



Case Study:

Loudon County E-911 Adds Dispatch Redundancy and Interoperability

Any veteran storm chaser knows that the old saying “lightning never strikes the same place twice” is pure myth. So does Loudon County Tennessee’s E-911 Director Jennifer White. The public safety answering point (PSAP), which handles more than 55,000 calls each year, was hit not once, but twice, during a 10-day period. The double strike left them with only four of eight functioning dispatch console positions. To make matters worse, each strike hit during time periods when key team members were out of town enjoying some well-deserved vacation time. One of those individuals was the PSAP’s only in-house, vendor-trained technician—a vital team member and part of the center’s redundancy plan to augment local support during times it might not otherwise be immediately available.

It was quickly an all-hands-on-deck sort of affair.

White and her team reached out to Avtec LLC and Critical Tech Solutions (CTS), a Motorola Solutions channel partner in the state. All collectively rolled up their sleeves and got to work. Together, they completed a major upgrade that added both equipment and technical support redundancies as well as the mission-critical interoperability necessary to operate reliably within the Tennessee Valley Regional Communications System (TVRCS). Together, Avtec and CTS brought the new Scout™ dispatch system live in just over a month, marking a major win for the more than 40,000 residents served by Loudon County E-911.





While the Avtec Scout system was being deployed, the Loudon County team sprang into action and developed an immediate but less-than-optimal workaround. They leaned heavily on portable radios for a couple of days, while her expert in-house technician managed a speedy temporary fix of their previous consoles by salvaging components from a mobile response unit, restoring all seats for the time being. From there, they looked ahead with a sense of relief in anticipation of the new, future-proofed, long-term solution. Avtec's Scout platform would provide redundancies not only for equipment but also for service and support to ensure no future storm of unexpected events would put them in this sort of bind again.

"It made us realize how much local service for our previous dispatch consoles had declined in our area," White recalled. "Naturally, that was a big concern." With the new Scout platform, the center would also be simultaneously addressing growing interoperability issues, as neighboring local law enforcement agencies had begun ramping up the process of switching over to the TVRCS. The system is part of the three-zone Tennessee Advanced Communications Network (TACN) APCO P25 network. TVRCS covers more than a dozen counties in northern Georgia and southeastern Tennessee.

"Our previous dispatch console system would not interface with all radios, so if an officer pushed an emergency button we couldn't see it," White stated. "We had an officer shooting in the past where we had more than 30 agencies working on the event and didn't have interoperability. We managed a workable solution, but that's dangerous for officers. Being able to reliably share information in a timely fashion is absolutely critical at such moments."

"We've had many conversations about how shocked we were at how simple the process was working with Avtec and CTS," said White, who is also the former chair and a current member of Tennessee's Emergency Communications Board, which oversees all 101 Emergency Communications Districts in the state. "In less than 5 weeks' time we had the system built and ready to install. I've never seen turnaround like that."

"Avtec custom-built the new system using screen configurations we sent," she continued. "I've had no complaints from our team. That never happens when you're introducing a new system. Our dispatchers were using the system comfortably within 10 minutes. Having the backing and support of the combined Avtec and Motorola Solutions teams was another important factor in our decision. Knowing we now have service and support redundancy is a big deal for us."

Loudon County E-911 Case Study Snapshot



SYSTEM CHALLENGES:

- Declining local service in the area and no remote post-warranty manufacturer support to provide immediate assistance if the dispatching system went down and the E-911 center's in-house team could not quickly resolve the issue.
 - Dispatch console that could not pass through radio alias information when first responders called for help without specialized engineering by the PSAP's team.
 - Lack of ability for Loudon County's dispatch consoles to connect with the TACN, a three-zone APCO P25 network designed for statewide visibility of and access to emergency system communication assets. TACN provides critical interoperability for all public safety first responders on a common platform to act as backups during times of outages and during mutual aid situations, such as natural disasters.
 - No way for dispatchers to answer both 911 telephone and radio calls using a single headset.
 - A platform that could not easily scale, which presented obstacles for planned future growth and hindered the ability to quickly deploy mobile positions during expanded emergency situations.
 - Concerns about ease of use for dispatchers when transitioning to a new vendor's dispatch console, which could present a long learning curve and operational inefficiencies.
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Loudon County E-911 Case Study Snapshot



THE SOLUTION:

Avtec Scout dispatch communication system, including:

- Eight Avtec Scout EX dispatch consoles, including configurations for adding positions to the center's mobile command unit during expanded emergency situations.
 - Five-year ScoutCare™ post-warranty software maintenance and remote services program with 24/7/365 access to Avtec's U.S.-based support team and continual software patches and feature enhancements.
 - National Emergency Number Association (NENA) headsets.
 - Interfaces with KENWOOD and Motorola Solutions radios, including P25, for reliable interoperability during mutual aid situations within the TVRCS and the broader statewide TACN APCO P25 network.
 - Advanced features and functionality, such as real-time information on first responder radio unit IDs.
 - A customizable graphical user interface (GUI) to facilitate an easy transition from a previous vendor's console system.
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Loudon County E-911 Case Study Snapshot



THE RESULTS:

- Multiple Motorola Solutions dealers and technicians in the immediate area to call on for assistance, augmenting Avtec's ScoutCare U.S.-based 24/7/365 remote support program, giving Loudon County assurance of service redundancy when unforeseen issues arise.
- Post-warranty software upgrades through ScoutCare—including new integrations and feature enhancements—ensuring the center's dispatching operation would be an “evergreen” system that could easily expand as requirements changed.
- A dispatch platform that immediately transmits radio unit IDs when first responders call for help, eliminating the need for the staff to spend valuable seconds doing manual radio alias lookups to respond.
- A vendor-agnostic platform that integrates with leading radio, telephony, broadband/LTE and recording technologies, ensuring interoperability within the statewide APCO P25 TACN as other emergency agencies migrate to the network. PSAP managers within the TACN now have more flexibility in the selection of voice-based equipment and applications.
- Elimination of the need for multiple systems or headsets to respond simultaneously to both telephone and radio calls, saving dispatchers valuable time and reducing the chance of errors.
- An easy transition for system users because of Avtec Scout's fully customizable GUI screens, which mirrored the layout of those on the center's previous consoles.