Government Data Sharing Community of Practice

Panel Discussion on Data Sharing in Disaster Response and Recovery

Meeting Minutes

January 26, 2015, 9:30am-12:30pm

The MITRE Corporation, 7525 Colshire Drive, McLean, VA 22102


Background on the GAO’s Government Data Sharing Community of Practice

Federal government agencies face challenges in sharing information, using data analytics, and leveraging resources that could assist them in their programmatic and oversight missions. GAO formed its Government Data Sharing Community of Practice to foster an ongoing dialogue about strategies used to overcome challenges that federal, state, and local government agencies face in trying to share data to fulfill their missions. The Community of Practice was an outcome of a forum GAO hosted with the Council of the Inspectors General on Integrity and Efficiency (CIGIE) and the Recovery Accountability and Transparency Board to explore opportunities to use data analytics to identify and prevent fraud, waste, and abuse in federal government programs. ¹ GAO’s Government Data Sharing Community of Practice is open to all stakeholders, including those from both the public and private sector.

Data Sharing in Disaster Response and Recovery

In order to respond effectively to a disaster and provide basic-needs assistance to affected individuals, federal, state and local government entities need to be able to share data and leverage a skilled workforce. In this session of the Government Data Sharing Community of Practice, representatives from the Department of Defense, Department of Housing and Urban Development, the White House Innovation for Disaster Response and Recovery Initiative, GAO, and MITRE discussed how federal, state and local government entities agencies have shared data to facilitate previous emergency management and recovery efforts and ongoing challenges. Representatives from the Center for Organizational Excellence, GAO, and the Office of Personnel Management discussed how data about employees’ skills may be generated and applied by federal agencies to deploy a skilled emergency management workforce.

Panel 1: Data Sharing in Disaster Response and Recovery

¹ A summary of the key themes from the forum is published at http://www.gao.gov/products/GAO-13-680SP. Minutes from previous sessions of GAO’s Government Data Sharing Community of Practice are available at http://www.gao.gov/aac/gds_community_of_practice/overview#t=1
Note: These minutes summarize the discussion that took place at the Government Data Sharing Community of Practice meeting. The summary does not necessarily represent the views of GAO or the organizations that the discussion participants represent.

Moderator
- Joah Iannotta, Assistant Director, Forensic Audits, U.S. Government Accountability Office

Panelists
- Denice Ross, Presidential Innovation Fellow, U.S. Department of Energy; and support for the White House Innovation for Disaster Response and Recovery Initiative
- Sara Meyers, Chief of Staff for the Federal Housing Administration, U.S. Department of Housing and Urban Development
- Elmer Roman, Oversight Executive, U.S. Department of Defense
- Don McGarry, MITRE

Presentations

Joah Iannotta, Assistant Director, Forensic Audits, U.S. Government Accountability Office

In her opening remarks Dr. Iannotta highlighted some of GAO’s recent work to identify fraud, waste, and abuse in the Federal Emergency Management Agency’s (FEMA) response to Hurricane Sandy (GAO-15-15). In particular, she discussed how the audit team brought together disparate data sets shared from FEMA and several federal housing authorities to identify risk factors that indicate potential fraud, waste, and abuse. Such risk factors include failure to self-report accurate information about home insurance.

Denice Ross, Presidential Innovation Fellow, U.S. Department of Energy; and support for the White House Innovation for Disaster Response and Recovery Initiative

Ms. Ross discussed how federal, state, and local entities need comprehensive and accurate data to form effective disaster responses. However, as Ms. Ross described, sharing government data across federal, state, and local entities presents significant challenges. Ms. Ross discussed two examples of challenges and successes with sharing data in post-disaster environments: Open data in New Orleans (Data.nola.gov); and the federal disaster.data.gov website.

Open data in New Orleans (Data.nola.gov)

Federal, state and local entities did not have access to the data needed to shape an effective response to Hurricane Katrina. Most publicly federal and state datasets, such as the census, were “outdated” after the Hurricane because of physical destruction and displaced populations. While the City of New Orleans had valuable data about infrastructure (such as the map of property boundaries), city officials were reluctant to share the data with others over concerns of privacy and potential legal ramifications. The lack of data sharing hampered federal, state, and local responses and recovery efforts. Based on these experiences in responding to and recovering from Hurricane Katrina and lessons learned, the City of New Orleans created data.nola.gov, a catalogue of public datasets, including city administrative data, property boundary maps, planning and zoning data, data on healthcare facilities, and census data. The data.nola.gov facilitates data sharing among all public and private stakeholders. Part of what swayed the City to move to an open data solution was the fact that so many stakeholders were asking for the same information and that citizens had started to track this information and share it themselves.
White House’s disaster.data.gov website

Federal, state, and local agencies also encountered challenges in coordinate response and recovery efforts after Hurricane Sandy. Federal agencies, lead by the White House Office of Science and Technology Policy, created a catalogue of federal datasets that may be used in disaster response and recovery by federal, state, local, and private entities. The site was a part of the larger data.gov site that was launched in 2009 as part of the government-wide open data initiative. Disaster.data.gov currently includes 168 data sets and applications and tools for analyzing and using data to respond to disasters. All of the data sets available at disaster.data.gov are machine readable and accessible to government entities and the general public. