

A New Chapter in Connectivity

Security and resilience drive network modernization



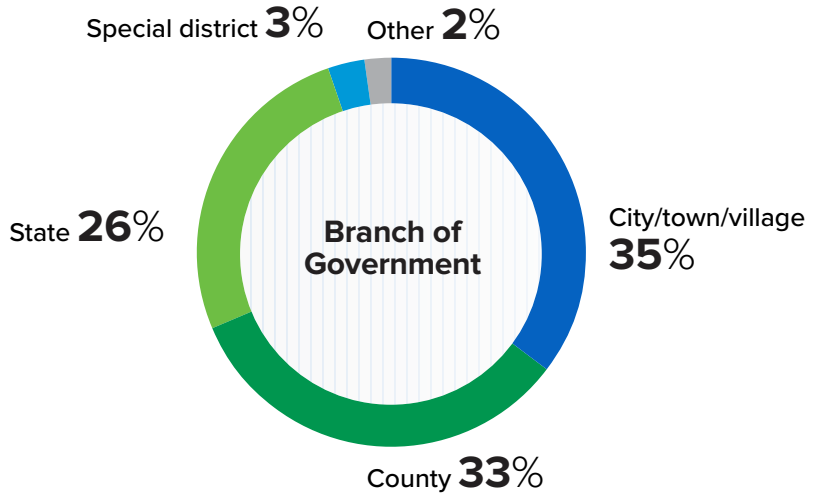
Overview

The pandemic drove rapid and sweeping changes in the way state and local governments operate internally and deliver public-facing services — and almost all this crisis-driven innovation hinged on network connectivity. Now the landscape around how government employees work and how constituents interact with public agencies is permanently altered. This is driving state and local government agencies to reassess network technologies that provide the foundation for increasingly vital digital services.

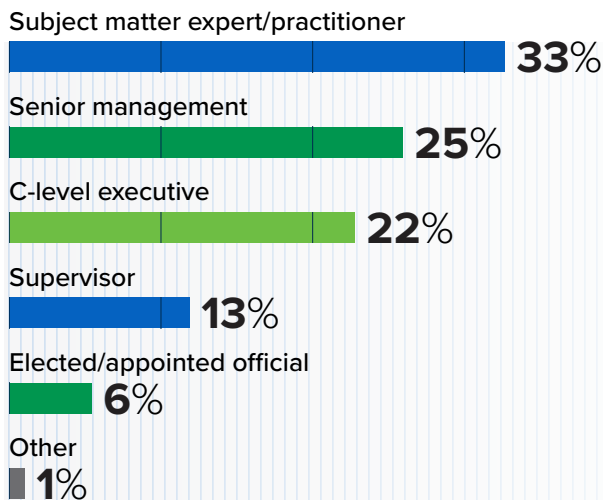
In late 2021, the Center for Digital Government (CDG) — in partnership with Spectrum Enterprise — surveyed state and local government officials nationwide on how they are approaching this new chapter in connectivity. The survey results, based on 126 responses, show that many state and local government organizations aren't completely satisfied with their current network performance, and they are pursuing a range of technology upgrades.

Multiple factors are driving the need for network enhancements, according to survey respondents. Chief among them are heightened concerns around cybersecurity and resilience. In addition, agencies are feeling connectivity strains around creating permanent hybrid work environments, improving digital experience for constituents and supporting a growing array of cloud-based applications.

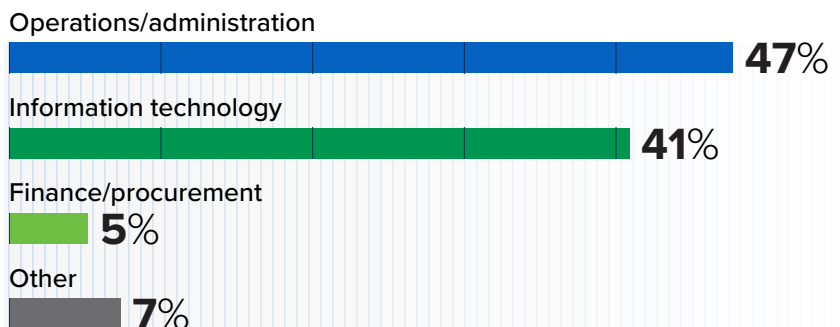
Survey Demographics



Job Role



Job Function



Figures in charts throughout this report may not total 100% due to rounding.

