

IDC MarketScape

IDC MarketScape: Asia/Pacific Next-Generation Telcos: Telecom Services 2018 Vendor Assessment

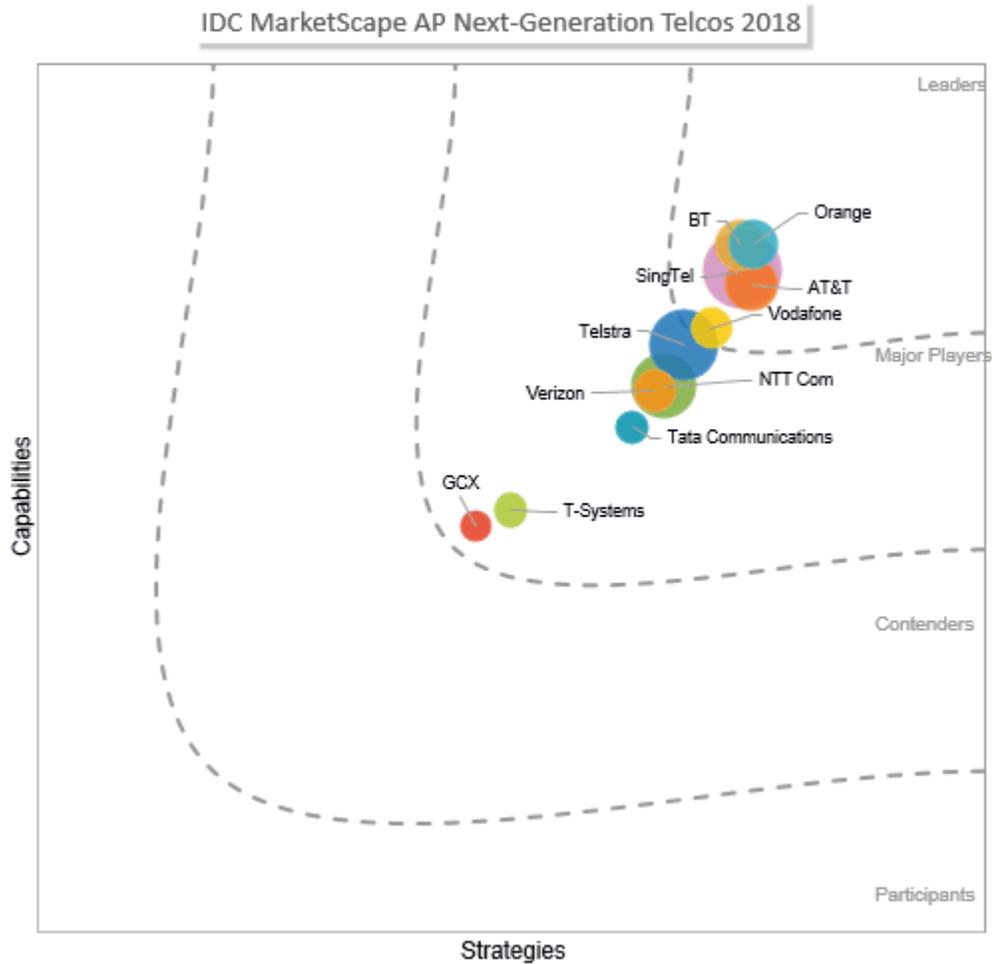
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IDC MARKETSCAPE FIGURE

FIGURE 1

IDC MarketScape: Asia/Pacific Next-Generation Telcos: Telecom Services 2018



Source: IDC, 2018

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

IDC OPINION

This study leverages the IDC MarketScape framework to evaluate the leading regional and global telecommunications SPs in Asia/Pacific (AP). The primary focus of this study is to assess SPs' capabilities to meet the telecommunication and ICT needs of various customer segments. IDC identified the top 11 providers by scale and scope of operations in terms of strong regional network presence, suite of managed services offerings in the region, and 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 strategy, growth strategy, partner ecosystem, and innovation strategy.

There are several key differentiators among the telecommunications firms assessed that IDC noted for success in this market and of which buyers should be aware.

A Comprehensive Portfolio of Software-Defined Networking and Virtual Network Services

As traditional network offerings become table stakes, Communication SPs are increasingly using software-defined networking (SDN) to differentiate themselves. The benefits of SDN in the datacenter are well known; however, the expansion of SDN into disparate and often chaotic access networks has also become prevalent now. Communication SPs have curated a wide portfolio of services, including on-demand bandwidth offerings, SD-WAN, SD-LAN, and virtual network services, such as vRouter, vFirewall, and vWAN Optimization. SD-WAN is fast becoming an integral part of enterprise network strategy with almost 65% of organizations in AP having already deployed or planning to deploy an SD-WAN solution in the next 18 months. This is not a threat, but a complimentary offering to the traditional fixed data business and carriers that align their connectivity portfolios to accelerate SD-WAN adoption by providing hybrid connectivity options should be of great interest to the enterprise.

Networks Are a Strategic Asset

Carriers are promoting the construction of the "network of the future." However, the technology is not an end in itself. Organizations around the globe need a faster, flexible, and agile network to support their digital transformation (DX) initiatives. Hence, buyers are looking for carriers that understand, from an applications standpoint, the composition of the network and its workloads, to provide a superior experience to their respective organizations and end customers. Going forward, the network itself is evolving into an intelligent platform. This gives it the ability to deliver advanced services as the market shifts from premises-based appliances to cloud environments. Enterprise CFOs and chief marketing officer (CMOs) are seeking carriers that can provide them critical insights by leveraging a new class of intelligence obtained from understanding what's happening within their networks. This network analytics and intelligence supports the evolution of the network operator from three major dimensions:

- **Customer experience.** Provide an enhanced digital experience to end users by understanding the granular details of how they are utilizing the networks.
- **Financial.** Drive wiser investment decisions to enhance the network based on exactly what and where is being demanded from it.

- **Marketing.** Create new revenue streams through internal (personalized and targeted offerings) and external monetization of data.

A Strategic Business Partner

As organizations embark on their DX journeys, they need partners that understand the business and help achieve business objectives through adoption of 3rd Platform technologies. These technologies, such as cloud, SD-WAN, mobility, and internet of things (IoT), have strong momentum behind them and impact the enterprise operational environment in multiple dimensions. Complexity of the technology landscape means that the need for strategic guidance for enterprises has never been more important. Buyers are searching for carriers that can act as a trusted advisor on their business transformation journey.

A Well-Rounded Managed Security Services Portfolio

Attacks are quickly growing in frequency and sophistication, but the talent pool of experts is not keeping up with these evolving changes. As the threat landscape evolves along with new business processes, there will be a need to acquire specialized security professionals. The ability to combine business and IT security skills is growing too slowly to meet the demand for enterprises globally.

As the landscape changes, along with DX, more companies are competing for skilled and specialized security professionals. Because of the scarcity of talent in the marketplace, the skills gap will be a larger problem in the future. Companies are already strategizing on how to grow in-house talent and looking to third-party outsourcing companies, such as telecom providers, to help provide the experts they need. Almost all the communication SPs have enhanced their basic managed security services (MSS) portfolio over the past 12 months. However, advanced MSS capabilities, the delivery and onboarding flexibility, price competitiveness, security operations center (SOC) capabilities, complementary services (including forensics or training services), service-level agreements (SLAs), and self-service customer portal capabilities vastly vary from one carrier to the other. Successful communication SPs will plan ahead, will have identified new technologies and the skills labor shortages, and are prepared to work with partners to develop a well-rounded portfolio.

IDC MARKETSCOPE VENDOR INCLUSION CRITERIA

For the purpose of this study, IDC defines "next-generation telcos: telecom services" as international IP VPN, international Ethernet services, and suite of managed services, which 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 strategies in the next three to five years for this customer segment in AP region. Capabilities and 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 MarketScope study, SPs must have network services, multiprotocol label switching (MPLS)-based, and/or Ethernet-based international services for the 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 11 global and regional telecom SPs that operate in AP:

- AT&T
- BT Global Services
- Global Cloud Xchange (GCX)
- NTT Communications (NTT Com)
- Orange Business Services (Orange)
- Singtel
- T-Systems
- Tata Communications
- Telstra
- Verizon
- Vodafone Global Enterprise (VGE)

ADVICE FOR TECHNOLOGY BUYERS

Communication 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 initiating complex efforts for the DX of their businesses, and to this end, communication SPs are helping them achieve their goals with a portfolio of solutions and products that include SDN, hybrid cloud deployments, and managed services.

Communication 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 continues to evolve driven by DX and more and more businesses implement new technologies, IDC believes that the enterprises should take note of:

- **Network transformation to accelerate your DX journey.** The adoption of 3rd Platform technologies is putting a lot of strain on legacy ICT infrastructure, including 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, including the adoption of software-as-a-service (SaaS) and platform/infrastructure-as-a-service (PaaS/IaaS) offerings as a way of gaining business agility and creating operational efficiencies. Evaluate software-defined technologies, such as SD-WAN, to support your DX journey. SD-WAN is a solution that came about 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 your network investments over time. However, while evaluating technology vendors and 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 SLAs based on business objectives.** As organizations continue to move further on their cloud journey, their expectations from SPs are also evolving. SLAs for enterprises that have moved applications/workloads to the cloud are less about the dedicated network

bandwidth connecting to their workload and more about the performance of the migrated workload, ensuring that the application can be accessed with 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 an optimal performance of their workloads irrespective of where they are hosted. Organizations should look to partner with SPs that can define network performance in terms of business objectives and provide SLAs, such as application performance, and even link them back to the enterprise business objectives.

- **The growing importance of security.** Cyberthreats are increasing exponentially and enterprises are hard-pressed to meet the threat protection on their own. They will need to adopt best-of-breed technologies while depending on their communication SPs that have a comprehensive view of threats emanating over the network.
- **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, evaluate the providers' capabilities based on specific business requirements to select the preferred partners.

VENDOR SUMMARY PROFILES

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

AT&T

AT&T is positioned in the Leaders category in this year's Asia/Pacific Communication SP IDC MarketScape.

Over the past few years, AT&T's Strategic Business Services unit, which is composed of its fixed-line, cloud, hosting, VoIP, and MSS portfolio, has grown in importance within the AT&T group and now contributes over 40% to carrier's overall business revenues globally. Even though the carrier experienced declines in wireline voice and data services as well as lower wireless revenues at the larger corporate level, the Strategic Business Services unit outperformed the rest of the group, offsetting some of those declines. AT&T continued to execute well on its enterprise strategy and witnessed high single-digit year-over-year (YoY) growth of its Strategic Business Services division globally, with the AP region performing along similar lines. As one of the pioneers in SDN, the carrier offers a wide portfolio of solutions, including cloud connectivity and hosting, software-defined WAN acceleration and application performance management (APM), unified communication, managed security, enterprise mobility, and content delivery network (CDN) services in the region.

AT&T's comprehensive network coverage in the region includes 46 of its own MPLS nodes in 15 countries and partnerships in 25 more. This enables AT&T customers to connect to its global network through its 500 service nodes across AP (and almost 4,000 globally). Within the region, AT&T's core network backbone consists of multiple 10G routes deployed in a mesh design, complemented by connections to similar networks in Canada and the Asia, Middle East, and Africa (AMEA) region, and a mesh network of 40G routes in the United States. AT&T's subsea cable facilities connect each of its core sites in AP to three others, offering a high level of redundancy by providing physically diverse alternate paths to combat any outages. The carrier will continue to invest in the regional networks to further its coverage through deployment of additional MPLS nodes in India, Japan, and South Korea. AT&T shared that further investments in expansion of network access services will continue through

2018 for deployment of access aggregation nodes, providing lower access costs in regional and satellite cities and further control of the network when deployed into datacenter hosting exchanges, such as Equinix.

AT&T's latest generation of network offerings utilizes its software-defined core to offer dynamic bandwidth services, a set of virtual network services, and an SD-WAN overlay at the edge. This suite of capabilities is bundled under its "AT&T Intelligent Edge" portfolio. A key building block in the Intelligent Edge portfolio is AT&T FlexWare, a Juniper Networks universal customer premises equipment (uCPE) with three different hardware options, which launched in 2016. The Intelligent Hardware platform has been expanded to also include Ciena and Vyatta uCPE models. This portfolio of virtual network services currently includes vWAN optimization (Riverbed), vRouter (Cisco and Juniper) and vFirewall functions (Palo Alto, Fortinet, and CheckPoint). The carrier also plans to add vSD-WAN (VeloCloud and Viptela) through 2018.

AT&T also continued to further invest in the NetBond platform, its patented network technology. NetBond binds private network resources to a customer's cloud services, ensuring logical separation in the network, resulting in enterprise class performance and availability. AT&T's NetBond is available with public cloud services, including Amazon Web Services (AWS) and Microsoft (Azure and Office 365) in Singapore, Hong Kong, Australia, and Japan. In addition to colocation and hybrid cloud services, the NetBond ecosystem also offers the enterprises the option of subscribing to IP voice services, a big plus for customers moving their contact center application to the cloud. The carrier has also added more partners to its NetBond ecosystem and expanded the availability into China since the last update.

