



# Modernizing the Network with Performance-Enabled Digital Infrastructure



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# In This InfoBrief

IDC conducted a web survey of 305 respondents from U.S. small and medium-sized businesses (SMBs) and enterprises in a variety of industries including **manufacturing/transportation/utilities, financial services, retail trade, professional services, healthcare, public sector (state and local government and education), and technology.**

The survey was conducted on behalf of Lumen with the intent of understanding how companies use **networking technology to secure data and applications, support a distributed workforce, and quickly grow and innovate.**

## Some of the highlights discussed in this InfoBrief include:

- ✓ Benefits of deploying performance-enabled digital infrastructure
- ✓ Networking technology required to support a distributed workforce
- ✓ Key drivers of bandwidth
- ✓ Key desired IT outcomes
- ✓ Challenges
- ✓ Key takeaways and essential guidance

# Top Business Priorities

To deliver on customer expectations, organizations can focus on **operational efficiencies that grow revenues and also drive customer loyalty.**



A focus on **customer experience** is the top priority for organizations to help reduce churn and improve loyalty.



Businesses are driving **digitized outcome strategies** to improve operational efficiency and underpin new growth opportunities.



Businesses are also focusing on helping customers tap into **new streams of profitable revenue** through innovative solutions and services by industry vertical.

## What are your organization's top 3 business priorities?

(Percentage of respondents)



Note: Managed by IDC's Global Primary Resource Group. Data not weighted. Use caution when interpreting small sample sizes; multiple dichotomous table; totals will not sum to 100%. n = 305; Source: IDC's *Lumen IP Web Survey*, July 2023

# The Key Framework for Agile Digital Infrastructure



## AI-DRIVEN DIFFERENTIATION

- ▶ Cost-effective customer engagement
- ▶ Omni-channel
- ▶ Advanced data analytics



## DIGITAL INFRASTRUCTURE

- ▶ Fiber, broadband, fixed wireless access (FWA)
- ▶ Agile connectivity
- ▶ Orchestration and automation



## PARTNERS

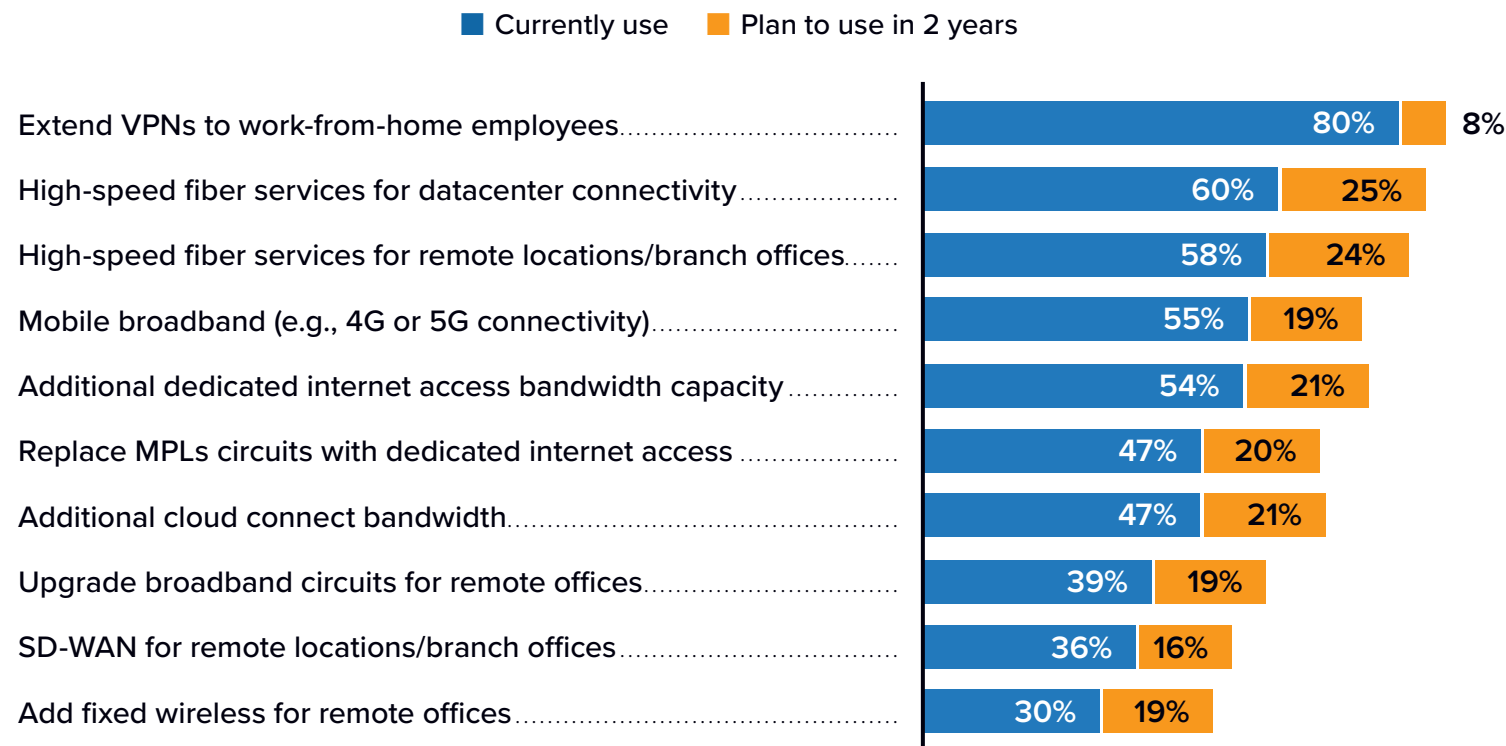
- ▶ Transformation roadmap
- ▶ Managed services
- ▶ Augment skill gaps

