

IDC MarketScape

IDC MarketScape: Asia/Pacific Next-Generation Telcos:
Telecom Services 2020 Vendor Assessment

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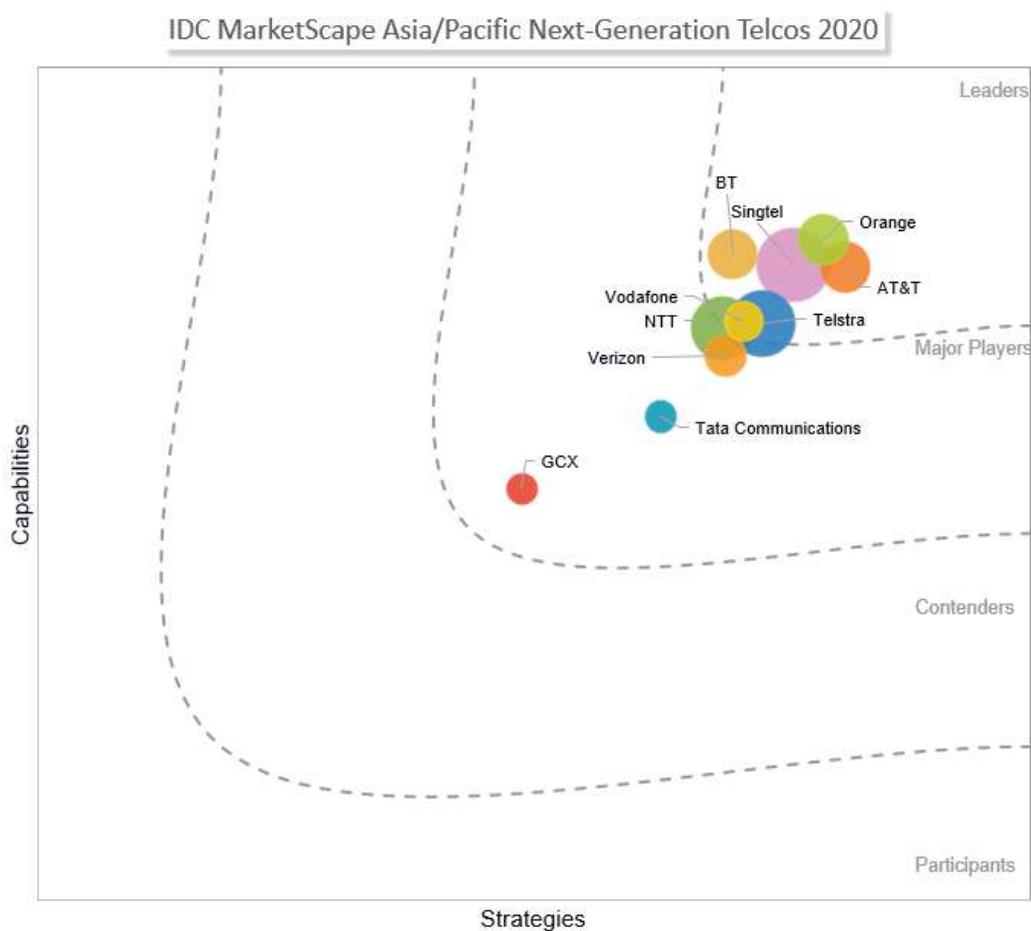
Hugh Ujhazy

THIS MARKETSCAPE EXCERPT FEATURES: SINGTEL

IDC MARKETSCAPE FIGURE

FIGURE 1

IDC MarketScape: Asia/Pacific Next-Generation Telcos: Telecom Services 2020



Note: Please see the Appendix for a detailed methodology, market definition, and scoring criteria.

Source: IDC, 2020

IDC OPINION

This study leverages the IDC MarketScape framework to evaluate the leading regional and global telecommunications service providers (SPs) in Asia/Pacific (AP). The primary focus of this study is to assess telecommunications SPs' capabilities to meet the telecommunication and ICT needs of various customer segments. IDC identified the top 10 providers by scale and scope of operations in terms of strong regional network presence, suite of managed services offerings in the region, and a large base of midsize and large-sized enterprises, multinational corporations (MNCs), and government clients across AP. The evaluation framework consists of a large variety of parameters, such as comprehensiveness of service offerings, datacenter and cloud capabilities, go-to-market (GTM) strategy, growth strategy, partner ecosystem, and innovation strategy.