Over the past year, AT&T has ramped up its cybersecurity activities in the region, and its portfolio now includes Cloud Web Security, Secure Email Gateway, and Virtual Network Security offerings, along with AT&T Threat Manager, its managed service offering. The AT&T Threat Manager platform analyzes large volumes of data traversing the internet backbone through the AT&T Analysis Engine and AT&T's Cybersecurity Experts to provide clients early insights on potential cyberthreats.

AT&T leverages its global and regional security and network operation centers (S/NOCs) to service its enterprise customers. It also operates eight internet datacenters (iDCs) in the region, delivering a fully managed utility computing service and various managed application services (such as hosted Microsoft Lync and enterprise application management) out of the Singapore "super" iDC for enterprises in the region. The provider also partners with Equinix and Digital Realty to expand AT&T's colocation offering beyond eight AT&T-owned datacenters across AP.

With a focus on further expanding its network and platform IoT capabilities, AT&T continued to invest in this area in the last 12 months, expanding the coverage of its global SIM offering to over 200 countries. The carrier is also working on growing its horizontal platforms and services portfolio, including its SIM management platform, labeled as "Control Center," and IoT Data capture platforms, which integrate into third-party tools, such as IBM Watson, for advanced AI and analytical capabilities. Besides, the carrier is also working to develop industry-specific solutions in areas such as connected vehicles (in partnership with Porsche, Infiniti, and Volkswagen), Smart Cities, and supply chain. It has also invested in a "Regional IoT Overlay" team with people based in Australia, Hong Kong, India, and Japan.

Strengths

Strong Heritage in SDN

AT&T has been one of the pioneers in the software-defined space and has been executing well on its network virtualization strategy. The carrier shared that it has already virtualized over 50% of the network functions in its core globally by the end of 2017 and is well ahead of accomplishing its goal of 75% by 2020. With networks at the core of most of AT&T's offerings, the carrier has continued to build on this strong heritage and now offers a comprehensive portfolio of solutions and services in the software-defined space, including on-demand bandwidth, burstable ethernet, FlexWare (along with virtual network functions), SD-WAN, and NetBond (plus NetBond Essentials), all of which are available in AP. The carrier has also continued to further deploy its cloud-based AT&T Integrated Cloud nodes (AIC nodes), enabling it to deliver network-based SD-WAN capabilities to provide superior customer experience.

AT&T reported strong enterprise interest for AT&T FlexWare, its on-demand network function offering, in which the carrier works with leading technology vendors, such as Cisco, Fortinet, CheckPoint, and Riverbed, to provide virtual network services on a Juniper-based uCPE. It allows enterprises to replace specialized premise-based equipment with virtualized, cloud-based functions for firewall, routing, and application performance. Although AT&T currently only offers virtual routing and virtual firewall capabilities, it plans to add virtual WAN optimization and acceleration, SD-WAN, and other such capabilities, with a focus on providing best-of-breed solutions to enterprise customers, over the next 12 months.

In addition to developing its software-defined portfolio, the SP recently introduced a new initiative called AT&T Network 3.0 Indigo, aimed at helping enterprises leverage access technologies, such as Long-Term Evolution Advanced (LTE-A) and 5G, and learn from AT&T's software-centric transformation journey. Although the program is in its infancy, initiatives such as these, along with its technology leadership, continue to work well for AT&T in the region.

Strategic Account Management and Focus on Customer Experience

AT&T's elevated focus on customer experience and account management strategy has been a consistent strength for the carrier in the region. Although there have been a few comments from AT&T customers regarding billing errors and complex structure of the self-service portals, in the past, AT&T has committed itself to transforming its customer experience and has made significant progress in the area. In addition to simplifying its workflows and introducing internal quality assurance programs, such as "first bill review" and "pre-invoice check," it has also invested in aligning its back-end systems. The carrier reported consolidating more than 45 of its disparate customer portals into a single pane of glass and launched the new AT&T Business Center in 2017, much to the delight of its enterprise customers.

On the account management front, good local in-country support and strong service delivery has been working quite well for the carrier in the region. Strategic partnerships and a joint venture in China as well as an expanded presence in India have also turned out well for them. Besides having local support, AT&T has set up working principles with alliance partners and ebond support systems to improve cycle times for service provisioning and repair. In addition to these initiatives, AT&T initiated a Service Ambassador program in 2015 in Latin America to allow for a closer relationship with its customers by assigning a local ambassador, one who understands the local culture and speaks the same language. Following the successful trial of this program in Brazil and Mexico, the program was launched in India in 2016 and has been expanded to all of AP in 2017. This approach of having a local

account manager who is accountable for the overall client experience has allowed the SP to forge stronger partnerships and grow its share of wallet with its enterprise customers.

Challenges

Growing IoT Practice in the Region

AT&T has identified IoT as a strategic area to invest and further develop its capabilities and partner ecosystem. Its IoT portfolio currently includes a global SIM offering, other vertical-specific offerings, and platform solutions. AT&T also continues to innovate in the field of machine to machine (M2M)/IoT, with recent pilots for LTE and narrowband (NB) technology, which enables low-cost and low-power connectivity modules, and the beta launch of its Multi-Network Connect platform, which allows its enterprise customers to manage devices connected over multiple access technologies through a single console. AT&T is continuing to broaden its IoT ecosystem through various regional partnerships and has invested in industry-specific IoT specialists throughout the region based in India, Hong Kong, Japan, and Australia.

However, its IoT business in the region can go unnoticed in terms of connected devices and customer base. Moreover, some of its peers have identified IoT as one of the key growth areas, and are quite aggressive in the space. Hence, despite winning some deals for its industry-specific solutions (primarily in supply chain) in the region, the SP will need to do more to establish itself as a major IoT player in AP.

Limited Visibility in the Region

AT&T has always been one of the most innovative carriers in the market, leading on the technology front. The carrier has a strong track record in Asia and has witnessed good growth of its enterprise services in the region over the past few years now. However, it lags behind some of its competitors in terms of visibility in the market. Although this conservative strategy has worked well for AT&T in the past, as the market gets more competitive, the SP will need to be more aggressive with its marketing push to be more visible to AP enterprises and execute on its strategy of acquiring new Asia-based customers.

BT Global Services

BT Global Services is positioned in the Leaders category in this year's Asia/Pacific Communication SP IDC MarketScape.

BT Global Services reinforced its position as one of the leaders in the region by positioning itself as a DX partner for its customers and having an increased focus on improving customer experience. The U.K.-headquartered global CSP reported growing revenue in cloud and network services through a healthy bid–conversion rate and the acquisition of new customers in the region. In addition to focusing on increasing revenue and share of wallet with existing customers, the carrier also particularly focused on improving its operational efficiency. It has undertaken various technology initiatives and has optimized its sales processes to focus more on profitable accounts, resulting in significant cost reductions.

BT Global Services continues to increase its network coverage in the region and differentiate itself through its fundamental network offerings, vertical industry expertise, and a wide portfolio of solutions and services in cloud, collaboration, security and software-defined space. BT Global Services' service-led approach to its cloud offerings and the continuous evolution of its fundamental Cloud of Clouds strategy has worked well for the communication SP as it reported good growth of its cloud business

over the past 12 months in the region. BT Global Services provides interconnects to third-party cloud providers, including Microsoft, AWS, Salesforce, Oracle, IBM, and T-Systems. It has also added Equinix to its already comprehensive list of public cloud and SaaS interconnects. This Cloud of Clouds ecosystem, with BT Global Services' network infrastructure at its core, also consists of BT One, its cloud collaboration portfolio, and BT Contact, its contact center solution. The SP has invested further in machine learning and AI to enhance the fundamental security of these offerings through initiatives such as voice biometrics for its collaboration and contact center suite.

Over the past 12–18 months, BT Global Services' network infrastructure offerings, which underpin its Cloud of Clouds ecosystem, have been brought together under the banner of Dynamic Network Services. Although BT Global Services continues to grow its network coverage in the region, offering traditional connectivity services, such as IP Connect, Ethernet Connect, Internet Connect, and internet-based access (hybrid VPN), it has also developed significant capabilities in the software-defined space. The introduction of bandwidth on-demand for the IP Connect service, SD-WAN offerings in partnership with Cisco (including Meraki, Intelligent WAN [IWAN], and Viptela options), and Nokia Nuage has allowed the SP to address some of its customers' challenges that arise because of 3rd Platform technology adoption.

BT Global Services' product portfolio is well complemented by its services capabilities. It has integrated its network fabric with security elements and is offering end-to-end security services through its BT Security portfolio. A modular approach to the cloud-based Cyber Security Platform to deliver all of its security services including managed SIEM, cyber SOC, and threat monitoring has allowed BT Global Services to integrate the same within its Dynamic Network Services portfolio as well. The carrier is working with technology partners Zscaler, Palo Alto, CheckPoint, and Fortinet to further develop its BT Security portfolio and has four global service hubs across seven regional locations based in Brazil, Hungary, India, and the United Kingdom. It also has four SOCs (one in Australia and three in India) in the region to support its enterprise customers. In addition, BT Global Services has 10 customer innovation showcases in the region, which allows the carrier to showcase its capabilities in network innovation and application acceleration, security, collaboration, and contact centers through portfolio demonstrations. These innovation showcases provide an interactive experience for its visitors and are being used by BT Global Services to have broader conversations and create stronger pipelines.

Strengths

Robust Sales Strategy and Strength in Digital Marketing

BT Global Services continues to innovate its digital marketing and strengthen its sales strategy, with a particular focus on achieving profitable growth. This leads from the carrier's focus on segmenting its customers in three key buckets — globally managed accounts, geomanaged accounts, and domestic accounts in the region — with a particular focus on the profitable accounts. Although the SP is focusing on growing its share of wallet with its large global MNC accounts in the region, it also continues to nurture its relationships and create new ones with Asia-based entities. This approach has allowed BT Global Services to ensure a healthy mix of AP and global accounts in the region, resulting in sustainable growth in key areas, such as cloud, security, and vertical-specific solutions. Among the core industries that BT Global Services focuses on, its financial services vertical continues to outpace its competition. BT Global Services provides network-centric solutions, such as Radianz (a cloud-based trading environment), Netrix HiTouch (a cloud-based collaboration center among traders, their respective clients, and other parties involved in a trade), and BT Unified Trading (a voice trading platform), to leading banking and financial institutions.

BT Global Services has always had a distinct focus on refreshing the skill set of its sales professionals, in line with the changing customer requirements and its evolving product portfolio. The carrier is making investments to improve its customer experience and has evolved its service delivery model to that effect as well. Internal initiatives to speed up sales cycles, extensive global account management and sales programs to maximum account potential, and leveraging its proprietary Key Account Marketing platform to analyze the info on its existing and prospective customers continues to work well for the carrier.

A Strong Network Story to Turbo Charge Its Cloud of Clouds Strategy

As organizations undertake various degrees of cloud transformation projects, a large percentage of them have struggled in ensuring the performance of workloads they've moved to the cloud. BT Global Services' SDN portfolio, under the banner of Dynamic Network Services, solves a lot of these challenges and now underpins the carrier's Cloud of Clouds strategy. The portfolio combines a lot of traditional connectivity offerings, such as MPLS, ISDN, and public internet, along with a software-defined overlay (SD-WAN) and APM solutions to ensure the optimal performance of cloud-based workloads and SaaS solutions. To complement its SD-WAN portfolio, BT Global Services is actively working to offer virtual network services globally and regionally, starting with virtual routing (in 2Q18) and followed by virtual WAN optimization, firewall, and SD-WAN solutions throughout the year. This tight alignment of network strategy to its cloud story allows BT Global Services to provide end to SLAs and have wider conversations with its existing and prospective customer base.

Challenges

Limited Traction in the IoT Space

BT Global Services recognizes the opportunity in the M2M and IoT space but is behind the eight ball when compared with some of its peers in the region. With a strong network heritage, most of BT Global Services' IoT efforts seem to be focused on leveraging its fixed and mobile networks in the United Kingdom and further building capabilities in the low-power WAN space, such as NB-IoT. For example, the SP has expanded its BT Trace portfolio to offer BT Trace for Retail, which allows it to monitor in-store customer movements and behavior and provide further analytical insights to retailers. It is using these solutions internally in some of its stores in the United Kingdom and selling into retailers, such as Thomas Pink (in New York). However, engagements are at an earlier stage in this region so far. Having said that, BT Global Services has impressive reference cases from elsewhere in the world, and IoT presents the carrier with a great opportunity to offset some of the decline in traditional spaces.