Agile digital infrastructure delivers **increased performance and more dynamic services**. Communications service providers (SPs) across the globe are slowly **migrating from physical networks to software-defined virtual networks** that support greater scale and increased creativity of services.

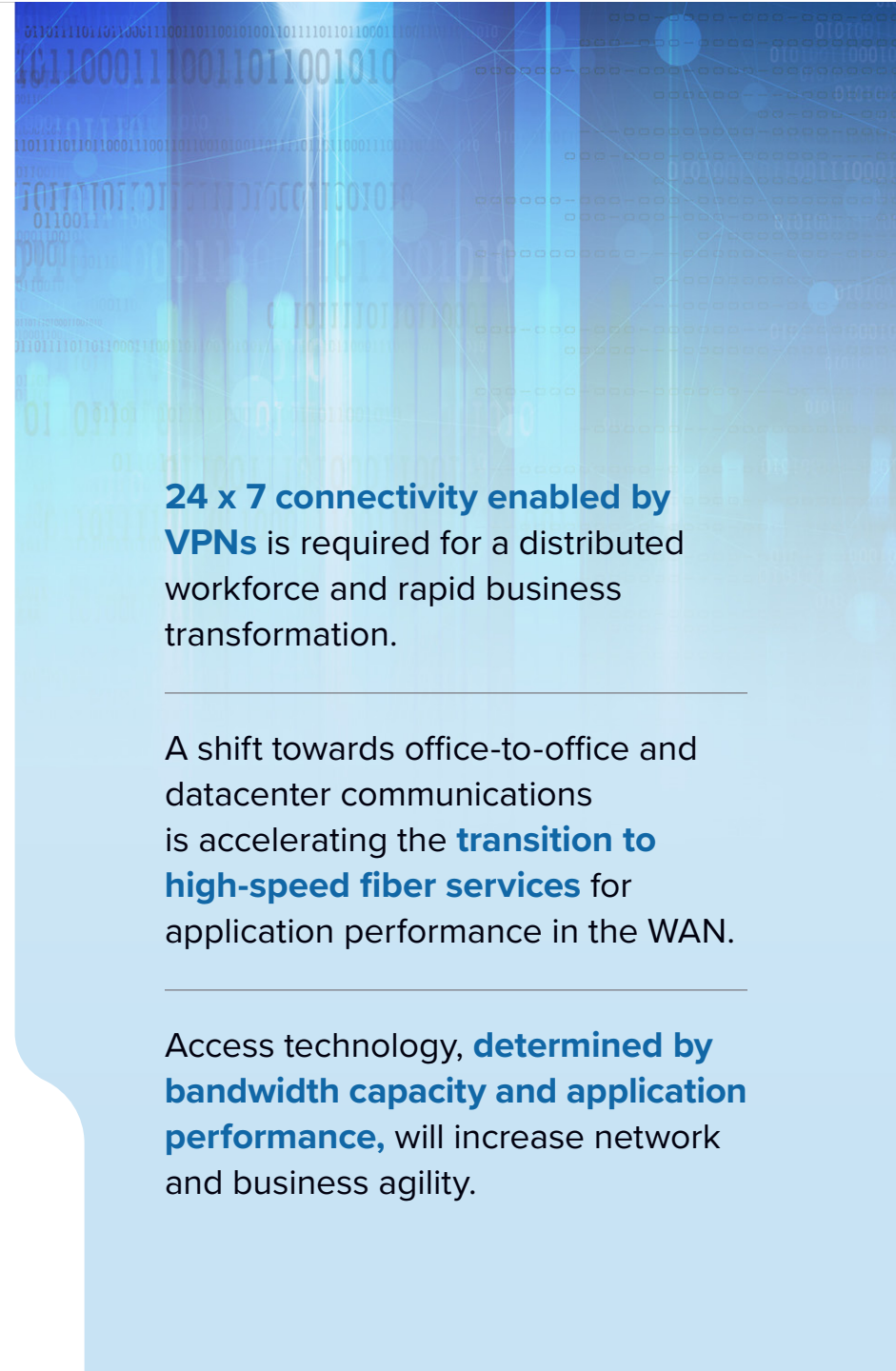
# Networking Technologies for a Distributed Workforce