Network Satisfaction and Future Plans

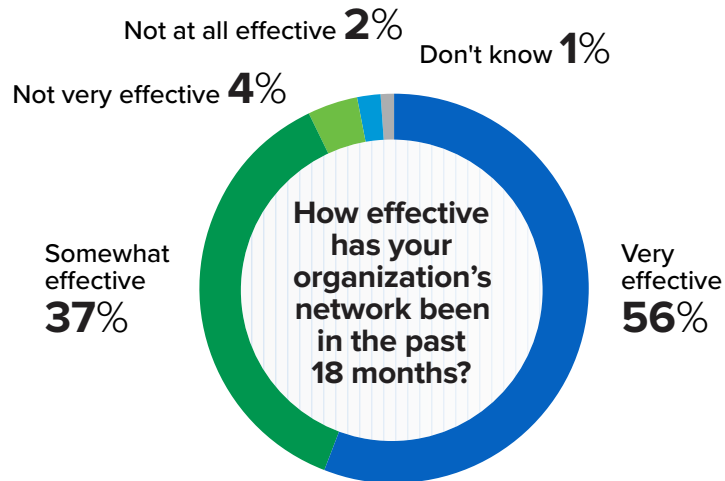
Survey respondents were generally satisfied with their network's performance during the pandemic response. However, about 40% indicated their current network technology has room for improvement. Requirements for network reliability and bandwidth will continue to expand as jurisdictions push for broader modernization and tap into cloud, low-code/no-code platforms, automation, and other connected technologies to improve organizational agility and resilience.

One-on-one interviews with public sector executives conducted by CDG detail how expanding use of video and digital services is impacting agency network requirements.

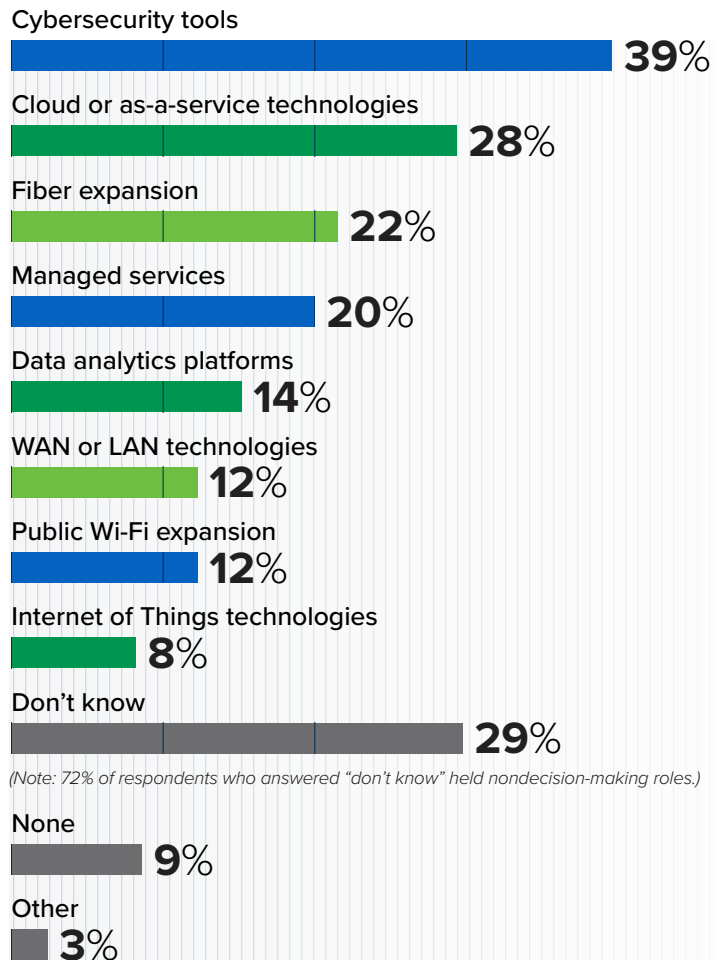
Requirements for network reliability and bandwidth will continue to expand as jurisdictions push for broader modernization.

