a highly competitive yet increasingly commoditised sector. The reality is that the barriers to entry in this market are low. There's a tendency for new competitors to appear, push down prices and then go bust. But the downward pressure on margins and prices remains.

Success at the digital front-end play can require a significant partnership and alliance ecosystem. It can also require a greater focus on innovative products, e.g. CBA bundling mobile plans to banking products, and improving customer experience – in some cases tailored to a specific set of use cases and patterns for targeted customer segments or verticals. And players should be much more responsive in their operations and supply chain to help ensure they meet customer expectations. Some will see this as a natural step towards becoming a fully digital technology company. And, having removed the shackles of bricks and mortar infrastructure and pivoted around the customer, this model can certainly help telco players enhance their value – both to customers and investors. However, commoditisation is also a big risk as players compete around subscriber numbers in a brutal fight to the bottom regarding prices.

3. Enhancing managed services

The managed services business model focuses on moving up the value chain, which makes it imperative to offer a complete solution set to clients, particularly business customers. But it also gives telcos a way to drive increased volume and traffic to their networks. This model could manifest in a range of innovative value propositions.

On the business-to-business side, telcos already offer solutions like managed security services and managed network services, such as Network as a Service (NaaS). Some are now tailoring these services within specific verticals to create unique solution sets centred around connectivity for healthcare, banking, insurance, manufacturing and retail. However, the organisation's ability to become a more connected and integrated operating model centred on customers, employees and partners, can help drive the success and sustainability of this model. In our view, that will be the key to uncovering new services, building better ecosystems, creating insight-driven strategies, and delivering better experiences through more digitally-enabled technology architecture. At the same time, market trends and skills shortages are driving large global organisations to rethink their networking strategies and look outside to telcos to fill the gaps.

A new trend is emerging where partners and suppliers fully own networking and provide fully managed NaaS solutions. This is happening in multiple areas related to private 5G enterprise networks in healthcare, mining and industrial manufacturing settings. That said, telcos should evolve and better position themselves to capture this new market segment. Telcos could then adapt these new service areas to deliver similarly effective customer solutions.

