Remaining Resilient

Lake Apopka Natural Gas District relies on technology to maintain worker productivity and citizen service delivery in the midst of disruption.

For Florida's Lake Apopka Natural Gas District, digitizing and streamlining processes are vital strategies to cope with an increasing workload.

Established in 1959 to bring energy to rural customers, the district's central Florida service area is now home to a rapidly expanding population. The district, which serves about 25,000 residents today, is adding 1,700 customers annually, making it one of the fastest-growing public gas districts in the nation.

Mobile technology, digital workflows and smart integration are keys to efficiently handling these multiplying demands, says Scott Minter, Director of Information Systems.

"We're a utility, so we serve the community. These tools let us handle more and more customers without adding an army of people," says Minter. "We use technology to serve our customers better while keeping our costs as low as possible."

For instance, one of Minter's first moves as CIO was to equip field workers with smartphones connected to the district's mobile work order system. Crews already carried laptops in their trucks, but giving them an easier-to-carry device squeezed paper from the repair process, which saved time and improved accuracy.

"Before, when technicians serviced a meter, they would write down information on a piece of paper and then enter it into the work order system later," he says. "Now they carry the smartphone with them, and they can take a picture of the meter and attach that to the work order."

Lake Apopka also has steadily added digital service options for customers, including a mobile app and the ability to pay utility bills online or through an interactive voice response system. Those digital options became critical business continuity tools when the district shut down three customer service lobbies in March due to the COVID-19 pandemic.

In addition, the district shifted the bulk of its staff to remote work, a move which Minter says went relatively smoothly. Located in hurricane country, the district already had moved systems to the cloud to strengthen resiliency.

"That really helps us," Minter says. "I'm proud to say during the last hurricane we had we didn't have a minute of downtime for our back office."

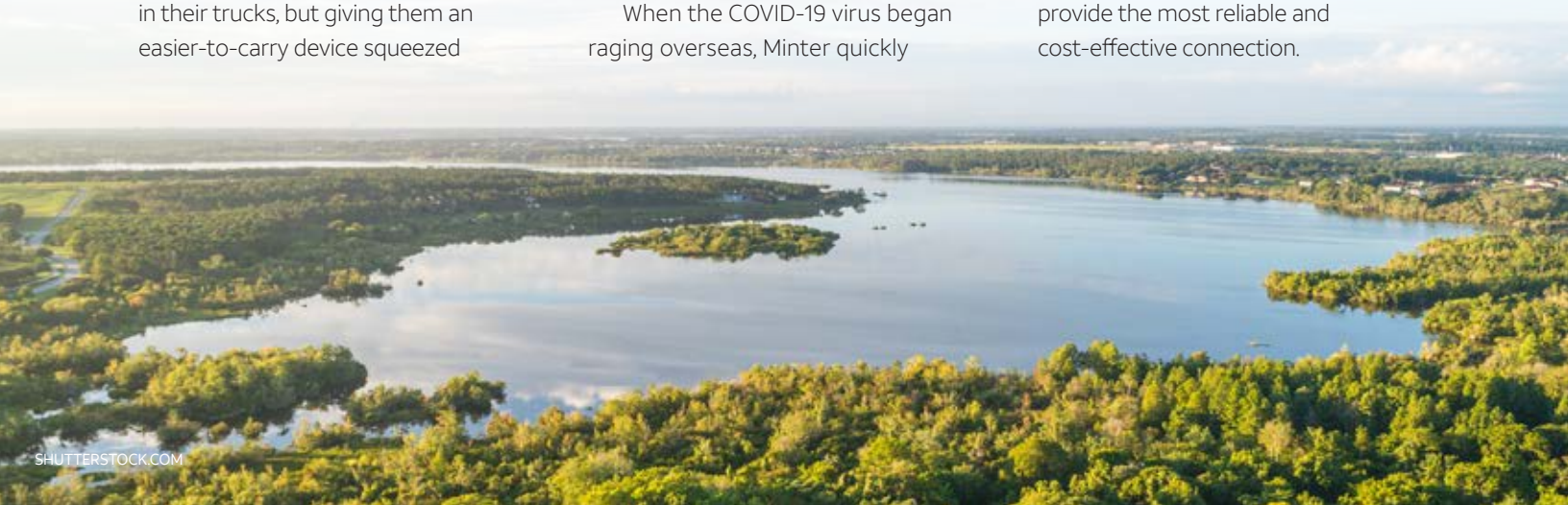
When the COVID-19 virus began raging overseas, Minter quickly replaced staff desktop computers with laptops so employees could access resources from home. Minter's IT team also offered expanded user training and support to ensure newly remote workers were comfortable and productive.