Some of the key differentiators for success in this market are:

- **A wide portfolio of enterprise connectivity options with a software-defined overlay.** IDC predicts that by 2024, 60% of companies in AP will leverage all four connectivity types (fixed, cellular, low-power wide area networks [LPWAN], and Wi-Fi) throughout their daily functions, with cellular and LPWAN seeing the greatest increase in adoption. The growth of distributed WAN and hybrid multicloud networks has been a major theme in recent years and will have a profound impact on network configuration for enterprises. The growth of Internet of Things (IoT) networks and the rise of 5G will also have profound implications going forward. Software-defined WAN (SD-WAN) and edge computing are key drivers for hybrid WAN connectivity. As fiber-based broadband networks proliferate, SD-WAN becomes more popular. 5G will further drive SD-WAN by connecting remote and dispersed sites. Edge computing will bring applications closer to these sites and will allow access to cloud-based applications. IoT connectivity has been a highly competitive space, with the licensed technologies, such as narrowband IoT (NB-IoT) and category-M (CAT-M) solutions, jostling with unlicensed technologies, such as long range (LoRa) and Sigfox. However, as enterprises deploy more assets in remote and dispersed areas, they will continue to connect these assets with the best available, low-power solutions.
- **Development of edge computing platforms for next-generation applications.** The confluence of emerging technology trends, such as cloud, IoT, mobility, and analytics, is driving the rise of edge computing as the next frontier for capturing and analyzing enterprise data. New applications are being served from edge cloud locations, and the increasing adoption of software-defined networking (SDN) is pushing services from discrete appliances to edge cloud locations. The deployment of 5G will add even more capabilities to the edge cloud and boost investments that will shift more services to the edge and will create a marketplace for virtualized services. For applications that need quality of service (QoS) with guaranteed service-level agreements (SLAs) and low latency, 5G will be crucial in combination with the shift to the edge cloud in multiple locations. Developing edge capability needs to be a strategic priority for communication SPs if they are to realize their objectives of becoming true digital SPs and move further away from the "dumb pipe" scenario. Too much ground has already been lost to cloud SPs, such as Amazon Web Services (AWS) and Microsoft. The edge infrastructure will be crucial for communications SPs to support a variety of network access types and generate new revenue streams.
- **Thinking of cloud and networks as one.** Communications SPs lost the battle with hyperscale cloud providers, such as AWS, Microsoft Azure, and Google Cloud platform. Despite significant investments, they were not able to keep pace either with the ability of cloud providers to build out their networks at a large scale and across borders and geographic

regions. Although the communications SPs' community has moved away from the early ambitions to become hyperscale cloud providers, they, after a few years of experimentation, have begun to find their feet with regard to potential services that they can offer to the enterprise customer base. The multicloud and hybrid cloud landscape is quite hard and complex to manage for today's enterprise. Although cloud interconnect offerings have become table-stakes now, communications SPs are differentiating themselves further by providing cloud management and orchestration platforms, which not only provide a single-pane-of-glass view of all the cloud resources, but also weave in the network resources, along with online marketplaces, to subscribe for new virtual network services on the go. Rather, the new positioning is not only because of losing the hyperscale battle, but also because of networks and cloud becoming more and more intertwined for enterprises on their respective journeys.

- **Leveraging a new class of network intelligence.** Over the past few years, artificial intelligence/machine learning (AI/ML) has gradually been adopted by communications SPs to enhance network operations by leveraging network traffic and end-user data to refine the efficiency of network operations. On the customer-facing side, AI/ML has been used to augment customer experience (CX) and provide tools for process and sales process automation to recommend services to end users. AI/ML or machine intelligence facilitates the development of predictive and prescriptive applications that offer predictions and recommendations and automates routine functions based on predefined algorithms that also evolve with ML capabilities. It is seen that communications SPs' AI/ML have implemented intelligence in intent-based networking, security intelligence automation and network forensics, customer experience automation, and sales process automations. Carriers that implement and leverage this new class of intelligence and automation will be able to reduce churn, operational costs, and significantly improve customer experience.