"We've needed to increase bandwidth, both to support our remote workforce and city facilities," said one city government CIO. "Everybody is using more bandwidth with more virtual meetings and more digital work, with everybody really focusing on technology to provide city services."

Respondents said they plan to procure a range of technologies over the next several years to support network modernization, led by new cybersecurity tools. Growing bandwidth requirements were also reflected in procurement plans, with more than 20% of respondents anticipating an expansion of fiber deployment in the near future.



What technologies does your organization plan to procure within the next 18 to 24 months to enhance network modernization efforts? (Select all that apply.)



(Note: 72% of respondents who answered "don't know" held nondecision-making roles.)

Responding to Evolving Requirements

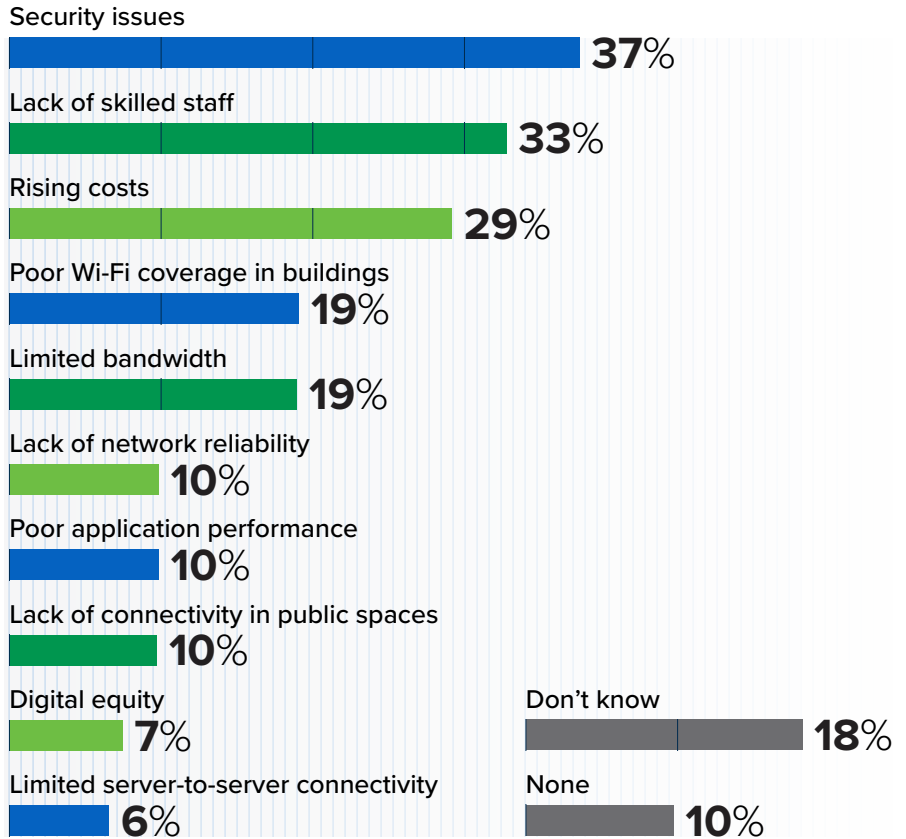
Survey results also indicate movement toward cloud-based network models. Twenty-eight percent of respondents are planning to procure cloud or as-a-service technologies as part of their network modernization efforts. Another 20% expect to use managed services for network upgrades.

Multiple factors may be pushing state and local agencies toward managed SD-WAN and other services-based network approaches to meet their evolving connectivity needs. Respondents cited lack of skilled staff (33%) and rising costs (29%) as key network challenges, reflecting the difficulty of maintaining and scaling traditional hardware-based networks.