"You could see it coming — you could look at other countries and see what was happening," he says. "Now we don't have a desktop left, and most of the staff is working from home. It's been very seamless."

New Network Resiliency

AT&T's Michael Harrod says sophisticated new network technologies can make districts both more resilient and more efficient. For instance, software-defined networks (SD-WAN) enable districts to replace existing network infrastructure with flexible and intelligent network services.

SD-WAN services delivered via the internet help districts reduce the amount of network hardware they own and maintain, lowering IT expenses. In addition, these new services are smart enough to automatically choose from multiple connectivity options to provide the most reliable and cost-effective connection.



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"That's really where you get the ability to be agile and flexible," Harrod says. "The network has the intelligence to look at multiple paths to see what's available. That's a huge benefit for redundancy and business continuity."

When SD-WAN is combined with 5G wireless, these benefits are magnified.

"What 5G brings to the table is massive device connectivity, low latency and ultra reliability," he says. "You can integrate 5G into SD-WAN to give yourself even more connectivity options and backup capacity."

Ultimately, these advanced network platforms will help organizations erase differences between traditional and mobile connectivity. This trend, combined with increasing integration of field technologies like work order applications with back-office business systems, will transform how utility districts work.

"Where we're going is to bring all of those parts into a seamless environment so users can access information and resources wherever they are and during whatever they're doing," says Harrod.

Focus on Integration

Greater integration is on the agenda for Lake Apopka. The district recently integrated its work order and mapping applications, giving customer service agents more visibility into where repairs are taking place and the location of staff resources in the field. The new information makes the district more responsive to customer needs. Now when a citizen calls to report a potential gas leak, for example, customer service agents can quickly pull up the customer's address on a computer screen and alert the closest repair crew.

In addition, the district recently digitized forms used to track critical rust protection on pipes and inventory supplies carried by field crews. The latter change led to savings of more than 40 percent during its first year of use, according to Minter.

"That's good savings and it really came from simply eliminating the paper form," he says. "Now, when crews take supplies off the truck, they fill out an inventory form on their tablet, smartphone or laptop — whichever device they prefer. There's no paper to get lost. It's also easier and faster so they don't forget to do it."

Minter says integration and digitization efforts will continue. Implementation of a new enterprise resource planning (ERP) system is about two-thirds complete, although the project currently is paused due to the COVID-19 pandemic. An upgrade to the district's automated meter-reading technology also is on the horizon.

"We try to be constantly improving," he says. "And we really try to identify and eliminate single-use systems in favor of multi-use systems because it makes us more efficient."

Efforts like these help the district deliver on its goal of providing reliable and affordable energy services to the community — a mission that hits close to home for Minter and his staff.

"Most of us who work for the district are also customers," he says. "These are our neighbors."

Market Overview: Energy Districts

ENERGY DISTRICTS USE TECHNOLOGY to balance competing demands for affordability, customer service and resiliency. These organizations are reaping significant efficiency benefits from digitizing and automating paper processes, as well as from deploying mobile applications for field staff. Some of this activity is reflected in the results of our 2019 Special Districts Survey, where energy district respondents ranked mobile applications for staff and field crews among their top technology priorities. Other priorities include deploying smart infrastructure and improving transparency.

Energy districts also are integrating formerly standalone systems to improve performance and responsiveness. Examples include integration of geospatial mapping and work order systems to enhance visibility into repair activities and resource allocation, as well as integration of inventory applications and ERP systems to improve overall management.

Like other public sector organizations, utility districts rapidly moved staff to remote work during the COVID-19 pandemic. Many special district leaders now intend to retain work-from-home capabilities to support continuing social distancing requirements and improve resiliency. This trend likely will drive more attention on cloud, scalable network services and other technologies that support rapid implementation of remote work during disruptive events.

To learn more about how special districts are innovating across the nation, visit: govtech.com/districts