CSPs' readiness to reap the benefits of 5G – a year on

RESEARCHED BY

OMDIA

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Beyond Now

One year on: most of the enterprise 5G opportunity is still untapped by CSPs

In 2020, our study Industries and enterprises are ready to reap the benefits of 5G found that 72.3% of telcos already believed that most 5G revenues would be derived from B2B, B2B2C, or government/smart city opportunities.

But it also found that only 21% of overall enterprise-related deployments saw CSPs leading the 5G projects. One year ago, it looked like the enterprise opportunity could very well slip through the fingers of CSPs.

We concluded that the right approach to the 5G enterprise opportunity is a business-first, vertical solution-first, partner ecosystem-centric strategy. That is a model in which CSPs must master joint go-to-market with partners and co-creation with customers.

Now, one year on, we note that CSPs are no longer trapped in their thinking, but is it just a change in mentality, or have CSPs implemented the right 5G strategies? Are these working? Do they put partners and customers at the centre of their 5G strategy? Is their ecosystem strategy fit for purpose? We reviewed the data and asked their partners and concluded that there is more to be done.

"CSPs are no longer trapped in their thinking, but their partners believe there is more to be done."

5G enterprise opportunity, one year ago:

Enterprise:
71%
of enterprises believed that 5G networks will have a big impact on their businesses
36%
of enterprises believed that 5G networks are transformational

CSPs:
72.3%
of CSPs believed that 5G revenue will come from B2B/B2B2X

The Market:
21%
of deployments were CSP led

CSPs recognize the need for a multi-technology, omni-partner, solution-oriented approach for 5G enterprise

This thinking has evolved – CSPs now realize that solution-oriented production models also require them to master several technologies and to establish partnership options to complement 5G networks.

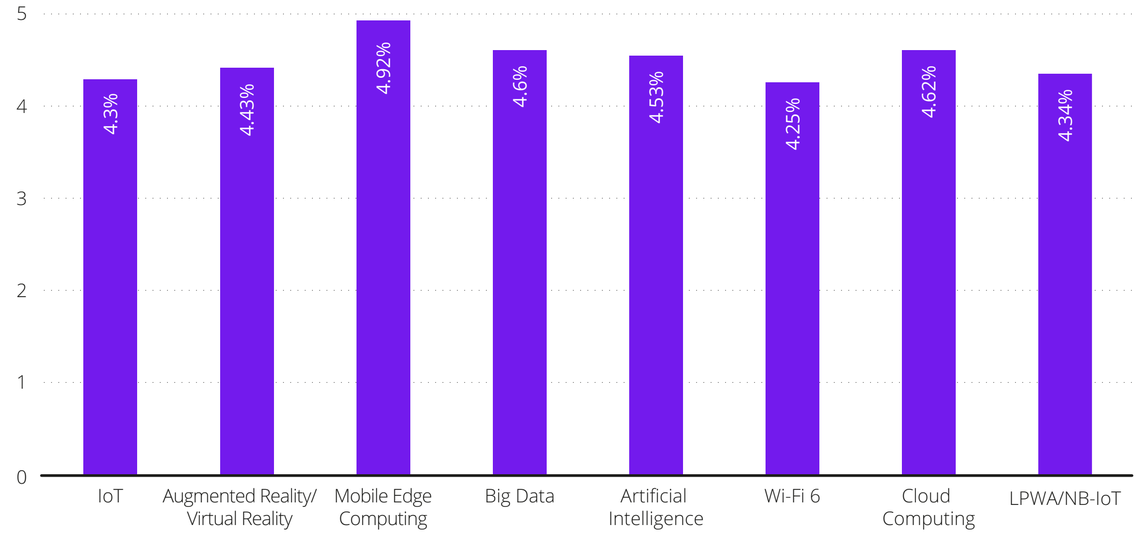
To address the enterprise demand, all relevant technologies need to be considered for inclusion in CSPs' toolkits. These options include the use of cloud computing and edge, and equally crucial artificial intelligence (AI) and augmented reality (AR).

Most importantly, CSPs now recognize that unlicensed technologies such as Wi-Fi 6 should be included in the mix of available options when embarking on a solution-oriented project – before, this was seen as a pure competitor to 5G.

CSPs' ambition is to facilitate the creation of enterprise solutions, regardless of the origin of each individual application. For example, the cloud ecosystem and its developers are already well established around AWS and Microsoft, while Google has advanced big data capabilities. The challenge for CSPs is how to collaborate with these ecosystems and how to develop in-house capabilities to work and manage these relationships with multiple partners and multiple technologies.