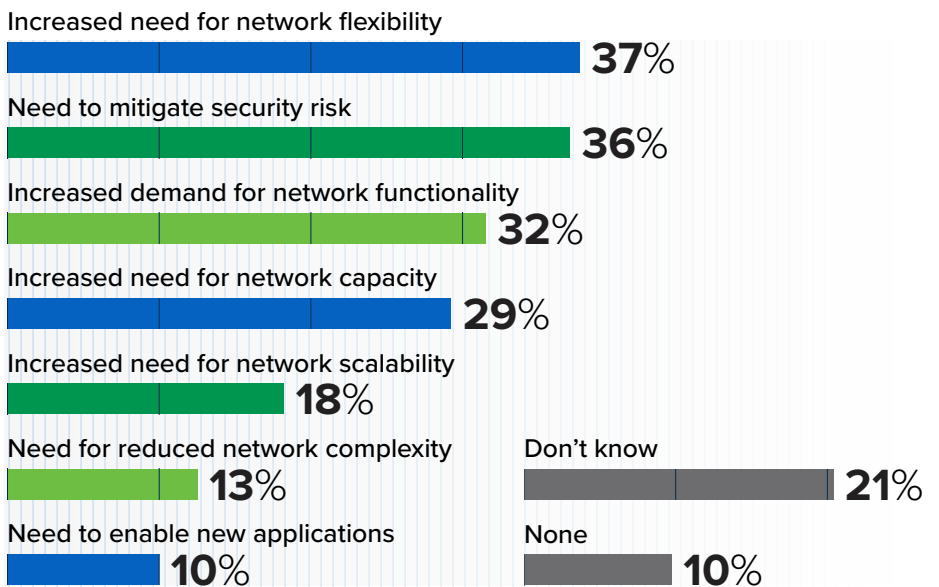
Other factors in this shift are growing requirements for network agility and scalability. Nearly 40% of respondents are seeking greater network flexibility to support digital services for internal staff and the public, and more than 30% say they need increased network functionality.

Respondents cited lack of skilled staff (33%) and rising costs (29%) as key network challenges, reflecting the difficulty of maintaining and scaling traditional hardware-based networks.

What networking and connectivity challenges is your organization facing? (Select all that apply.)



How is growing emphasis on mobility — both for internal staff and public-facing services — impacting your organization's network requirements? (Select all that apply.)



Security and Resilience are Key Drivers

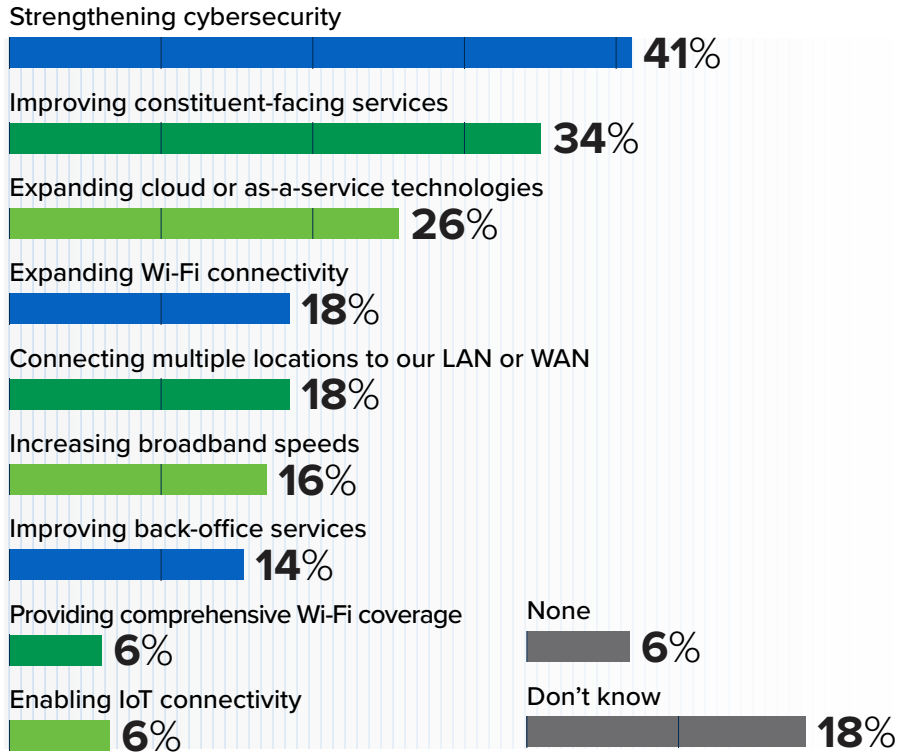
Security is a key driver behind current network modernization activity. Anxiety around growing network cybersecurity threats and the need for stronger security controls were common themes throughout the survey results. For example, respondents decisively ranked strengthening cybersecurity as their top priority for network modernization. They also ranked security issues as their top connectivity challenge.