Is your company implementing, or does it plan to implement any of the following networking services/technologies?

(Percentage of respondents)



Note: Managed by IDC's Global Primary Resource Group. Data not weighted. Use caution when interpreting small sample sizes; multiple dichotomous table; totals will not sum to 100%. n = 305; Source: IDC's *Lumen IP Web Survey*, July 2023 | For an accessible version of the data on this page, see [Supplemental Data](#) in the Appendix.



**24 x 7 connectivity enabled by VPNs** is required for a distributed workforce and rapid business transformation.

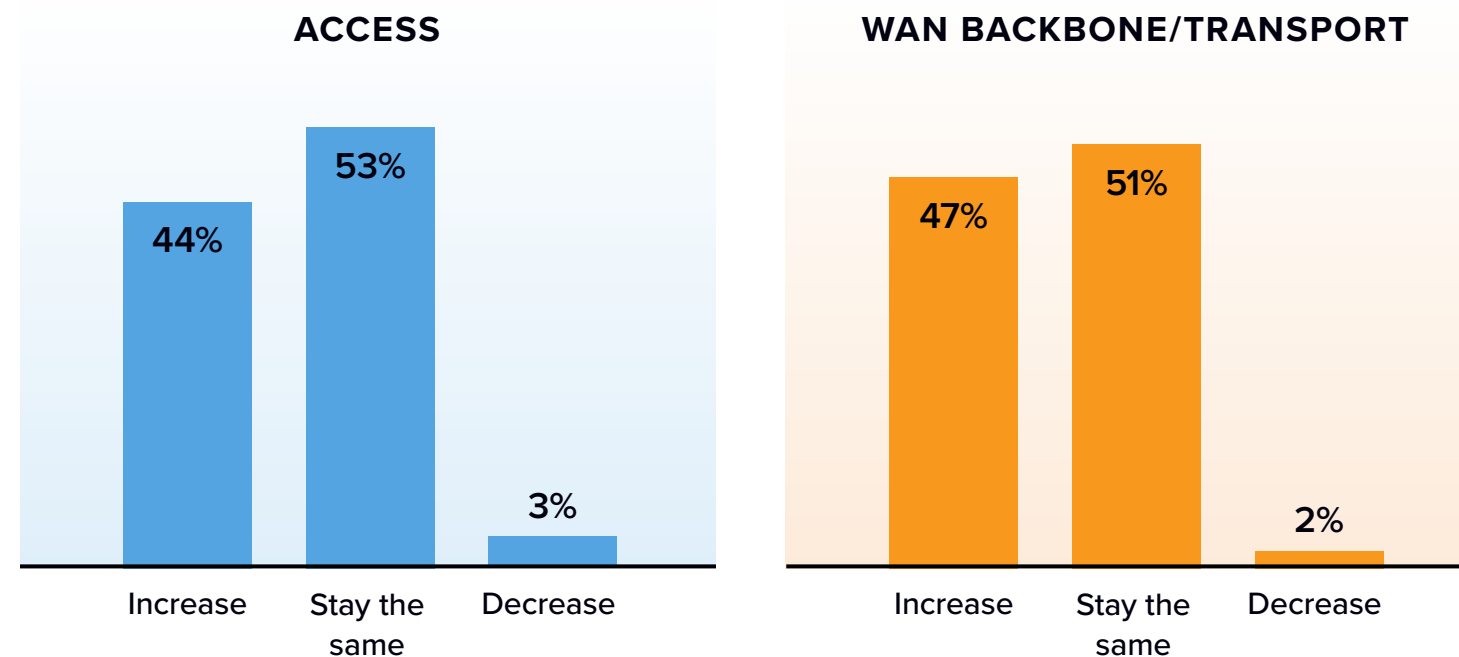
A shift towards office-to-office and datacenter communications is accelerating the **transition to high-speed fiber services** for application performance in the WAN.