Innovating in the AP Region

We estimate that the AP region contributes about 10% of BT's entire Global Services revenue, making it challenging for the SP to get the attention at the corporate level in terms of investments. Also, the carrier reported declining AP revenues in 2017 (around 4%). These factors pose additional challenges, as BT Global Services competes in an increasingly aggressive competitive landscape in cloud, traditional, and software-defined connectivity. As noted previously, BT Global Services has impressive credentials in IoT and industry solutions outside AP. We see this as an opportunity for BT Global Services to bring those solutions to AP and move beyond connect, collaborate, and contact center solutions.

Global Cloud Xchange

Global Cloud Xchange is positioned in the Major Player category in this year's Asia/Pacific Communication SP IDC MarketScape.

This is the first time that GCX has been positioned as a major player in the study, largely because of its focus on strengthening its subsea network assets and cloud business, driving growth from emerging markets. It also introduced a fully managed SD-WAN service in the region. The SP, formerly known as Reliance Globalcom, has gone through major changes over the past few years, including rebranding to GCX in 2014 and realigning its senior and local management, including expanding the role of Bill Barney, CEO of GCX, to also oversee the Reliance Communications business in the enterprise segment, datacenters, and national long-distance (NLD) operations. As a global subsea network operator, GCX is at the heart of the digital journey of its enterprise customers and has continued to expand and enhance its network infrastructure to deliver carrier-grade solutions.

GCX has a three-prong strategy for its enterprise business over the next two to three years, focusing strategically on building a fully owned global submarine and Indian terrestrial network, ramping up its datacenter expertise, and investing in cloud delivery networks. As a result, the SP has upgraded its existing submarine and Indian terrestrial networks to 100G, making it cloud-ready. GCX operates about 180 points of presence (POPs) in India and another 20 POPs in AP, supplemented by its network of 148 POPs globally. The launch of Cloud X in late 2014 was a key step for GCX in creating a cloud ecosystem for delivering virtualized infrastructure, applications, and content. In addition to the existing ones in Mumbai and Hong Kong, the SP added Sydney (Australia) and Chennai (India) to the list of cities where Cloud X platform is deployed across the region. Cloud X services are available in shared (Cloud X Multi-Tenant), dedicated (Cloud X Private), and hybrid environments (Cloud X Hybrid). GCX also expanded its Cloud Fusion X footprint in the region to offer direct connections to third-party cloud services, including AWS, IBM Cloud, Microsoft Azure, and Google Cloud Platform. The service is now available in Singapore, Hong Kong, Tokyo, and Sydney. To enable greater flexibility, GCX provides a Cloud X orchestration portal that allows customers to create an on-demand network by selecting the desired bare metal servers, applications, and bandwidth and activating these services instantly. The SP has used the Cloud X as a base and built an impressive portfolio of services and applications, such as security, virtual desktop, backup, load balancing, and WAN optimization, over the past year.

GCX continues to perform strongly on the managed ICT services front and recently launched its Cloud X WAN service, its version of an SD-WAN solution. The solution includes a generic SD-WAN router, which will perform as a basic building block, carrying out instructions from a centralized SD WAN controller. GCX intends to use the same device as a host for its road map of virtual network services, which will be available to its enterprise customers. This would include virtual network functions, such as virtual CPE, virtual firewall, and virtual WAN optimization. In addition to Ethernet-based and MPLS VPN services, GCX also offers cloud-based managed WiFi delivered on an SaaS model, WAN Xtra (a hybrid network service that uses wireless technologies to provide temporary last-mile access that can be rapidly turned on), and App Xpress (GCX's managed WAN optimization offering). Other services include managed videoconferencing, network-based MSS, and APM. The provider has partnered with Jasper to deliver some IoT services in India.

Strengths

Ownership of Cable System Helps GCX Maintain Cost Advantage

Continued investments in its cable infrastructure (such as India Cloud Xchange [ICX] and Pacific Cloud Xchange [PCX]) and its existing network resources allow GCX to achieve a better cost structure and maintain cost advantage. Its strategy to focus on building cloud-enabling networks in emerging markets in AP and Middle East, in countries such as India, China, Saudi Arabia, Egypt, and Yemen, where large internet bandwidth consumption is expected, will serve the carrier well in the longer run.

IDC's enterprise surveys highlight that the cost of bandwidth required to ensure the business-grade performance of hosted applications is one of the inhibitors in moving to cloud in most of the emerging markets. GCX's ability to offer affordable connectivity solutions, coupled with new offerings, such as Cloud X WAN, its SD-WAN offering, will gain a lot more traction with enterprises in the emerging markets. Moreover, leveraging the virtual network operator (VNO) model inherited from the Vanco acquisition, GCX is able to select and integrate the most appropriate network solutions to meet the network service performance requirements and its active consulting process (ACP), which gives an annual review of network pricing, price benchmarking, and technology, is also a key strength of the provider.

Focus on Midmarket Segment

In contrast to some global SPs, GCX does not only target the largest global MNCs but also focuses on midsize to large enterprises. The addition of the domestic operations in India has allowed GCX to better align its go-to-market strategy and target customers that are expanding outside of India. At the same time, it is offering end-to-end connectivity for enterprises into India, powered by its MPLS core, which covers 200 cities (180 MPLS POPs, 120 metro Ethernet POPs). GCX's hybrid (on-net/off-net) solution and its focus on delivering services via its Cloud X platform will further appeal to midsize and large enterprises in the emerging markets.

Challenges

Fewer OWN POPs to Deliver On-Net Services

Although GCX is able to deliver services through its VNO arrangement with partners, other than in India, where it operates the largest MPLS-enabled core data network, covering 200 cities, it doesn't have as many POPs in AP as major competitors do through network-to-network interfaces (NNIs) or in-country builds. These competitors will have an upper hand in bidding for deals that require on-net coverage in major cities across AP.

Limited Professional Services Capabilities

The provider has a relatively smaller professional services team in AP. Although GCX ramps up its cloud services, it should also build up its capabilities in cloud consultancy and assessment services so as to assist enterprises in their cloud migration process. Besides cloud, professional services are often crucial in areas such as security, application performance, and unified communications and collaboration (UC&C). Customers are increasingly looking to their SPs as trusted advisors in leveraging technologies to transform their business processes.

NTT Communications

NTT Communications is positioned in the Major Player category in this year's Asia/Pacific Communication SP IDC MarketScape.

After a quiet 2016, NTT Com witnessed decent growth in 2017, driven by significant growth in its cloud as global business group. The carrier, which derives over 90% of its revenues from AP, continued to execute well on its strategy of becoming a preferred ICT partner for MNCs and large enterprises across the region and worldwide. In addition to comprehensive network coverage in the region, NTT Communications' portfolio of services now includes traditional and next-generation (SDN-/network function virtualization [NFV]-based) connectivity offerings, hybrid and managed network services, cloud, and collaboration tools. The cloud computing platforms group outperformed the rest of the business segments, riding on its enterprise strategy aimed at helping organizations optimize their ICT

environments by taking advantage of cloud-based infrastructure. This was ably supported by its set of globally standardized services that enable NTT Com to provide consistent solutions at attractive price points to enterprises.

NTT Com continued to make further investments not just in expanding its network coverage but also in increasing its datacenter footprint and cloud infrastructure in the region and globally. Although most of the SPs have chosen to partner with third-party entities for datacenter and colocation capabilities, NTT Com treats the datacenter as a core capability for its service offerings in the space and has plans to increase it further. The carrier now operates a network of more than 400,000sq m of datacenters worldwide and plans to add more to the list over the next 12–24 months. NTT Com further increased its regional presence by expanding in emerging markets, such as India and Thailand. The carrier continued to build on the local footing and customer base as part of its Netmagic acquisition in India and reported a strong interest from Japanese manufacturers for connectivity, cloud, and managed services in Thailand. These infrastructure assets, along with a robust IP backbone providing multiple connectivity routes within Asia, between Asia and Oceania, within Europe, within the United States, and between Europe and the United States, form the cornerstones of NTT Communications' push in the enterprise space.

On the network front, NTT Com has been providing its MPLS-based and Ethernet-based IP VPN offerings, together with its Internet VPN service, allowing customers to build their internal networks purely using the internet and directly connect their premises or branch offices with each other via the internet. NTT's transport-independent SD-WAN portfolio converges the utilization of private network connectivity and public internet into a seamless hybrid network architecture optimized for enterprise application performance. It also integrates security, WAN optimization, and other virtual network services enabled from cloud or customer premises for its SD-WAN customers. NTT Com has made significant investments in increasing the capacity and improving the latency of its backbone cable network as well as MPLS-based VPN and introduced a bandwidth on-demand option for its customers in Japan. It also provides cloud-enabled networks for connectivity to NTT Communications' Enterprise Cloud sites (in Japan, Hong Kong, Singapore, Australia, Thailand, and Malaysia) and third-party cloud providers, such as Microsoft Azure, AWS, Oracle, and Salesforce.

Strengths

Datacenter Network as a Strategic Asset

Although a lot of SPs treat datacenter capabilities as a complementary offering that enables colocation and hosting, NTT Com continues to look at them as a strategic asset and among its biggest strengths in the market. It operates datacenters in more than 20 countries globally, including new datacenters in Japan, Indonesia, Thailand, United States, United Kingdom, Germany, China, Hong Kong, Philippines, and South Africa, which became operational in the last 12–24 months. The SP has also focused on expanding its global footprint, and nearly two-thirds of its datacenter server floor space is outside its home country now. In AP, NTT Com operates datacenters in 109 locations, with a total server floor space of over 200,000sq m. These datacenters power its enterprise cloud business, and about half of them are connected through a 10Gbps backbone network to provide datacenter interconnects for its customers.

NTT Com leverages this datacenter footprint and its network strength to help its customers transition from on-premise to hosted cloud and various hybrid and virtualization capabilities along the way. It has further leveraged software-defined technologies to further enhance its services capabilities by

providing on-demand functionalities and strengthening automated features to support management of complex ICT environments. NTT Com offers:

- Managed services (WideAngle [managed security] and Global Management One [remote infrastructure management])
- Datacenter and cloud (e.g., Enterprise Cloud services and Nexcenter colocation services)
- Cloud-based applications (e.g., Desktop Virtualization, UC as a service [UCaaS], and conferencing)
- Networks (e.g., Arcstar Universal One and Nexcenter connect)

Treating datacenters as core of its ICT business and positioning them as a differentiator in the market have allowed the carrier to renew existing deals and win new logos in the region.

Integration of SDN into Its Wider Portfolio Offerings

NTT Com has identified its IP backbone and datacenter assets as key differentiators in today's competitive market. Increased investment in its network is a foundation for the rest of its product and services portfolio, with an emphasis on the importance of network in powering an enhanced customer experience. It continues to integrate elements of SDN into its wider set of offerings to create value for its enterprise customers throughout their network, including SD-LAN (including SD-WLAN), SD-WAN, SD-Exchange, and managed services for the software-defined ICT environment.

The SDx + M initiative refers to the further enhancement of network-based services using software-defined technologies, such as SD-LAN, SD-WAN, and SD-Exchange, The M refers to the automation of managed services to support complex ICT environments, including third-party components. NTT Communications' SD-WAN offering enables self-service on-demand control of customer network needs by combining multiple network resources with varying quality of service, including NTT Com network services, third-party VPN services, and the internet.

Furthermore, the solution operates in a multivendor environment, allowing customers to visualize and control traffic based on multiple attributes and centrally control network equipment regardless of vendor. The SD-LAN offering provides similar benefits as an SD-WAN solution, albeit on the local network, whereas the SD-Exchange solution allows customers to interconnect systems deployed in a hybrid environment, including NTT Com cloud, colocation infrastructure, and third-party cloud, such as AWS, Microsoft Azure, and Oracle. This is integrated with other NTT Com offerings, such as bandwidth on demand, WideAngle MSS, and virtual load balancing and firewall services, to provide customers with a one-stop shop for their requirements. It has expanded the scope of virtualization to datacenters (within and between datacenters), clouds, and networks. Following the Virtela acquisition, NTT Com integrated Virtela's virtual network services into its SD-WAN Service Portfolio, enabling the automation of network functions, such as WAN acceleration, IPSec gateway, and firewall, over a self-service portal. This service also includes advanced network analytics and near-real-time reporting to provide customers with enhanced application visibility, end-to-end application performance review, and network replay functionality. This integrated SD-WAN Service Portfolio is available in more than 190 countries globally, of which 40 are in AP. SDN and NFV have been key components of NTT Communications' enterprise strategy and continue to be a strong talking point for the carrier.

