White Paper

Digital Transformation Obstacles and How to Overcome Them

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IDC OPINION

Digital transformation is at the heart of business strategies across all industry segments and markets. IDC predicts that two-thirds of CEOs of G2000 companies will have digital transformation at the center of their corporate strategies by the end of 2017.

Digital leadership requires a more sophisticated understanding of the enterprise ecosystem than is typically in place today. Markets, customers, and service providers are becoming digitally accessible. Digital leaders anticipate this and are developing both product and operational innovations that create digital experiences that serve the needs of mobile, socially connected, and digitally transforming customers and partners. The upside is measured in extended market share and increased revenue. IDC believes digital leaders will increasingly require trusted partner support to fully realize the effectiveness of their digital initiatives and strategies.

The network is critical to achieving digital success. Digital leaders surveyed for this study agree unanimously. But they also rank insufficient network resources at the top of the list of obstacles to achieving digital objectives. This is alarming, considering IDC further predicts digital transformation will drive connectivity levels 50% higher across all industrial sectors in 2016 alone.

Encouragingly, our study points to broad plans to invest in latest-generation network upgrades such as software-defined networking (SDN) and network-function virtualization (NFV). We also identify certain network leader profiles poised to reap the benefits of digital and network transformation ahead of the market. But IDC believes that network leaders are not an exclusive club and that, with a few relatively simple choices described in this study, almost any organization can achieve network and digital acceleration.

IN THIS WHITE PAPER

This IDC white paper identifies the barriers to digital transformation and describes what organizations can do to address them. It features results and analysis of a global survey of digital leaders — today's senior decision makers at the cutting edge of digital transformation.

IDC defines digital transformation as a continuous process by which organizations adapt to or drive disruptive changes in their customers and markets with digital competencies and technologies to create new business models, products, and services. This process blends digital, physical, business, and customer experiences while improving operational efficiencies and organizational performance.

SITUATION OVERVIEW

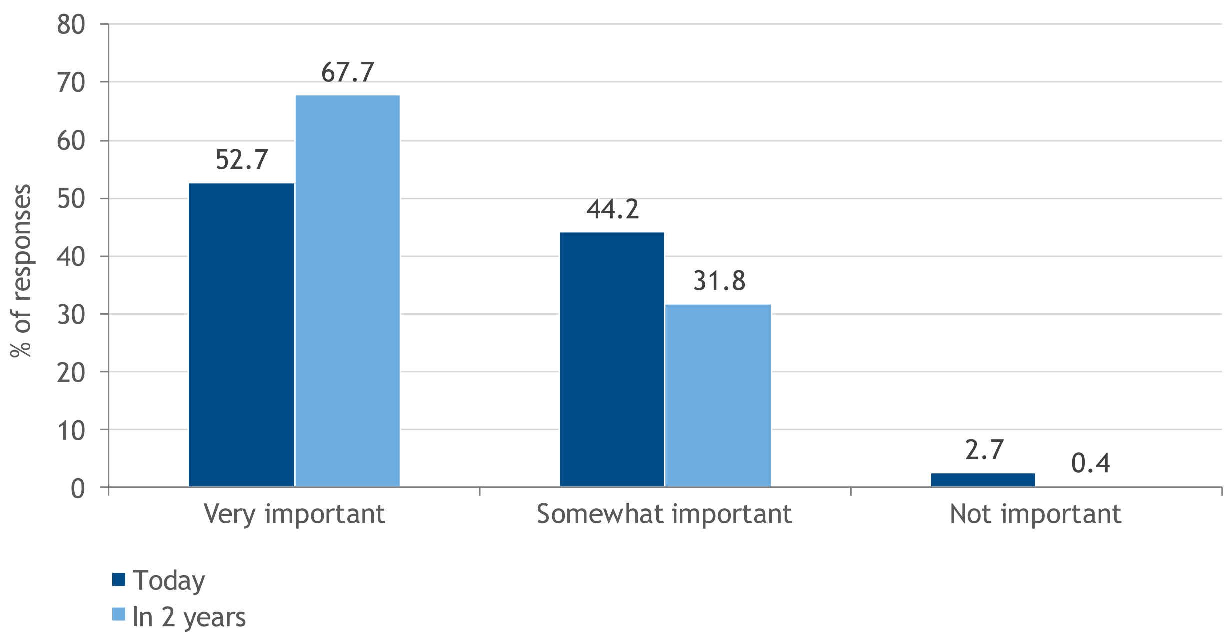
Digital Leaders Agree That the Network Is Critical