IDC MARKETSCAPE VENDOR INCLUSION CRITERIA

For the purpose of this study, IDC defines the "next-generation telcos" as international IP VPN, international Ethernet services, and a suite of managed services that include cloud services and professional IT services (excluding support services) offered in the AP region for the enterprise segment. IDC defines the enterprise segment to include the midsize and large-sized enterprises, multinational corporations (MNCs), and government clients that have regional or international ICT requirements. Vendors are evaluated based on their current capabilities and next three to five-year strategies they set for this customer segment in the AP region. Capabilities or strategies in the consumer, small and medium-sized enterprises (SMEs), or wholesale segments are not included as part of this vendor evaluation.

To qualify for inclusion in this IDC MarketScape study, SPs must have network services, multiprotocol label switching (MPLS)-based, and/or Ethernet-based international services for enterprise segment in AP. They must also have a portfolio of managed services, including managed WAN and managed security, network and application acceleration solutions, cloud services, and other ICT services targeting the enterprise segment in the region.

This year, IDC considered the following 10 global and regional telecom SPs that operate in the AP region:

- AT&T
- BT Global
- Global Cloud Xchange

- NTT
- Orange Business Services
- Singtel
- Tata Communications
- Telstra
- Verizon
- Vodafone Business

ADVICE FOR TECHNOLOGY BUYERS

Communications SPs operating in AP are seeking to become the ICT partner of choice for enterprises that are seeking rapid growth regionally and in their respective countries. These enterprises are embracing the 3rd Platform and are initiating complex efforts for the digital transformation (DX) of their businesses, and, to this end, communications SPs are helping them achieve their goals with a portfolio of solutions and products that include SDN, hybrid cloud deployments, and managed services.

Communications SPs are attempting to go "digital" themselves as they transform their networks to incorporate software-defined and virtualization paradigms, investing heavily in analytics, automation, and other emerging technologies that will transform not just their network architectures, but ultimately their business.

As the networking environment, driven by DX, continues to evolve and as more and more businesses implement new technologies, IDC believes that the enterprises should take a note of the following:

- **Management of a multi-WAN, multicloud ICT environment.** As organizations grapple with the complexity of a multicloud, multi-access network architecture, they should look toward their communications SPs to help them on their network transformation journey. IT and network departments struggle to manage the increasing complexity of not only the overall network, but also the connectivity mix. Some of the configurations have added complexity because of the emergence of private networks, with traffic even going through a mix of public-private networks depending on the use case. Orchestration is increasingly becoming challenging, especially because the enterprise IT departments usually do not have the requisite skills or resources in-house. Moreover, IT departments will also have to balance the sometimes conflicting needs to use multiple vendors to lower dependence with the fact that multiple vendors add complexity. Enterprise should engage communications SPs to better understand their deployment plans, particularly in those coverage areas that map to assets that are deployed at the enterprise's campuses, factories, and other facilities, especially those in remote and dispersed areas. Organizations should also consider an outsourced and managed option for specific portions of the network and/or specific regions to see if it can be more cost-effective and efficient than managing through in-house teams.
- **Network transformation to accelerate the DX journey.** The adoption of 3rd Platform technologies is putting a lot of strain on legacy ICT infrastructure, including the networks. Cloud computing is a key pillar of the enterprise's drive toward DX. As enterprise applications move to the cloud, the WAN needs to evolve to support the new application paradigm. Enterprises worldwide are embracing hybrid- and multicloud IT strategies that include adoption of software as a service (SaaS) and platform as a service (PaaS)/infrastructure as a service (IaaS) offerings as a means of gaining business agility and creating operational efficiencies. Evaluating software-defined technologies, such as SD-WAN will support the DX journey. SD-

WAN is a solution that rises in response to this need and holds the promise of aligning the WAN with the application networking requirements of a digitally transformed enterprise. It also holds the promise of integrating cheaper broadband with private line-based connectivity to deliver more value out of network investments over time. However, while evaluating technology vendors and communications SPs, enterprises should evaluate the provider's capability and road map to deliver the long-term strategy of not just SD-WAN, but also virtual network services.