Some CSPs find it more fruitful to join an existing ecosystem than create a new one or replicate existing ones. All options are viable if CSPs equip themselves with the infrastructure and mindset that helps them join the dots and build the right solutions.

Which of the following technologies will complement and assist execution of your organization's 5G strategy? (Rank relevance on a scale of 1 to 8)

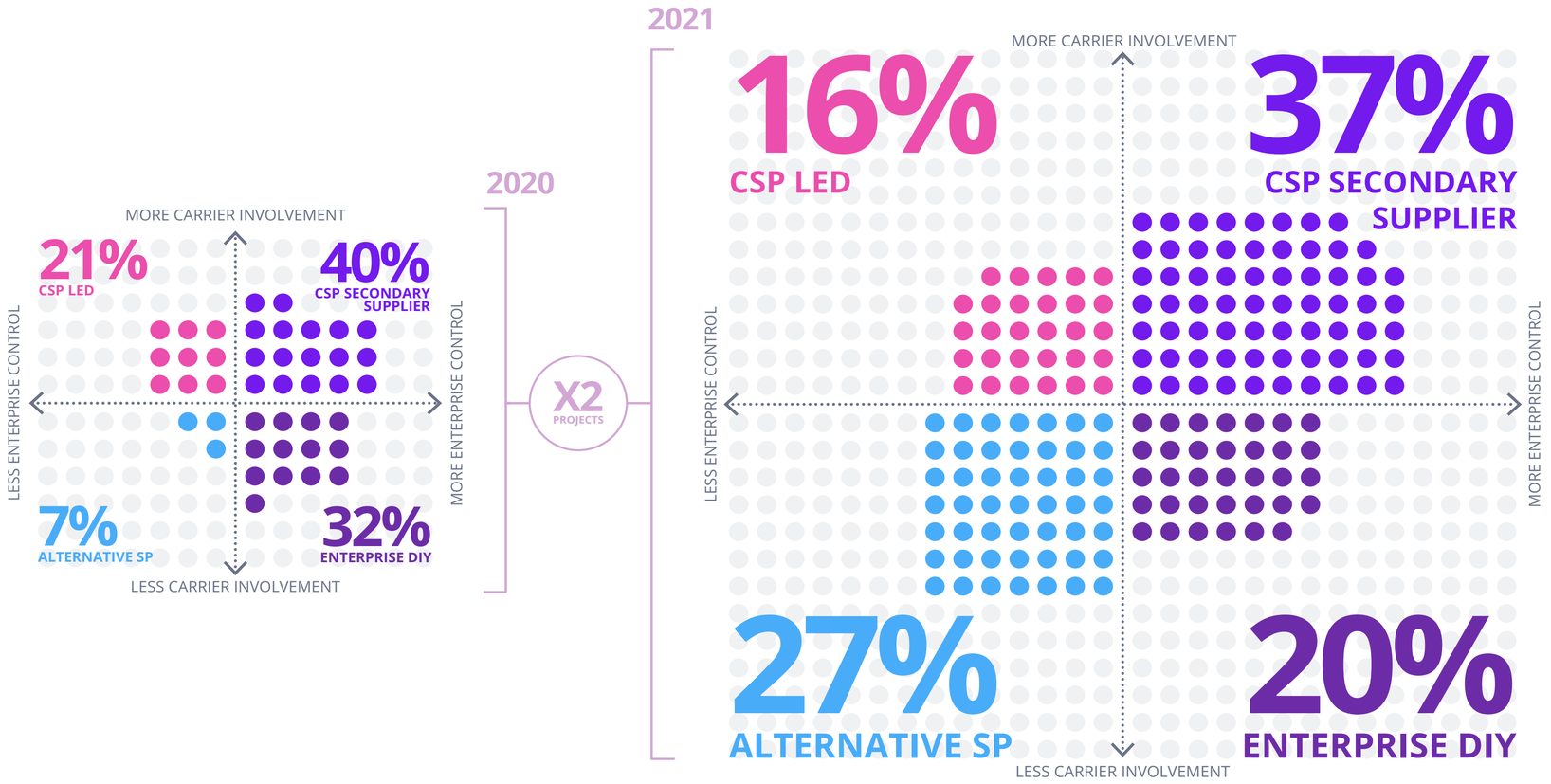


SOURCE: OMDIA 5G WORLD: GLOBAL 5G INSIGHTS SURVEY 2021, N=392

"Create your own or join an existing one. All options are valid as long as it's an ecosystem-first strategy."

But CSPs are still too slow to react to new models of 5G provision

No. of 5G projects in the market 2020 vs. 2021 comparison



SOURCE: OMDIA

According to Omdia's Enterprise 5G Innovation Tracker, the number of enterprise 5G projects has doubled in just one year.