The network matters essentially, integrally, and immediately to the digital transformation process, and the dependence of digital initiatives on networking capabilities is clear to digital leaders. Results of our survey show a high degree of association between network capabilities and digital initiatives. Figure 1 shows a full 97% — effectively all digital leader respondents surveyed for this study — acknowledge some importance of the network to digital initiatives "today," with a majority (53%) saying the network was "very important." Asked to project over the next two years, respondents make the association unanimous, with more than two-thirds (68%) of digital leaders calling the network "very important." This sentiment is strongest in the North American region as shown in Figure 2. Here, those saying "very important" already stands at 69% and grows to 80% when we look two years ahead. That around twice as many companies in Western Europe and Asia/Pacific are more dismissive of the connection is a cause for concern.

FIGURE 1

Almost All Organizations Acknowledge the Network's Importance to Digital Initiatives

Q. How important are your organization's networking capabilities to its digital initiatives?



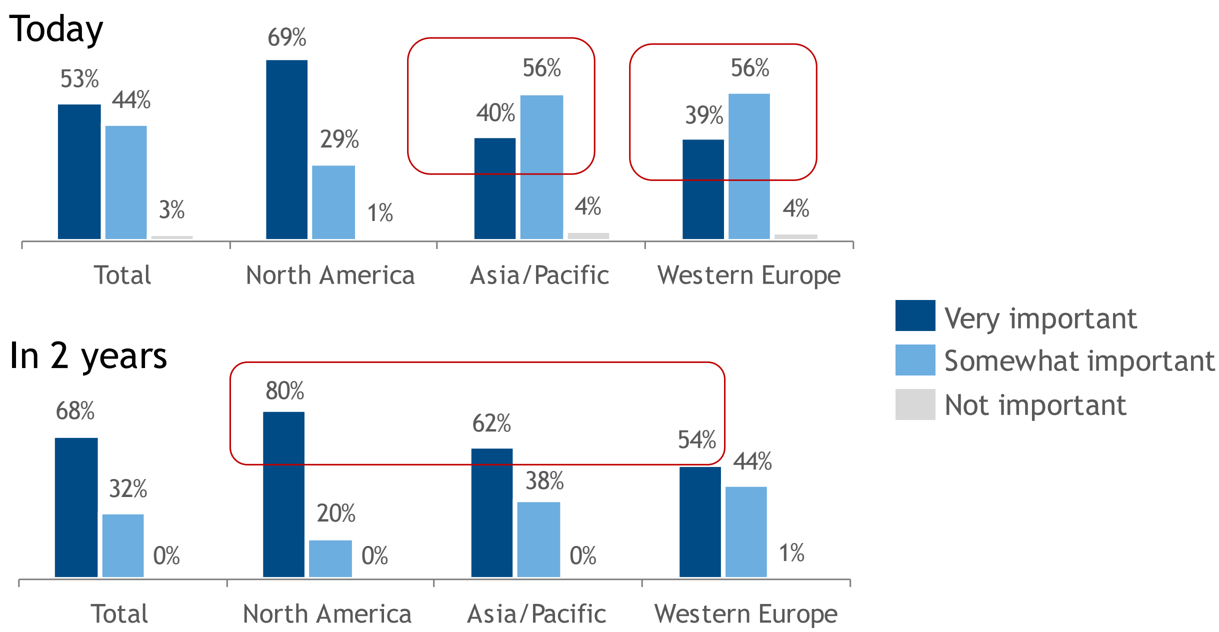
n = 603

Source: IDC and Verizon's *Network Transformation Survey,* April 2016

FIGURE 2

Companies Convinced of Network's Importance to Digital Initiatives, Especially Those in North America