- **Co-creation of service-level agreements based on business objectives.** As organizations continue to move further on their cloud journey, their expectations from SPs are also evolving. SLAs for enterprises, who have moved applications/workloads to the cloud, are less about the dedicated network bandwidth connecting to their workload, but more about performance of the migrated workload – ensuring that the application can be accessed with a certain degree of latency and reliability. Moreover, the cloud conversation has changed from "whether or not cloud" to "how many clouds," and enterprises are looking for solutions that provide optimal performance of their workloads, irrespective of where it is hosted. Organizations should look to partner with communications SPs who can define network performance in terms of business objectives, and provide SLAs, such as application performance, and even link it back to the enterprise business objectives.
- **One size does NOT fit all.** Enterprises need to be aware that even the best-positioned telcos may not necessarily meet all their ICT needs and requirements. Hence, buyers must evaluate the providers' capabilities based on specific business requirements to select the preferred partners.
- **Evaluating requirements and testing communications SPs' experience for embedded security offerings.** Evaluate and define the organization's IT infrastructure, systems, and all assets, with a view to identify which parts are highly at risk and what the risk profile may be. Subsequently, have the communications SP's managed security provider to demonstrate its security expertise in a variety of organizations and determine whether the managed security SP can deliver the necessary business outcomes specific to your organization.
- **Embrace mobility.** In the start of 2020, IDC predicted that by 2022, 75% of enterprise frontline workers will be enabled with mobile devices, apps, and connectivity services as part of a prioritized effort to increase the efficiency of task-oriented workflows. It is expected to be over 85% now as the COVID-19 pandemic takes its full toll on the way people work.

VENDOR SUMMARY PROFILE

This section briefly explains IDC's key observations resulting in Singtel's position in the IDC MarketScape. The vendor is evaluated against each of the criteria outlined in the Appendix, and the description here provides a summary of the vendor's strengths and opportunities.

Singtel

Singtel maintains its position as a Leader in this year's IDC MarketScape.

As a key enabler of Smart City initiatives across the region, as well as helping its enterprise customers on their respective digital journeys, Singtel has continued to build on its capabilities in the ICT space. Although the service provider continued to witness pressure on its carriage business because of increased competition and weaker enterprise sentiments, its non-carriage portfolio (including business from its ICT arm, NCS, as well as cloud, cybersecurity, and datacenter business units) showed decent growth.

Through 2020, Singtel's primary focus is to maintain leadership in the network services segment and further grow the contribution of its ICT business. Contributing 48% of the overall group enterprise revenue, the ICT business will invest in growth areas, including cybersecurity, digital services, cloud, and IoT. Digital services contributed to about one-third of NCS's total revenue, mainly from cloud and managed services, which was in line with Singtel's objective of forging strategic partnerships with its key enterprise customers to help their DX.

The carrier is investing to improve customer experience and reduce operational cost and expenditures through digitization initiatives across the board. This includes creating new self-service support platforms for enterprise customers, integrating offline and online sales channels, digital enablement of its own workforce, and optimizing its go-to-market spends. On the network and operations front, Singtel is reengineering its internal operational processes and automating a variety of manual tasks through robotic process automation (RPA) to reduce the manual errors and speed up order processing and activations. In addition, Singtel group's move to leverage their size to deliver group-wide procurement savings and shut down some of their legacy networks and systems has allowed it to save significant costs. Singtel has reported a FY20 year to date cost saving of SGD359 million as a result of its digitization efforts, along with reductions in cost of sales (through streamlining and automation of tasks in store), staff reductions, and savings on miscellaneous operational costs.

As Singtel continues to defend its core business in the enterprise mobility and domestic data markets, it has also been working actively to increase its market share in the rest of the AP region, including Australia, where it functions through its fully owned subsidiary, Optus. Moreover, the carrier is further investing in software-defined networks and building a portfolio of virtual network services to respond to market movements.

