CASE STUDY

Advanced Technology Integration for First Responders

The Challenge

—   DHS Science and Technology (S&T) and Ardent partnered with first responders in Grant County Washington and others to evaluate several promising technologies for public safety operations. These technologies include the ability to provide the location of first responder units and personnel, wireless voice, data coverage, live video streaming communications, and live monitoring of responder heart rate and body temperature.

The Solution

—   Ardent brought together a team of developers that have the knowledge and experience in emergency management, geospatial applications and sensor data integration to work with first responders to consolidate technology development for Next Generation First Responders (NGFR). Ardent created several technologies including: a Public safety cloud, a Watchtower mobile app for both Android and iOS, Pinpoint location reporting using a Windows app and Raspberry pi, and sensor integration, and an Esri operations dashboard. These technologies were tested in a Technology Experiment (TechEx). Full details about this TechEx are available in the Grant County – DHS Science and Technology Directorate Next Generation First Responder Apex Program Technology Experiment (TechEx) After Action Report.

The Outcome

—   The TechEx successfully demonstrated these lifesaving first responder capabilities:

- Improved public safety communications with an enhanced integrated network communications architecture

- Enhanced ability to maintain connectivity with cloud services

- Increased situational awareness and integrated with Grant County's existing systems and is capable of disseminating real-time video streams to end-users.

- Ability to geo-locate end-users (based upon their devices) and vehicles

- Provided basic data collection and dissemination capabilities for two physiological sensor-based systems.

"Our first responder community very much appreciated the efforts put forth by DHS to ensure our voices were heard, our guidance considered, and our input utilized. Overall, the Grant County TechEx was a positive experience that provided our public safety with insight as well as new capabilities to improve our preparedness and response."

~ Chief Deputy Darrik Gregg

Tools used to achieve these outcomes:

- AWS
- Watchtower Mobile App (Android, iOS)
- Pinpoint location reporting (Windows app and Raspberry pi)
- Sensor integration (Hexoskin, POC patch, Zephyr HR Monitor)
- Cradlepoint router integration
- ESRI operations dashboard

About Ardent

—   A Digital Transformation, Location Intelligence, and Data Analytics firm, Ardent Management Consulting (ArdentMC) is a certified HUBZone Small Business and CMMI-Dev Level 3, v2.0 and ISO 9001:2015 company with offices in Arlington, VA and Tulsa, OK. ArdentMC management systems (ISMS/ITSMS) are certified to ISO 27001:2013; ISO 20000-1:2018 standards by SRI Quality System Registrar. Ardent brings a significant history of innovative and "at the speed of the mission" proven best practices in geospatial analytics, cloud services and modernization, and software development. Ardent is the "All In" trusted provider to many government agencies, DHS mission components, state and local projects, and the commercial and non-profit sectors.

For more information, visit www.ardentmc.com.