CSPs understand the opportunity for providing private networks and 5G solutions to the enterprise, yet they are still slow to act on it because of internal issues and a continuing focus on "consumer first" as their 5G strategy.

New emerging models reveal a complex reality and a hidden opportunity

The CSP-led model slipped to 16% of enterprise 5G project deals. While CSP activities grew in the market, their efforts were outpaced by smaller players such as private networks specialists, which were already active in the market.

Enterprise DIY has decreased, now representing 20% of all deals, and while there will always be a number of enterprises that are willing to take full ownership and responsibility for their 5G solution, it is clear that this is not their first priority as most enterprises don't have the resources or the knowledge to do everything in-house and will therefore look for help.

CSPs as secondary suppliers decreased slightly to 37%. Despite this decrease, this model certainly represents a significant opportunity for CSPs, because being involved even as a secondary player means they are still part of the project, and they can drive upsell of enterprise services such as security or integration.

Alternative service providers is the fastest-growing 5G provider model, jumping from 7% to 27%. These providers are often local or specialist players whose main business is delivering private networks to local enterprises and whose strength resides in quickly adapting and shifting resources to target new opportunities. They were fast to identify and react to spectrum developments and opportunities. Alternative service provider Edzcom, for example, uses a high-touch approach and has a precise vertical focus and clear market segmentation. Overall, its strategy adapts to what the customer wants – it has a deeper vertical understanding and it does not need to balance diverse company priorities like the larger players do.

WHAT SHOULD CSPs LEARN?

CSPs underestimated the relevance of spectrum liberalization, the enterprise demand for better control and security of its data and processes, and how much time they needed to build specific strategies, solutions, and portfolios. Consequently, 2020 became a transition year for CSPs; **they developed new strategies but failed to seize a head start in the market.**

The growth of alternative service providers means a healthy market that can be won through speed and focus – segmenting the market into key targets, identifying only a few verticals, and providing what the enterprise wants. **The importance of agility is also a key lesson that CSPs should take on board.** With CSPs failing in the past to capture emerging opportunities at the early stage of their development they may need to create a more flexible organizational structure, possibly via a separate unit, in order to better capitalize on fast-growing markets.

The 5G enterprise game is far from over

Several global and regional CSPs have now announced clear strategies to target this opportunity:

Between 2020 and 2021 CSPs started to fully realize the importance and urgency of the enterprise 5G market, and this resulted in an increasing number of CSP-driven 5G enterprise new service launches. The likes of Verizon, Orange Business Services, Telia, Rogers, and many more joined Vodafone, Deutsche Telekom, and Telefónica in announcing private 5G multi-access edge (MEC), campus LTE and 5G networks, and enterprise 5G offerings.

- CSPs are bringing new offerings to the enterprise, covering all different scenarios from dedicated connectivity to public network-based wide area solutions. This is a key differentiation as virtually no other company can offer such a broad portfolio covering wide needs via an already available public network.
- CSPs are working to build 5G enterprise propositions and bringing partners together to create and validate new solutions. Orange, Vodafone, Verizon, Telia, Telefónica, and TIM are a few examples of CSPs that have created 5G labs.
- CSPs have started to push MEC as part of their enterprise strategy, further complementing their private network offerings and addressing issues such as data security and latency for critical applications. This strategic push has also taken the form of partnerships with hyperscalers, with examples including Verizon and AWS, and Telus and Google Cloud.

With strategies, products, and alliances with technology partners in place, it is now time for CSPs to deliver growing results in the enterprise 5G market and to show their ability to understand different vertical markets and be more than just a connectivity player.

"CSPs have technological assets and expertise. To bring these to life and monetize them in the 5G world, they will need to form relationships with new partners and think creatively about what type of partner organization will help them address the enterprise opportunity. Openness to new partnerships is critical."

AT&T is offering enterprise 5G solutions to support branch and mobile use cases, leveraging Cradlepoint devices and services to deliver wireless wide area network connectivity. As part of the offering, the company provides the AT&T Managed Wireless WAN service.

Orange is driving 5G co-innovation of new use cases in the Port of Antwerp, where the CSP deployed a 5G SA network. Partners include Borealis, Covestro, BASF, Deloitte, and other industrial players. Borealis used 5G to connect plants' equipment to AI-powered quality check systems hosted in the cloud. Covestro used 5G to modernize its workforce, equipping it with a tablet/smart glasses that are used to retrieve technical data including 3D models of the installation to be serviced. BASF used the network to support mission-critical push-to-X communication.

