

*Interview with Bob Woolley, senior fellow for the Center for Digital Government and former chief technical architect for the Utah Department of Technology Services*

**E**dge computing has enormous potential to optimize government service delivery, from emergency response to water distribution, snow removal, road repair, street light maintenance and more. Over the next several years, experts predict governments will leverage edge computing to make operations more affordable, efficient and timely. But what can governments do today to prepare for the coming edge computing era?

### **Why is edge computing important?**

There's a lot of hype around edge computing, so it's worth taking a moment to define the term. Put simply, edge computing processes data close to the source, allowing for real-time data and analysis and improving reliability, performance and cost.

"Edge computing represents a point in the communications network where people and things converge with the digital world," says Bob Woolley, senior fellow for the Center for Digital Government and former chief technical architect for the Utah Department of Technology Services.

The number of active IoT devices is expected to grow from about 26 billion today to approximately 75 billion by 2025, and that growth is a catalyst for edge computing. As IoT devices become more common and citizens demand faster, more streamlined services, agencies will want to limit the distance between the data source and the end user. Edge computing will play a pivotal role, solving a variety of challenges around latency, governance, security and monitoring. The ability to gather, distribute, process and analyze data in real-time or near real-time will allow agencies to see broader trends and data relationships that will help them improve service delivery and performance.

### **Changes Ahead**

The following are three things state and local agencies should keep in mind as they prepare to move into the edge computing era:

**1 Infrastructure demands will grow.** With edge computing, data is collected and analyzed locally, and may be

## ISSUES TO WATCH

# 3 CONSIDERATIONS FOR THE EDGE COMPUTING ERA



aggregated and correlated at remote public and private data centers. Some experts suggest that the implementation of 5G will dramatically boost the amount of data generated by edge devices connected to government networks.

**2 Compute, storage and network capabilities will need to be re-evaluated as agencies begin to make data-driven decisions in near real-time.**

"Agencies will need to correlate locally gathered data from information silos and analyze that data in a broader, multiple-agency and business-requirements context," says Woolley. "This implies the use of edge devices at all kinds of collection points — local servers for immediate business analysis and core data center services for large-scale storage and analysis."

**3 Multi-cloud environments will be mandatory.** Since data aggregation and analysis tools are largely enterprise services, availability in both private and public clouds will assume greater importance. Cloud services traditionally have been delivered from the core to the edge, but that will change with edge computing.

"The point of edge computing is to provide situations where information processing is extended from the edge to the core to meet specific agency and multi-agency business requirements," says Woolley. "Agencies will need to make business decisions as to where final points for data aggregation, computing resource requirements, and storage and reporting services are most effectively utilized."