This likely reflects growing attention on cybersecurity risk — including increasing executive-level awareness of the issue — in the wake of disruptive ransomware and supply chain attacks over the past several years.

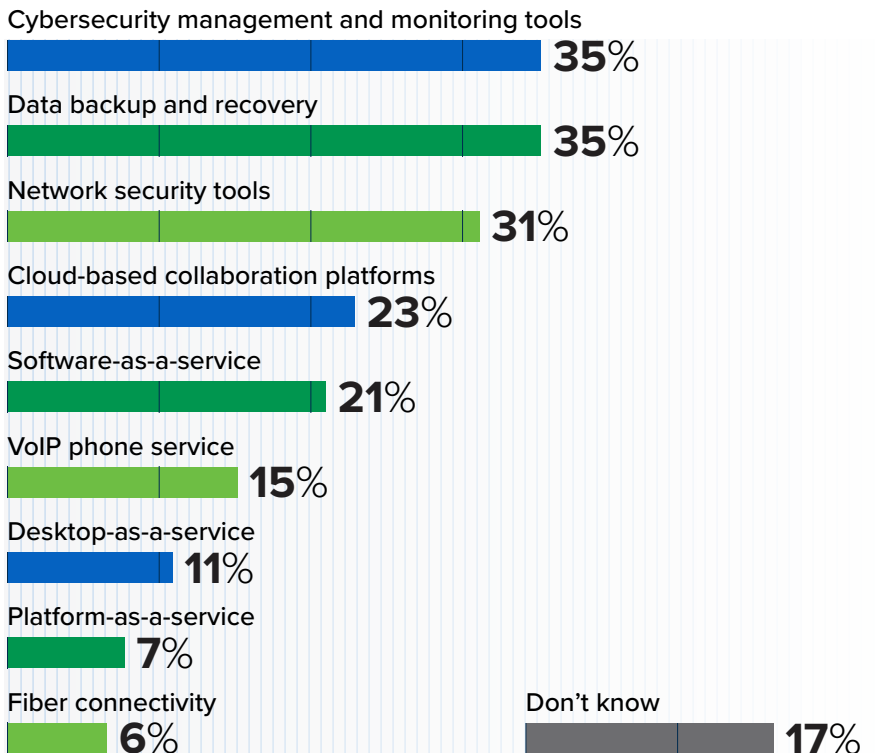
“We’re asked by our city council every time we meet, ‘What are you doing about ransomware?’ because that is the buzzword right now in the industry that has everybody concerned,” one local government IT director told CDG.

In addition, the survey results indicate a tightening link between cybersecurity and resilience. Respondents ranked cybersecurity management and monitoring tools even with data backup and recovery solutions as their most important technology for business continuity. Respondents also ranked network security tools second on the same list.

What are your organization’s priorities for network modernization? (Select up to three.)



What technologies are most important to your organization when considering business continuity and resilience? (Select up to three.)