The value of 5G is greater than the network

CSPs must highlight what differentiators they can bring to enterprise in the context of their 5G offerings

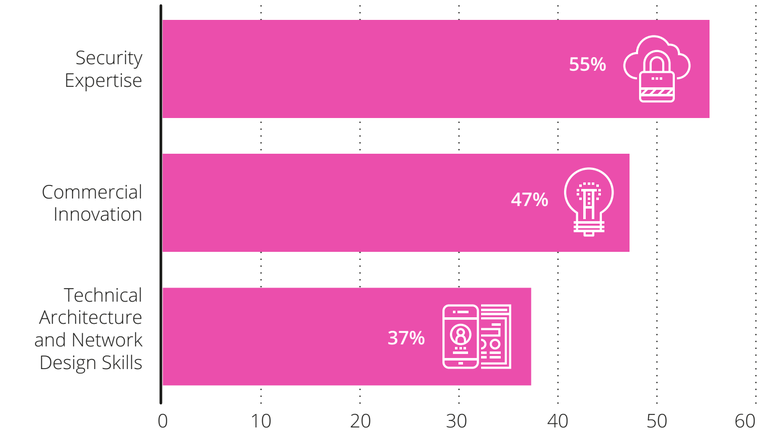
5G network design is only one component of enterprise digitization. CSPs need to offer additional value to become preferred partners.

Security: Security is the cornerstone of any activity or any project within an enterprise digitization journey, and with enterprise 5G becoming an integral part of this journey, security expertise is emerging as a must-have skill for CSPs. This is an area already identified by some CSPs, including Orange and Verizon whose investments in this domain also include M&A.

Commercial innovation: Commercial innovation is an area where CSPs can leverage stronger financial muscle than alternative and smaller providers, starting with flexibility to meet the price sensitivity of enterprises and offering a wider and more flexible array of business models that include opex, pay-as-you-grow, as-a-service, full managed services, and cloud-like contracts. CSPs can innovate, experiment, and tailor business models to meet specific enterprise requirements. While doing so, CSPs should also differentiate themselves from smaller providers by highlighting their long-term commitment to the enterprise market as well as their stability and their ability to scale projects and solutions. These strengths will make CSPs ideal partners for multinational enterprises with complex and cross-countries needs.

Technical architecture and network design skill: This is the core competency and expertise of CSPs, but in addition to this, CSPs also have the structures and workforce in place to operate and maintain enterprise 5G solutions. Technical and design skills, coupled with the ability to manage the network and with additional capabilities, will be a tempting proposition for enterprises that do not have the will or resources to do everything in-house.

Whats are the most important attributes when choosing an enterprise 5G partner?



SOURCE: OMDIA

"It's clear the enterprise 5G market is not just about connectivity. CSPs need to prove their prowess in security, network architecture, and design and demonstrate commercial creativity to win the trust of enterprises to do more."

The market is being shaped by partnerships and the vertical context

CSPs are joining in and forming partnerships

VERTICAL FOCUS

AT&T is partnering with Accenture to target the energy market with private networks and enterprise 5G. The CSP is partnering with one of the leading SIs and consulting organizations in a move that enables the CSP to leverage in-depth vertical and account knowledge in the energy space. At the same time, it brings connectivity and private networks expertise, which enables end customers to use private networks, replacing multiple coexisting alternative connectivity options such as Wi-Fi and others.

VERTICAL FOCUS

Telekom Slovenije is partnering with Iskratel to develop enterprise 5G solutions targeting the industry 4.0 opportunity. The companies can leverage each other's strength in connectivity and vertical expertise and will focus on smart manufacturing, aiming to build an open ecosystem of partners. The partnership is relevant, having a clear vertical focus in targeting the industrial space. And furthermore, Telekom Slovenije aims to build similar partnerships for other vertical markets.

PARTNERSHIP FOCUS

Vodafone has been collaborating with partners to test and develop new 5G solutions. In the UK, the CSP tested how 5G can support gaming and holographic calls as well as drones. Vodafone also turned Milan into a city-wide testbed where it worked with 38 partners including ABB, AWS, Exprivia, and others to develop 50 use cases from connected ambulances to robotics and wearables. The CSP is leveraging partners to test new solutions.

REGIONAL FOCUS

NTT and partners established the 5G Global Enterprise solution Consortium (5GEC) to bring enterprise 5G to Thailand and other countries in the Asia Pacific region, starting with verticals such as manufacturing. Partners include ACTIVIO Inc., Fujitsu, NEC, and others. The consortium has a clear focus: targeting an early-stage market and identifying enterprise 5G as a means of supporting enterprises' digital transformation with a one-stop delivery of private 5G systems and related managed services.

