

ECOSYSTEM PREDICTS

The Top 5 Trends for Telecommunications in 2022

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Darian Bird

Principal Advisor,
Cloud, IT Services,
Telecommunications



Matt Walker

Principal Advisor,
Telecommunications Networks
and Data Centres

Introduction

2020 was a watershed year for the Telecom industry as it acted as the backbone for the rapid changes in work practices, communication and entertainment. This has led telecom providers to embark on their own digital transformation journeys.

The challenges continue for the industry, especially as 5G has not yet delivered on the early promises. Telecom operators today are having to provide cutting-edge services and top-notch customer experience as they continue to be challenged by new market entrants and strong regulatory pressures.

KEY BUSINESS PRIORITIES FOR TELECOM IN 2022



**Innovation/
Improvement
of Products & Services**



**Improving
customer
experience**



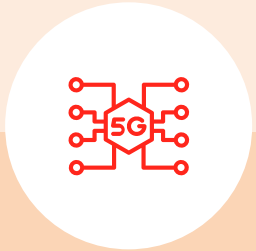
**Compliance with
Regulations**



**Costs
Optimisation**



Ecosystem Rates the Telecom & Mobility Predicts for 2021



The 5G Divide - Reality for Some and Hype for Others

The prolonged process of spectrum auctions, network upgrades, and device development makes 5G a multi-year development. It remained a hype for many markets.



Telecom Operators Will Accelerate Digital Transformation

Telecom operators have started to invest in automation technologies and IoT deployments at the Edge – but the focus has been on mergers and other internal measures such as downsizing.



Remote Working Will Transform Telecommunications Networks

Nearly two years after COVID-19 became widespread, work-from-home and remote learning are still mainstream, fundamentally changing network traffic patterns.



SASE Will Grow - and Sprawl

Secure access service edge (SASE), combining SD-WAN and security in a cloud-based environment, did see some growth in adoption in 2021. Expect to see a wider adoption of SASE strategies in 2022.



OTT Players Will Continue their Expansion in the Telecom Space

Not only have the 'web' companies rounded out their OTT comms services, but they have also entered the mobile infrastructure space, providing private 5G to enterprises and open RAN services to smaller operators.



#1 Telecom Providers Will Rethink the Future as 5G Upside Proves Underwhelming

Telecom providers deploying 5G are clearly seeing a revenue uptick related to sales of 5G-capable devices. This also happened with 4G. Looking back, device and app companies captured much of the revenue upside related to deployment of 4G networks. This is a risk with 5G as well. As telecom providers deploy stand-alone 5G networks and roll out some of the more sophisticated functionalities that comes with 5G, they will need to stay focused on deploying new services that deliver them growth. That will not be easy and will require collaboration with both their vendors and the adjacent webscale sector of operators. Cloud providers like AWS, Microsoft Azure, and Google, are partnering aggressively with the entire telecom value chain, and would be happy to strip the sector of its growth potential.

Moreover, telecom providers will need to attack their cost base even more aggressively than in past years. Some of the areas that will need rethinking are the network assets they need to own, whether mergers would yield synergies and if they should exit unprofitable markets. They will continue to downsize their labour force (responsible for up to 20-25% or more of OpEx) and invest in automation technologies to cope with fewer staff. They will also push regulators harder for cost sharing and other forms of relief, as we are already seeing in Europe.

Telecom providers have created a hype around 5G – they may not be in the best position to leverage that hype now. This will require them to re-think their future strategies, including costs optimisation.



Matt Walker

PRINCIPAL ADVISOR,
TELECOMMUNICATIONS NETWORKS
AND DATA CENTRES



#2 Telecom Providers and Hyperscalers Find a New Battleground in 5G

Telecom providers have spent years manoeuvring to find their place in the cloud ecosystem, pushed by the hyperscalers to focus on connectivity and services at the Edge. AWS, Microsoft, and Google are now cosying up to them, simultaneously viewing them as clients, partners, and competitors in 5G.

Earlier this year, DISH, with ambitions to be the fourth major carrier in the US, revealed that it will rely on AWS to provide the supporting infrastructure for its open-RAN 5G network. The hyperscalers have also launched offerings to embed their cloud infrastructure directly in the 5G networks of major operators, like SK Telecom, Singtel, and Vodafone to deliver low-latency cloud services. Most recently however, AWS and Microsoft have launched private 5G services for enterprises looking to deploy IoT devices on-site. While this can be rolled out in conjunction with a carrier as a partner, it can also bypass them altogether. This jostling for position in 5G is all happening, while Google helps the likes of Telecom Italia, Telenor, and T-Systems to cloudify their operations.



Telecom providers and the hyperscalers have realised they need each other to deliver low-latency computing at the network edge for IoT applications. Enterprises have often looked to telecom providers to provide a local, private solution but the hyperscalers want a larger slice of the pie.



Darian Bird

PRINCIPAL ADVISOR,
CLOUD, IT SERVICES,
TELECOMMUNICATIONS



#3 The CNNO Market will Continue to Consolidate and Integrate Across Infrastructure Types

Traditionally, carrier-neutral network operators (CNNOs) have focused on one of three types of assets: towers, data centres or bandwidth (fibre). These dividing lines have always been imperfect with some ownership across asset category. Crossover has come from M&As, incremental expansion of business models, telecom providers spinning off multiple types of infrastructure at once, and private equity investments across sector boundaries.