Challenges

Positioning Itself as a Business Transformation Partner

Over the past few years, NTT Com has vastly increased its capabilities in networks, security, datacenter footprint, and services through various acquisitions and investments. Moreover, the carrier is a part of the larger NTT Group, which has a diverse array of companies in its portfolio, including many Japanese subsidiaries and sister companies, such as NTT Data, Dimension Data, and NTT Security. Traditionally, these entities worked somewhat independently and did not realize the benefits of being part of such a diverse group. However, in the past couple of years, the NTT group has made significant progress in streamlining all its subsidiaries and capabilities to provide end-to-end solutions and experiences to the enterprise customers. This is a big change and provides a significant opportunity for NTT Com. However, the SP is yet to communicate this evolution effectively to the market. NTT Com should educate its customers of this evolution story to change market perception and position itself as a business transformation partner for its enterprise customers.

Limited Focus on Developing Industry-Specific Solutions

With the advent of Industry 4.0, although some of NTT Communications' competitors are working toward developing industry-specific solutions, NTT Com continues to focus more on developing horizontal solutions. Low-latency network offerings for the financial services industry and a manufacturing-focused IoT platform are some examples of its limited push in the space. However, on a broader level, NTT Com is still partnering with systems integrators (SIs) and vendors to fulfil industry-specific requirements. There's an increasing trend for organizations to partner with communication SPs that understand their business and provide them with integrated solutions addressing certain business outcomes. Hence, developing in-house capabilities to deliver industry-specific solutions will enable NTT Com to engage deeper with its customers and grow its business further in the region.

Orange Business Services

Orange Business Services is positioned in the Leaders category in this year's Asia/Pacific Communication SP IDC MarketScape.

Orange continues to further develop its positioning as a DX partner to enterprise customers while transforming itself internally. Orange has executed well on this ambitious strategy to leverage 3rd Platform technologies in its day-to-day operations, a journey that the carrier kick-started in early 2017. Moving from a technology-led approach to a customer-experience based strategy has worked well for the SP in the last 12–18 months in the region by allowing it to broaden its conversations with its existing and prospective customers. This customer-led approach is also the driving force behind its five-point overarching "Essentials 2020" vision and strategy, in which the SP realigned its product portfolio along three strategic pillars:

- Digital Inside leverages technology to improve internal communications and collaboration, mobilizing business processes, and increasing productivity. This includes Orange Business Services' offerings, such as enterprise mobility and UC&C portfolio.
- Digital Outside acts as a strategic partner for its customers, enabling them to build new revenue streams and new relationships with its respective customers by utilizing technologies, such as big data analytics, IoT, and digital customer experience.
- Digital Enabler creates the foundation for its customers to deliver a superior digital experience through high-speed, low-latency, software-defined networks along with a robust cloud infrastructure. Orange Business Services' Easy Go network-as-a-service (NaaS) offering for

small and medium-sized businesses small-sized customers and its uCPE offering with security, router, and WAN optimization VNFs are some similar examples.

Orange prides itself on having a superior and resilient network, demonstrated by its continuing investment in its network backbone infrastructure worldwide, including the AP region. Its connectivity business continues to outperform industry averages, with over 50 new logos acquired in the last 12–18 months. A lot of these wins came from developing economies, such as India and China. Orange has also partnered with Tata Communications in India and tier-1 telcos in China to further enhance its network coverage in two of the fastest growing markets in the region. The carrier boasts one of the largest POP coverage maps in Asia, claiming over 350 POPs, including its partner networks. The network offers a high-capacity, low-latency, and resilient network with diverse cable paths connecting the key cities in the region to those in the United States and Europe. It also reported an increased demand in capacity for its connectivity offerings from other emerging economies, such as Vietnam, Thailand, and Indonesia, and as a result, investments in these countries have been high. Orange has also further consolidated its strengths in the submarine infrastructure space, in which it provides end-to-end services from initial design and engineering to installation of submarine cables. In fact, Orange is one of the few SPs able to lay and repair these submarine cables.

With a focus on SDN/NFV, Orange further evolved its Easy Go portfolio, offering NaaS in 75 countries globally, including AP, where customers can install a uCPE and integrate with best-of-breed virtual network solutions from vendors, such as Cisco, Riverbed, Fortinet, and Akamai, for application control, performance management, and application acceleration. Today, Orange offers Cisco- (Viptela), Riverbed-, and Ipanema-based managed SD-WAN solutions.

Orange has recognized security as a "critical commodity" and a key digital enabler for today's enterprises. Hence, it continues to focus on building basic security elements into the network fabric itself. In 2017, it established a new dedicated business unit focused on security (Orange Cyberdefense) and integrated capabilities from its earlier acquisitions of Atheos (2014) and Lexsi (2016) to the broader product portfolio. Security offerings are segmented in five key areas based on enterprise objectives:

- Identify — consulting, audit, and compliance capabilities supported by penetration testing
- Protect — a comprehensive suite MSS for network, applications, mobile, identity and access management, and email
- Detect — security incident and event management, anti-DDoS, and universal serial bus (USB) "decontamination"
- Respond — digital forensics and incident response
- Anticipate — a combination of cybersurveillance, threat intelligence, hack, and fraud prevention

Orange Business Services' product and services portfolio is well supported by its network of eight SOCs worldwide, complemented by cyberSOCs (one in India and two in France). It brings together Orange Business Services' expertise in its data scientists and security technologies. Although the SOCs are designed to offer 24 x 7 monitoring services to detect, intercept, and react to threats, the CyberSOCs are staffed with security professionals and data scientists specializing in advanced threat protection (ATP). As the carrier continues to invest further in AI and analytics capabilities, it aims to build the Cyberdefense unit into a significant growth engine for the company in the region by 2020.

Orange Business Services' UC&C portfolio continues to perform well. The carrier reported about 30% YoY revenue growth for its collaboration portfolio (excluding contact center), with the AP region as a significant contributor. Orange Business Services' revamped positioning of "business together," projecting itself as a workplace transformation partner for its enterprise customers, has resulted in increased engagements and a healthy pipeline of its cloud and premise-based collaboration solutions heading into the next 12 months.

Strengths

Wide Cloud Portfolio to Power Enterprise DX Journey

With a strong fundamental network underlay and the heritage of an IT services company at its core, Orange Business Services' cloud portfolio continues to act as a key differentiator for the carrier in the region.

It's positioning as a flexible IT partner for enterprises to help them achieve a completely flexible application-ready environment to build, deploy, and manage their enterprise applications. This is resonating well with its customers. Its "flexible engine" offering is essentially an application programming interface (API)-driven and secure cloud platform, offering compute, storage, and network resources on a pay-as-you-go commercial model to the enterprise customers. This is powered by its comprehensive suite of cloud and cloud-based solutions, including IaaS (multitenanted, dedicated private, or customized offer), PaaS, storage as a service, contact center as a service, UCaaS, cloud-based fleet management, and telecare/telehealth solutions. As part of its cloud portfolio, it also offers cloud brokerage and orchestration to third-party public cloud services and customized applications, integrating these cloud-based applications on a single dashboard for enterprises for easy management.

Orange also offers Flexible Computing Advanced, its IaaS solution that allows enterprises to build virtual datacenters with scalable resources and can be managed through a self-service portal.

In addition to its platform capabilities, the SP provides a wide variety of professional and ICT services to enterprises on their cloud journey. In 2017, Orange restructured its multiple regional cloud teams into one vertical business unit worldwide, which has made it easier for the carrier to break down silos and tap into global expertise for regional projects. With a strong focus on MNCs, a healthy double-digit growth of its overall cloud business over the past year (worldwide), and increased investments and partnerships in further developing its cloud ecosystem, the carrier is better placed than some of its peers are to continue on its growth path in the region.

Vertical Expertise and Use Case Approach for IoT Solutions

Although some of the SPs have been solely focused on building low-power WANs, such as Sigfox, LoRa, and NB-IoT, Orange has been able to build an early-mover advantage in offering IoT solutions catering to specific verticals, including transport, Smart Cities, manufacturing, and healthcare. Through active participation in various industry initiatives, such as the Global M2M Association (GMA), the LoRa Alliance, and TM Forum, and a focus on building its local and regional partner ecosystem, the carrier currently operates over 15 million connections (over 30% YoY growth) worldwide, with most of these spanning across the manufacturing and automotive (and transport) segment. The carrier also boasts of customers such as a major domestic transport sector company in Singapore and a leading automotive manufacturer in the region. In addition, the carrier has continued to invest in growing Datavenue and its IoT and analytics solution suite, with a team of over 700 IoT and analytics experts (worldwide) working with Orange's enterprise customers to help them get the maximum value out of

their IoT investments. With a strong suite of custom solutions (vertical-specific) and integration services, Orange is gaining strong momentum in the automotive, transportation, utilities, Smart Cities, and manufacturing space in the region and is well placed to further grow its IoT business over the next 12–18 months.

Challenges

Software-Defined Offerings Neutralize Orange Business Services' Network Advantage

Regional and global network assets have always been a key differentiator and Orange Business Services' strong suite. However, as software-defined offerings level the playing field and hybrid offerings based on virtual network services become more prominent, the carrier faces a stiff challenge in maintaining its network advantage. Other communication SPs are now offering a comprehensive portfolio of software-defined and virtual network solutions in the region to challenge Orange Business Services' legacy. Having said that, Orange has done well to build a software-defined portfolio, including on-demand bandwidth, SD-WAN solutions in partnership with Cisco (Viptela) and Riverbed, and virtual network services, along with its Easy Go network as a services offering for smaller branch offices. It also has a promising road map ahead to add more virtual network services to its portfolio. However, the carrier will need to continue to evolve its offerings at a rapid pace to maintain its network advantage.

Focus on the AP Region Needs to Be Clarified

Even though AP is one of the strongest performers for Orange worldwide, it is sometimes missing from key announcements at the larger corporate level, such as the Essentials 2020 and some other recent discussions. Although the carrier shared its plans to invest further in the Middle East and Africa, in its latest annual presentations, any reference to the AP market was surprisingly missing. However, we do see that the carrier is quite active in the region and will need to ensure that it continues to have a strategic focus on the region to offer a full suite of solutions without regional discrepancies to its enterprise customers.

Singtel

Singtel is positioned in the Leaders category in this year's Asia/Pacific Communication SP IDC MarketScape.

The Singtel Group Enterprise, which focuses on Singtel's business in the enterprise segment, grew about 3.2% YoY in FY16–FY17, with its Cyber Security and ICT Managed Services portfolio outperforming its competitors. The cybersecurity practice grew on the back of increasing security demands by the enterprise and government sectors, with the SP well positioned following its Trustwave acquisition. Traditional services, such as enterprise voice, continue to decline in line with the rest of the industry, whereas its enterprise data offerings continue to grow at a healthy rate.

Following its focus on driving profit from traditional services while identifying new growth engines in 2017, Singtel continued on its enterprise strategy to build on security, cloud, and Smart Cities practices. Although security services portfolio outperformed other solution portfolios in 2017, enterprise cloud garnered good interest from the midmarket and government segment. Singtel made further investments in its cloud orchestration platform, Liquid Sky, to increase its capabilities to allow for cloud management and operation in addition to the deployment of workloads. With Liquid Sky at its core, wrapping it with its cloud life-cycle management services, infrastructure management services, and cloud security services, Singtel has witnessed another good year for its growing cloud practice in the

region. Over the past 12 months, Singtel further increased its traction with the Singapore government for an extension of the G-Cloud initiative and developed strategic relationships with the likes of AWS, Microsoft, VMWare, Dell EMC, Cisco, and ServiceNow not just as technology partners but also as channel partners for developing leads and helping Singtel win additional business. In addition to infrastructure modernization, Singtel is also working with organizations to help them develop or enhance existing enterprise applications to work seamlessly with cloud and leverage its capabilities within NCS to deliver on the promise. The SP also increased its activity in the Smart Cities space by working with the Singapore government on various projects, including healthcare, public safety, and transport, such as the delivery of an advanced Electronic Road Pricing (ERP) system for the Land Transport Authority in Singapore.

On the network front, Singtel continues to extend its regional and global reach through various partnerships and integrating its partner networks along with its own domestic and regional networks. One good example of its partnership is the "One Network" initiative with Airtel. Singtel also upgraded the capacity on the Faster cable system, the Southeast Asia–Middle East–Western Europe 5 (SMW5), and Southeast Asia–Japan cable subsystem to strengthen its coverage across Asia, Europe, and Trans-Pacific region. Direct connectivity to public cloud providers for optimized performance is one of the key criteria for enterprises when selecting an SP for its connectivity services. To that effect, Singtel 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 layers 1, 2, and 3 network infrastructure at its core, Singtel has built significant software-defined overlay capabilities over the last 12 months to further address enterprise WAN challenges. In addition to its existing SD-WAN offering, Singtel launched a managed SD-Branch solution in 4Q17, primarily targeting branch offices. Bundled with its Global Internet offering, the SD-Branch solution is Singtel's network-in-a-box solution, offering organizations access to a faster and agile network. The Singtel uCPE can host a variety of network functions, such as vRouter and vFirewall, along with the capability to integrate third-party VNFs (on the road map for later 2018). The solution also allows organizations to gain further insights about their network and application performance through various analytical dashboards.

