



**PROJECT NAME: Agreement of New York City Fire Department (FDNY) Communication Infrastructure, Technology, Processes, and Protocols**

**Concepts To Operations Concepts To Operations** in team with other two consultants (iXP and RCC) was retained by the New York City Fire Department (FDNY) to assist in the design of the fire ground and in-building communication system.

This project involves redesign of the fire ground voice and data communications system for the City of New York Fire Department. The final system met all the FDNY's emergency operations communications needs. The system was designed around a robust infrastructure which provides firefighters, EMTs and other first responders with voice communications to and from all types of structures found in New York City (from below ground to high-rise buildings), with sufficient redundancy to allow continued operation even if parts of the infrastructure are not functioning. The system allows communications between FDNY and other agencies involved in emergency operations, and is flexible enough to incorporate new technologies as they emerge.

The design took into account the needs of the Fire Department and the City of New York during large scale incidents or multiple incidents. CTO analyzed the FDNY's communication needs, evaluated all potential solutions and determined how best to create a comprehensive system that meets the Department's needs. CTO's efforts involved analysis of options and recommendations for the comprehensive redesigned of the FDNY's fire ground voice communications system, including detailed technical specifications for each component, in the following areas:

- Infrastructure that serves the voice communications needs of the Fire Department and other first responders in New York City.
- Other critical redundant system components, such as mobile or vehicular-based repeaters and high-wattage portable radios.
- Interoperability and integration with other emergency responders' infrastructure and voice communications systems.
- Evaluation of technologies for video, personnel location, and other approaches to improve operations.
- Data capacity, including wireless information transmission and receipt, personnel tracking and accountability, network access, and ability to integrate emerging technologies.