Your Network's Edge®

CSP survey: L2 business services and 5G xHaul

July 2021

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Introduction and Key Findings

Introduction

The reliance on telecommunications has sky-rocketed over the past 18 months, as almost every part of the way that we live and work has changed dramatically. For business services, there are two main drivers for increased infrastructure investments – the gradual return to the office, and the speed of 5G rollouts. What technologies and networking requirements will be needed to power enterprise services post-pandemic?

To gain insight into the new normal for today's communications services, we surveyed 100 executives around the world from the United States, Canada, United Kingdom, Ireland, India, Australia, New Zealand, Mexico, Colombia, Germany, Austria and France. Our respondents are all senior managers in Telecom & IT in charge of product management, network engineering and planning in companies that span from 3,000 to 50,000 employees. The survey was completed by independent survey company, Global Surveyz and the collection of responses took place during June and July 2021.

The results gave us a clear indication of the pulse of the telecoms and access solutions market post-COVID-19.

1 Gbit connectivity is no longer enough to sustain business needs, and in terms of buying criteria, quality of service matters far more to today's CSPs than traditional differentiators such as price point. If carriers want to succeed – they must find new ways shorten time to cash and gain greater visibility and control over their customer experience. Looking for the true voice of the carrier in 2021? Let this report be your guide.

Key Findings

1

98% of our audience agree –100G L2 business services is the new normal

Just 2% of respondents aren't completely certain that 100G Layer 2 business services will be offered in the future in their markets. 64% already see it commercially available today, with a further 34% seeing 100G services arrival and usage within 12-24 months. As businesses demand more access to cloud services and high bandwidth communications –what used to be reserved for large carrier-to-carrier services is now part of mainstream business communications offerings.

2

Service providers have limited visibility of network segments that have significant impact on the end user experience. Just 24% of challenges are under the service provider's visibility and control…

Most service providers are only responsible for their own network, and have limited visibility over other network segments that are part of an end to end connection from the end user equipment to the public cloud where the application typically resides. In the majority of cases, network issues negatively affecting their end user experience originate in network segments that the CSP has no visibility and control over. This is either from third-party leased WAN connections, (39%), or from the end-user internal/LAN network (35%). More than two thirds of issues are arising where the service provider only has limited visibility and control, making it near on impossible to identify where the root cause is, and quickly resolve challenges for the end customer.

3

… yet almost 80% of carriers see SLA as important

This is even more worrisome when you consider that enterprise operations are increasingly dependent on high availability of the network. The parameters measured by the SLA are therefore a key requirement for 78% of businesses. In contrast, 56% of customers say low cost is a "nice to have", rather than an essential attribute. A service provider who doesn't provide its customers with strong SLA adherence will quickly lose its customers to the competition, regardless of price.

4

Long time to connect to new branches is losing carriers money.

35% of carriers recognize the importance of being able to connect a new business customer or a new branch of an existing customer, **fast**. However, just 44% of carriers are achieving connection times of 1 month or less. In 47% of cases, it's taking carriers up to 60 days, and in 9% of cases connection time goes as high as 90 days (sometimes even more). Such a long time to cash means that carriers are leaving money on the table. Moreover, such a long connection time puts the CSP at risk of suffering churn from customers who simply cannot wait so long, and may move to a competitor.

5

5G uplink is seen as a viable access alternative for L2 business services

71% of respondents see future support for 5G cellular uplink as either important or critical in their Ethernet Access Device (EAD)/Network Interface Device.

6

Flexibility is the most essential attribute in 5G Cell Site Gateways (CSGs)

When it comes to their xHaul strategy, the flexibility to support future 5G standards came in third place, with 30% of respondents calling it out as a top requirement. Most service providers haven't mapped out their xHaul strategy yet, and therefore rely on this flexibility, recognizing that 5G poses very stringent synchronization requirements to the network to support next-gen applications.

Survey Results

Layer 2 Customers Requiring Services Faster than 1G, 2020/2021

We asked survey respondents what percentage of their layer 2 business customers required services that are faster than 1G.

We can see a growth of 57% in this requirement between 2020 and 2021 (weighted average of answers for 2020 is 21% compared to 33% for 2021).

It's clear that 1G is no longer enough to sustain business connectivity needs. The growth in bandwidth demand is due to digital transformation, the surge in pandemic habits such as video communications for remote teams, as well as the fast adoption of cloud-based services that require faster, more reliable service-assured connectivity. Today's CSPs need to ensure their network edge is flexible and agile enough to meet these needs.