On the network front, Singtel had a good year. Despite the pressure on its carriage business, the service provider was able to retain most of its enterprise customers and substitute part of the carriage revenues through a combination of new logos, increased capacities with existing ones, as well as through software-defined services. The carrier now has 428 POPs in over 370 cities worldwide, which includes self-owned and partner POPs, in addition to its global internet capabilities in over 200 countries. Singtel further grew its submarine cable capacity over the last 12 to 18 months by the addition of INDIGO (Singapore to Perth and Sydney) and SJC2 (across Singapore, Hong Kong, and Japan) submarine cables to its list of already diverse connections across Asia, Europe, and the trans-Pacific region. In addition to continued investments in cable and submarine infrastructure assets, Singtel also invested in a submarine cable maintenance company, ASEAN Cablesip, as a part of its long-term strategy.

In line with its aim to grow its regional business, the carrier has also created a mesh network architecture with multiple connectivity options from various hubs in Asia and Australia. Singtel is also a party to the Chongqing Connectivity Initiative (CCI), a Sino-Singapore project, which aims to drive the growth of China's emerging western region. As a part of this initiative, Singtel has forged a strategic partnership with all of China's tier 1 telecom providers, including China Telecom, China Unicom, and China Mobile, to service data connectivity requirements of organizations in this corridor.

Singtel ConnectPlus provides direct cloud connectivity to organizations around the region, and the provider has further enhanced its cloud ecosystem by establishing direct connectivity to major cloud providers, including Microsoft, Amazon, Google, IBM, and Alibaba.

With a complete suite of layer 1, 2, and 3 network infrastructure at its core, Singtel continues to expand its software-defined "overlay" capabilities. To complement its existing SD-WAN offering, Singtel has invested in creating 16 SD-WAN gateways and nine controllers to enhance the performance of these solutions by bringing them closer to the core network. Moreover, the carrier has extended its proprietary Liquid Infrastructure platform on the network side to provide enhanced visibility and software-defined controls on the network to provide a flexible, agile, and on-demand network environment.

Strengths

Singtel's North Star Vision – Its Own Digital Transformation

In addition to helping its customers transform, Singtel has been on a transformation journey of its own through realigning the complete product/services lifecycle along with the customer journey. This aligns well with Singtel's broader goal of enhancing customer experience while improving its operational efficiency. Singtel kick-started this journey about 18 months ago with a broad objective of delivering on its North Star vision of having 50% of its products, 60% of its processes, and 70% of its people digitally enabled by 2021. With customers at the heart of this transformation, Singtel divided the customer journey into multiple domains and identified various pain points, such as visibility around order processing and activation, challenges with providing contextual real-time omni-channel support, and service desk operations.

Singtel took a factory floor approach to achieve the North Star vision, where multiple teams are assembled to work within themselves, addressing specific areas and then fitting in with a larger group, similar to what happens on a manufacturing factory floor. This has allowed the teams not only to deliver on their own specific objectives, but also to understand how they fit in with the larger objective of enhancing the customer experience. Using AI/ML, big data and analytics, RPA, and API-based platforms, Singtel has developed some innovative tools, such as a request for program (RFP) bid margin management tool, a WhatsApp-based support chatbot for its enterprise mobility customers, and a predictive incident management system that automatically classifies the incidents and does a root cause analysis based on its historical database.

Moreover, in order to help its sales teams understand more about their customers and grow their share of wallet, Singtel has developed an interactive account dashboard that pulls information from various disparate sources within the carrier itself to provide a snapshot of the account health. The comprehensive dashboard displays account information, such as net promoter score (NPS), products/services subscribed, recent interactions with the support team, network capacity usage, downtimes, new leads and discussions, account spend, among others. This not only allows Singtel account managers to preempt customer sentiment ahead of certain discussions, but also enables them to unlock more cross-sell and upsell opportunities.

Singtel is well underway on its transformation journey, and these innovative digital tools will prove critical in staying ahead of the curve and extend its lead over other communications SPs.

