U.S. Marine Corps Improves Emergency Response System

Marine Corps Systems Command
United States

In 2009, a gunman opened fire at Fort Hood, Texas, killing 13 people and injuring more than 30 others. Soldiers and Fort Hood emergency personnel saved many lives that day, but the incident exposed gaps in the military's emergency response model.

Following the incident, the U.S. Secretary of Defense undertook a complete study and ordered the U.S. Armed Forces to address shortfalls in its response systems, requiring implementation of E911 systems at military bases.

"We didn't have things like computer-aided dispatch (CAD) that could show us how to get the right resources to the right place in the most efficient manner," said Kevan Kvenlog, senior program analyst, Marine Corps Systems Command (MCSC).

Tasked with addressing the secretary's requirements, MCSC examined common public safety systems used by the civilian sector and chose to implement a comprehensive solution called the Consolidated Emergency Response System (CERS).

"Our Marine Corps leadership took it one step beyond just 911 and brought in dispatching, fire station alerting, a robust records management system, and also mobile data computers," said Kvenlog. "This would give our leaders in the first responder communities the best ways to handle their assets with regard to day-to-day operations or emergency response situations."

Implementing CERS

Hexagon US Federal, an independent subsidiary of Hexagon's Safety & Infrastructure division serving the U.S. federal government, was awarded the US$23 million Indefinite Delivery, Indefinite Quantity (IDIQ) contract for the Dispatch, Alert, and Reporting (DAR) portion of the CERS solution. Hexagon was also tasked with developing and implementing a systems integration lab to aid the introduction of new products and interfaces and certification of the overall solution.

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Although MCSC selected Hexagon's commercial off-the-shelf software, the solution still went through the Defense Acquisition System as if it were a weapons system or aircraft. It also needed to meet stringent cybersecurity requirements.

"We had to go through the requirements development, and we took it all the way to 'Milestone C,' which is basically authority for us to go into full production," said Kvenlog. "That's a huge and significant achievement to do that with an integrator in this type of a system – an information system. I don't know of anyone that's done this before with a public safety type of system."

Enhancing Capabilities

Foundational to the solution is Hexagon's CAD system. The solution is being implemented at 13 Marine Corps sites, including three bases outside the U.S. It will protect Marine Corps personnel, their families, and others on base, increasing the effectiveness of law enforcement and fire and rescue personnel and reducing response times.

"The ability to gauge and understand your acquisition availability, material availability, and call volume is an efficiency we've gained," Kvenlog said. "Also being able to record things for forensic purposes is critical to follow-on investigations."

MCSC's CAD system includes the ability to track first responders at the radio level, something rarely implemented in the U.S. civilian sector. This ensures the closest, most capable unit is dispatched. In Okinawa, where many Marine Corps personnel live off-base, the solution will provide critical location information. This will significantly enhance emergency response for all U.S. personnel covered by the Status of Forces Agreement with Japan, while also supporting Japanese authorities.

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Exceeding Requirements

MCSC was the first to meet the Secretary of Defense's mandate following the Fort Hood shooting, and has gone above and beyond those requirements with the CERS DAR solution. And in a unique twist, it's a successful example of technology being transferred from civilian to military use.

"We are using a standard product used in thousands of places across North America, and we're incorporating it into a military setting with a strict cybersecurity requirement," said Kvenlog. "It's almost the reverse of typical technology transfer. We're taking civilian-sector technology and using it to best protect our communities."

Hexagon's solution reduces response times and increases the effectiveness of law enforcement and fire and rescue personnel.

Marine Corps personnel and their families can now rest assured knowing they are protected by MCSC's world-class emergency response system.

"The bottom line is we support the warfighters," Kvenlog said. "We support the warfighter both deployed and also in home station. I think it's very important that we exploit this type of technology and resource it properly to protect our assets and our families and communities."

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