Q. How important are your organization's networking capabilities to its digital initiatives today and in two years?



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Source: IDC and Verizon's *Network Transformation Survey,* April 2016

Majority of Digital Stakeholders Feel Behind the Curve and Vulnerable

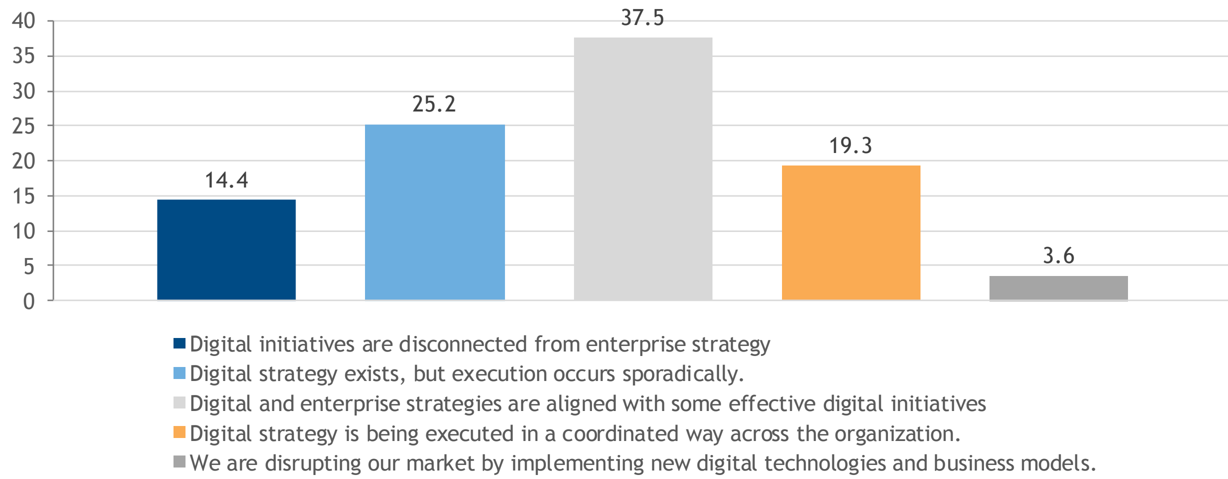
The senior-level professionals surveyed for this study collectively represent the cutting edge of digital awareness in organizations across all industrial sectors worldwide. They hold digital transformation leadership positions in their organizations, with direct influence over digital strategy planning, digital requirements definition and technology selection, and digital budget approval. Their attitudes might be expected to betray a certain confidence or even swagger.

That these stakeholders agree on the network's critical role would suggest a clear need to consider networking as part of any digital strategy, but this doesn't happen consistently. A majority of these digital leaders see their organizations' approach to digital strategy either lagging (39%) or only somewhat effectively aligned with broader enterprise strategy (38%). Less than a quarter of respondents (23%) think they are ahead of the digital acceleration curve (see Figure 3).

FIGURE 3

Majority of Digital Stakeholders Characterize Their Organization's Approach to Digital Strategy as Lagging