"Regardless of the size of the country, enterprises and SMEs demand complete solutions, based on a combination of technologies and partnerships, to address specific industry problems. CSPs must deliver on what the enterprise wants with purpose-led partnerships."

The market is being shaped by partnerships and the vertical context

SELECTED VERTICAL APPLICATIONS AND WHY THEY NEED ENTERPRISE 5G

Manufacturing

Video-based quality control, with a deployment from Huawei, China Mobile, and Haier, the application needs high uplink performances which cannot be delivered by competing technologies.

Energy and mining

AGVs with a deployment from Nokia, Telefonica, and Vale, the application needs low latency and predictable connectivity. Wi-Fi falls short in areas such as handover, mobility, coverage, and scalability.

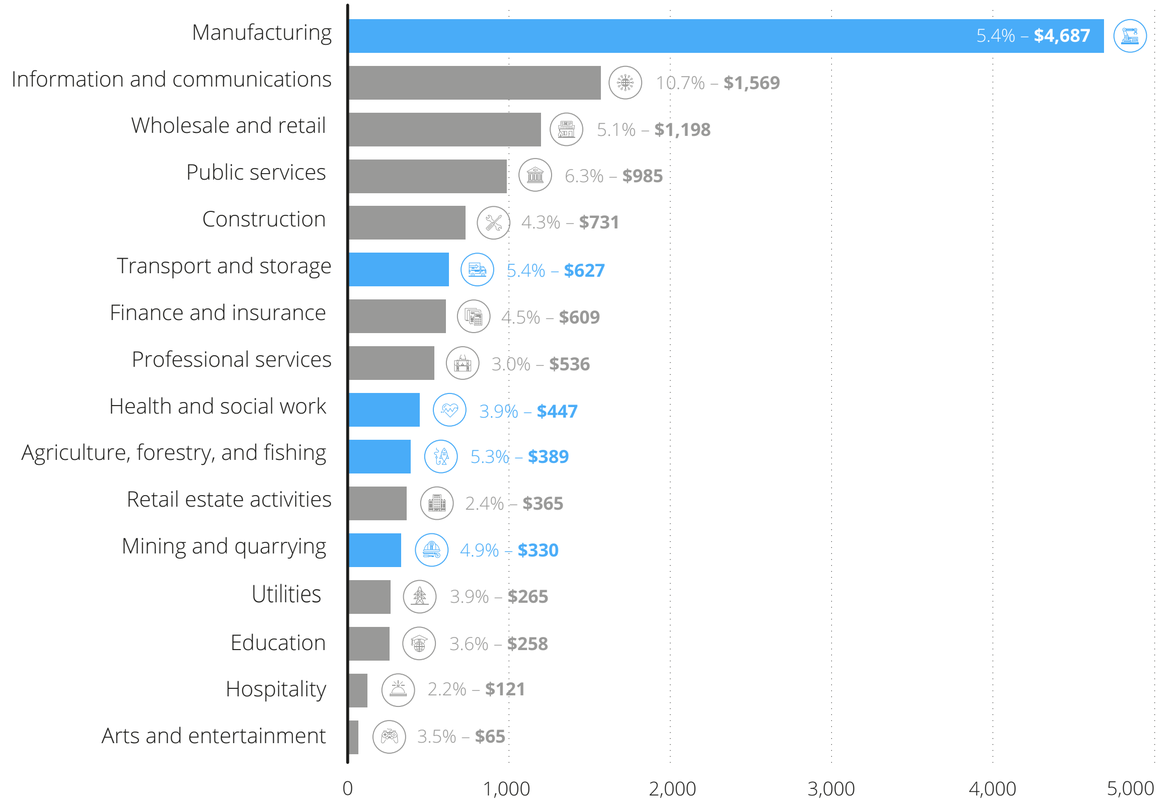
Transport and logistics

Remotely controlled cranes with a deployment from Three UK, Cambridge University, Blue Mesh Solutions, Ericsson, and Siemens for the port of Felixstowe – the application needs features such as low latency and high bandwidth.

Agriculture

Drones were connected to 5G by Claro Brazil and Huawei in the state of Goiás (Brazil) for monitoring and administering chemicals and pesticides in a soybean. Farm drones need the low latency and high bandwidth of 5G.

Value attributable to 5G by industry ($bn and % of total)



CSPs' activities show their intent to leverage strengths such as regulatory compliance and local knowledge and presence

Agriculture: A key strength of CSPs in serving the agriculture vertical is the relevance of having an understanding of local needs and dynamics and a local footprint. Small and medium agriculture firms will look for a trusted local service provider for their digitization need.