Strengths

The Larger Singtel Ecosystem as One of Its Biggest Strengths

The larger Singtel Group, which consists of Group Consumer, Group Digital Life, Group Enterprise, Singtel's fully owned subsidiary in Australia (Optus), and associates, such as Advanced Info Services (AIS) in Thailand, Globe Telecom in Philippines, Bharti Airtel in India, and Telkomsel in Indonesia, is one of the carrier's biggest strengths. The Singtel Group is also home to its technology arm, NCS, along with its corporate capital ventures arm, Innov8, which identifies and nurtures technology start-ups that further strengthen the carrier's technology capabilities.

Although the communication SP has recently started seriously leveraging the strengths of the larger Singtel group, it represents capabilities and opportunities that its competitors lack in the region. Over the past year, Singtel has significantly increased its effort to grow its regional business through Optus, its fully owned subsidiary, in Australia as well as associates, including AIS, Globe, Airtel, and Telkomsel. The carrier recently raised its stake in Airtel to 39.5% (February 18, 2018) and is also working ever more closely with Optus to challenge Telstra in Australia, reporting some early success in displacing the incumbent in key accounts. In addition to the enterprise space, it has been working with Optus to invest in further building its mobile capabilities and has had a lot of success in the past six months in the consumer segment, led by broadband and postpaid mobile subscriptions. Singtel acknowledges the role of fixed-mobile convergence in enterprise services in the region and is working

with its associates in helping them enhance their mobile capabilities as well. Airtel, AIS, and Globe acquired additional spectrum in the recent auctions in their respective markets to ensure superior 4G coverage and enhanced user experience. These relationships have allowed Singtel to foray in some of the key markets in AP using these communication SPs as a channel, such as in the Philippines, where it launched the Trustwave Managed Security Services in partnership with Globe in 1Q17.

Time to market has always been a big challenge for telcos, and as competition increases, it will be even more crucial for Singtel to leverage its subsidiaries and associates to launch new solutions in markets outside of Singapore to respond to threats.

Growing from Strength to Strength in the Managed Security Space

Singtel's cybersecurity portfolio outperformed that of the rest of the group in 2017 largely because of the increasing demand for MSS as well as the communication SP completely integrating Trustwave to develop an extensive MSS portfolio. The evolution of malware and an exponential increase in network-based ransomware attacks resulted in a big spike in enterprise security requirements. Singtel's managed security portfolio is very well placed to address this influx through its offerings, such as DDoS mitigation, managed ATP, endpoint security, and incident response and forensics investigation.

Singtel's managed SD-WAN and SD-Branch solutions are integrated with its managed security offering to provide a one-stop policy management for its enterprise customers. Trustwave's payment card industry (PCI) auditing and penetration testing gives Singtel a distinct edge in the highly competitive banking and financial sector. Furthermore, the additions of CounterTack and FireEye to its partner ecosystem, which already includes leading security providers Akamai, CheckPoint, and Palo Alto Networks, lend it a lot of credibility.

In addition to the already existing Singtel Cyber Security Institute, Singtel established the Singtel Cognitive and Artificial Intelligence Lab for Enterprises (SCALE) in partnership with the National Research Foundation (NRF) and Nanyang Technological University (NTU). The focus of the initiative is to develop applications in the areas of healthcare, public safety, transportation, leveraging artificial intelligence, robotics, data analytics, and smart computing. On the sales side, Singtel has a highly effective engagement model with these partners, resulting in all the deals in the region to be fronted and closed by security sales staff in the region, instead of having its partners target the same market. This leads to a highly efficient and more targeted approach. Consequently, the carrier has won new businesses in countries such as Japan and the Philippines. It also offers its MSS solutions in the United States and United Kingdom. Singtel now operates nine SOCs worldwide, including four in Asia (Singapore, Australia, and Philippines), one in Europe, and the rest in the United States and Canada.

Challenges

Increased Competition from Global and Regional Communication SPs

Over the past few years, Singtel has enjoyed the position as one of the leaders in traditional telecom services and as an incumbent in a lot of Singapore-based regional accounts. However, software-defined technologies have leveled the playing field for all SPs, and value creation is happening at the application and services layer, which are challenges to Singtel as an incumbent. With fundamental underlay and networks increasingly becoming a commodity, Singtel will need to differentiate itself from the pack to protect its current enterprise base. Although Singtel's push in the cloud space is resonating well with the government and enterprises, it faces stiff competition from its peers in the Smart Cities and SDN space. Singtel will need to expedite its work in the SDN/NFV space to get some quick wins and stay ahead of the pack.

Compensating for Declining Revenue from Traditional Services

This has been a challenge for most SPs over the past three to four years and continues to be a bigger one for Singtel, given that traditional voice and data services form a significant part of Singtel's group enterprise revenue. It has done well to compensate some of the decline through growth in managed ICT services, but it will need to continue to build on that momentum. In addition, the SP should actively look at utilizing data analytics and artificial intelligence to proactively manage the complex communication SP network. Having a real-time view of the network that provides workload intelligence is a key element in the delivery of a flexible and agile infrastructure to power the enterprise transformation journey while delivering cost-efficient operations for Singtel.

T-Systems

Note: The SP did not respond to requests to provide information, and hence, there are limited updates to the profile.

T-Systems, the IT arm of Deutsche Telekom, is positioned in the Major Player category in this year's Asia/Pacific Next-Generation Communication SP IDC MarketScape.

The provider is considered by the market as a European provider with global aspirations. In AP, the provider will largely focus on serving its European-based customers operating in the region. For A-end contracts or Asian-based enterprises, T-Systems will penetrate these accounts with industry solutions. Within AP, the provider targets three main verticals — automobile (connected car), healthcare, and airport — to expand businesses in the region with specific vertical solutions in each sector. For the healthcare sector, it will target the Singapore and Malaysia markets, and for the automotive sector, it will target the Japan and China markets. In Singapore, the provider was also contracted to implement an integrated solution for the Singapore Sports Hub, leveraging its expertise in this area through stadium projects in Germany and Poland.

In AP, the provider has a telematics platform (embedded with analytics capabilities) for connected cars. This solution has been deployed in China for a number of European automotive car manufacturers. T-Systems also has a global connected car team based in China to serve the automotive industry. On healthcare, the provider has in-house capability on SAP HANA for healthcare and has expertise in Singapore to deliver healthcare IT and electronic health solutions. In the airport vertical, the provider has had a number of successes in China, delivering airport consultancy services and IT integration projects for various airports in the country. The provider is making China its hub for airport solutions, whereas Singapore will be its hub for healthcare solutions. In the IoT/M2M area, T-Systems is also growing its business through partnerships (e.g., digital luggage with Rimowa and Airbus).

Besides these vertical capabilities, the provider offers a suite of managed services in the region as well. These managed services include MSS, managed hosting, APM, virtualization service, IaaS (Dynamic Services for Infrastructure [DSI], local and remote, for on-premise/hosted dedicated cloud deployment and DSI vCloud Datacenter Services for hybrid deployment), application operations (e.g., DS for SAP Solutions), and UC&C (DSs for collaboration based on Microsoft). The provider continues its focus on enhancing its cloud offerings, particularly around cloud integration. In November 2014, it formed an alliance with Informatica to offer data orchestration as a service (DOaaS), which helps customers integrate data and applications residing in-house, in the public cloud, and in the private cloud. Other recent partnerships for its cloud solution include one with Avaya (contact center),

Salesforce (CRM), Covata (file sharing), and SugarCRM. The provider also won major cloud deals, such as with ThyssenKrupp AG and KONE Corporation, globally.

In AP, the provider has about 1,200 employees and a local presence in major hubs, such as China, Hong Kong, India, Japan, Malaysia, and Singapore. Its NOC and security evaluation lab are located in Singapore. It has 28 MPLS POPs and manages 6 datacenters (owned or leased) with about 4,500sq m of operational datacenter space. Its regional datacenter is in Singapore. Its DS cloud servers are hosted in the Singapore's datacenter as well as in datacenters in China and Malaysia. The provider has invested in the dynamic cloud platform (DCP), which will be implemented across all datacenters globally to enable a more seamless agile delivery between datacenter locations and cloud solutions. This platform will allow T-Systems to flexibly shift capacities between different cloud types based on service logic.

Strengths

Subject Matter Expertise in SAP

T-Systems has deep knowledge in SAP applications and is well-recognized for its strength in SAP integration. Globally, its SAP cloud platform hosts more than 2.6 million productive SAP users. It offers application class of service (COS) on its IP VPN network, which offers SLA on SAP (and Microsoft applications). It also provides application performance assurance on SAP for its DS for SAP solutions and demonstrated the ability to migrate enterprise's SAP workloads into the cloud.

Capabilities in the M2M and Big Data and Analytics Space

In the M2M and big data and analytics space, the provider is among the first few providers in AP to move into big data and analytics. It is leveraging these technologies for the healthcare and automotive sectors. Its connected car platform and solutions are all related to M2M and big data and analytics. It has also implemented meter data management for smart energy management in China. Its big data platform includes Hadoop storage, analytics as a service, and developer cloud (a test platform for customers to trial service), with consultancy services wrapped around it. The consultancy and implementation services involve big data readiness assessment, proof of concept (POC), and a big data strategy road map.

Challenges

Limited Network Footprint in AP

Compared with some of its competitors, T-Systems has a limited network footprint in the region. The provider has indicated that its investment on networks in AP has been adequate to serve its customer base which is largely European-based MNCs. However, with limited network presence in AP, T-Systems would be at a disadvantaged position when faced with any potential ICT deals that also have large regional connectivity requirements.

Lack of Traction for Mobility and Collaboration Solutions in AP

In its home country of Germany, T-Systems offers mobile device management (MDM), mobile consultancy, and the mobile AppFactory, an incubator for its business-to-business (B2B) and business-to-business-to-consumer (B2B2C) applications. It also has application developers in Germany and leverages global offshore capabilities for application development. However, in AP, the provider has had limited success in pushing these offerings to enterprise customers. Mobility consultancy can be a door opener for T-Systems in AP, especially when enterprises are moving

toward a mobile-first strategy at the workplace. These will provide pull-through for other managed services, such as managed security, application performance monitoring, or mobile applications management (MAM). Even though the provider has a good overall portfolio of enterprise mobility solutions globally, it has not been able to gather much traction in the region.

Tata Communications

Tata Communications is positioned in the Major Player category in this year's Asia/Pacific Communication SP IDC MarketScape.

The communication SP, which celebrated its 15th anniversary in 2017, continues to grow its network coverage and breadth of capabilities in the region and globally. Its extensive network coverage, coupled with a strong portfolio of managed network services, cloud offerings, UC&C, and software-defined solutions, has allowed the carrier to grow significantly beyond the Indian domestic market and position itself as a major regional (and global) player. With 67%% of its revenues for the quarter ending on March 31, 2018 coming from outside of India, Tata Communications continues to develop a strong base of customers in AP, along with the Europe, Middle East, and Africa (EMEA) region and United States, to further grow its global business.

Tata Communications prides itself on winning the role of global connectivity partner for Formula One (F1) and should be applauded for taking the opportunity and risk to sponsor the premium motorsport event in an effort to improve its visibility in the market. The carrier is also an innovation partner for the Mercedes F1 team and Red Bull Media House. Tata Communications continues to further invest in increasing the backbone capacity of its 210,000km wholly owned cable systems considerably and build new routes within Asia as well as between Asia and the United States to complement its existing Tyco Global Network (TGN) cable systems. Strategic partnerships such as these, along with its extensive network assets and product portfolio, have worked well for the SP to improve its image as a major global SP.

The carrier reported good growth of its AP business in 2017 fueled by further expansion of its India business. With a dual focus on growing the share of wallet with existing customers, along with acquiring new logos, the carrier now accounts for more than 25% of India's enterprise connectivity market. Tata Communications operates and manages over 240 MPLS POPs globally (AP split is not shared). With one of the world's largest subsea cable network spanning six continents, Tata Communications has the scale and diversity to provide competitive connectivity services.

The carrier shared its focus on four key technology areas to address the business challenges of its enterprise customers: cloud to help create a flexible core, IoT/M2M to help create new revenue streams, artificial intelligence to help them change customer interactions, and APIs to act as a digital glue to integrate technology into their business processes. It's also working with leading technology providers around the world to co-create services, such as its UC&C offering in partnership with Cisco and Microsoft, mobility offering in partnership with Teleena, and IoT operational/business support system (OSS/BSS) offerings in partnership with OrbiWise. The carrier has also managed to develop a significant set of reference customers, such as Air France–KLM, KPIT Cummins, and Skylab, helping to further increase its brand recognition in the market.