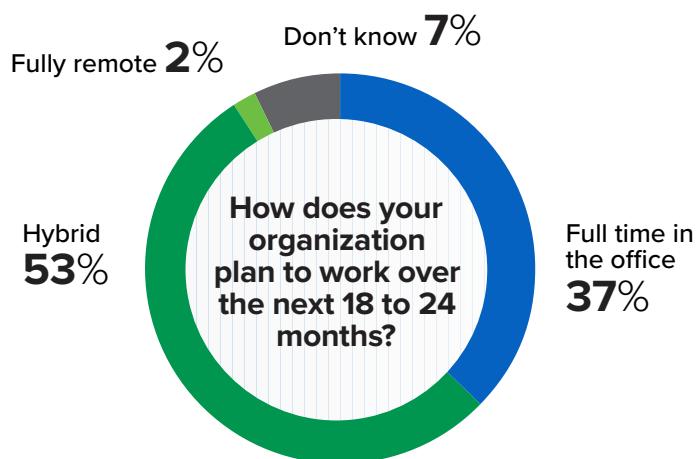
Supporting the Hybrid Workforce

About half of survey respondents expect their organizations to continue hybrid work environments — where employees work from home at least part of the time — for at least the next several years. While connectivity struggles for remote staff have been well documented, the results of this survey show the challenges created when hybrid workforces return to the office and organizations must support a mix of in-person and remote employees.

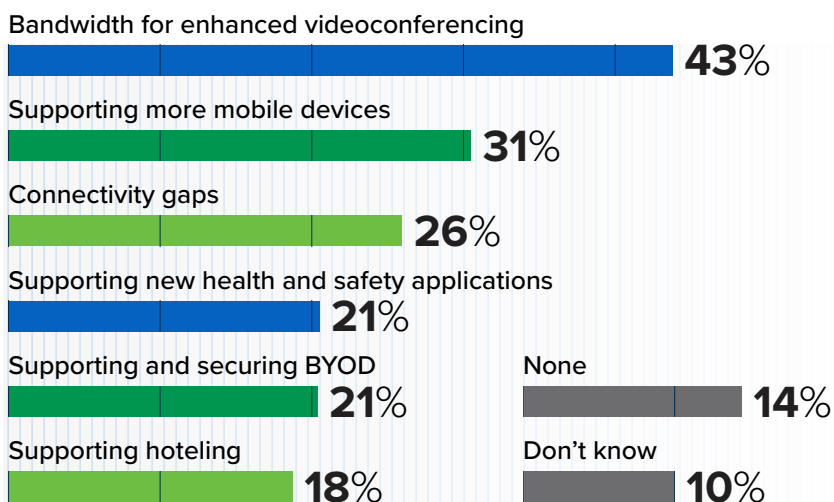
Respondents said they're experiencing on-site bandwidth challenges related to expanded use of videoconferencing to connect virtual and in-person workers. Similarly, they're struggling to connect a growing number of mobile devices that workers are bringing to the office.

One local government IT executive told CDG he anticipates substantial network impacts from hybrid work in his city.

"We've been building requirements for a hybrid model and shared workspaces. Some of the more elaborate solutions that have been reviewed include adding sensors to cubicles, offices and conference rooms to track use and occupancy," he said. "Certainly, that would require significant new connectivity. We've begun assessing needs for a comprehensive Wi-Fi solution in shared workspace locations, and we anticipate needing a significant amount of infrastructure to meet those requirements."



What are your biggest network challenges associated with supporting the return to the office? (Select all that apply.)



Conclusion

The pandemic permanently changed how state and local government agencies work and deliver services. These shifts are impacting network requirements and driving widespread modernization activity.

Agencies are seeking network solutions that are fundamentally more secure, as well as more flexible, more scalable and easier to maintain. These requirements, along with chronic lack of IT staff talent in state and local government, are pushing agencies toward cloud and as-a-service network models. Ultimately, governments are planning modernization efforts around network resilience and reliability as connectivity becomes ever more critical to how they operate and serve constituents.

This piece was written and produced by the Center for Digital Government, Content Studio with information and input from Spectrum Enterprise.

Produced by:



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