



# Digital Transformation: Simplifying the Journey

**Network flexibility and bandwidth are essential to success.**

**IT'S INCREASINGLY APPARENT THAT NETWORKING** is an essential key to digital transformation. You can't get from here to there without a flexible network infrastructure and fast, reliable connectivity that can effectively utilize IT assets spanning on-premises and cloud environments. A recent survey indicates that many enterprises are turning more to managed services to simplify the effort and supplement IT skills.

Legacy networks can go only so far in meeting business needs for digital transformation. Older technology is difficult to quickly adapt to new demands, and achieving scale is costly. Often decision-makers have little visibility into the full extent of their network architecture.

An IDG Research Services QuickPulse survey of 51 IT decision-makers revealed three almost equal groupings:

- **A third are fully committed** and have made the necessary network investments to achieve digital transformation goals.
- **Another third want to get there** but need to pay more attention to the basic plumbing—including adding networking capabilities and investing in networking technologies to include software-defined wide-area networks (SD-WANs).
- The **final third have not yet committed** and are limited in their network access capabilities and WAN technologies, which, in turn, is limiting their ability to take advantage of cloud services.

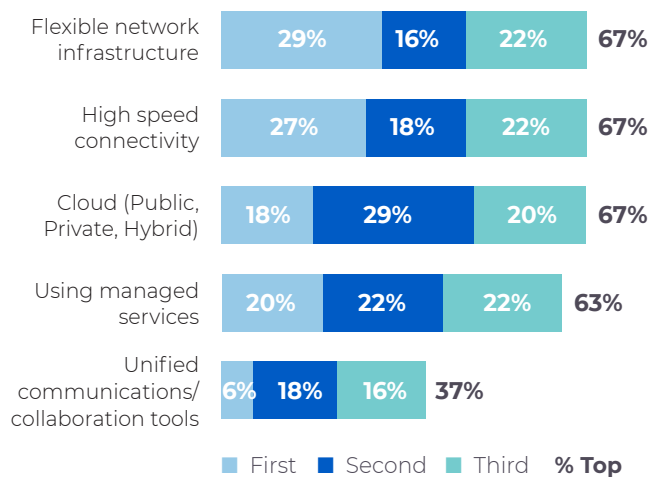
And when asked what the top three priorities are for achieving their objectives, network flexibility, high-speed connectivity, and the cloud were each ranked by 67% of participants. Close behind, at 63%, was managed services.

## Getting from here to there

Software-defined networking technologies reduce costs, improve productivity, and make it easier and more efficient to get data to and from the cloud. Software-defined networks (SDNs), SD-WANs, and network functions virtualization (NFV) change the way networks are built and redefine how services can be delivered.

## The single greatest priority is a flexible network infrastructure

*Technology/Service Prioritization in DX Strategy (% ranked)*



Source: IDG Research 2019

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Legacy networks are often burdened with expensive hardware and T1 transport, and equipment generally has to be individually coded or replaced to implement new or enhanced services. Administrators often don't know what applications are on their network.

But software-defined technology allows for centralized management and programmability, application visibility, and flexibility to push network changes across sites to shorten IT deployment cycles and reduce "truck rolls." SDN replaces most network hardware with software-based controls, providing transparency and enabling administrators to steer application traffic to achieve the best performance.



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— Jody Hagemann, Director, Product Management and Strategy, Comcast Business

Migration to software-defined technologies can save on opex and capex as well as provide for hybrid WAN solutions that leverage existing Multiprotocol Label Switching (MPLS) investment while building a path to the future.

"With software-defined technology, we've seen a lot of complexity removed from networking," says Jody Hagemann, senior director, Product Management and Strategy, at Comcast Business. "Once they are up and running and realize the simplicity of managing a network portal, we've seen IT teams determine they can hire a college grad to manage it and free up skilled IT staff to go work on other, more complex projects."

But getting to that point can be challenging. Lack of IT skills ranks as a top 3 impediment to achieving digital transformation, according to 67% of the survey respondents, and is the No. 1 challenge for 37%.

"We're finding that many enterprises just don't have a solid grasp on their network infrastructure," says Hagemann. "They've often had ongoing rotation of IT staff and, as a result, may not have good record-keeping for what's been added to and deleted from the network over the years."

### Overcoming hurdles with managed services

Because of the complexity of existing networks, there's often a reluctance to rely on in-house implementation of software-defined networking technologies. Making the case for and finding funds for needed IT skills and infrastructure can be challenging and time-consuming. Enterprises need to move quickly to capitalize on opportunities and increasingly are turning to managed services providers.

"Some of that legacy equipment may not have been touched for 15 years, and IT wants to bring in a managed services provider able to analyze what is in place, diagram the network architecture for tomorrow, determine what SD-WAN can and should do, and develop a road map for success," Hagemann says.

IT needs to get upper management on board for needed changes. According to 75% of the survey respondents, there is a misalignment between IT and executive management on the objectives of digital transformation. That may indicate that business leaders who have bought into digital transformation as a business strategy may not recognize the work involved in network migration.

That may require education on how a software-defined networking model can reduce the time and cost involved in trying to retrofit legacy networks to meet the needs of digital transformation. "Legacy network hardware requires a different engagement model," says Hagemann. "Change management protocols take a long time, because someone has to log into each existing or new box, so that requires more time, and if an organization is adding locations, every new box is going to require more hands-on management."

### Managing a new network model

In the software-defined-networking model, universal customer premises equipment can be readily deployed with centralized manageability and the ability to run downloaded virtual network functions (VNFs). Comcast is already deploying SD-WAN VNFs, and in the future, IT will be able to deploy multiple VNFs for security, Wi-Fi, voice, and session border controllers.

That flexibility will more readily support digital transformation initiatives and will better scale for future growth.

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