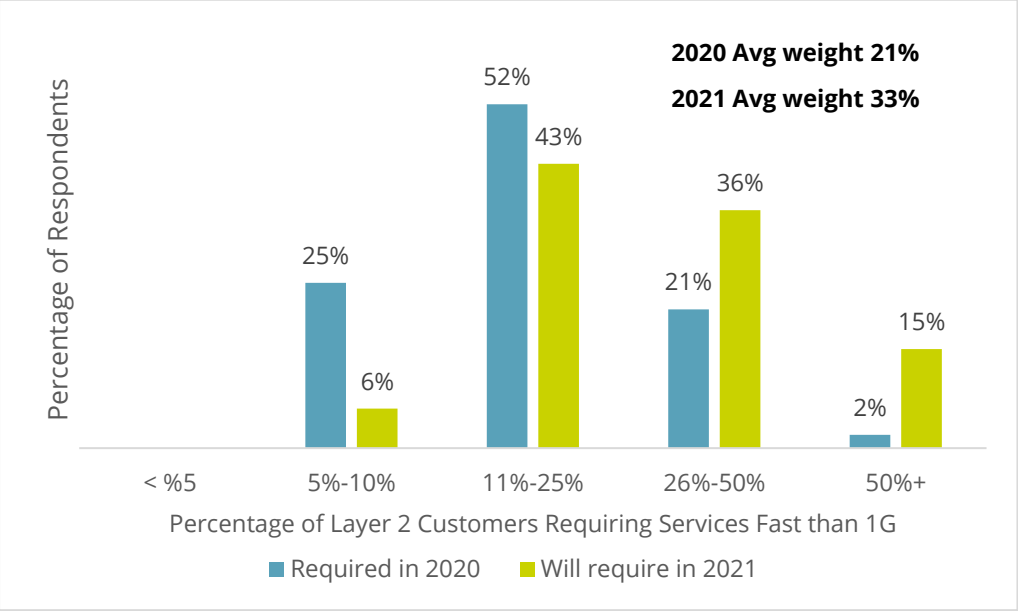

Figure 1 Layer 2 Customers Requiring Services Faster than 1G in 2020, 2021

Top Features of Ethernet Access Device (EAD)/Network Interface Device

78% of respondents see SLA support as an important or must-have feature in their Ethernet Access Device (EAD)/Network Interface Device.

Other must-haves are license-enabled port speed upgrades (28%), reiterating how important it is for CSPs to achieve flexibility for high bandwidth to the branch without replacing edge equipment and without truck rolls, and future support for 5G cellular uplink (23%). This demonstrates the wide intended use of 5G and the growing acceptance of mobile networks as a valid access technology for business connectivity and infrastructure. CSPs see 5G as a viable access tech for connecting out of footprint branches, compared to 4G/LTE.

Another notable result is MEF-certification, which was cited as important or critical by 55% of respondents.

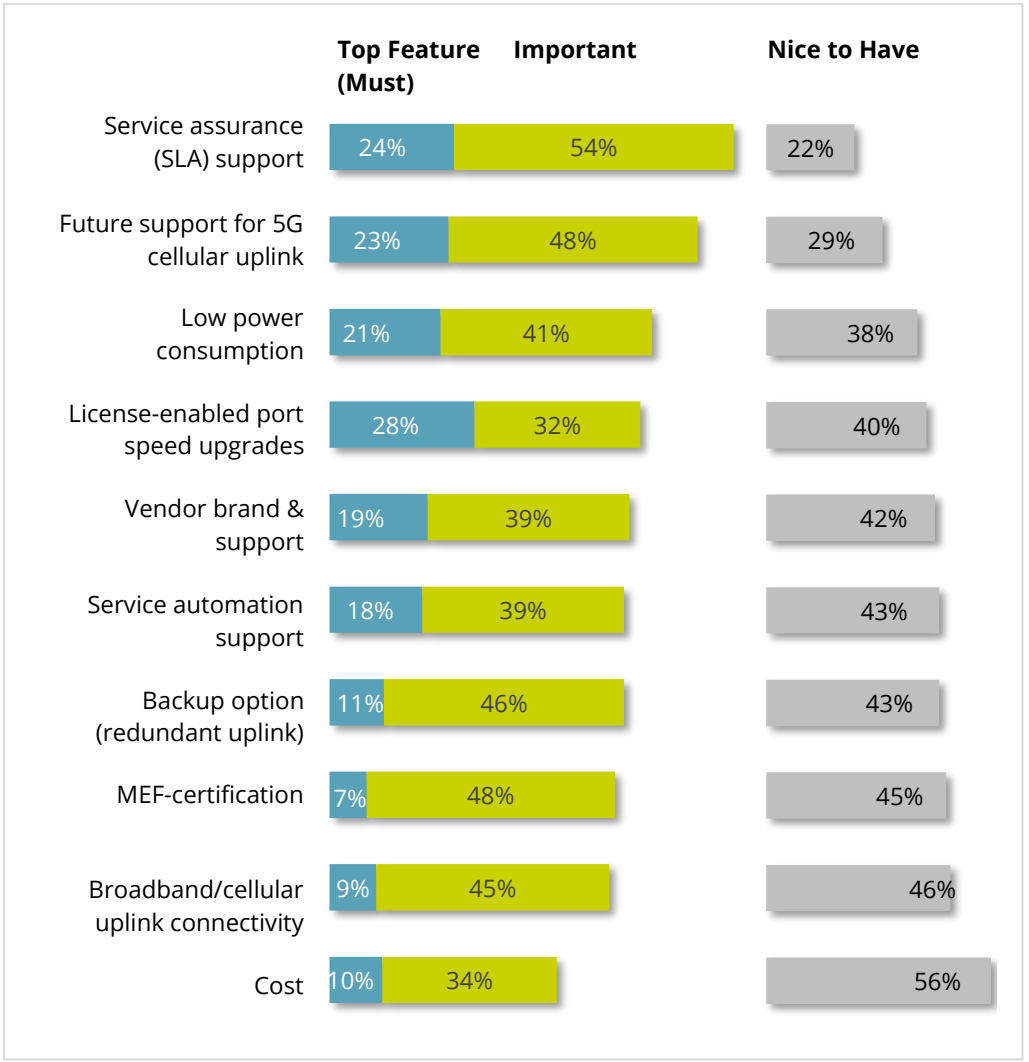

Figure 2 Top Features of EAD/Network Interface Device

Use Cases for Ethernet Access Devices (EAD) in Network

More than half of respondents say that the most common use case for Ethernet Access Devices (EAD) on their network is wholesale service (51%). This is in line with the fact that the most important EAD buying criteria in the previous question – SLA support – is a critical element in carrier-to-carrier services.

