

When 911 Goes Down

When a natural disaster required a large communications customer of MATRIX to meet new federal resiliency standards on deadline, a plan that leveraged the use of expert consultants helped to successfully achieve all project commitments ahead of schedule.

This successful partnering story traces its roots to a June 2012 fast-moving storm that packed straight-line winds up to 90 miles per hour and caused massive damage in 11 Great Lakes and Mid-Atlantic States, plus Washington, D.C.

The 700 mile-long storm, known as a derecho, knocked down trees, power lines and emergency response systems. The derecho (Spanish for straight) also severely impacted much of the nation's electrical and communications system.

911 Services Knocked Out

In parts of Virginia alone, an estimated 2.3 million people lost access to 911 emergency services for up to four days following the storm as public safety answering points (PSAPS) that handle 911 calls failed.

Due to the significant impact of the derecho, the Federal Communications Commission (FCC) conducted a major investigation into the resiliency and reliability of public communications networks. In its Derecho Impact Report issued in 2013, the FCC established aggressive goals to strengthen the communications networks and prevent a reoccurrence of this event.

"I'm always in awe of nature, and a derecho storm can be unbelievably powerful," said MATRIX Telecom Services president Kenny Edgerton.

MATRIX and the large communication provider aligned when the FCC established two key deadlines that required communication providers to:

- have 50% of their e911 trunk networks diversified by October 2015, and
- have 100% of their e911 trunk networks diversified by October 2016.

The aggressive mandate led the large communication provider to turn to MATRIX for professional services assistance in order to meet the FCC deadlines, all the while making sure regularly scheduled work projects would also be completed.

Bouncing Back From the Storm

Edgerton heard from the customer about how the FCC requirements – atop existing work projects – would require outside support to complete all existing projects plus the compressed timelines of the FCC's e911 trunk diversification project.

Assessing the situation, Edgerton knew MATRIX would need to assemble a team of consultants who were very familiar with operations support system that serve as an inventory and design tool for many of the nation's largest communications providers. Initially in March 2015, MATRIX transitioned the services of 10 existing experienced consultants for the project. Each was already

outfitted with MATRIX computer equipment and credentials so they could access the unique operations support systems needed to establish redundant communication paths.

Since each PSAP had its own individualized circuit paths, all the circuits had to be split between unique paths to establish diverse routes for backup purposes. Each MATRIX consultant was provided a specific starting and end point, and then used the tools provided by MATRIX and the customer to create new diverse paths to allow data and voice traffic to move along each circuit along unique routes.

Meeting Critical Deadlines

However, once the work began, Edgerton and his colleagues analyzed the production rate and believed the team would be hard pressed to meet the FCC's first mandated deadline if no additional staffing was added. That's when five more consultants with 911 network design knowledge were added to the team in April.

"By increasing the team size beyond the original plan, we were able to ramp up production more quickly than forecasted, and we were able to beat the deadlines," said Edgerton.

The customer was delighted with the way the project was managed from both a staffing and operational perspective, calling it a "superior response."

Swarming the Situation

"MATRIX did a very good job of seeking out and retaining former network employees who were familiar with e911 networks and systems," said the sponsoring manager with the large communications provider. "Some of the consultants were out of their previous roles for a little time, but it's like riding a bike for those people. Once they got back into the routine of working with systems they were familiar with, they ramped up extremely fast."

Edgerton credits the professionalism of the consultants to jump quickly into the project, and said the customer helped make the project flow seamlessly.

"We had such a short runway in that we had to diversify the first 50 percent of the network by October 2015," said the customer. "We brought on MATRIX in March 2015, so we only had six months to get in an entire year's work and they got it done. Without MATRIX delivering consultants with the right skill sets and knowledge to be able to navigate the various inventory databases needed to complete the project, we would have been hard pressed to finish on time. MATRIX was a great partner in meeting the FCC deadline."

The MATRIX team is wrapping up the last remaining PSAPS to help the customer complete the final 2016 requirements, months ahead of schedule.

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