Looking forward, the CNNO market will be driven by entities with holdings across all three types of infrastructure. Publicly held and private equity-controlled CNNOs will seek to offer integrated “digital infrastructure” to communications network operators, with a focus on the telecom and webscale markets as their primary customers.

CNNOs face multiple challenges today: high levels of debt, weak cash flows, declining tenancy ratios in the tower sector, and the emergence of a need for data centre and fibre buildouts at the network’s edge. There will continue to be niche CNNOs focused on specific types of asset, but the economic logic for a more integrated offering is compelling. While M&As will continue, there will be significant and new investments in network expansion, especially in the data centre and fibre space.

There will be challenges faced by the integrated CNNO – the skillsets, software, and supplier relationships involved in building and operating towers, data centres and fibre networks vary widely. However, customer needs will drive this integration, along with the realities of scale economics.



Matt Walker

PRINCIPAL ADVISOR,
TELECOMMUNICATIONS NETWORKS
AND DATA CENTRES



#4 Climate Change and Sustainability Will Be Integral to C-Suite Discussion

While data centres that anchor webscale networks are notoriously big consumers of energy, they have been able to attack costs and deploy sustainable solutions from the start. Telecom providers have older networks, with 1000s or 100s of thousands of sites to manage, and several generations of technology in the network. They also have existing relationships with power suppliers that cannot be replaced overnight. Moreover, with deployment of 5G radio networks, their energy costs are rising at a time when telecoms must keep all costs in check.

In 2022, telecom providers will attack their energy costs and aim to boost their green credentials more aggressively than in the past. The recent COP26 conference in Scotland has raised the stakes. The telecom CFO may be concerned mainly with the direct cost of energy consumption, which is already a big challenge. The CEO will be concerned with the company's overall carbon footprint, and how it can work with customers and partners to address climate change. Telecom providers will also explore ways to help customers reduce energy costs and migrate to green energy sources – and make money while doing so.

Initiatives such as Smart building, telematics, and smart grid solutions will find a receptive audience and potential new revenue streams for the telecom industry.



Matt Walker

PRINCIPAL ADVISOR,
TELECOMMUNICATIONS NETWORKS
AND DATA CENTRES



#5 **Elon Musk's Starlink Venture Will Begin to Impact Rural Broadband Markets**

In recent years, more than 10 low earth orbit (LEO) satellite projects have surfaced, among which SpaceX's Starlink has a clear first-mover advantage. Starlink is by far the largest network in the orbit, even though full commercial service has not yet begun. Despite service downtimes during the initial beta-testing phase, Starlink's satellite broadband service managed to provide a comparable experience to fixed broadband service. As more Starlink satellites join the orbit, the occasional downtimes will reduce significantly, also improving the latency and speed. And if Elon Musk is to be believed, Starlink's speed will double to 300 Mbps by the end of this year, from the current promised speeds of 50-150 Mbps range.

Starlink is far from the only game in town, and Elon Musk is known to exaggerate. Yet the company is making waves in a number of broadband markets around the globe, most recently in India. A country with a vast digital divide where rural areas have limited broadband availability, would clearly benefit from a venture like Starlink, or one of the many other rising LEO players: OneWeb, Amazon's Kuiper, and Telesat's Lightspeed, for instance. We can expect telecom providers to be worried about the LEO players in 2022, as network capabilities improve.

Telecom providers will aim to circumvent new competition in their traditional markets through partnerships and also by lobbying regulators behind the scenes.



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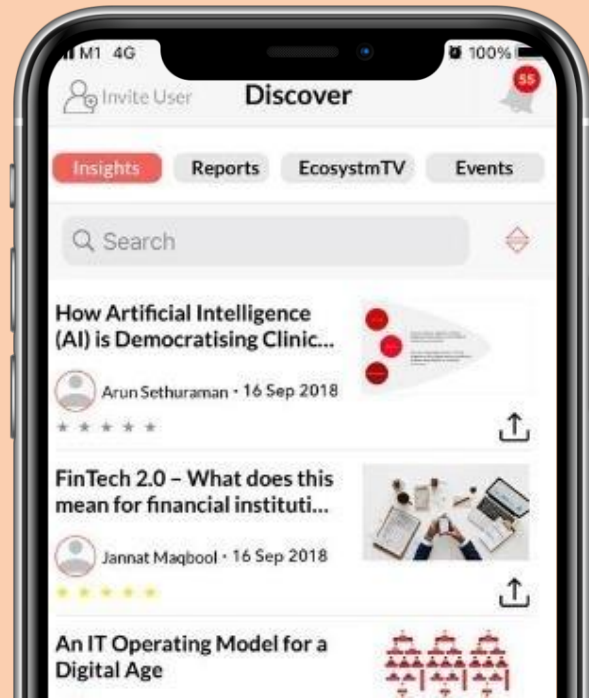
**PRINCIPAL ADVISOR,
TELECOMMUNICATIONS NETWORKS
AND DATA CENTRES**

Engage our Analysts

For more information, visit:

www.ecosystem360.com

info@ecosystem360.com



Ashok Kumar

Principal Advisor,
IoT, Mobility



Claus Mortensen

Principal Analyst,
DX & Cloud



Darian Bird

Principal Advisor,
Cloud & AI



Matt Walker

Principal Analyst,
Telecommunications
Networks and Data Centres



Tim Sheedy

Principal Advisor,
Cloud & AI