

# Preparing for a Data-Driven Future in State and Local Government

**D**ata is at the heart of digital transformation efforts in state and local government. Agencies rely on data to fuel personalized citizen services, smart city initiatives, machine learning and more. To easily access, analyze and share data, they are turning to advanced technologies like artificial intelligence (AI) and cloud-based platforms and applications. However to fully leverage these technologies, they need a robust, software-based network that readily meets ever-increasing demands for bandwidth, high performance, reliability and integration. In other words, this network must be adaptive to easily, flexibly and cost-effectively accommodate the rapid pace of change that agencies face. With this Adaptive Network foundation in place, state and local governments can better prepare for a smarter, data-driven future that helps them make better decisions and exceed citizen expectations.

## The Adaptive Network: A Combination of Intelligence and Automation

“An Adaptive Network sets modernization in motion by simplifying and automating connections that provide maximum visibility and control,” explains Adam Saenger, VP of Networking Solutions for Lumen, a leading provider of network, security, cloud and managed services.

It addresses the growing need for instant processing and high performance as state and local governments embrace AI, machine learning and other advanced data tools to gain insights, improve decision-making and deliver sophisticated services. With an Adaptive Network, public safety organizations can dynamically scale resources and reroute network activity to accommodate bursts in demand during emergencies. Departments of transportation can enable real-time analysis of traffic videos and sensor data to reduce traffic congestion. Health and human services agencies can allow caseworkers to securely share data no matter where it resides, where the worker is or what device is used.

Adaptive Networking bridges disparate connections under a centralized, software-defined umbrella (e.g., SD-WAN or Ethernet WANs) to support a more data-driven, citizen-centric government. When run on a carrier-grade, globally distributed network platform, an Adaptive Network:

**Improves deployment speed and flexibility.** Software-based, dynamic connectivity enables rapid deployment of cloud services as well as uninterrupted data movement from IoT sensors, edge devices, and other data sources to the cloud and other public and private data centers. In an IDG study of Adaptive Networking, 74 percent of respondents who implemented SD-WAN, hybrid WAN (MPLS + Broadband), Ethernet WAN or a combination of

all three saw on-demand connections between data center and cloud improve by up to 34 percent.<sup>1</sup>

**Enables on-demand capacity.** An Adaptive Network can automatically and agilely respond to growing needs for storage, bandwidth and computing power to allow real-time, high-performance access to data, applications and services. Ovum research found enterprises experienced an approximately 28 percent gain in network speeds, application performance and reduced latency when they adopted a hybrid network.<sup>2</sup>

**Enhances security and resilience.** Adaptive Networking allows organizations to dynamically re-route traffic when disruptions, heavy usage or security issues threaten availability. In addition, it allows organizations to easily create more secure, encrypted channels for sensitive data.

**Reduces costs.** Intelligent, automated processes help organizations optimize resource usage so they don't acquire more capacity than they need. Faster deployment reduces employee time spent on provisioning. Network operating costs decreased by 26 percent among organizations that had deployed Adaptive Networking.<sup>3</sup>

## Ensuring Success

According to Lumen's Saenger, the following best practices help ensure successful implementation of Adaptive Networking:

**Identify business-specific drivers.** When justifying the adoption of Adaptive Networking technologies and processes, be sure to tie it to existing initiatives such as digital transformation. Quantify business drivers such as cost savings, improved network visibility, tailored application performance and greater security.

**Thoroughly assess the existing environment.** This inventory should include types of offices and locations, applications and performance requirements, and existing network connections and utilization across them. The assessment should also determine whether Adaptive Networking technology should be implemented on premises or in the cloud.

Create a clear path forward, with incremental change. Incremental change allows fine-tuning, minimizes risk and softens the impact of change. It's important to establish clear steps with measurable outcomes along the way.

**Combine multiple Adaptive Networking technologies.** “Adaptive Networking becomes stronger when organizations combine elements into a solution. When an organization adopts just one element, such as hybrid networking without SD-WAN, it does not capture the full benefits of Adaptive Networking,” says Saenger.

# It's All About Timely, Accurate Access to Data

Adaptive Networking is a key pillar of digital transformation. It equips state and local governments to overcome some of their most pressing challenges.