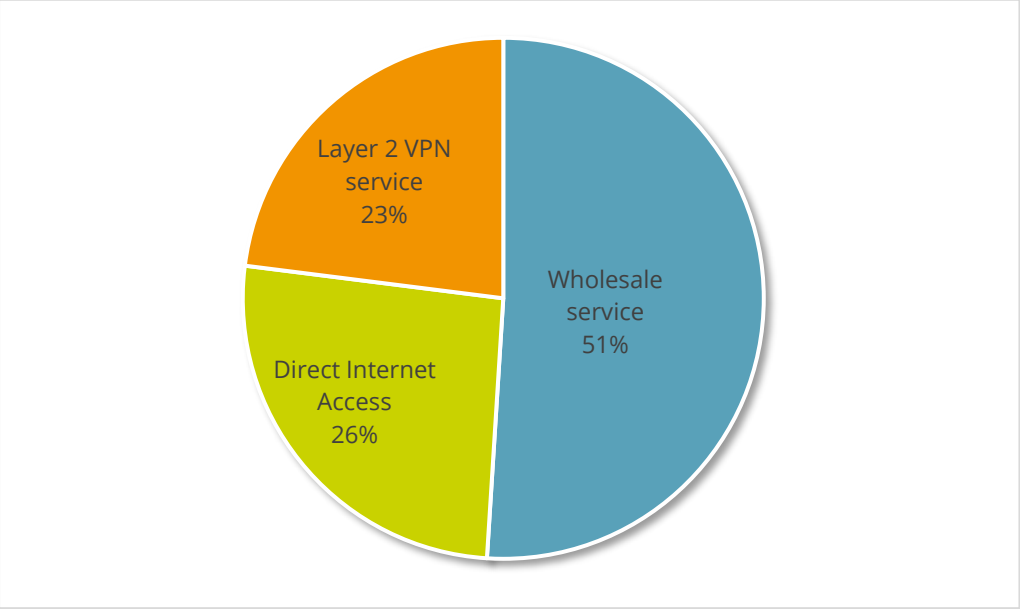

Figure 3 Use Cases for Ethernet Access Devices (EAD) in Network

100G Layer 2 Business Services Offered by other CSPs

98% of respondents say that 100G L2 business services are already being offered today in their markets or will become available within 12-24 months. This shows that 100G is no longer reserved only to large, data hungry users such as data center interconnect. 100G EAD requirements are likely to be part of every new tender because CSPs understand that they need to be able to offer it to their customers.

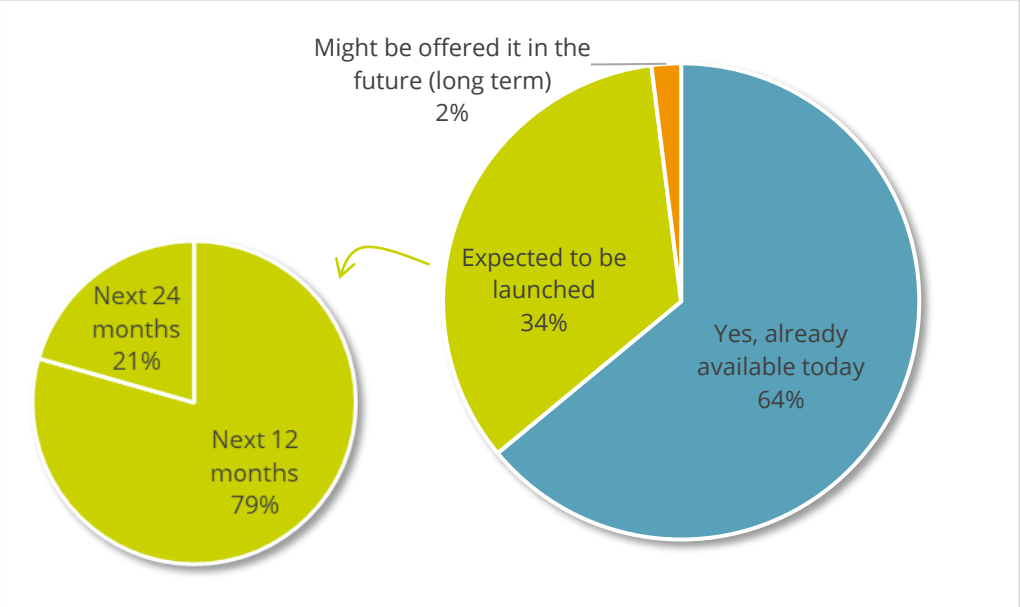

Figure 4 100G Layer 2 Business Services Offered by other CSPs

Root Cause of Service Calls Received at Customer Care Center

Where do problems originate from? The service provider is responsible for their own network, but in the majority of cases the problem originates elsewhere, either from a third-party WAN (39%), or the end-user internal/LAN network (35%).

More than two thirds of issues are arising where the service provider doesn't have adequate visibility and control, which may lead to high OPEX due prolonged service call resolution times, and in many cases unnecessary truck rolls.