Q. Please indicate which response below best characterizes your organization's approach to a digital strategy.



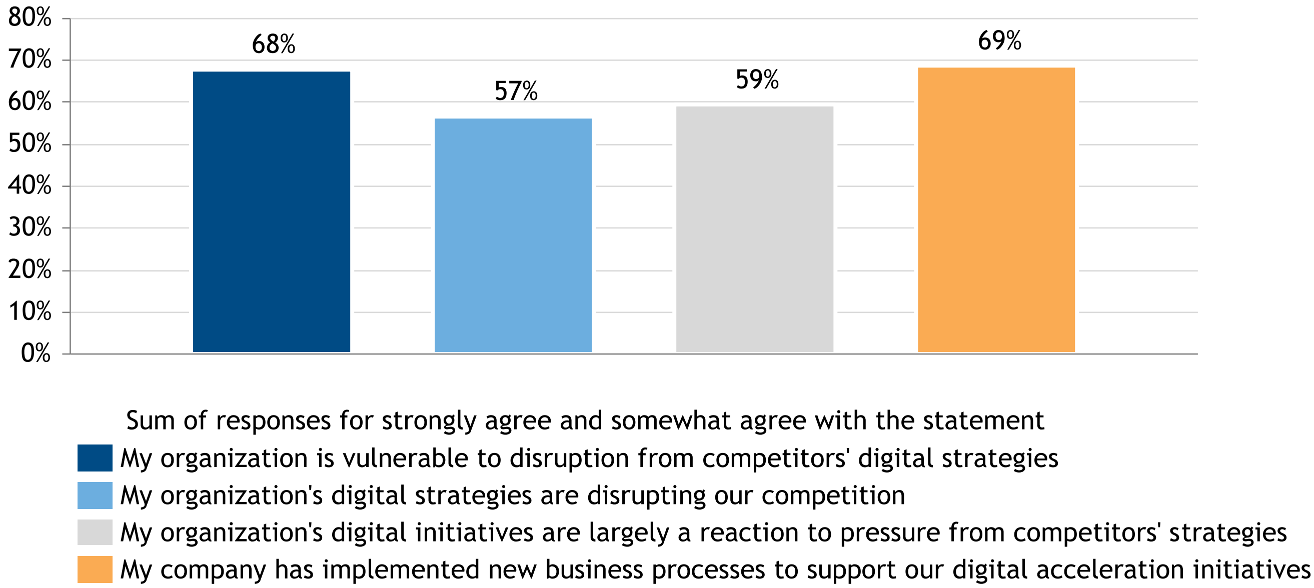
Source: IDC and Verizon's *Network Transformation Survey,* April 2016

They also express a strong sense of vulnerability from competitors' digital strategies. This is not surprising given that the large majority of these stakeholders see their organizations' digital execution lagging or partially successful at best. Figure 4 shows a majority of survey respondents (68%) believe their organizations are vulnerable to disruption at the hands of competitors' digital strategies, while 59% describe their organization's digital strategies as reactive.

FIGURE 4

Majority of Digital Stakeholders Feel Vulnerable to Disruption from Competitors' Digital Strategies Despite Organizational Support

Q. Please indicate the extent to which you agree with the following statements.



n = 603

Source: IDC and Verizon's *Network Transformation Survey,* April 2016

Reactive strategies can be fine if they are effective, and it is encouraging to see a similar majority (69%) saying that their organizations have implemented new business processes to support digital acceleration initiatives.

Clearly, sentiments around the state of organizations' digital strategies run strong, and the feeling that one is disrupting and also subject to disruption is not mutually exclusive. Digital transformation should be disruptive by definition, so the 57% majority of self-described digital disruptors is encouraging. However, it is ironic that only 23% of respondents see their organizations' approach to digital as leading edge (refer back to Figure 3), and those who see themselves dispensing disruption remain convincingly outnumbered by those who feel vulnerable.

Barriers to Digital Transformation Guide Toward Solutions

Organizations with digital initiatives planned or in place, or in other words most organizations, should seek direction from the majority of today's digital leaders who consider their organizations to be vulnerable digital laggards. By examining the barriers to executing on digital initiatives, we gain vital insight into why this is the case and what steps can be taken to address the obstacles and accelerate the digital agenda. Figure 5 shows the rank order of obstacles or challenges digital leaders see impacting their organization's digital strategy.

FIGURE 5

Inadequate Network Resources Are a Primary Barrier to Digital Effectiveness

Q. Please rate the impact of the following obstacles or challenges impacting your organization's digital strategy.

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Note: Responses are based on a scale of 1 to 5, where 1 is = not challenging at all and 5 = highly challenging

Source: IDC and Verizon's *Network Transformation Survey,* April 2016

The results are remarkable for a number of reasons. The primacy of security is understandable but also predictable. Security is a pervasive requirement including at the network level. So it is instructive to look at the next closest choices.