In addition to network services, Tata Communications offers a range of managed ICT services, including UC&C, mobility, IoT, CDNs, managed security, and cloud services. Its cloud-enabling network technology, the IZO platform, includes IZO Internet WAN, IZO Private Connect, IZO Public Connect, IZO Hybrid WAN, and IZO SD-WAN services.

IZO Internet WAN rides on the global tier-1 IP network and its ISP partners to provide predictable routing and guaranteed end-to-end SLAs. IZO Private Connect offers end-to-end private network connectivity for customers to datacenters of major cloud providers, including AWS (AWS Direct Connect), Microsoft Azure and Office 365, Salesforce.com, Google, IBM, Alibaba, Oracle, and Tata Communications' IZO Private Cloud. With an open systems– and API-based open framework approach, the carrier continues to expand its cloud services portfolio. The carrier provides various levels of cloud connect services to its enterprise customers, through its network of over 110 datacenter and eight cloud partners globally. Although the carrier is primarily witnessing good growth and focusing on the cloud services market in India, it also shared some traction in countries, such as Malaysia, Singapore, and Thailand, in the region, where the carrier is addressing enterprise cloud requirements in partnership with local datacenter providers.

On the software-defined front, Tata Communications shared realization of good market traction and success with its software-defined version of IZO SD-WAN (launched in late 2016), the IZO WAN portfolio. Built on a strong underlying network (IZO Hybrid WAN), the service is available in over 130 countries globally, covering most major markets in AP. This offering has two variants. IZO SD-WAN Prime is an in-house developed solution that provides its customers with near-real-time application-aware dynamic congestion management, dynamic path selection, and symmetric routing, whereas IZO SD-WAN Select is a solution developed in partnership with third-party SD-WAN technology partners, with Versa Networks being the first of them. IZO SD-WAN runs on top of Tata Communications' robust underlay infrastructure, IZO Hybrid WAN, ensuring optimal application performance, deployment flexibility, and a better end-user experience.

Other offerings include solutions based on its partnerships with Cisco and Microsoft, enabling enterprise mobility and delivering cloud-based messaging and collaboration solutions to its customers globally. Tata Communications Cloud Contact Center solution InstaCC Global witnessed strong enterprise traction as the carrier continued to add capabilities, such as workforce optimization and speech recognition. In the media space, its global Media Ecosystem provides a comprehensive solution, which includes asset management, workflow management, channel origination, internet contribution feeds, over-the-top (OTT) platform and transcoding as service, media storage, and Ultra Live OTT. In addition, Tata Communications also provides a comprehensive portfolio of MSS, a multilayered and integrated service offering that relies on secure operations and its partnerships in the space.

The carrier continues to promote its Tata Communications MOVE platform, a fully managed IoT connectivity service to allow devices to interconnect across borders, enabling IoT roaming. Tata Communications reported a healthy adoption of its offerings in the region, with customers such as Surbana Jurong, DRVR, and Omate. The fully managed solution brings Tata Communications' global network and roaming partnerships to over 600 mobile network operators to enable the solution, with an aim to provide B2B global mobile connectivity, allowing the carrier to grow its revenues as IoT connections grow globally. As an enabler for mobile network operators looking to provide full-scale IoT offering, Tata Communications MOVE provides the coverage, control, billing, subscriber management, and resources to help it become a mobile VNO (MVNO) and provide solutions for its respective things and people. The carrier is also driving Industry 4.0 transformation in India by developing a complete IoT ecosystem on a private LoRa-based LP-WAN network.

Strengths

Strong Heritage as a Network Services Provider

With an excellent network coverage in India and extended connectivity into Middle East and Africa, the SP continues to consolidate its position as a global communications SP. Also, an increasing number of enterprises in countries, such as India and China, are expanding westwards, and Tata Communications' global and regional network strength works in its favor. In Africa, the provider has direct connection to 22 countries within Africa, either via its own POPs or NNIs and has its own subsea cable connecting to the Middle East. It has built new landing stations and routes on its Tata Global Network-Eurasia (TGN-EA) and TGN-Gulf subsea cable systems, expanding its presence in the Middle East. Besides these two cable systems, the provider also operates its own global cable network ring, providing seamless global connectivity. The SP rides on this comprehensive network to provide various connectivity solutions including its well-known IZO Hybrid WAN. This is well complimented by Tata Communications' IZO SD-WAN, which offers features such as dynamic routing, self-service capabilities, WAN optimization, application integration, and reporting capabilities.

Innovations in the SIP Space

Tata Communications' extensive Session Initiation Protocol (SIP) infrastructure, which powers its UCaaS offerings, covers nearly 89% of the world's gross domestic product (GDP). Its recent innovation, multimodal SIP, acts as an enabler of its portfolio of Cisco and Microsoft-based UCaaS solutions, including cloud-based contact center service. The multimodal SIP capability lets the same SIP trunk carry all collaboration traffic, including video, and enables customers to set up point-to-point video calls, using SIP to connect with each other directly, instead of going through a bridge. Tata Communications has continued to further grow its communications and collaboration business and has expanded its portfolio of services within the segment. Cisco Hosted Collaboration Solution (HCS)–powered InstaCC Global, its cloud-based contact center offering, and Click2RTC, its real-time communications solutions, continue to perform well in the market. The carrier shared impressive wins with leading global IT firms and the State Bank of India (SBI), the largest public sector bank in India. Strong partnerships with technology providers and its network innovations to support these solutions allow the carrier to provide an end-to-end quality of service (QoS) and an enhanced customer experience.

Challenges

Vertical Solutions and Professional Services Are a Challenge

Customers are increasingly looking for SPs that understand their business and are engaging them as trusted advisors to reinvent their business processes. Although Tata Communications has developed knowledge and capabilities to target customers in the media and entertainment sector, it has not been able to do the same in other sectors. The provider is also lagging behind competitors in the area of business consulting and professional services. Most of the enterprise customers expect SPs to support a hybrid ecosystem that allows integration of existing systems into the new ecosystem. Consulting capabilities are important for complex customers that are sourcing for such solutions that are not readily available off the shelf.

Growing Overall Market Share in the Region

Tata Communications has spent the past few years building substantial network and technology capabilities in the region and working toward the goal of being recognized as a global SP. Although the SP reported low double-digit growth in 2017 on the back of these capabilities in the region, in terms of

its market presence and market share, it is still behind some of its competitors. Having said that, although the carrier lacks the size and scale of its more established competitors in the region, the experience and learnings from the success in the hypercompetitive Indian market bodes well for the carrier as it continues to push its boundaries and focus on other markets in the region.

Telstra

Telstra is positioned in the Major Player category in this year's Asia/Pacific Communication SP IDC MarketScape.

Over the past couple of years, Telstra has mapped out its DX strategy (including its "Network 2020" initiative), aimed at transforming its networks for the software-defined world as well as the enhancement of its operational and service delivery platforms to enhance the customer experience.

The communication SP continues to swiftly move along this journey as it transforms itself from a traditional telco to a technology company. It continues to execute on its transformation agenda internally, on how it operates, as well as externally, by evolving its messaging and value proposition to its customers in the domestic as well as global markets. This has been the driving force behind the bulk of its investments and its refreshing pivot to organize its enterprise solutions portfolio by the following five business outcomes rather than horizontal solution areas:

- **Optimize your IT.** Business solutions aimed at provisioning and managing cloud environment plus infrastructure solutions, including SDN
- **Liberate your workforce.** Business solutions targeted at activity around collaboration and mobile applications
- **Secure your business.** Business solutions aimed at activity around identity, information, and data security solutions
- **Reach global markets.** Business solutions around global expansion and connectivity solutions
- **Create transformative innovation.** Disruptive solutions using cloud and application solutions

Telstra has recognized that even though underlying networks play a crucial role in powering the enterprise digital journey, most of the value today is created and captured at the application and services layer, hence its focus on further growing its Network Applications and Services (NAS) business. The portfolio outperformed the rest of the business segments comfortably with a 30% YoY growth in FY17 on the back of commercial works for NBN Co and significant growth in industry solutions, cloud services, and unified communications business. These investments are structured in the following areas:

- **Network investments.** Underpinning Telstra's transformation journey with the Network 2020 initiative focused on modernizing its core, the carrier has invested in increasing network resiliency and creating a differentiated software-defined offering. Leveraging the software-defined network IP from its US\$700 million Pacnet acquisition (April 2015), Telstra launched the Telstra Programmable Network in early 2017 and has added capabilities such as SD-WAN, in partnership with VeloCloud, to its portfolio through the year.
- **Strategic investments.** Telstra has identified three strategic near-term investment areas in the form of 5G, IoT, and big data. On the mobile side, Telstra continues to enhance its 4G capabilities while aiming to launch 5G commercially by the end of 2019. The communication SP is conducting 4G and 5G integration trials with Ericsson, Intel, and Qualcomm and is also working with these tech providers to develop an end-to-end 5G ecosystem. In addition, Telstra

is looking to invest more in acquiring additional spectrum in the 3.6GHz and 26GHz auctions to complement its current holdings.

- **IoT connectivity.** The carrier has invested in deploying an NB-IoT network in major cities in Australia, in addition to its already widespread Cat-M1 coverage, to fast-track the development of IoT applications and services on top of it. It also acquired MTDData to provide itself with a solution stack and services in the connected vehicle and telematics space.

On the network front, Telstra boasts of one of the widest network coverage in the region, including the hotly contested submarine cable space, in which the carrier owns significant lit submarine cable capacity. The provider offers MPLS IP VPN, Ethernet private line (EPL), EPL Express, and Global internet, and IP transit services globally. Its East Asia Crossing (EAC) cable system and city-to-city (C2C) infrastructure provide enterprises in key Asian cities with diverse low-latency and multiple-capacity options to connect within the region as well as to Europe and United States. Telstra also introduced new 10G and 100G routes connecting Malaysia, Indochina, Singapore, India, and Sri Lanka to Europe.

Telstra has expanded its security portfolio, adding new services and capabilities to its growing security practice. Its MSS witnessed about 10% growth YoY in FY17. The communication SP opened two new SOCs, one each in Melbourne and Sydney, with plans to open another one in London to further service its enterprise and government sector customers. Telstra also has an NOC in Hong Kong and a 24 x 7 service desk for L1 customer support and coordination of end-to-end resolution of customer escalations. Telstra's NAS unit provides managed network services, UC&C and contact center solutions, cloud hosting solutions, security services, and a range of SaaS solutions for enterprise and MNC customers. Telstra also launched a BroadSoft-powered converged telephony solution called "Liberate" (September 2017) and announced plans to integrate native voice calling with Skype for Business to Teams in partnership with Microsoft, to further strengthen its UC portfolio.

Overall, Telstra is continuing its transformation journey and is focused on expanding aggressively within and outside of AP, leveraging its various partnerships and acquisitions.

Strengths

A Strong Software-Defined Portfolio to Complement Its Network Assets

Over the past two years, Telstra has built serious capabilities in the software-defined space, leveraging its Pacnet acquisition, partnership with Cisco for project Symphony (and later Viptela), and its investments in VeloCloud through Telstra Ventures, its corporate ventures arm.

The carrier continues to focus on building networks of the future through various software-defined initiatives, including virtualizing its core and implementing a programmable network fabric, facilitating increased flexibility and operational agility in serving customers in Australian and international markets. Although there was some early confusion in the market regarding various Telstra offerings in the software-defined space, the communication SP has done well to consolidate all of its software-defined and virtualization portfolio within the Telstra Programmable Network platform.

The portfolio, accessible through Telstra's domestic and international MPLS network, includes bandwidth-on-demand services, cloud gateway for optimized connectivity to public and private clouds, SD-WAN, and virtual network services, such as virtual router and virtual firewall in partnership with Palo Alto and Cisco. With organizations realizing the critical role of networks in powering their DX journeys, Telstra's software-defined portfolio compounded with its widespread network assets give the SP an edge over some of its competitors in the region.

Solution Alignment with Line of Business

Telstra's reinvention of its product portfolio, with the de-emphasis of technology solutions and the move to focus on business outcomes, echoes its consumer-focused marketing campaign (called "Thrive"). The carrier has organized its solution portfolio to align with the five business outcomes highlighted earlier: optimize your IT, liberate your workforce, secure your business, reach global markets, and create transformative innovation. With line of business increasingly holding the reins of spend in all areas IT, orienting its portfolio toward DX outcomes makes the carrier more accessible for key enterprise initiatives. Changing the language of ICT allows the carrier to position itself in higher-value solutions, complemented by its services investments, such as Readify.

Challenges

Significant Headwinds at the Corporate Level

Telstra is battling serious headwinds and shareholder pressure at the larger corporate level. Along with the Ooyala write-off and increased competition, it expects a significant impact of about US\$3 billion following the completion of the NBN Co rollout in 2020–2021. NBN Co is also impacting the carrier's margins and giving rise to new entrants and unconventional competitors. This is going to have an even bigger impact on Telstra's revenue going forward. Although Telstra has made some efforts to insure itself against these pressures through increased investments, the growth of its NAS portfolio, and an increased focus on international expansion, it will need to be careful not to overcommit and overpromise.