Advances in Cloud Space Led by Singtel's Liquid Infrastructure Platform

The carrier's innovations and investments in Liquid Infrastructure (LI) platform, Singtel's suite of data-driven and software-defined cloud-centric solutions over the last 12-18 months, has allowed it to strengthen its position as a leading cloud provider in the region. Positioning cloud as a foundation for the future enterprise and providing a broad suite of managed public, private, and hybrid cloud services, through its deep strategic partnerships with the likes of Amazon, Microsoft, and VMWare, has allowed

Singtel to grow further its cloud practice in the region. Singtel's enhancements of the Liquid Platform and the development of CloudShop last year have been quite impressive. Information about both innovations are as follows:

- **Liquid Platform.** Singtel has further enhanced its software-defined cloud orchestration and brokerage platform, Liquid Platform, to allow for easy management of hybrid cloud offerings. Liquid Platform provides features such as multicloud automation, migration of cloud workloads between clouds, and simplified access management with enhanced visibility and analytics, allowing organizations to optimize their application resources and cloud cost and providing a single point of control and scaling across multiple cloud providers. Singtel is further working to integrate the Liquid Platform with its wider software-defined portfolio to allow for a service chain of the network elements, along with the cloud requirements, so the network bandwidth can also be turned up or down as cloud resources are managed.
- **CloudShop.** With Liquid Platform at its heart, Singtel recently launched CloudShop, a digital marketplace that allows its customers to order cloud-related products and services from Singtel and its technology partners through a self-service, unified services catalog. Dealing with multiple technology vendors has always been an enterprise challenge, and this allows customers to consolidate all their different accounts for different cloud services under a single Singtel bill. Hence, if a customer has different accounts with, for example, AWS, Microsoft Azure, Puppet, and Docker, the CloudShop will help them consolidate everything under a single Singtel bill, and the Liquid Platform will handle all the complexities of provisioning and activation in the back end. With an option for organizations to migrate their existing accounts, CloudShop also provides each customer with a central reporting mechanism and an intuitive dashboard to view the consumption, provide cloud spend prediction, and also identify potential savings through different budgeting controls.

These tools enable Singtel to position cloud as an enabler of the future enterprise, and its initiatives have resulted in the strong growth it has seen from its cloud practice thus far. In addition to the enterprise space, the onboarding of government agencies and departments on Singtel's cloud offerings for government, including the government private cloud (for all government agencies and subsidiaries), and government commercial cloud (for services such as application transformation and managed services) continues to grow well for the carrier.

Challenges

Go-To-Market and Messaging Around Its Broader SDN Portfolio

Singtel has made considerable strides in its software-defined networking and virtual network services offerings, but organizations are still not fully aware of the comprehensiveness of those solutions. The development and evolution of Singtel's managed SD-WAN portfolio, along with the availability of SD-Branch, SD-LAN, and SD-Core offerings, could be better communicated to enterprise customers. Singtel must continue to work with its sales teams to ensure that it is positioning these offerings as platforms and enablers for its enterprise customers, and not as point solutions.

Protecting Its Turf Against Global and Regional Communications SPs

Singtel continues to face a significant challenge from regional and global SPs in the region, and being an incumbent in a lot of Singapore and Asia-based accounts, the pressure is on Singtel to maintain its leadership position in the market. The situation in countries such as Australia, where the regulatory environment because of the NBN initiative has given rise to new local players, has also impacted the carrier. However, internal initiatives such as the account health and sales dashboards, coupled with

advancements in cloud, software-defined networking, and its Liquid Infrastructure platform provides Singtel with the much-needed arsenal to fight off the competition. Singtel will need to work proactively with its existing customers to keep the competition out of the picture.

APPENDIX

Reading an IDC MarketScape Graph

For the purposes of this analysis, IDC divided potential key measures for success into two primary categories: capabilities and strategies.

Positioning on the y-axis reflects the vendor's current capabilities and menu of services and how well aligned the vendor is to customer needs. The capabilities category focuses on the capabilities of the company and product today, here and now. Under this category, IDC analysts will look at how well a vendor is building/delivering capabilities that enable it to execute its chosen strategy in the market.