Inadequate network resources, the second-greatest barrier to digital progress, is a clear warning signal and call to action. We have established that:

- Digital leaders are almost unanimously aware of the network's importance to digital initiatives.
- Digital leaders are wary of their organization's digital execution and feel more vulnerable to disruption than prepared to disrupt.

The matter that inadequate network resources ranked second only to security and ahead of other issues such as cost, organizational structure, and executive vision as a barrier to digital progress should have the full attention of corporate strategy and budget holders.

Furthermore, inadequate network resources are not an inseparable consideration from the other top-ranked barriers. As we have noted, security features are an essential element at the network level. Network security will take on new requirements in the process of digital acceleration such that the adequacy of network security support for digital initiatives should be revisited.

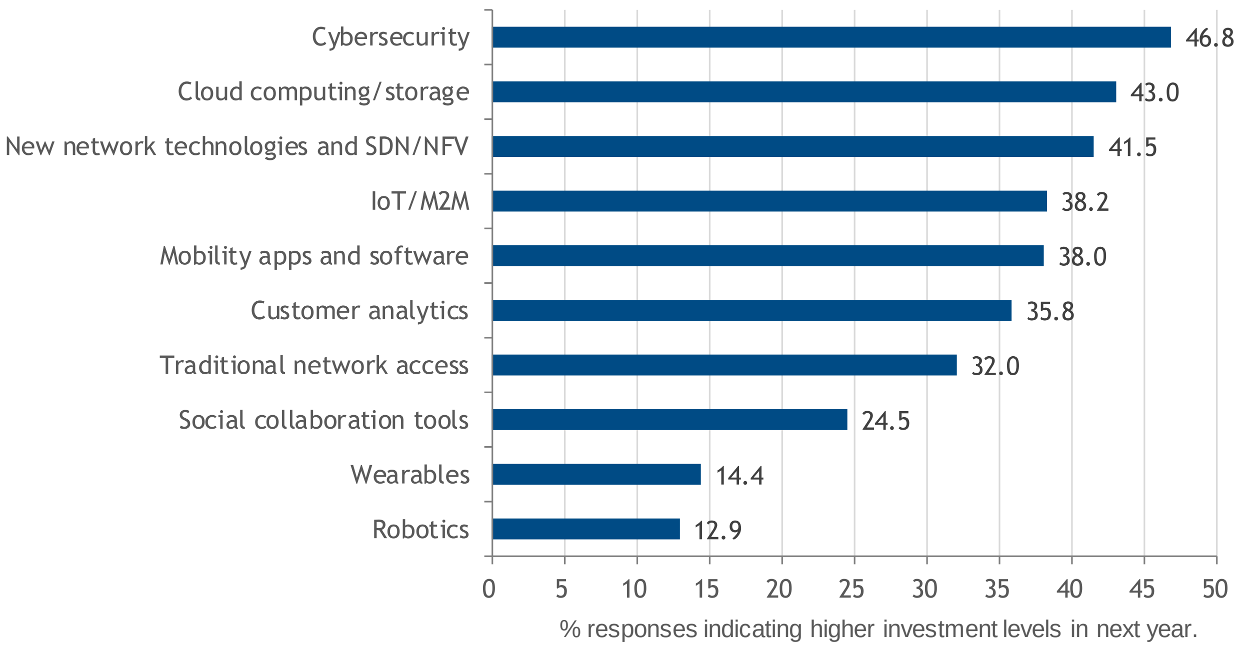
Complexity of the technology and partner ecosystem is the third-highest-ranked obstacle behind network inadequacy. This is also understandable given the enhanced organizational sophistication required to achieve digital leadership and the similarly enhanced complexity of the technologies and partners that will be required in most cases to support it.

Interestingly, when we ask digital leaders where investment will increase in the next year, we see highly advanced network technologies such as SDN/NFV prioritized ahead of high-profile digital and mobile enablers (see Figure 6).