Access technology, **determined by bandwidth capacity and application performance**, will increase network and business agility.

# Performance and Data Growth Drive Demand for Bandwidth

How will overall network bandwidth (both access and transport) change in your WAN over the next year?

(Percentage of respondents)



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Organizations' investment plans for **network bandwidth to support WAN access connectivity** will increase even in this recessionary environment, cited by **44%** of respondents.

**WAN backbone transport** will also increase according to **47%** of respondents, driven by the bandwidth increase at the network edge and distributed edge compute requirements.

**Increased productivity through technology and applications** will drive bandwidth needs (e.g., GenAI, automation, managed cloud services, and distributed workforce).

# Cloud Services, AI Implementation, and Managed Services Drive New Investments



## Driving growth through innovation:

Organizations will continue to increase investment to create a modern, digital, and data-driven agile network service model.

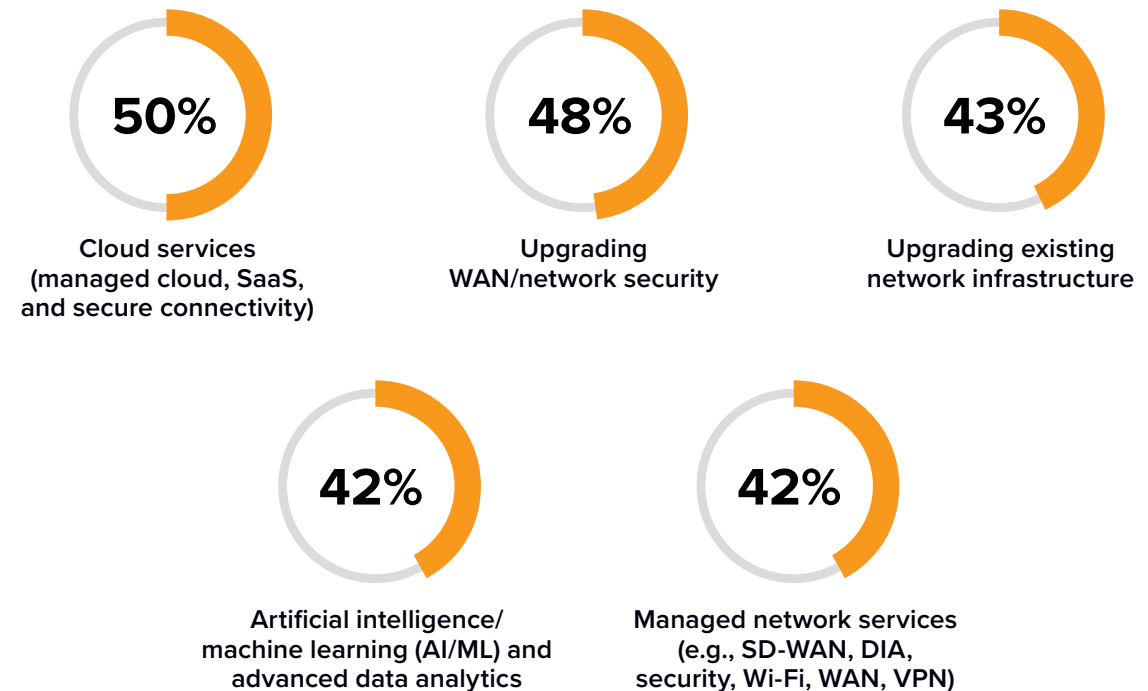


As organizations transition to a **cloud-first strategy, security, and AI-embedded automation** are keys to their core communication strategies and growth plans.



**Managed services** provide a great opportunity to help companies bridge budget constraints and skills gaps, and achieve operational efficiencies.

Which areas does your organization plan to invest in over the next 3 years?  
(Percentage of respondents)



Note: Managed by IDC's Global Primary Resource Group. Data not weighted. Use caution when interpreting small sample sizes; multiple dichotomous table; totals will not sum to 100%. n = 305; Source: IDC's *Lumen IP Web Survey*, July 2023



# Key IT Outcomes Required by Organizations



An **outcome-driven agile connectivity strategy** will empower organizations to meet their investment objectives.

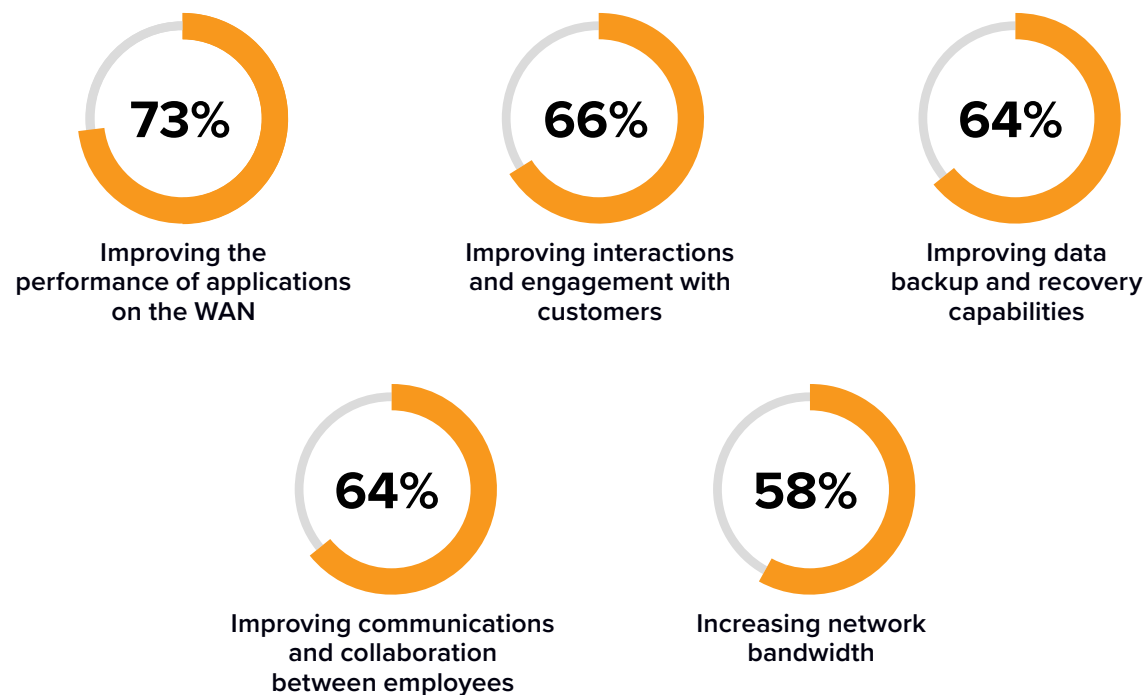


Organizations will increasingly **rely on strategic partners** to deliver improved performance and more dynamic services that support greater scale and increased creativity of services.