Manufacturing: This is the largest vertical industry by number of sites and the one that could be most heavily disrupted by 5G. A key strength for CSPs serving the manufacturing industry is their expertise in cellular and 5G – a technology that is new to the industry and is not well known to enterprises and industrial vendors.

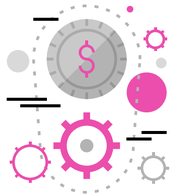
Transport and logistics: The needs of this industry are often tied to local trends of sustainability, smart cities, and green agendas. Therefore, one of the key strengths for CSPs is their understanding of local regulations and engagement with local stakeholders.

Healthcare: COVID-19 has accelerated the industry need for digitization and automation whilst also changing the regulatory attitude and highlighting the critical importance of the sector. CSPs have experience in supporting critical industries, and their strengths in areas such as data security and compliance perfectly match the requirements of the industry.

Telcos' involvement in the enterprise 5G opportunity (% of all activity that saw CSP involvement in each vertical)	
Agriculture	**67%**
Manufacturing	**52%**
Transportation and logistics	**45%**
Healthcare	**44%**
Energy and utilities	38%
Financial, insurance, and real estate	33%
Education	21%
Public administration	20%

The voice of 5G ecosystem partners

Omdia undertook targeted desk research and conducted several interview briefings with companies active in the 5G enterprise space to properly represent and analyze the partners' view of the 5G B2B ecosystem and the role of CSPs. Interviewed companies were selected from different backgrounds and included categories such as network vendors and system integrators (SIs) to provide a comprehensive view of partners.

	 System integrators	 Global vendors	 Vendor specialists (For example O-RAN)
What is the main challenge of the enterprise?	Education, understanding ROI	Education, solution complexity	Education, solution complexity
How do enterprises see CSPs?	**Weakness:** Don't speak the enterprise language, still learning new skills **Strength:** 5G technology skills	**Weakness:** Are yet to focus all the required resources on this market **Strength:** 5G technology skills	**Weakness:** Lack of open collaboration and support **Strength:** Size and company stability
What is the role of CSPs?	Orchestrator of enterprise 5G ecosystem, end-to-end provider	Orchestrator of enterprise 5G ecosystem	Orchestrator of enterprise 5G ecosystem, end-to-end provider
What is the role of CSPs?	Accelerate their cultural transformation and skill development	Improve openness and collaboration, with better engagement and all-round support of partners and enterprises	Improve openness and collaboration, relinquish control to partners or customers

"All partner types expect CSPs to take the lead on orchestrating different services, technologies, and capabilities. CSPs must think of themselves as enterprise 5G orchestrators.

The voice of 5G ecosystem partners

WHAT IS THE MAIN CHALLENGE FOR THE ENTERPRISE?

Education and the lack of understanding of a complex 5G world is still the single biggest challenge faced by enterprises.

For one large network vendor, this means that 5G complexity is affecting network management. Meanwhile, enterprises also lack the required level of education to understand which use cases should be delivered by 5G.

A specialist network vendor also echoed the challenge of complex 5G B2B solutions – enterprises struggle to understand what technology is right for them and which solution is the right one to adopt.

For a large SI, enterprises are still struggling to understand and identify the ROI for enterprise 5G and this is currently resulting in a large number of proofs of concept (POCs).

WHAT ARE THE CSPs' WEAKNESSES IN THE EYES OF THE ENTERPRISE?

It is not clear if CSPs are really ready to commit and to put time and money into helping enterprises – from understanding the technology, to implementation and continuous support.

According to a specialist network vendor, CSPs are still perceived as unwilling to share knowledge or to have a deep partnership with the enterprise and guide it through its transformation.

CSPs are still viewed as providers of services for the consumer market: they are sellers of data and voice.

According to a large SI, CSPs are in the middle of a learning curve to master the complexity of new solutions. This includes both a technical and a cultural transformation and enterprises are yet to see the results of these transformations.

HOW HAVE CSPs' PARTNERING STRATEGIES AND ATTITUDES EVOLVED?

CSPs are becoming more collaborative but aren't there yet, hence their halting progress over the last year.

For a large network vendor this is because CSPs now realise the importance and size of the enterprise market, and they know they must be a part of it.

For a specialist network vendor, the CSPs' more collaborative attitude has been accelerated by the pandemic, which highlighted enterprises' need for connectivity and digitization. This helped CSPs to understand the low-hanging opportunity of this market.

For a large SI, CSPs are in the middle of a transformative journey: their leadership understands the opportunity but time and effort is needed to train sales and create products. This is why they are yet to fully lead collaboration in this market.