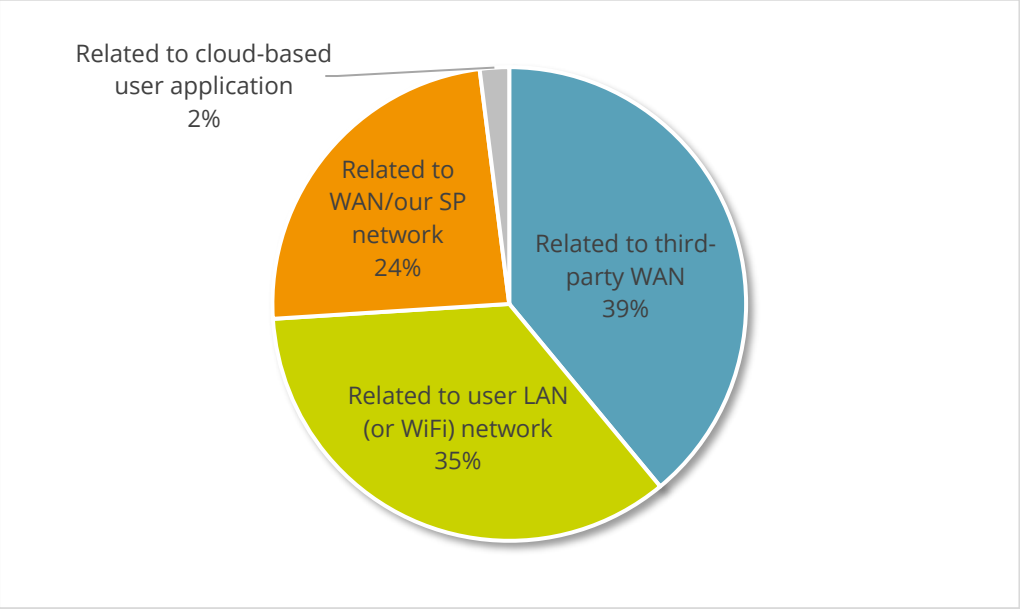

Figure 5 Root Cause of Service Calls Received at Customer Care Center

Time to Cash Connecting a New Branch of an Existing Business Customer

In 47% of cases, it takes up to 60 days to connect a new branch of an existing business. In 9% of cases, it takes 3 months or more. Such a long time to cash leaves a lot of money on the table and puts the CSP at risk of churn as this delay sends customers to find alternatives not only for their new branch, but across all of their branches.

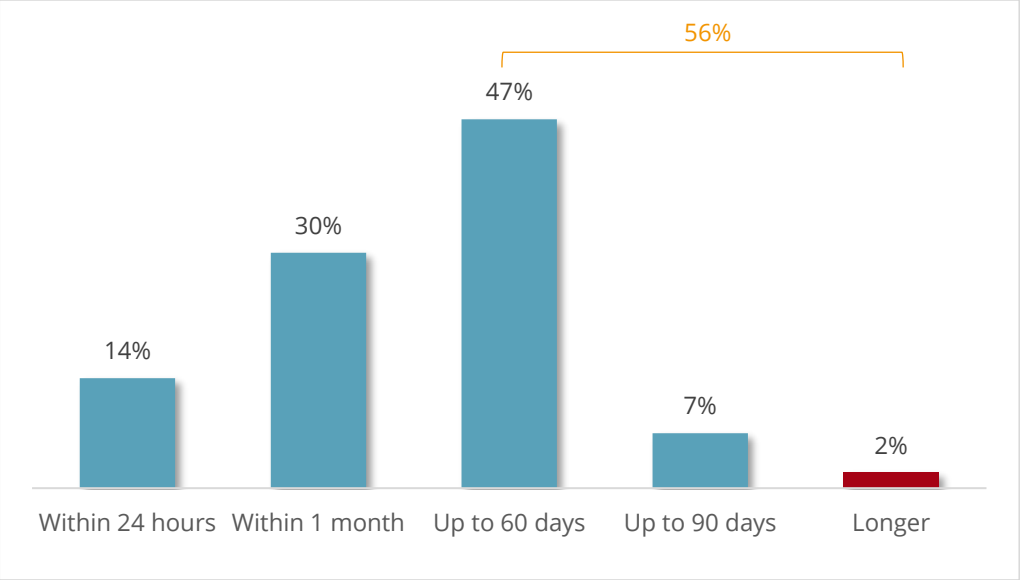

Figure 6 Time to Cash Connecting a New Branch of an Existing Business Customer

Top Challenges Delivering Layer 2 Business Services

The top two challenges to deliver layer 2 business services are significant efforts to integrate a new offering/use case (40%), and flexibility to address rising bandwidth demand (32%).

However, when looking at the breakdown by region, we see that the top challenge (significant efforts to integrate a new offering/use case) is mostly a challenge in Europe (60% compared to 28% in North America), and the top challenge of flexibility to address rising bandwidth demand is most prominent in North America (48% compared to 10% in Europe).