IDC sees a shift in spending priorities as organizations **adopt managed services** to pursue flexible connectivity solutions that combine hardware, software, and life-cycle services, which are proactively managed.

What do you hope to achieve as a result of these investments in the next 3 years?  
(Percentage of respondents)

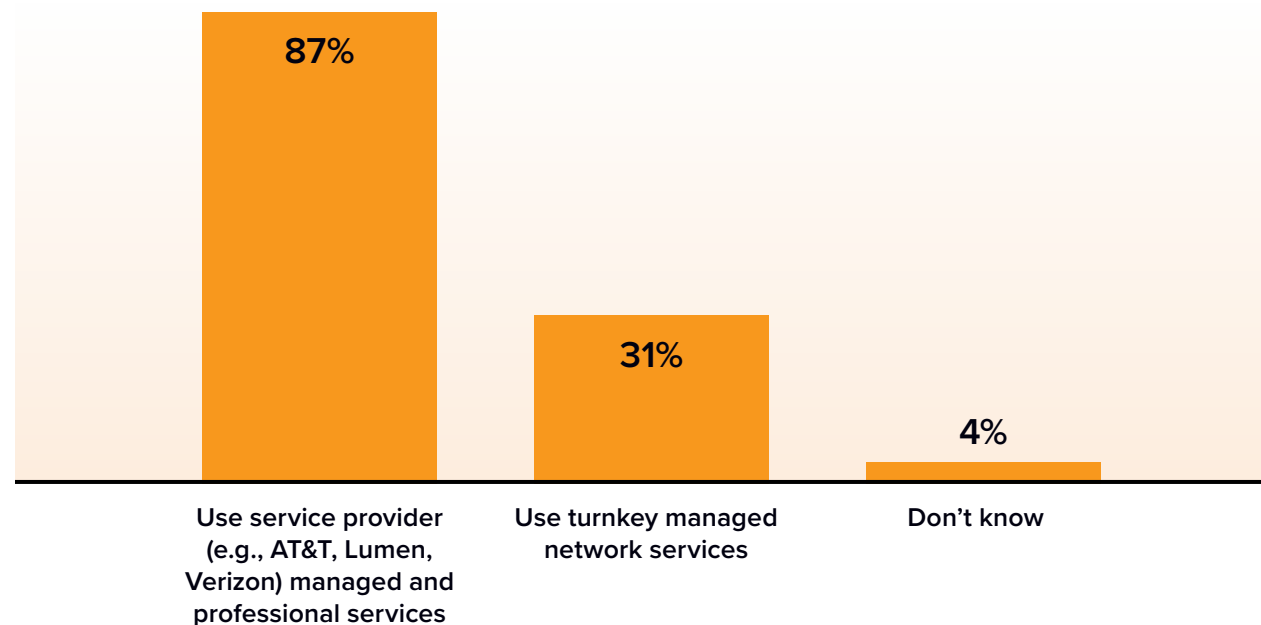


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# Bridging the Skills Gap and Budget Constraints Are Challenges

How will you augment your IT staff or address skill shortages to manage your WAN service over the next year?

(Percentage of respondents)



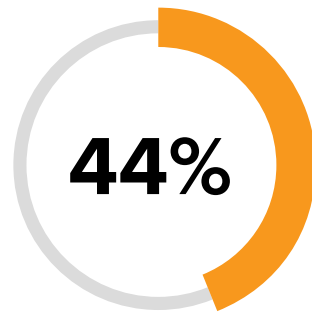
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As businesses adopt new technologies (e.g., security, cloud, AI, etc.), they **will face skill shortages and will be unable to support these new tech deployments** which can be costly and difficult to manage at scale.

This shortage will impact organizations financially due to **missed product releases, impaired competitiveness, lower customer satisfaction, and missed revenue goals.**

Organizations will look to **leverage service and technology providers** to help bridge the expertise gap with managed network services.