Playing the role of connectivity provider is a given, but there is demand for CSPs to assume an end-to-end role, even from some surprising players.

Some partners see CSPs mostly focusing on connectivity but with a role to play in helping to enable the integration and collaboration of partners.

For a large SI and a specialist network vendor, CSPs should become end-to-end providers or orchestrators, but should pursue this opportunistically. Both categories believe CSPs need to find selected verticals to build success stories, with examples including energy and public safety.

"Everyone can have a role in this partner ecosystem," says one **specialist network vendor**, "however, CSPs should be aware that this market and ecosystem will happen with or without them."

"Everyone can have a role in this partner ecosystem," says one specialist network vendor, "however, CSPs should be aware that this market and ecosystem will happen with or without them."

WHAT SHOULD CSPs DO?

CSPs need to develop and support long-term partnerships with large and small players. It is not about selling a contract and moving to the next customer; it is about selling and nurturing a solution for a specific problem.

CSPs must become more open to collaboration even when they may not be in full control of the product or solution.

- According to a **specialist network vendor**, they need to relinquish some control to those enterprises that want it. They must also be more open to pursuing emerging opportunities such as O-RAN.

CSPs must use their financial muscle and become a key player on the business side of enterprise 5G.

- For instance, according to a **large network vendor**, enterprises will not buy spectrum across the globe to support their 5G needs, and this creates a direct route for CSPs to be part of the ecosystem.
- According to a **large SI**, CSPs should ease the financial burden of 5G enterprise projects, taking away the upfront investment cost and driving as-a-service models.

"CSPs must own the view that enterprises and partners have of them. They should address their knowledge gap. Senior CSP leaders must enable their salesforce to sell new solutions and services."

Partnering at scale and at speed is the key to 5G success

CSPs are aware of the importance of partnering, but the 2020–21 global pandemic took more attention away from CSPs than it did from hyperscale internet players. It also exposed some limitations of CSPs when it comes to capabilities to create new agreements at speed.

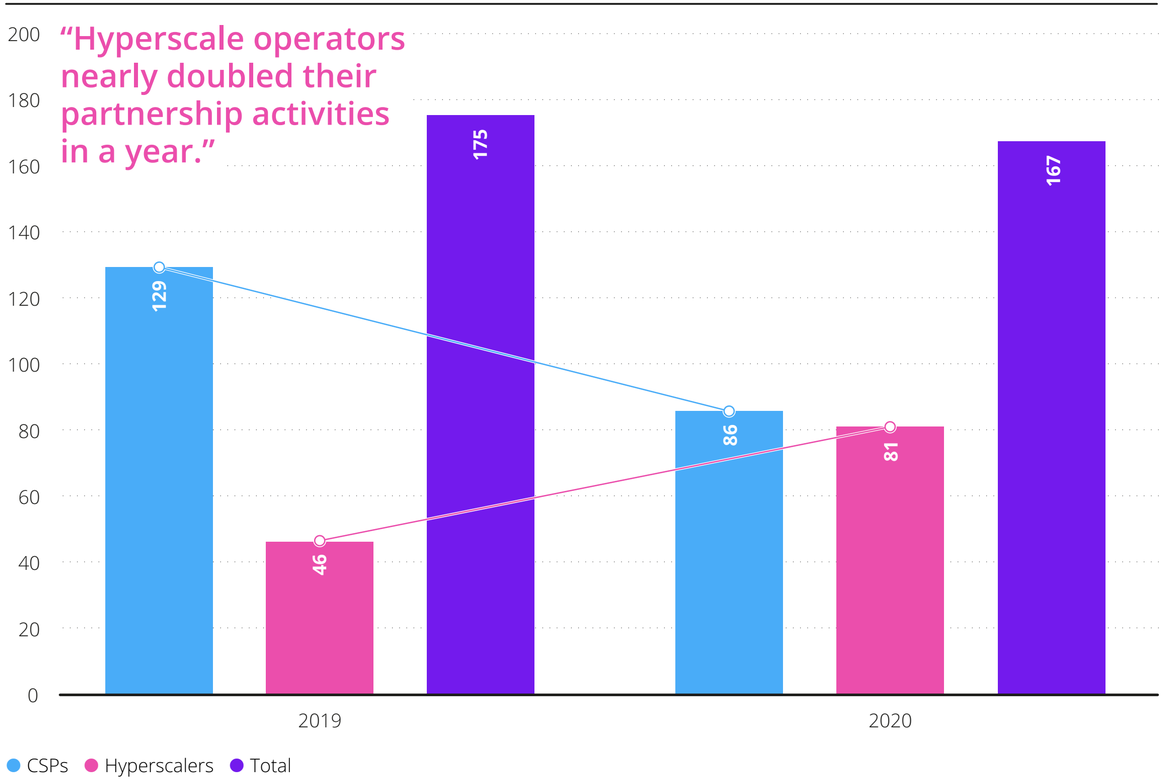
2020 saw partnership activity by hyperscalers increase substantially as the digitization of everything ignited. By contrast, CSPs slowed down as telco operators' attention moved to ensuring fixed and mobile connectivity robustness rather than nesting new 5G solutions with partners.