FIGURE 6

Advanced Network Technologies Prioritized for Increased Investment in 2016-2017

Q. How will your organization's level of investment in the following change between this year and next year?



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Source: IDC and Verizon's *Network Transformation Survey,* April 2016

A lack of skills necessary to support digital initiatives also ranks as a significant barrier. All of this suggests that organizations driving toward digital transformation currently lack sufficient internal or external support.

Failure to align strategy formulation, requirements definition and technology selection, investments, and implementation practices between digital initiatives and network planning risks undermining the success of organizations' digital transformation … or worse.

Addressing the Obstacles

- Security concerns are a logical but predictable primary barrier to digital execution — security is always the primary concern around any IT-centric initiative including network-level support for digital initiatives.
- Digital leaders understand the importance of the network to digital but express uneasiness about their organization's digital execution and point to inadequate network resources as the next-greatest obstacle after security.
- The complexity of the technology and partner supply side is the third-greatest challenge to digital execution, yet at the same time, extraordinarily complex cybersecurity, cloud, and network technologies are prioritized for increased investment within the year.

Network inadequacy and technical complexity are holding back digital progress. At the same time, digital leaders' organizations are investing directly into both areas with inadequate internal skills or partner support. This is potentially perilous and strongly suggests the need for a trusted partner to bridge the divide between investment and execution.

But what type of partner? Refer back to Figure 6, which reflects the types of underlying technology investments that digital execution will require. This means hybrid IT that takes advantage of cloud computing, advanced network technologies such as SDN/NFV, "IoT" machines, and wearable devices with optimized network connections.

Digital leadership requires advanced software-driven orchestration of data and the policies and SLAs that surround it with optimized routing across networks. Multiple cloud platforms must integrate with on-premise and colocation services to create a unified enterprise environment. Network security and compute resources must be provisioned in near real time through self-service portals, and resources should reallocate dynamically or even automatically based on predefined business rules. All of this must happen with performance and security that inspire confidence amid extraordinarily new levels of complexity.

It only makes sense to work with a partner that understands all of these elements intimately. IDC believes that certain communication service providers (CSPs) are well positioned to fulfil this trusted digital partner role.

Follow the Network Leaders

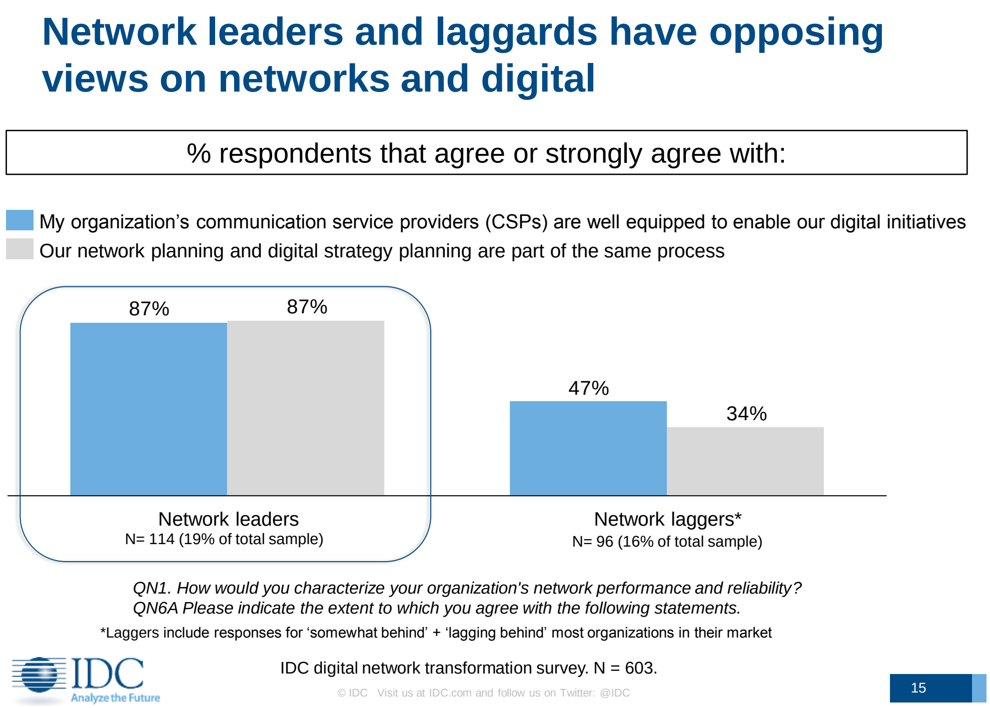
Research conducted for this study surfaced certain network leadership profiles among the digital leaders surveyed. Figure 7 shows how self-described network leaders have significantly higher confidence than self-described network laggards in both the ability of their CSPs to support digital initiatives and the coordination of digital and network strategy planning.