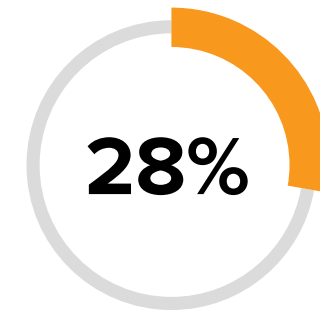
# Bandwidth Trends: More Spending, Capacity, and Speed



of companies will increase spending on bandwidth



of organizations have an average of at least 500Mbps bandwidth capacity per site



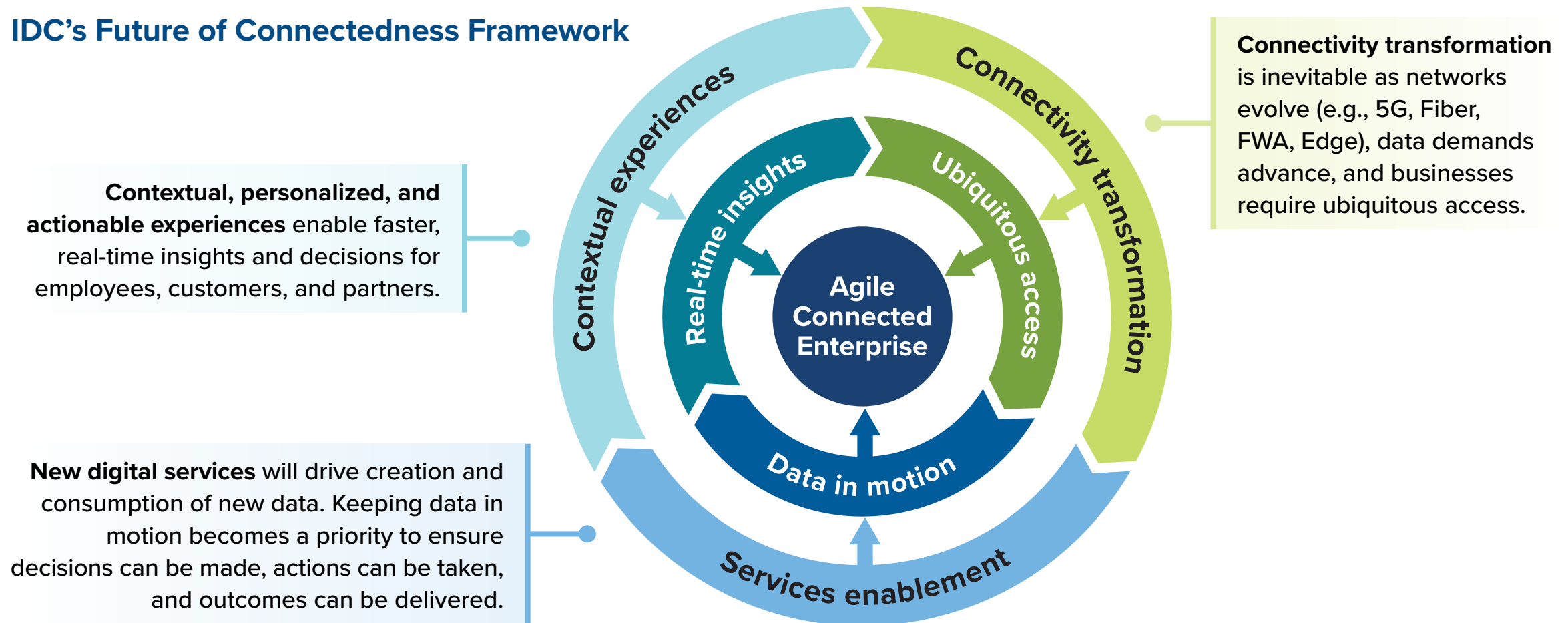
of companies leverage WAN Gigabit speeds up to 400Gbps for enterprise networking

Note: Managed by IDC's Global Primary Resource Group. Data not weighted. Use caution when interpreting small sample sizes; multiple dichotomous table; totals will not sum to 100%. n = 305; Source: IDC's *Lumen IP Web Survey*, July 2023

The growth of workloads driven by GenAI and automation will require **robust low-latency networking for cloud connect and datacenter interconnect.**

# Invest in Digital Infrastructure to Prepare for What's Next

## IDC's Future of Connectedness Framework



Source: IDC's *The Future of Connectedness 2.0: Redefined*, June 2023

# Key Takeaways



**Performance-enabled digital infrastructure** will unlock efficiencies and facilitate enhanced customer experiences, driving profitable growth.