Unifying Back-End ICT Systems to Support Its Own DX Journey

Over the past few years, Telstra has developed a holistic portfolio of technology solutions and end-to-end capabilities in consulting, professional, and managed services, underpinned by various acquisitions, both locally in Australia and internationally, including Kloud, Readify, Cognevo, Company85, MTData, and, most recently, VMTech. As Telstra continues further on its transformation journey with an explicit focus on customer experience, it will need to consolidate the back-end ICT systems, which is critical in providing a uniform customer experience, and address enterprise challenges around long sales and provisioning cycles.

Verizon

Verizon is positioned in the Major Player category in this year's Asia/Pacific Communication SP IDC MarketScape.

After a couple of challenging years, the SP performed well in 2017, witnessing what IDC estimates as a low single-digit growth of its overall enterprise business in the region. The revenue decline in some of the traditional data services was offset by healthy growth in its managed security and network services, which IDC believes outperformed the rest of the pack. The carrier expects to further build on this momentum and is focusing on four key technology areas, namely network, unified communications, security, and IoT, for the next 12–24 months.

Verizon has extensive network coverage in the region and provides MPLS connectivity through 53 Verizon owned POPs in 17 key countries, along with NNI partnerships in 10 more countries, such as Brunei, Bangladesh, Cambodia, Laos, and Nepal. It also offers its Ethernet services, including Ethernet Switched E-Line, Switched E-LAN, Private Line, and Dedicated E-Line in AP. The Ethernet Dedicated E-Line service offers dedicated point-to-point and point-to-multipoint connectivity with predictable latency and is available in Australia, Hong Kong, Japan, South Korea, and Singapore.

Over the past 12 months, the carrier has developed cross-border leased line capabilities into emerging markets, such as Myanmar, Macau, Mongolia, Fiji, and Papua New Guinea.

Verizon, as one of the leaders in the software-defined space, continues to execute well on its virtualization strategy in the region. With a focus on meeting flexible infrastructure requirements of its end customers, Verizon's SDN/NFV stack of services includes Dynamic Bandwidth, Secure Cloud Interconnect (SCI), SD-WAN, Next-Generation Secure Gateway, and a wide variety of virtual network services. Verizon is providing these services on a subscription basis to align with customer requirements. Verizon's Managed SD-WAN offering currently allows customers to choose from Cisco iWAN, Viptela Secure Extensible Network (SEN), Versa SDSB, and Cisco Meraki CCM and can be offered as a virtual service running on Verizon uCPE on customer premises. The carrier has also used SD-WAN aggressively to get into new accounts and grab market share from some of its competitors by leveraging its customer technology centers in the region to demonstrate SD-WAN use cases and launch bundled SD-WAN offerings, allowing customers to try this service without paying licensing fees for a limited time. In addition to SD-WAN, the carrier also offers virtual network services to its enterprise customers, either delivered through an on-premise uCPE or through a cloud-based Verizon virtual CPE. The SP currently offers virtual routing, SD-WAN, security, session border controller (SBC), and WAN optimization services in a virtual network services marketplace and has plans to add more partners through the year.

The carrier also offers a strong suite of managed network and professional services capabilities, cloud offerings, and managed security capabilities in the region. Verizon's strong partner ecosystem allows it to offer additional managed services, such as managed WAN/LAN, enterprise WiFi, WAN optimization, and network APM. These core offerings are well supported by its capabilities in the collaboration space in partnership with Cisco, M2M (telematics capabilities out of China), digital media (Airtel partnership), and professional services in AP.

Although Verizon sold its private cloud and managed hosting business to IBM mid-2017, it continues to further expand its SCI offerings in AP. The SP added two cities in India for its SCI offering, which now provides direct connections to eight cloud providers, including Amazon, Microsoft, Google, DXC, Salesforce.com, SAP and IBM, in 19 AP cities, with plans to add more in 2018. SCI also allows its customers with private cloud infrastructure in Equinix datacenters (Hong Kong, Singapore, Sydney, and Tokyo) to directly connect to Verizon's MPLS network. Moreover, the SP has enhanced its SCI with Intelligent Cloud Control (ICC), which ensures optimal application performance through near-real-time and software-driven approach by providing cloud analytics based on price, performance, and compliance-based decisions. SCI continues to be one of Verizon's best performing portfolios in the region (and globally), and the carrier is enhancing its API capabilities through cloud partners. Verizon will continue to further expand in the region, with a distinguished focus on emerging markets such as India and China.

Verizon's operation in the region is ably supported by its 1,700 employees across 12 countries in various roles. It also has key customer facing offices in eight of these countries, managing day-to-day customer interactions. Verizon also operates a Global Accounts program for its key strategic accounts worldwide, aimed at providing a uniform and integrated customer experience across regions. The carrier reported that more than 100 of its key accounts enrolled under this program are Asia-based. An increased focus on enhanced customer experience is driving a lot of internal initiatives within Verizon, including process improvements to cut down the lead-to-quote time and aggregation of customer experience key performance indicators (KPIs) to predict the Client Health Index.

Strengths

Strong Product Portfolio and Road Map in the Software-Defined Space

As one of the founding members of the Open Network Foundation, Verizon continues to be at the forefront of the developments in the software-defined space. The carrier has a strong product portfolio, with most of its offerings available consistently in all the markets. Over the past 12 months, the carrier launched its multivendor SD-WAN offering across AP, allowing enterprises to choose from the likes of Cisco iWAN, Cisco Viptela, Versa, and Cisco Meraki solutions. Verizon also launched its first set of virtual network services, offering virtual routing, firewall, and WAN optimization functionalities that can be consumed as on-premise solutions hosted on a Dell, Advantech, Cisco, or a Juniper uCPE, as cloud-based services hosted in the cloud on Verizon vCPE, or as a hybrid model. The carrier has created a strong ecosystem of partners: CheckPoint, Fortinet, Juniper, Palo Alto, and Cisco for virtual security functions; Riverbed and Cisco for virtual WAN optimization; Versa and Cisco Viptela for virtual SD-WAN solutions; and Juniper, Cisco, and Cisco Viptela for virtual routing services. The solution integrates SevOne's reporting engine and the Ericsson Cloud Manager life-cycle management platform to allow for detailed reporting and analytics of the SDN/virtual network services solutions as well as automation and orchestration of services. In a market in which core connectivity and managed network solutions have become table stakes, this will allow Verizon to differentiate themselves from others.

The carrier has been aggressive in pushing these solutions in the market and has been utilizing its Customer Innovation Centers (five countries) and Customer Technology Labs (six countries) to deliver proof of concept and product demonstrations. In addition to the traditional capex-heavy approach, Verizon recently launched another payment option for organizations that prefer a lower capex and centralized billing. Positioned in the market as Virtual Network Services — One, the option allows enterprises to combine all of their virtualized network services into an opex-based software licensing model without needing to pay for hardware separately. Although the customer base for these offerings is currently small, the carrier has reported strong interest from its existing customers as well as new logos, resulting in a healthy pipeline for the next 12 months.

In a market in which core connectivity and managed network solutions have become table stakes, this will allow Verizon to differentiate themselves from others. And with an impressive multiyear road map to create a comprehensive marketplace of software-defined networks and virtual network services, the SP is well placed to take advantage of the same and win new logos in the region.

A Credible Managed Security Provider

Verizon continues to lead in the security space offering a range of services, including breach management, incident response, forensics compliance, and security assessment. The Verizon Cyber Intelligence Center (VCIC), launched in 2014, offers three levels of cyberintelligence to help enterprises stop and mitigate cyberattacks. Verizon leverages big data and analytics to examine user and network behavior, and its cybersecurity solutions are designed to meet the requirements of critical national infrastructure. The carrier introduced its Verizon Risk Report service, which provides an automated assessment of a customer's cybersecurity posture and helps the carrier kick-start broader discussions. Verizon is also developing Software Defined Perimeter, a VPN solution that utilizes cloud-based security controllers and software-defined access controls to provide secure connectivity for all kinds of applications.

Moreover, its push in the virtual security space with its virtual network services partnerships, managed security portfolio, and capabilities places the SP in a good position when it comes to delivering secure environment for cloud, mobility, M2M, or IoT implementations.

Challenges

IoT Push Limited to Telematics in the Region

Although Verizon has highlighted IoT as one of the key growth areas, it continues to solely focus on telematics in the region. Verizon Telematics, based in China, offers comprehensive connectivity, software, and hardware solutions to enterprise customers to power the connected vehicle market globally. Verizon further strengthened its telematics offerings through its acquisitions of Fleetmatics and Telogis, which gave the SP significant capabilities in the managed services space. Outside the telematics space, Verizon's IoT push is fairly limited in the region, but the SP shared plans to develop other industry-specific solutions. The expected growth of the entire IoT ecosystem offers a significant opportunity for the carrier.

Lack of Visibility in the Region

Verizon Enterprise Solutions reported constant revenues for 2017 compared with revenues in 2016, in which increased revenues from its XO acquisition were fully offset by declines in traditional data and voice services because of competitive price pressures. However, the AP region outperformed the larger global enterprise group, growing in the low single digits. The carrier expects to continue this momentum into 2019, aiming a mid to high single-digit growth in its overall AP business. However, the carrier lags behind some of its competitors in the region in terms of visibility in the AP market. The carrier will need to support its targeted account-based digital marketing programs with wider initiatives to create more noise in the market and make good on its growth plans for the next year.

Vodafone Global Enterprise

Vodafone Global Enterprise is positioned in the Leaders category in this year's Asia/Pacific Communication SP IDC MarketScape.

Vodafone was the biggest mover in this year's study in terms of its YoY growth on the IDC MarketScape Index. It enters the Leaders segment for the first time, largely owing to its refreshed focus on further growing the enterprise practice in the region with a distinguished focus on customer excellence. This includes scaling up its capabilities and business in the IoT, cloud, security, and collaboration spaces while leveraging its fixed and mobile network assets in the region. After spending the majority of the last two to three years on building substantial fixed-line capabilities and stabilizing itself in the region, the U.K.-based carrier executed well on its aggressive growth strategy to make good on its aim of becoming a total communications partner for its customers and highlighted a series of strong wins over the past 12 months to substantiate its progress.

Vodafone has a strong mobile heritage and that business still forms the basis of a lot of its strategy at the larger group level. However, the Vodafone Group Enterprise has become ever more critical to the carrier's overall business, contributing about 30% to Vodafone's worldwide revenues. The AP entity is the highest growth region for VGE globally, and with a new leadership team focused on driving the business as a tech company rather than a traditional telecom company, the carrier witnessed good growth in the region. While VGE continues to focus on its 1,400 (approximately) named large MNC accounts, it has also been working closely with Vodafone operating companies in India and New Zealand to leverage its market leading mobile capabilities to address the opportunities in smaller

accounts, with plans to grow further in the Australian market, where, barring the IoT business unit, most of its revenues come from the consumer side of things today.

Vodafone's fixed assets are key to its enterprise offerings. They include a global MPLS IP VPN network that extends into 75 countries and a total of 274 POPs. In the AP region, the carrier owns and operates 48 POPs in 14 countries. This fixed network runs through AP, Africa, Europe, the Americas, and the Middle East. NNI agreements in other global markets provide comprehensive coverage for Vodafone's enterprise customers.

The carrier launched high-speed ethernet services, up to 10G, in 2017, and is on track to launch a full suite of software-defined offerings, including on-demand bandwidth, SD-WAN overlay solutions, and virtual network services by the end of 2018. Currently, it offers a virtual Cisco SD-WAN solution based on a Juniper uCPE. The carrier also has established a strategic partnership with Huawei for codevelopment of services and joint go-to-market strategies globally in multiple areas, such as voice over LTE (VoLTE), intelligent fixed networks, and NB-IoT. Overall, the carrier experienced healthy growth for its fixed offerings in the region and expects the trend to continue over the next 12–24 months.

A combination of these fixed assets, along with its mobile networks, underpins the carrier's Technology 2020 strategy. Whereas Project Spring from the past two to three years was focused on networks primarily, the Technology 2020 strategy is focused on transforming itself into a digital telco. As Vodafone continued to further evolve its "Sell-Build-Run" operational model to provide a superior customer experience, it also enhanced its go-to-market strategy by moving up the value chain through strategic partnerships with large Indian SIs. Vodafone has also established effective partnerships with large consultancy companies for developing DX road maps for its enterprise customers.

