



FEMADex



FEMA

Ensuring Data Delivery to Disaster-Response

How REI Systems helps FEMA Govern Emergency Management Data

“The exciting implication of this new technology for the speed, efficiency, and effectiveness of FEMA operations [is a] promise to dramatically improve outcomes for our disaster survivors and communities.”

Seong Kim, FEMA's Manager for the Agency's Enterprise Data Analytics Modernization Initiative

The Federal Emergency Management Agency (FEMA) is deployed in more than 10 regions worldwide and employs over 20,000 individuals. FEMA is responsible for leading the federal government's emergency response activities before, during, and after a national disaster to save lives, reduce suffering, and protect property and the environment.

Every disaster can vary in size, severity, and damage. When a catastrophic disaster strikes, it can overwhelm the local and state governments to the point they cannot provide necessary resources. During these disasters, the federal government steps in to provide help through response support, federal programs, resources, and supplies. From 2020 to 2021, REI Systems data analytics and cloud experts joined FEMA's Enterprise Data Analytics Modernization Initiative (EDAMI). They made it their mission to provide critical technical support, fill knowledge gaps, and work collaboratively to ensure FEMA's long-term sustainability and success by harnessing the consulting and cloud prowess of REI Systems.

CHALLENGE:

Rapid Access to Data that Agencies Need to Make Critical Disaster-Response Decisions

Emergency management data comes from many different systems and sources inside and outside the government, which means FEMA and its partners (state, local, tribal, and territorial, or "SLTT")



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entities) must collaborate closely to prepare for, respond to, and recover from disasters. The COVID-19 pandemic highlighted these problems but the need for rapid, accurate information impacts nearly every type of disaster and aspect of FEMA's mission, from preparedness and mitigation to response and recovery. FEMA's on-premises legacy architecture made it hard to bring data together and share it collaboratively across geographies, and security issues baked-in obstacles to data sharing. Together, these factors made it challenging for FEMA to get data rapidly to disaster responders at all levels and geographies.

SOLUTION:

The FEMA Data Exchange (FEMADex)

REI has extensive experience working with government agencies to migrate their systems to the cloud, making us the ideal consulting partner to tackle the migration of a complex system with various data points. FEMA needs a partner experienced in applying cutting-edge Artificial Intelligence (AI) and Machine Learning (ML) with emerging technologies to shape data-driven decision-making to help make FEMA's workforce more effective.

FEMADex serves as an ongoing innovation that unifies and modernizes data analytics under a multi-cloud platform to deliver insightful reports and dashboards to people at other levels of government, and in diverse geographies across America. Instead of information remaining siloed, offices and programs across headquarters, regions, and the field will be able to share their data with one another, working off the same information and a common operating picture. FEMADex will also make it easier to exchange information with external emergency management partners to make sure aid and services are delivered to the survivors who need them the most.

Our FEMADex prototype and pilot phase laid the critical functionalities groundwork the system depends on today:

- Integrated AI/ML into the DevSecOps pipeline to identify legacy issues slowing down FEMA analysts to spin-up a personal or team workspace on-demand with a combination of cloud-based tools and services.
- Make data more secure, accessible, and resilient via cloud computing by using the secure FedRAMP-certified Amazon Web Services and Azure Government cloud.
- Provide a centralized hub for FEMA data using Lakehouse architecture and intelligent search tools, so that information, dashboards, and reports are easy to find and share across teams.



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- Share information quickly and easily with SLTTs to help disaster responders save lives.
- Serve as a key enabler of the FEMA administrator's initiative to analyze Agency operations for equitable mission delivery and outcomes.

PARTNERSHIP IMPACT:

To Save Lives, FEMADex Makes Access to Information 40 Times Faster

With FEMADex, syndicated data from multiple sources is available 40 times faster, which enables disaster responders at every level to move more quickly, with the same accurate information. For example, during a surge of infections across the nation due to COVID-19, our FEMADex prototype helped analysts rapidly identify the resources patients needed to receive timely care.

Today, FEMADex provides analytic results in less than one hour versus the previous 48-hour turn-around benchmark. Our analytics solution helped FEMA streamline operations by reducing data duplication, cleansing, and re-creation with other stakeholders. At REI Systems, we support agencies that touch millions of lives using our advanced technology solutions because we continue to keep innovate with ease, FEMA can stay on top of disasters and control the flow of critical information cohesively, accurately, and securely.

ABOUT REI

REI Systems provides reliable, effective, and innovative technology solutions that advance federal, state, local, and nonprofit missions. Our technologists and consultants are passionate about solving complex challenges that impact millions of lives. We take a Mindful Modernization® approach in delivering our application modernization, grants management systems, government data analytics, and advisory services. Mindful Modernization is the REI Way of delivering mission impact by aligning our government customers' strategic objectives to measurable outcomes through people, processes, and technology. Learn more at REIsystems.com.

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