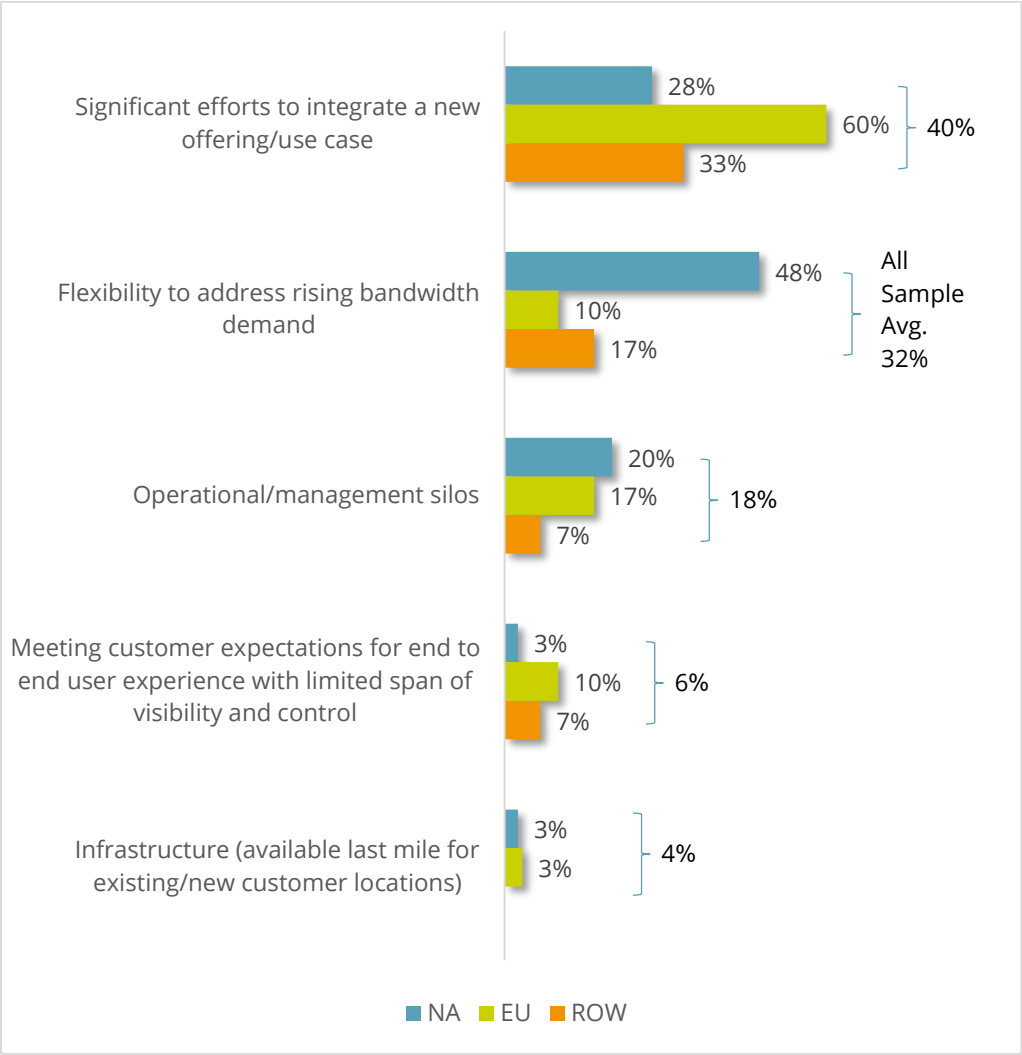

Figure 7 Top Challenges Delivering Layer 2 Business Services

Most Important Attributes of New Business Service

The most important attributes of a new business service are easy IT integration using standard APIs (45%), and fast time to cash when connecting new customers (35%).

CSPs key pain points are siloed systems that make it difficult to introduce and integrate equipment with their own management systems, and the long set up time for new services.

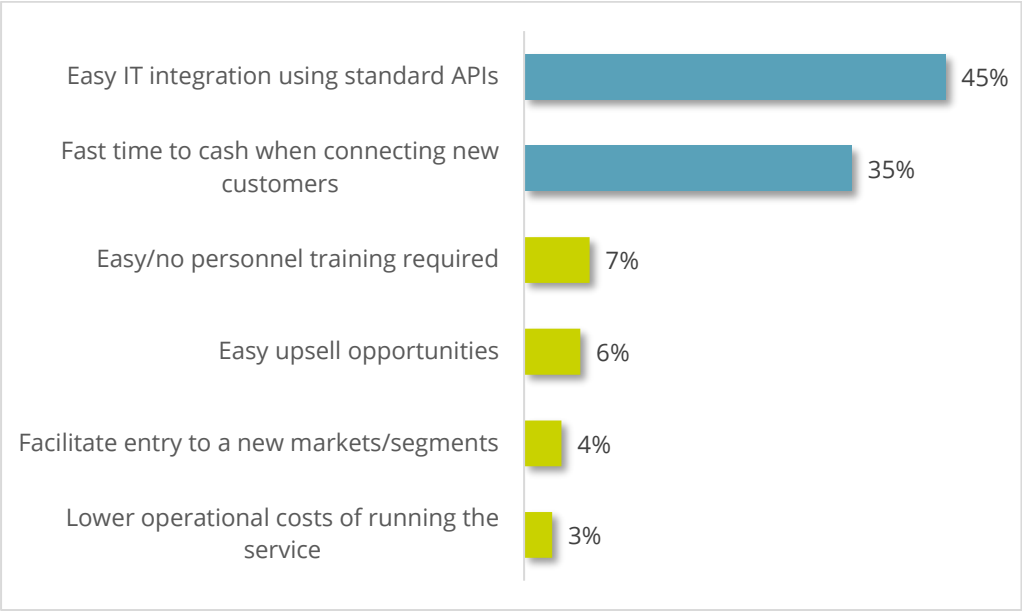

Figure 8 Most Important Attributes of New Business Service

Top Features Affecting Cell Site Gateway (CSG) Selection Criteria for 4G/5G

The top three features affecting Cell Site Gateway (CSG) selection criteria for 4G/5G are physical interfaces for any xHaul segment (45%), timing & synchronization (41%), and flexibility to support future 5G standards with a field-programmable chip (30%).

While major releases of 3GPP's 5G standard are already approved, many service providers have not finalized their xHaul strategy yet. Service providers are trying to roll out 5G services now, but they also need xHaul solutions that are flexible and future-proof so that they don't need to replace their network equipment as the CSP RAN (Radio Access Network) architecture evolves into vRAN (virtual RAN).