Positioning on the x-axis or strategies axis indicates how well the vendor's future strategy aligns with what customers will require in three to five years. The strategies category focuses on high-level decisions and underlying assumptions about offerings, customer segments, and business and go-to-market plans for the next three to five years.

The size of the individual vendor markers in the IDC MarketScape represent the market share of each individual vendor within the specific market segment being assessed. This market share is derived from an estimation of revenue from enterprise services, including (but limited to) fixed voice and data, cloud, IoT, UC&C and managed services (excluding support services) from midsized to large enterprises, MNCs, and government segments within AP. The size of the bubbles has been scaled down to better reflect the positioning of each vendor in the chart.

IDC MarketScape Methodology

IDC MarketScape criteria selection, weightings, and vendor scores represent well-researched IDC judgment about the market and specific vendors. IDC analysts tailor the range of standard characteristics by which vendors are measured through structured discussions, surveys, and interviews with market leaders, participants, and end users. Market weightings are based on user interviews, buyer surveys, and the input of IDC experts in each market. IDC analysts base individual vendor scores, and, ultimately, vendor positions on the IDC MarketScape, on detailed surveys and interviews with the vendors, publicly available information, and end-user experiences in an effort to provide an accurate and consistent assessment of each vendor's characteristics, behavior, and capability.

Market Definition

In today's agile world, carriers are promoting software-defined networks to help their enterprise customers stay competitive in the market. Organizations around the globe are looking for a faster, flexible, and agile network to support their DX initiatives. Network services are becoming more intelligent as SPs continue to invest in technologies within their network core to deliver more efficient, scalable, and smarter networks to enterprises. However, realizing that most of the value lies beyond the network layer, telcos continue to expand their capabilities, moving deeper into the ICT stack, providing a comprehensive portfolio of cloud, M2M, IoT, enterprise mobility, SDN, professional, and managed services.

In this IDC MarketScape, the SPs are assessed on their strategies and capabilities in the AP region. The evaluation framework is based on a large variety of parameters, such as comprehensiveness of service offerings, datacenter and cloud capabilities, go-to-market strategy, growth strategy, partner

ecosystem, and innovation strategy (complete details in the following section). These parameters are evaluated from current capabilities and a future strategy point of view.

LEARN MORE

Related Research

- *Market Perspective: 2020 Technology Theme Implications for Asia/Pacific (Excluding Japan) Communication Service Providers* (IDC #AP46106320, April 2020)
- *IDC FutureScape: Worldwide Mobility and Telecommunications 2020 Predictions – APEJ Implications* (IDC #AP45221220, January 2020)
- *Carrier Cloud Business Models: Thinking of Cloud and Networks as One* (IDC #AP44533619, November 2019)

Synopsis

This IDC study is the eighth yearly assessment of next-generation telecom operators in Asia/Pacific. The primary focus of this study is to assess service providers' capabilities to meet the telecommunication and ICT needs of various customer segments. It leverages the IDC MarketScape framework to evaluate 10 leading regional and global telecommunications SPs in Asia/Pacific. The evaluation framework consists of a large variety of parameters, such as comprehensiveness of service offerings, software-defined platforms and cloud capabilities, go-to-market (GTM) strategy, growth strategy, partner ecosystem, and innovation strategy. Communications SPs are evaluated based on their current capabilities and the strategies they have set in the next three to five years for the enterprise segment in the Asia/Pacific region.

"Globally, communications SPs are undergoing a dramatic change in much the same way that most enterprises across verticals are undergoing changes. Asia/Pacific is certainly no exception, with communications SPs in this region facing the same enterprise business priorities as their counterparts in other countries, albeit with high deviations among Southeast Asian countries and mature Asia/Pacific markets. Enterprises are grappling with multiple objectives and imperatives, focusing on cost savings, new business models, customer centricity, and agility in operations. The heightened competitive intensity is forcing communications SPs to innovate, not only in operations, but also with how they engage with their customers and channel partners," says Nikhil Batra, associate research director, IDC Asia/Pacific Telecom Practice.

About IDC

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