



Virtual USA

Advancing Interoperability at All Levels

The Problem

The emergency preparedness and response community depends upon access to real-time actionable information for day-to-day and emergency operations. This is particularly critical when there is a need for interaction across disciplines, jurisdictions, and multiple levels of government. While there is an increasingly large amount of available information, it is often not accessible to the people who need it, when they need it, and in the form they need to see it. This inaccessibility has occurred because agencies have invested billions of dollars in hardware and software that, while serving their specific operational needs, tend to be proprietary and caused the creation of information silos, making sharing difficult. Rather than encouraging information sharing and collaboration, this has helped to perpetuate a culture in which there is little collaboration among disciplines and jurisdictions.

The Solution – A National Information-Sharing Capability



While there has been some progress, the nation's ability to seamlessly share information across localities, states, and regions is still limited. The Department of Homeland Security (DHS) Science and Technology (S&T) Directorate's Command, Control and Interoperability (CCI) Division, with the support of the First Responder Technologies program, developed the Virtual

USA (vUSA) initiative to create and implement a replicable model of enhanced information sharing and collaboration. vUSA creates a cost-effective nationwide capability driven by practitioners that significantly improves information sharing and decision making. Based on current and emerging technologies, vUSA integrates existing information-sharing frameworks and technologies to enable collaboration across local, tribal, state, and federal levels by providing critical context for information—thereby making it actionable.

Developed in partnership with the emergency preparedness and response community, vUSA improves this community's ability to fulfill its various missions by ensuring that practitioners at all levels have real-time and seamless access to the information they need to make better decisions.

Since vUSA's conception in early 2009, supporting information exchange and collaboration initiatives have been undertaken at all levels. At the state level, numerous states are using standards-based, open-architecture geospatial technologies to better collaborate for emergency preparedness and response. These systems are capable of seamlessly integrating hundreds of previously disparate data sets. While each one of these capabilities is incredibly powerful, they all are dependent on the ability to discover and access important information when needed by decision makers.

Using a system-of-systems approach, vUSA leverages these existing capabilities among practitioners and provides the connective tissue across these disparate platforms to seamlessly enable dynamic information sharing and collaboration. More specifically, it aims to foster the integration of disparate technologies across the information management life cycle—linking tools used for the acquisition, management, analysis, sharing, and securing of actionable data. vUSA's trusted information-sharing environment has the unique ability to meet the needs of practitioners across various disciplines by providing a discovery space for information, as well as notifying and alerting users of newly available information in a real-time context. In addition, a forum space within the prototype leverages users' vast knowledge banks and allows for collaboration across disciplines and jurisdictions, with regards to data, methods, tools, and field applications.

Virtual USA Core Principles

- Draw on Practitioner Input: vUSA was created based on the needs, requirements, and input of local and state practitioners to improve and manage information and its access within their own jurisdictions and to have the ability to share relevant information across jurisdictions, when needed. vUSA will continue to include practitioners in every related effort including through the vUSA Strategic Resource Group, a voluntary collaboration of practitioners representing operational, technical, and support organizations from across the public sector.
- Information is Controlled Locally: One of the reasons that agencies have historically been hesitant to share information is their need to be able to control their information so that they determine who can access it and when it can be accessed. The trusted environment created by vUSA keeps that control with the users.
- Integrate Existing Frameworks: vUSA integrates a set of processes and solutions that complements each partners' existing policies, processes, and architectures. The aim is to establish seamless information exchange among participants, as needed and as authorized.
- Build on Existing Investments: Practitioners have expended significant resources on information-sharing platforms, architectures, viewers, equipment, and other solutions. vUSA does not seek to replace these systems and tools, but instead leverages a system-of-systems model to permit the integration of new and existing technologies and concepts into existing investments.
- Employ a Comprehensive Approach: vUSA 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 and any relevant practitioners, as identified by practitioners.

Virtual USA Initiative Pilots

Current vUSA Initiatives include two regional information-sharing and collaboration pilots, one in the Southeast region, and one in the Pacific Northwest region of the country. The Southeast Regional Operations Platform Pilot (SE ROPP) includes ten states—Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas and Virginia. The Pacific Northwest (PNW) Pilot consist of five states—Alaska, Idaho, Montana, Oregon, and Washington. These pilots assist individual states and the respective region with the development of information-sharing capabilities. In, keeping with vUSA principles, emphasis is placed on an entity's ability to seamlessly share critical information between disparate platforms. These pilots integrate existing platforms, enhanced visualization tools, national best practices, as well as data integration, to improve participating states' ability to interoperate and collaborate outside of the traditional cultural and jurisdictional boundaries.

CCI also is working to integrate key Federal, national, and non-governmental partners and organizations into the open vUSA framework.

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Developed by the U.S. Department of Homeland Security Science & Technology Directorate's 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.