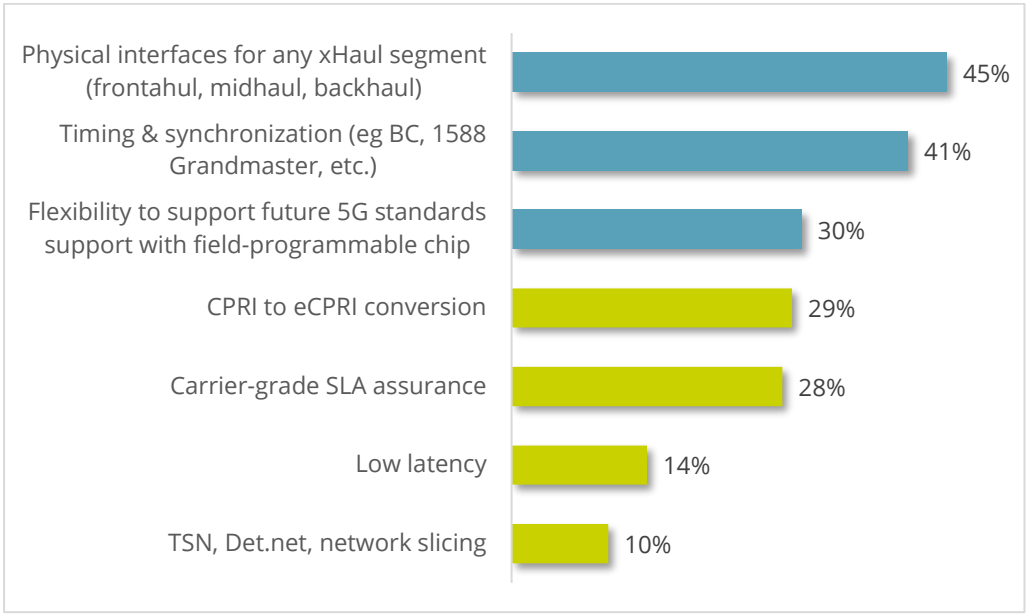

Figure 9 Top Features Affecting Cell Site Gateway (CSG) Selection Criteria for 4G/5G

Top Challenges Delivering 5G xHaul Wholesale Services

The top challenges in delivering 5G xHaul wholesale services are support for new timing synchronization requirements (26%), and high bandwidth demand (22%).

When looking at the breakdown by region, we see that timing is mostly a challenge in Europe (37% compared to 20% in North America), and bandwidth demand is most prominent in North America (33% compared to 17% in Europe).

This differentiation could mean that Europe is ahead in rolling out 5G, or that Europe sees 5G as an opportunity for smart cities, utilities, transportation, and other applications that need stringent timing synchronization. European CSPs may believe that end users will not be using significantly more bandwidth despite possibly higher demand. In North America, CSPs see bandwidth as more important than timing, and so the killer application is enhanced mobile broadband (eMBB) and fixed wireless access (FWA), rather than smart-X.