## Citizen Expectations

Fifty-six percent of respondents in a recent survey said they want more personalized government services.<sup>4</sup> An Adaptive Network supports real-time connectivity to and integration of a range of disparate — and often siloed — applications and analytics to help drive personalization.

## Velocity of Data

IDC predicts worldwide data will grow to 175 zettabytes by 2025, and nearly 30 percent of that data will need real-time processing.<sup>5</sup> An Adaptive Network allows organizations to dynamically scale bandwidth, storage and processing power for performance-sensitive scenarios such as delivering personalized citizen services, ensuring reliable communications during public emergencies and managing critical infrastructure assets.

## The Rise of AI

In a recent NASCIO/CDG survey, 45 percent of respondents indicated legacy IT infrastructure is the biggest obstacle to handling the large volumes of data and processing that AI requires.<sup>6</sup> Adaptive Networking provides agility to quickly upgrade networks or extend them to the cloud.

## More Cloud-Based Apps

Ninety-two percent of state CIOs plan to increase cloud-based services.<sup>7</sup> Adaptive Networking allows organizations to quickly provision additional storage, computing power and bandwidth for these new services. Fifty-two percent of organizations in an Ovum survey use Adaptive Networking for flexible bandwidth on demand.<sup>8</sup>

## Cybersecurity

Only about one-third of state and local governments are satisfied with their ability to monitor, identify and measure security breaches.<sup>9</sup> An Adaptive Network builds security directly into the network and draws on global threat intelligence to better detect threats and protect data. Executive IT decision-makers report a 25 percent improvement in their security posture due to Adaptive Networking.<sup>10</sup>

According to Ovum, organizations that adopt two or more Adaptive Networking technologies expect to get 10 percent more value out of hybrid networking and 15 percent more value out of SD-WAN than those who don't.<sup>11</sup>

**Take advantage of proven partners and managed services.** Organizations will likely need to enlist third-party expertise to help assess, design, migrate, implement, and manage modernization and the shift to Adaptive Networking. To reduce capital expenses, staffing burdens, and the ongoing cost and operational complexity of in-house network management and maintenance, some organizations may opt to work with a managed services provider. Whether implementing a solution in house or in the cloud, look for technology partners that specialize in Adaptive Networking, have standardized essential

services to enable quick deployment and tailor implementations based on your specific needs.

## Fueling a Better Digital Experience for Citizen Services

Adaptive Networking is a key pillar of digital transformation. It is the foundation to modernization, enabling government agencies to harness the data being generated across their organizations and improve services. With an Adaptive Network in place, agencies will be better positioned to flexibly meet citizen demands today and in the future.

*This piece was developed and written by the Center for Digital Government Content Studio, with information and input from Lumen.*

### ENDNOTES:

1. <https://www.centurylink.com/asset/business/enterprise/white-paper/network-world-how-a-sdn-advances-digital-transformation-white-paper.pdf>
2. Ovum, Adaptive Networking CATI Survey, June 2018.
3. Ibid.
4. <https://www.businesswire.com/news/home/20190709005037/en/One-Third-Citizens-Unaware-Digital-Government-Services-Accenture>
5. <https://www.seagate.com/files/www-content/our-story/trends/files/idc-seagate-dataage-whitepaper.pdf>
6. <http://www.nascio.org/wp-content/uploads/2019/11/AchievingthePromiseofAI.pdf>
7. <https://www.nascio.org/Publications/ArtMID/485/ArticleID/836/The-2019-State-CIO-Survey>
8. Ovum, Adaptive Networking CATI Survey, June 2018.
9. [https://www.accenture.com/t20170227t025533\\_\\_w\\_/us-en/\\_acnmedia/pdf-41/accenture-fy17-afs-rebooting-public-sector-cybersecurity-research.pdf](https://www.accenture.com/t20170227t025533__w_/us-en/_acnmedia/pdf-41/accenture-fy17-afs-rebooting-public-sector-cybersecurity-research.pdf)
10. Ovum, Adaptive Networking CATI Survey, June 2018.
11. Ibid.

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