FIGURE 7

Self-Described Network Leaders Are Confident in Networks, CSPs, and Process Alignment

Q. How would you characterize your organization's network performance and reliability?

Q. Please indicate the extent to which you agree with the following statements.



* Laggards include responses for "somewhat behind" and "lagging behind" most organizations in their market.

n = 603

Source: IDC and Verizon's *Network Transformation Survey,* April 2016

Optimistic self-assessments are not leadership of course, so what are the practical characteristics that inspire such confidence and otherwise constitute a network leader profile? Analysis of our survey data shows:

- **Greater intent to invest.** Self-described network leaders show greater intent than laggards to invest either to improve existing network technologies or in network technologies that are new to the organization.
- **Higher average top- and bottom-line growth.** In instances where investments in new networking technologies are planned, respondents are consistently more likely to report significant growth in both revenue and profitability over the past year.
- **Business outperformance where key networking technologies are in place.** As with the intent to invest, the same business performance trends exist in instances where specific advanced networking technologies are in place.

- **More ambitious digital strategies.** Network leaders' top indicated objective for digital initiatives is changing their revenue or monetization model. This stands in contrast to the more conventional objectives favored by the wider respondent base and is particularly noteworthy as it is more aligned with advanced digital objectives.
- **Geographic concentration.** The highest concentrations of self-described network leaders were in the United States (22%), Germany (22%), the Netherlands (25%), the Nordic countries (~27%), and Japan (20%).
- **Large organizations.** 72% of respondents that classed their organization as a leader were from organizations with 5,000+ employees.
- **Sector concentration.** The highest concentrations of self-reported network leaders were in financial service (32%), technology (24%), healthcare (23%), and transportation and distribution (22%).

CONCLUSION: FINDING THE RIGHT TRUSTED PARTNER

CSPs with certain profiles should be strongly considered as trusted partners by organizations determined to lead and excel with digital transformation initiatives. Why? Digital leaders surveyed for this study unanimously agree on the importance of the network to digital initiatives, and network leader profiles show business performance ahead of the market. But a majority of digital leaders express uneasiness about their organizations' digital execution, pointing to security concerns, inadequate network resources, a complex technology and partner landscape, and inadequate skills as primary obstacles to digital progress.

At the same time, a majority indicate plans to increase investment in complex new technologies such as SDN/NFV, cloud and hybrid IT, cybersecurity, and IoT solutions in support of their organizations' digital strategies. These technologies and solutions are powerful digital enablers, but they bring extraordinarily complex new security, networking, and integration challenges. Investment without the right trusted partner and with questionable internal skill set support threatens to compromise the effectiveness of digital initiatives. Organizations that fall behind the digital curve face existential risks.

CSPs are the enablers of network transformation without which the full potential of digital transformation cannot be achieved. Certain CSPs intimately understand and are equipped to support the complex, interrelated ingredients of digital transformation. Organizations with digital transformation agendas should prioritize those CSPs that "walk the digital talk" as trusted digital partners for evaluation and selection. These CSPs have the commitment and capability to sustain investment in the latest-generation network technologies, with support services, global reach, and demonstrated experience serving organizations at the intersection of SDN/NFV, hybrid IT, and security.

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