



# *Virtual USA*

## *Advancing Interoperability at All Levels*

### **The Problem**

The need for real-time, actionable information is critical during day-to-day and emergency response operations where multiple jurisdictions and disciplines interact. Plenty of homeland security-related information exists at the local, tribal, state, and Federal levels, but since equipment investment decisions have been made based on the specific operational needs of individual agencies without benefit of a national strategy or standards, this information is often trapped in silos. As a result, potentially critical information often does not make it into the hands of the people who need it most.



While there has been progress, the nation's ability to seamlessly share information across localities, states and regions is still limited. To address this problem, the Department of Homeland Security Science and Technology (S&T) Directorate's Command, Control and Interoperability (CCI) Division created the Virtual USA initiative. Virtual USA creates a cost-effective nationwide capability that significantly improves information sharing and decision making during emergencies. Based on current and emerging technologies, Virtual USA integrates existing information sharing frameworks and technologies to enable collaboration at the local, tribal, state, and Federal levels by providing critical context for information – thereby making it actionable.

Developed in partnership with the emergency response community, Virtual USA improves emergency response by ensuring that practitioners at all levels have immediate access to the information they need to make critical decisions.

Since many communities have significant resources invested in legacy platforms that they cannot afford to abandon, Virtual USA leverages a system-of-systems approach to seamlessly share relevant information when needed. More specifically, it aims to foster the integration of disparate technologies across the information management life cycle – linking tools used for collection, analysis, management, communication, and protection of actionable data – within each and across all components. Drawing on the experiences of other CCI and S&T programs, Virtual USA will demonstrate and share lessons learned and best practices with local, state, and Federal jurisdictions.

### Virtual USA:

- **Integrates Existing Frameworks:** Virtual USA integrates a set of processes and solutions that complements existing policies, processes, and architectures in each of the respective states. The aim is to establish seamless information exchange among participants, as needed and as authorized.

- **Builds on Existing Investments:** Significant resources have already been expended on information sharing platforms, architectures, viewers, radios, and other solutions. Virtual USA does not seek to replace these systems but instead leverages a system-of-systems model to permit new and existing technologies and concepts to exchange information.
- **Draws on Practitioner Input:** Virtual USA was created based on the needs of local and state practitioners to manage data access within their own jurisdictions and to share information with relevant jurisdictions across the Nation, when needed. Virtual USA will continue to include practitioners in every step of the process.
- **Employs a Comprehensive Approach:** Virtual USA is not limited to making information exchanges possible between only two agencies or fixed points; instead, the initiative will foster dynamic information sharing among all relevant practitioners.

### **Virtual USA Initiatives**

Since Virtual USA's conception in early 2009, information exchange initiatives have been undertaken at all levels. At the state level, Alabama and Virginia are using standards-based, open-architecture geospatial technologies to create statewide systems known as Virtual Alabama and Virginia Interoperability Picture for Emergency Response (VIPER), respectively. Serving as common operations platforms for emergency response, these systems are capable of seamlessly integrating hundreds of previously disparate data sets. States such as Louisiana and Mississippi are engaged in similar efforts. The City of Beverly Hills, California, has also embarked on a multi-jurisdictional initiative to launch a Virtual City platform that can be shared by partners across California.

At the regional level, CCI, in partnership with the S&T First Responder Technologies (R-Tech) program, created the Regional Operations Platform Pilot (ROPP) which brings together several states – Alabama, Georgia, Florida, Louisiana, Mississippi, Texas, and Virginia, as well as observers from Tennessee – to seamlessly share critical information between their disparate common operating platforms. This pilot integrates existing platforms, enhanced visualization tools, and other data sets to allow participating states' systems to interoperate and exchange information with each other, regardless of the platform or application.

At the Federal level, CCI is working to integrate Virtual USA with existing and planned efforts across the entire Department and other Federal agencies.

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*Developed by the U.S. Department of Homeland Security Command, Control and Interoperability Division in partnership with the response community, Virtual USA creates a cost-effective nationwide capability to significantly improve information sharing and decision making during emergencies and day-to-day operations.*