Cloud and hosting, along with collaboration and IoT, were Vodafone's best performing portfolios in 2017. The SP continues to further develop its relationship with Alibaba, including helping the SP establish a base in Europe and provide its cloud connect services for third-party providers, such as Amazon, Microsoft, and Hewlett Packard Enterprise (HPE). In addition, Vodafone's global partnership with Equinix allows the carrier to provide a variety of public, private, and hybrid cloud offerings and extend the geographic coverage of its cloud offerings. These services are ably supported through four support centers globally, of which two are in AP (India and Hong Kong). Vodafone's team of over 200 cloud specialists (worldwide) support the regional sales team in its push to sell cloud services to enterprise customers. The carrier continues to evolve its collaboration portfolio, which includes its One Net Enterprise portfolio (supplemented by One Net Express and One Net Business for the small and medium-sized business [SMB] market) along with the recently launched Meet Anywhere audioconferencing and videoconferencing offerings. With a 10% YoY user growth and a healthy pipeline going into the next year, the SP is well placed to further grow its collaboration business.

Strengths

Leadership in IoT Developments and Implementations

IoT is one of the key pillars of what Vodafone calls a "gigabit society," and the carrier continues to make significant strides in the space. With over 500 new customers added in 2017 and double-digit YoY revenue growth (worldwide), the IoT business unit within Vodafone is now as big as (if not bigger than) that of some of its smaller country operations.

Vodafone's IoT management platform, the Global Data Service Platform (GDSP), which manages most of the carrier's 62 million IoT connections, is one of the more mature platforms in the market. This platform strategy reflects Vodafone's opportunistic approach to the IoT market, in which some of the carriers are solely focused on building the network capabilities (such as LoRa, Sigfox, and NB-IoT). Vodafone's smart approach ensures that it puts enough focus on building network capabilities while also creating an end-to-end solution portfolio in key verticals, such as automotive, logistics, healthcare, and utilities. The carrier reported that the automotive segment outperformed the others by virtue of its agreements with major car manufacturers, including Volkswagen, Renault, and Infiniti. For customers with more horizontal requirements, Vodafone also partners with PTC ThingWorx and can support integrations with third-party IoT platform providers, such as industrial IoT companies, cloud vendors, module providers, and SIs. On the network front, the carrier now has live NB-IoT networks in nine countries worldwide, including Australia, and has entered various partnerships with the likes of China Mobile to further its coverage in the region.

Acknowledging that IoT is an ecosystem play, Vodafone has judiciously developed a partner ecosystem to help it in its IoT journey. This includes technology and ecosystem partners, such as Huawei, Microsoft, and IBM, along with consulting and revenue-generating partners with a number of large consultancy companies. Vodafone's strong capabilities in the IoT space, a good set of reference customers, and a well-rounded ecosystem place the carrier in good stead in the market and should continue to see the IoT business for the carrier to grow further.

Customer First Strategy at Its Core

Vodafone prides itself on being a customer-first organization and has developed most of its product portfolio and services with a distinguished focus on customer experience. Its strategy of not selling to the mass market but focus on its 1,400 large global accounts instead continues to work well for the SP, allowing the carrier to execute its global–local relationship strategy of developing a consistent relationship on a local, regional, and global level with its enterprise customers. This approach has allowed the SP to significantly grow its share of wallet with some of its strategic customers, starting with legacy mobility services and evolving into wide variety of network, collaboration, cloud and IoT services. Its mix of customers includes over 400 Asia-based accounts, and with two-thirds of its large global accounts having a presence in the region, Vodafone has a good ratio of regional and global MNCs as its reference client base.

Challenges

Building Capabilities in the Software-Defined Space

Although Vodafone made significant strides in the software-defined space in the past year, it still has a fair way to go. VGE's focus on sales and its account management strategy seems to be a winning formula in Asia, but the lack of a fully developed software-defined network portfolio could potentially affect VGE's charge in the region. Although the absence of cloud and datacenter assets could be supplemented by partnering, it's not so with software-defined capabilities as some carriers are already pushing through SDN and virtual network services regionwide. Vodafone has done well to reduce the gap over the past year, but it needs to ensure it continues to execute on its road map to grow further in the Asian market and move into the Leaders segment in this study.

Growing Market Share in AP

Vodafone has continued to further develop its capabilities in the region and branded itself as a "total communications provider" for its enterprise customers. Although the carrier reported healthy growth of

its AP business, it remains behind the competition in terms of market presence and market share. However, the carrier shared some key wins from competitors in the region. It will need to ensure the availability of all its services uniformly across the region and continue leading the industry movements in IoT to continue making further gains in AP.

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 midsize 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.

Strategies and Capabilities Criteria

This section elaborates market-specific definitions and weighting tables. IDC believes that the characteristics presented in Tables 1 and 2 are key for SPs in crafting a successful future strategy and in leveraging their existing capabilities. Each of the subcriteria Tables 1 and 2 has been assigned a certain weight to reflect the magnitude of importance of that parameter in helping the SP in maximizing the market opportunity and in leveraging its capabilities to the best of its advantage.

TABLE 1

Key Strategy Measures for Success: AP Next-Generation Telcos: Telecom Services Market, 2018

Strategy Criteria Categories	Market-Specific Subcriteria Definitions	Subcriteria Weights (%)
Functionality or offering road map	Vendor has plans to deliver services that meet the requirements of a mobile workforce, cloud solutions, enterprise mobility solutions, M2M/IoT, software-defined networks, and professional services skills for deeper engagement with customers, especially consultancy skills.	8.10
Delivery model	Vendor is staying on top of trends relating to bundling and packaging for vertical markets, options for on-demand delivery, and preference for end-to-end solutions, including in-depth professional services skills and good delivery governance.	7.50
Cost management strategy	Vendor is making investments in networks that will allow it to manage network costs and more easily and cost effectively offer additional features to customers, including back-end and portal investments, as well as ensure governance on margins and delivery.	4.50
Portfolio strategy	Vendor has intention to expand deeper into value-added services, such as security services, WAN/app	2.40

TABLE 1

Key Strategy Measures for Success: AP Next-Generation Telcos: Telecom Services Market, 2018

Strategy Criteria Categories	Market-Specific Subcriteria Definitions	Subcriteria Weights (%)
	optimization, and datacenter footprints, for the delivery of cloud services to enhance its portfolio acting as a partner to customers, suggesting new technologies and solutions and complementing the customer's existing IT resources.	
Range of services strategy	Portfolio enhancements that add value to current services and address emerging trends are planned, specifically the enhancement of network services, to offer new capabilities, complementary services, and a range of network services.	4.50
Partnership strategy	Vendor has partnership in place in service development, network, marketing, and sales strategies to develop or offer new services that complement core services or extend presences in the region.	3.00
Pricing model	Vendor has flexible pricing options that include bundles, usage-based, high-end solutions, and lower-end packaged products as well as an orientation toward alternative pricing methods. Vendors are able to demonstrate their ability to deliver business outcomes.	7.50
Sales/distribution strategy	Vendor is structured to best meet business customer's needs and is well suited to streamline or enhance business customer's experience. Vendor is able to leverage technology or software partners to extend sales and distribution.	7.50
Marketing strategy	Vendor is investing in marketing resources in growth opportunities, whether it be services or markets, and manages to generate new sales leads and has plans for raising awareness of its value proposition.	7.50

TABLE 1**Key Strategy Measures for Success: AP Next-Generation Telcos: Telecom Services Market, 2018**

Strategy Criteria Categories	Market-Specific Subcriteria Definitions	Subcriteria Weights (%)
Customer service strategy	Vendor is investing in back-end systems, such as customer relationship management, contract management, increased automation, consolidated billing that speed provisioning, and addition of functions to online portal, to enhance customer experience.	7.50
Growth strategy	Management has outlined plans that align with market trends, particularly those related to emerging services, and targets to acquire new logos and investment plans in AP and new markets.	10.00
Innovation/research and development (R&D) pace and productivity	Vendor is investing and exploring services that leverage convergence and value-added services catering to enterprises, investing in network that enables the faster implementation and delivery of services.	8.00
Financial/funding model	Vendor's financial outlook for the next three to five years looks strong and has good cash outlay for investment.	8.00
Employee strategy	Vendor is able to retain/expand talented employee base and maintain high staff productivity.	6.00
Network strategy	Vendor is making investments in its network for the efficient delivery of cloud, M2M, and big data, which will position it to offer multiple service features and emerging services and maximize performance, scalability, and reliability.	8.00
Total		100

Source: IDC, 2018

TABLE 2

Key Capability Measures for Success: AP Next-Generation Telcos: Telecom Services Market, 2018

Capabilities Criteria Categories	Market-Specific Subcriteria Definitions	Subcriteria Weights (%)
Functionality/offering delivered	A well-developed portfolio of SDN offerings, virtual network services, enterprise mobility, cloud, M2M/IoT to the midsize to large enterprises, MNCs, and governments in the region and has business consultancy professionals to hunt and "seed" business opportunities.	10.80
Delivery model appropriateness and execution	Vendor ensures good delivery governance and performance and offers a variety of delivery options for managed services and professional services that are aligned to industry requirements.	10.00
Cost competitiveness	Services are competitively priced and offer proactive pricing benchmarking review that results in better cost competitiveness to enterprises. Vendors should also have good governance to ensure profitability of any ICT/network projects.	2.00
Portfolio benefits delivered	Network services are supported by value-added services such as WAN/app optimization and security services and datacenter footprints for the delivery of cloud services.	3.20
Range of services	A broad portfolio of international MPLS-based and Ethernet-based data network services and managed services with coverage that meets the varying telecommunications needs of targeted midsize to large-sized enterprise, MNC, and government segments in the region.	8.00
Partnership capabilities	Vendor has partnership in place to complement the entire portfolio or offer new services that complement its core services portfolio.	6.00
Pricing model options and alignment	Pricing model is aligned with customer's preference for payment, which includes the implementation of smart/alternative pricing. Vendor demonstrates the ability to deliver business outcomes.	6.00

TABLE 2

Key Capability Measures for Success: AP Next-Generation Telcos: Telecom Services Market, 2018

Capabilities Criteria Categories	Market-Specific Subcriteria Definitions	Subcriteria Weights (%)
Sales/distribution structure and capabilities	Sales team is set up to best support customers and be able to sell into verticals. Teams are appropriately supported with account teams, sales engineering, project management, solution architects, consultants, and others.	9.00
Marketing	Marketing team is able to successfully convey vendor's message to customer segments and gain mind share among CIOs.	6.00
Customer service	Customer service has a successful global account management strategy that includes comprehensive streamlined online capabilities and proactive account management.	9.00
Growth strategy execution	Vendor is successfully implementing its growth strategy, including product and footprint expansion in AP and targets market expansion as well as an ability to generate high attach rate beyond base services.	9.00
Innovation/R&D pace and productivity	Vendor is bringing new products to the market in a timely manner, which keeps pace with customer demand for services. Vendor has R&D centers or joint innovations in the region.	7.50
Financial/funding management	This refers to the financial stability and performance of overall company.	6.00
Employee management	Vendor is able to attract and retain talented employee base and has comprehensive sales enablement trainings to equip staff to sell managed solutions.	1.50
Network capabilities	Vendor's network investments enable it to offer necessary services, migration strategies, and product features to customers.	6.00

TABLE 2

Key Capability Measures for Success: AP Next-Generation Telcos: Telecom Services Market, 2018

Capabilities Criteria Categories	Market-Specific Subcriteria Definitions	Subcriteria Weights (%)
Total		100

Source: IDC, 2018

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Related Research

- *IDC Asia/Pacific Networks and Communications Survey 2017-18: Network Transformation High on Enterprise Agenda* (IDC #AP43623218, March 2018)
- *IDC FutureScape: Worldwide Telecommunications 2018 Predictions – APEJ Implications* (IDC #AP43473418, January 2018)
- *Telecom Providers in Asia/Pacific – Protecting the Cloud Niche* (IDC #AP43031917, September 2017)
- *Surviving SD-WAN – Implications and Strategy for Carriers* (IDC #AP42893617, July 2017)
- *IDC MarketScape: Asia/Pacific Next-Generation Telcos: Telecom Services 2016-2017 Vendor Assessment* (IDC #AP42353917, March 2017)

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 SPs' capabilities to meet the telecommunication and ICT needs of various customer segments. It leverages the IDC MarketScape framework to evaluate 11 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, datacenter and cloud capabilities, go-to-market strategy, growth strategy, partner ecosystem, and innovation strategy. 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.

"Communication SPs operating in Asia/Pacific are seeking to become the ICT partner of choice for enterprises that are seeking rapid growth, in their respective countries and regionally. These enterprises are embracing the 3rd Platform and initiating complex efforts for the digital transformation of their businesses, and to this end, Communication SPs are helping them achieve their goals with a portfolio of solutions and products that include software-defined networking, hybrid cloud deployments, and managed services. Communication 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," says Nikhil Batra, senior research manager, IDC Asia/Pacific Telecom Practice.

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

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