Hyperscalers accelerated their push into network activities – evidence that telecoms networks are increasingly seen as partners for an extension of their cloud services and business, alongside their growing expertise in MEC.

Hyperscalers and CSPs partnered with each other and with various industry verticals such as manufacturing, healthcare, and financial services, aiming to create vertical-specific 5G solutions.

"Hyperscalers' and CSPs' 5G prospects are interdependent, but there is one difference, they move at different speeds."

Significant partnership initiatives in tech 2019–20



SOURCE: OMDIA

Key takeaways

1 Every 5G player, including CSPs, understands that enterprise 5G is an ecosystem game. CSPs have taken the first steps, but that has not been enough and they have been outpaced, losing the first-mover advantage to other players. To win the 5G enterprise game, CSPs must fully commit to this market: accelerating their internal transformation; upskilling their workforce; and securing the right people, IT platforms, and budgets and the freedom to explore and scale in order to capture the 5G opportunity.

2 No matter the size of the CSP or their location, they must assimilate lessons such as agility, speed, and focus from alternative providers, and they must accelerate into the enterprise market and not wait for network slicing, complete 5G coverage, or other new technologies. Enterprises want solutions built on multiple technologies, services, and partners, and CSPs must act now to deliver those solutions.

3 It is essential for CSPs to rewrite their narrative and own the view that enterprises and partners have of them. They must address their knowledge gap and thus enable the whole organization to create and sell new solutions and services. CSPs must leverage their key competencies, such as telecommunication networking, local presence, and regulatory compliance, as unique selling points. Still, they need to speed up and step up to a partner- and customer-first world.

4 The market expects CSPs to listen to their partners and take the role of orchestrators of the 5G enterprise system. However, CSPs should not underestimate this task: they must be willing to invest time and resources to secure and maintain significant purpose-driven partnerships.

About

Beyond Now

Beyond Now is a fast-growing ecosystem orchestration and digital platform provider, powering organizations to launch new services at speed and grow revenue by utilizing our digital platform, digital marketplace and SaaS BSS.

Our platforms are designed to help our customers experiment, monetize and orchestrate services while taking advantage of new technologies such as cloud, edge, IoT, AI, 5G and more. We enable them to co-create solutions with a growing network of partners; bringing them closer to their customers, helping drive higher efficiency and automation, taking them further, faster, Beyond Now.

We serve customers across Asia-Pacific, Europe, Middle East, Africa and the Americas, spanning industries from telecommunications, media and entertainment, to tech and IT, financial, and automotive.

In November 2021, Beyond Now completed a management buyout (from BearingPoint), supported by a small group of professional investors, and now operates as an independent technology company. Beyond Now is the company name replacing Beyond by BearingPoint.

For more information, please visit: www.beyondnow.com

Beyond Now

E info@beyondnow.com
W beyondnow.com

BeyondPlatforms
BeyondNowPlatforms

About

Analyst Names

Pablo Tomasi
Principal Analyst

pablo.tomasi@omdia.com

Dario Talmesio
Research Director

dario.talmesio@omdia.com

Evan Kirchheimer
Research Vice President

evan.kirchheimer@omdia.com

Omdia

Omdia is a global technology research powerhouse, established following the merger of the research division of Informa Tech (Ovum, Heavy Reading, and Tractica) and the acquired IHS Markit technology research portfolio*.

We combine the expertise of more than 400 analysts across the entire technology spectrum, covering 150 markets. We publish over 3,000 research reports annually, reaching more than 14,000 subscribers, and cover thousands of technology, media, and telecommunications companies.

Our exhaustive intelligence and deep technology expertise enable us to uncover actionable insights that help our customers connect the dots in today's constantly evolving technology environment and empower them to improve their businesses – today and tomorrow.

*The majority of IHS Markit technology research products and solutions were acquired by Informa in August 2019 and are now part of Omdia.

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E insights@omdia.com
E consulting@omdia.com
W omdia.com

OmdiaHQ
Omdia