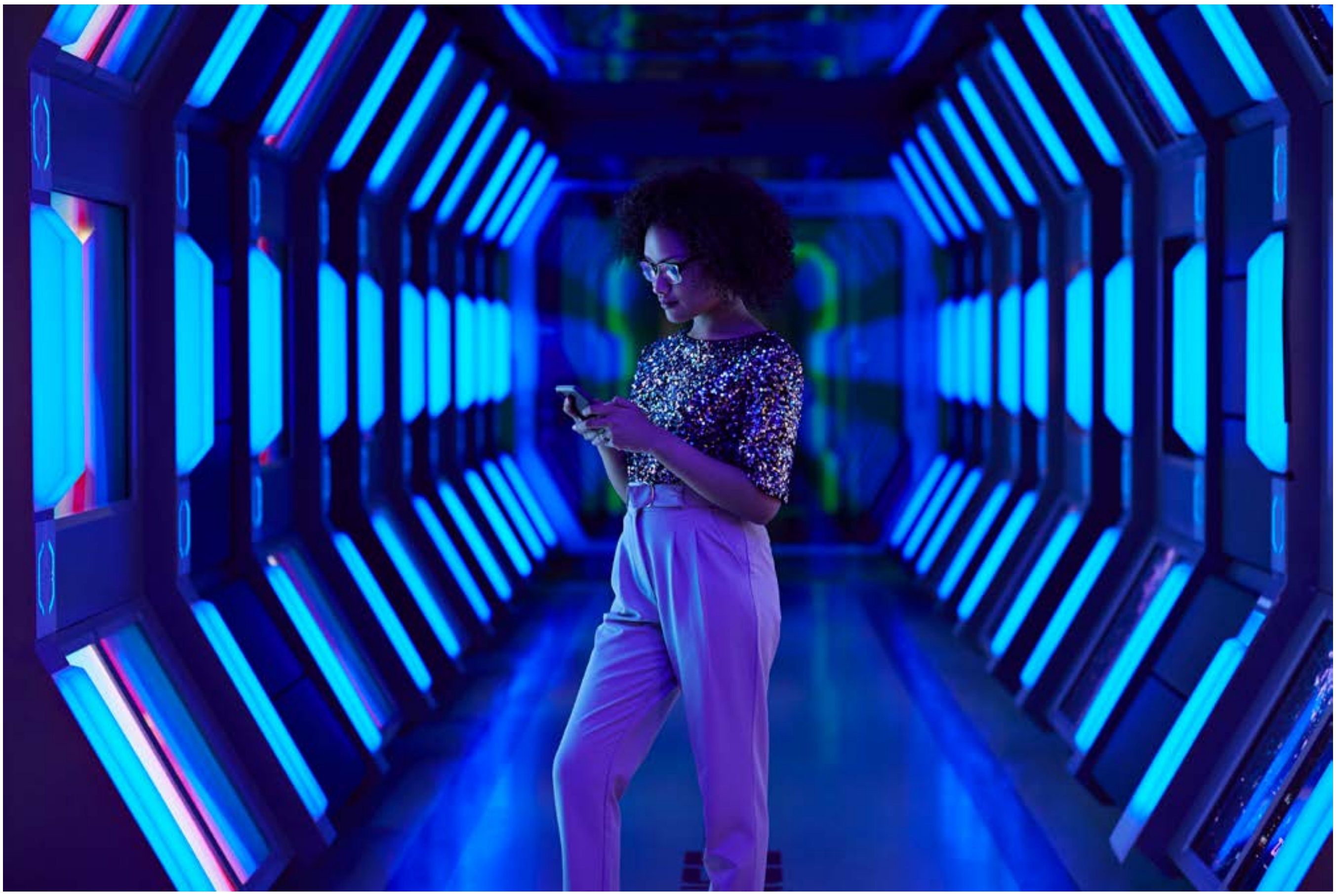
Telcos in this model could start to offer IoT packages where a certain number of devices are connected and managed (perhaps even monitored) for a flat rate, as with a collection of smart devices throughout the home. They could continue to bundle managed cyber security features into their consumer offerings and begin taking an increasing role in hosting the processes that underpin the smart home. With the emergence of gaming and other value-added, high-quality services demanded by consumers, telcos can position their tiered connectivity and quality per market demand in this area. Managed services players could enjoy better margins and higher market valuations than their pure connectivity peers. But that will likely require players to fully understand the needs and expectations of their business and consumer customers first. Then they should develop a culture and operating model that can deliver seamless, resilient, and scalable services to help meet these expectations.

We believe that the key to success in the managed services play will be the organisation's ability to deliver innovative products and services on a digitally-enabled technology architecture that enables seamless interactions and commerce. The managed services model again helps move traditional and incumbent telcos up the value chain and closer to becoming a digital techco. But it also helps bring increased competition and an overwhelming need for a more customer-centric culture and approach.

4. Making the telco-to-techco jump

For many telcos, their primary, overarching strategic imperative is to fundamentally reimagine themselves as technology companies. And many of them are trying to call themselves 'tech companies' as they try to move away from their traditional branding as network infrastructure providers.

They are leaning into that claim by launching new products and services that help them move up the technology stack, including private 5G networking systems in hospitals and innovative city services. But it's not likely they'll accomplish this without partners like hyperscalers or other industry-based application solution providers. Essentially, telcos are bundling networks and applications/solutions from partners to help them get to that coveted tech company branding. This is causing the lines to become increasingly blurred as hyperscalers evolve their innovation strategies and advance their deep-pocket agendas. At the same time, legacy telcos embrace a too-big-to-fail mindset.



Client case studies

01. CASE STUDY

Enhancing the finance operating model

GLOBAL TELECOMMUNICATIONS PROVIDER

The global telco environment has changed. This leading US-based provider knew it needed to sharpen its focus if it wanted to remain competitive. They wanted to standardise their processes, helping their organisation and service delivery, enable new tech solutions, and better manage their data.

Yet they were being hampered by a lack of integration and coordination across their strategic initiatives. And finance had identified several areas of deficiency in their organisational structure and service delivery model. A practical blueprint for the future state of the organisation was needed.

Professionals from KPMG in the US started by assessing the requirements, expected outcomes, and high level design decisions. A gap analysis then identified a portfolio of prioritised initiatives based on benefit and complexity to implement. Cross-functional dependencies and existing transformation initiatives were also considered. This led to developing a robust 3- to 5-year roadmap, supported by a rolling 12-month integrated plan to help ensure the company achieves its desired outcomes.