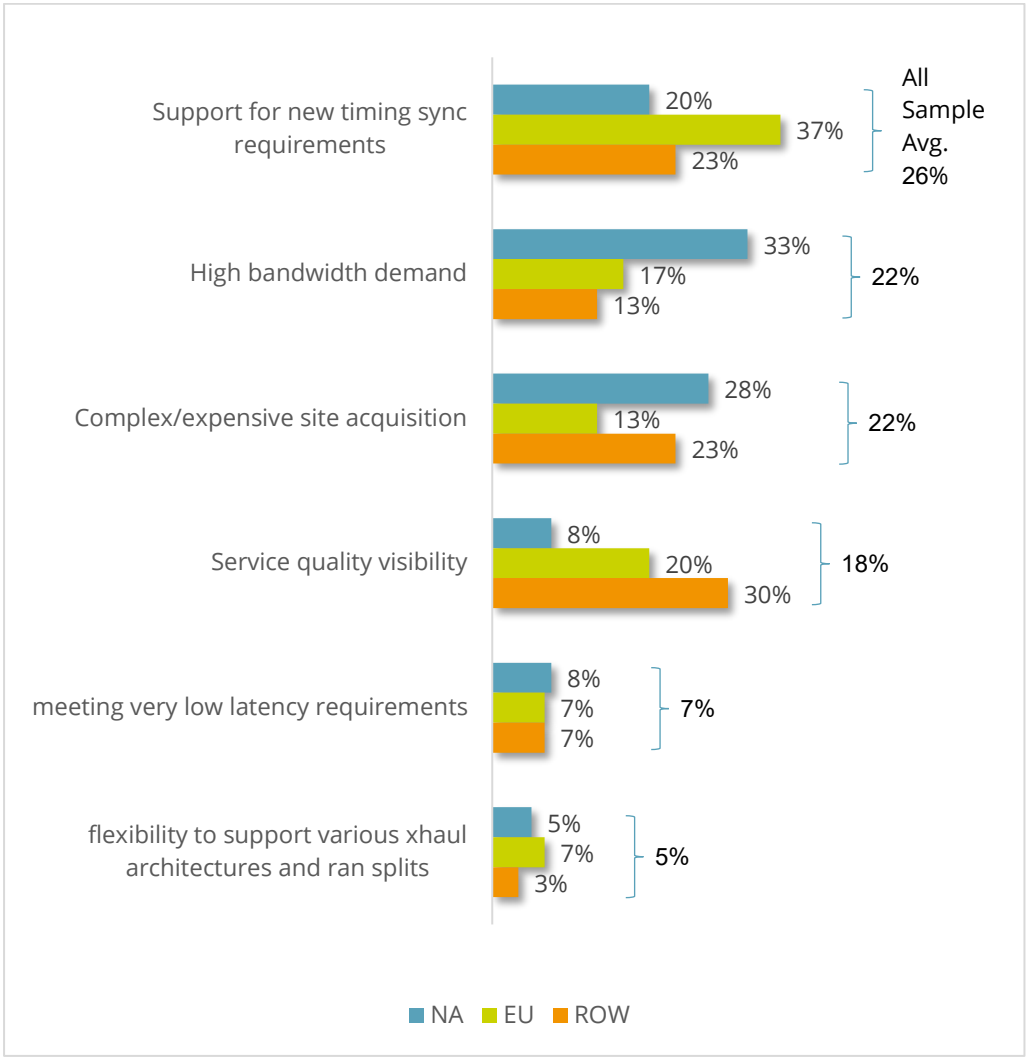

Figure 10 Top Challenges Delivering 5G xHaul Wholesale Services

Demographics

Regions Surveyed

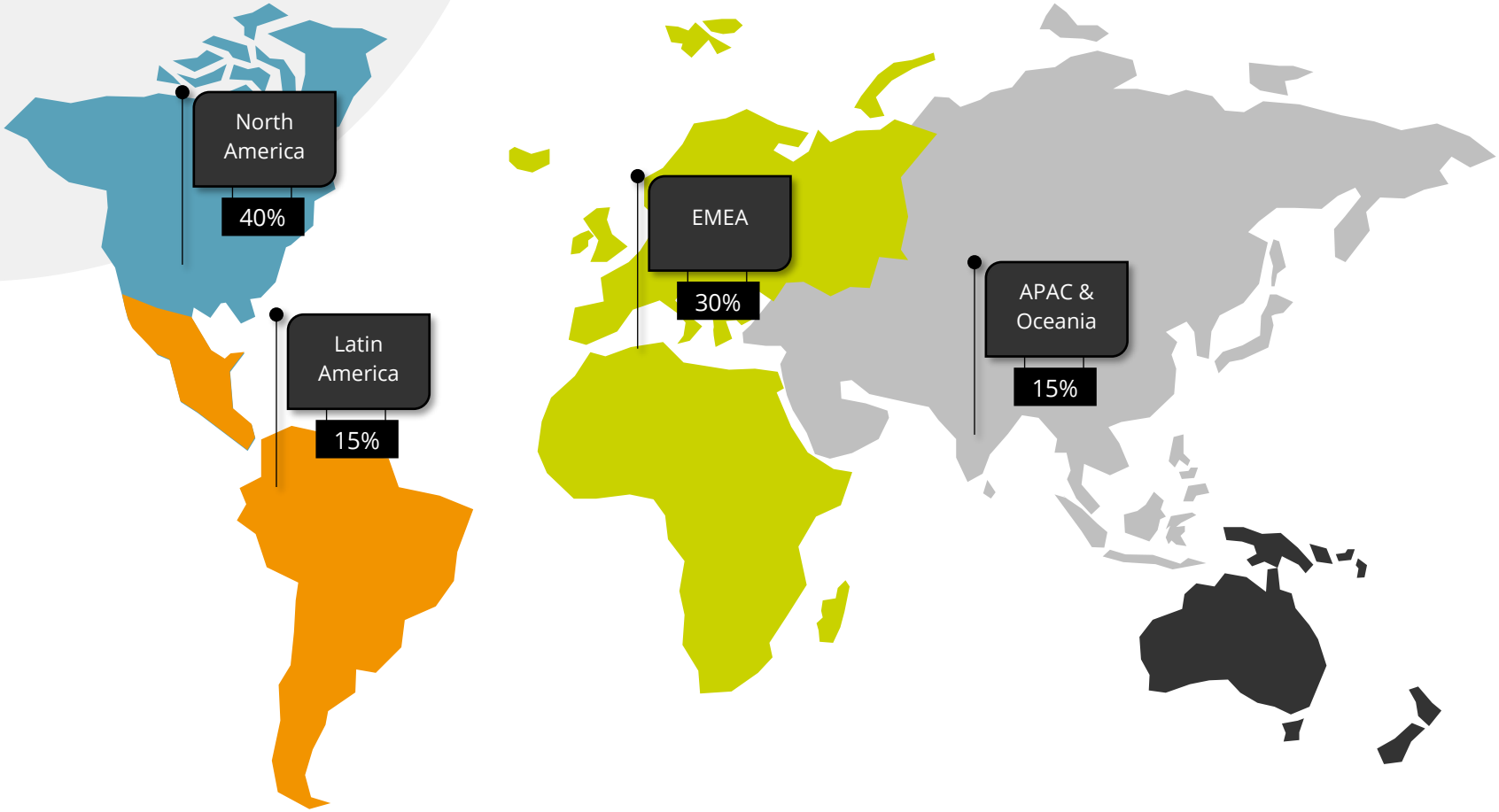

Figure 11 Regions Surveyed

Company Size, Job Seniority, Roles and Departments

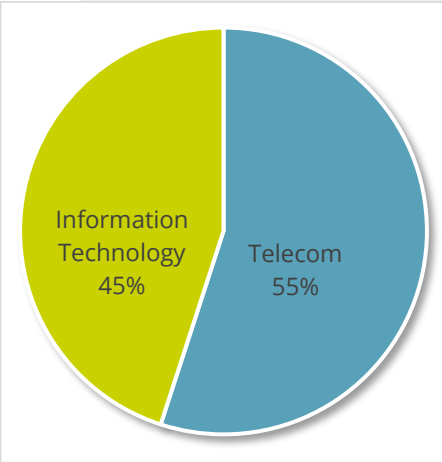

Figure 12 Industry

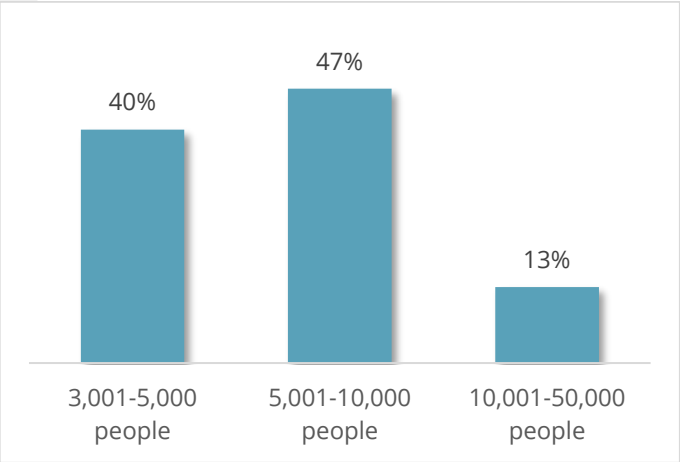

Figure 13 Company Size

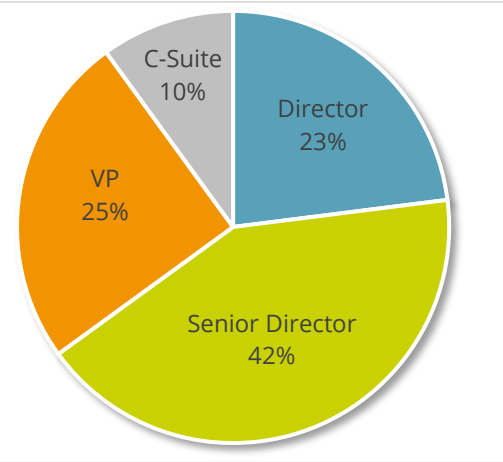

Figure 14 Job Seniority

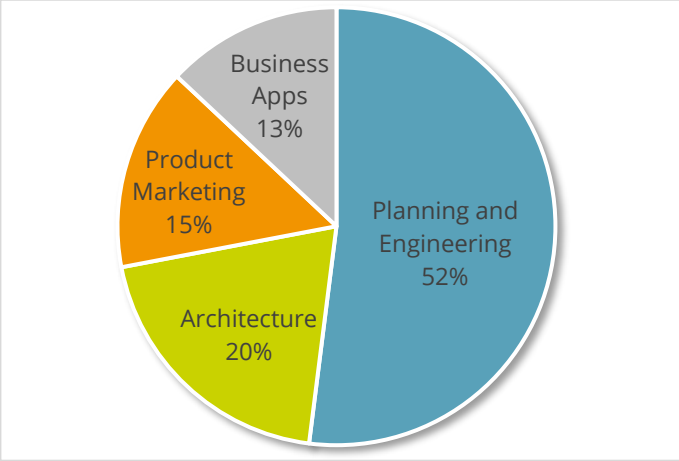

Figure 15 Department

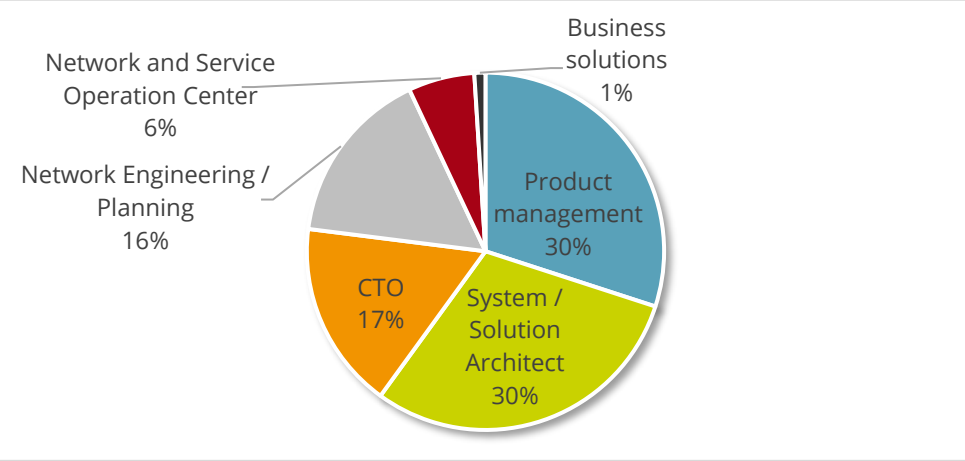

Figure 16 Job Function

About RAD

RAD is a global telecom access solutions and products vendor. By keeping at the forefront of pioneering technologies we enable service providers and network operators to move up the value chain at a pace that is right for them, while offering their end-customers added value – be it in Ethernet Access Devices (EADs), 5G xHaul, industrial IoT, or network edge virtualization. With 40 years of innovation, a significant worldwide presence in over 150 countries and an installed base of more than 16 million network elements, RAD has a proven track record of delivering value and addressing our customers' needs. RAD is a member of the $1.5 billion RAD Group of companies, a world leader in telecommunications solutions.

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