**Customer engagement and operational efficiency** as a path to profits is a key business focus.



**Cloud infrastructure and WAN upgrades** — including security — will dominate IT investments.



**Required IT outcomes** include enhanced WAN performance and tangible customer engagement benefits.



**IT inhibitors** include security threats, budget constraints, and adequate remote access.



**High-speed fiber, broadband, and wireless access** are the most prevalent connectivity options.



**Managed network services** that offer automation and leverage GenAI can improve customer experience.

# Essential Guidance

## Consider the following for a valued long-term strategic partner for enterprises:

- ✓ Managed services provide a great opportunity to help companies **bridge budget constraints and skills gaps and achieve operational efficiencies.**
- ✓ As companies migrate away from legacy platforms, **providing an adequate VPN and security roadmap** is a key requirement.
- ✓ Managing cloud infrastructure is a key challenge for companies today. **Offer a roadmap for efficient hybrid and multicloud networking.**
- ✓ Companies will continue to increase their **investment in network services to evolve WAN access connectivity.**
  - ▶ **The competitive landscape is broadening with existing and new entrants** (e.g., international comms SPs, cloud SPs, managed SPs, systems integrators)
- ✓ Look to **align network service pricing that is flexible** as both business needs and how organizations consume services change.



# Appendix: Supplemental Data

The table in this appendix provides an accessible version of the data for the complex figure in this document. Click “Return to original figure” below this table to get back to the original data figure.

## SUPPLEMENTAL DATA FROM PAGE 6

Is your company implementing, or does it plan to implement any of the following networking services/technologies?

	Currently use	Plan to use within 2 years
Extend VPNs to work-from-home employees	80%	8%
High-speed fiber services for datacenter connectivity	60%	25%
High-speed fiber services for remote locations/branch offices	58%	24%
Mobile broadband (e.g., 4G or 5G connectivity)	55%	19%
Additional dedicated internet access bandwidth capacity	54%	21%
Replace MPLS circuits with dedicated internet access	47%	20%
Additional cloud connect bandwidth	47%	21%
Upgrade broadband circuits for remote offices	39%	19%
SD-WAN for remote locations/branch offices	36%	16%
Add fixed wireless for remote offices	30%	19%

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# About the IDC Analysts



**Courtney Munroe**  
Research Vice President,  
Worldwide Telecommunications Research, IDC

Courtney is responsible for supporting IDC's continuous research on global telecommunications trends. His core research includes the evolution of WAN networking to software-defined hybrid WAN, and the impact of digital transformation on the WAN architecture. His research focus also includes consumer and enterprise networking requirements and analysis of the communications service provider strategies as they transform to implement new business models

[More about Courtney Munroe](#)



**Peter Chahal**  
Research Director,  
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Services and Strategies, IDC

Peter Chahal is Research Director at IDC's Network and Telecommunications research practice covering telecommunication services and strategies. Some of the key areas of his research includes mobile broadband services, 5G monetization, SD-WAN, wireline broadband services, and other emerging telecom digital services. Peter also looks at telecommunication service providers' broader strategies and how those strategies influence telecommunication providers' digital transformations. His research helps telecommunication service providers and vendors have a better understanding of the worldwide telecommunications market and discover new opportunities for growth.

[More about Peter Chahal](#)



# Message from the Sponsor

## LUMEN<sup>®</sup>

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Work with Lumen Technologies to optimize your next-gen app performance and hybrid productivity via integrated networking solutions designed to decrease latency, strengthen security, and scale to growing business demand.

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