KPMG professionals identified more than 100 actionable, quick-win opportunities that helped deliver significant savings in the near term. The team helped reduce labour costs, improve strategic business partnering and ensure consistent service across the organisation. Supported by detailed future-state process documentation and governance frameworks, our team showed the organisation how it could achieve its end-state vision, tracing its objectives to its original pain points and requirements.

The team helped reduce labour costs, improve strategic business partnering and ensure consistent service across the organisation.

02. CASE STUDY

Scaling up to capture the market

GLOBAL TELECOMMUNICATIONS PROVIDER

This major US-based IoT player wanted to move quickly to expand into the global market. Customers were asking for a bigger footprint, more consistent services, and a more seamless experience.

Leadership recognised a massive revenue opportunity in providing global IoT connectivity services. But the existing network was locally focused and not scalable to the worldwide market. Moreover, the organisation’s billing and operations centres did not meet local regulatory requirements in many markets. A global connectivity strategy would be required to meet their goals and objectives.

KPMG in the US worked closely with the organisation’s leadership to develop a massive US$10 billion target revenue business case that included US$622 million in capital investments. KPMG professionals engaged leaders from across the organisation – IoT network, customer care, product development, legal and regulatory, among others – to design a new operating model, including identifying global IoT network and billing solution ecosystem partners, as well as an operational roadmap to realise the business case objectives. The US$10 billion revenue business case and the capital investment portfolio were ultimately approved to support the global expansion.

The organisation inked a new global IoT network partnership that promised to deliver around US$200 million in savings in the first five years. New products to support end-to-end logistics and edge computing solutions have been launched. And a new care operations target operating model has been adopted to support global clients.

The organisation inked a new global IoT network partnership that promised to deliver around US$200 million in savings in the first five years.

03. CASE STUDY

Turning techco

REGIONAL TELECOMMUNICATIONS PROVIDER

When one of Asia's leading telco providers decided to get into the platform business, they turned to KPMG in Singapore to help them articulate their strategy.

The company already boasted world-class internal capabilities that could quickly be adapted to develop new external service offerings and internal value propositions. The organisation focused on Analytics as a Service (AaaS) as a pathway to delivering a market-facing CaaS offering.

KPMG professionals worked closely with company leadership to assess the organisation's current AaaS capability and define a strategic blueprint. Capability gaps were identified. And a broader action plan was developed to articulate key steps and design considerations to meet the opportunity.

KPMG professionals also helped the organisation identify internal use cases for AaaS and to communicate the value potential around the new CaaS services. The organisation is now continuing to evolve its internal AaaS capability and maturity to meet ongoing customer needs.

The KPMG team is helping the organisation conduct continuous maturity evaluations and improvements to its Agile AaaS service delivery model. At the same time, KPMG professionals are exploring ways to work with the partner ecosystem to better monetise the CaaS opportunity.

A broader action plan was developed to articulate key steps and design considerations to meet the opportunity.

Making it happen

KPMG Connected Enterprise for telco is an insight-led, client-centric approach to digital transformation.

KEEP CLOSE TO WHAT YOUR CONSUMERS WANT	The ability to think 'outside-in' is key in building a customer-centric business. Ensure you know and act on what your consumers want, need and value; keep continually looking up and outside of the organisation and industry to help ensure alignment with some of the best consumer experiences in day-to-day life.
DO THINGS IN AN AGILE WAY	Break changes down into specific steps, sequence and then implement them. Keep standing back to assess whether the change has been successful in a 'test-and-learn' approach. It's about a series of small changes that together can add up to a significant and impactful transformation.
BUILD IN RESILIENCE	Take on today's challenges with resilience and determination, and be prepared to expect the unexpected, fail fast and learn along the way. By developing a connected enterprise architecture, you will find that your ability to change course at speed can be significantly enhanced.
KEEP IT HUMAN	While embedding new technologies – such as AI and automation – is likely to be critical in developing more seamless interactions for consumers, remember that you also need to keep the experience 'real'. Many great organisations remain defined by the quality and passion of their people and their sense of purpose.
MAKE USE OF NEW TECHNOLOGIES	Continually look at what new technologies are becoming available that could help you serve consumers better or connect your business more seamlessly. Experiment with the opportunities available through cloud, machine learning and advances in data science.

Learn more about KPMG Connected Enterprise here.

KPMG Australia telco sector advisory

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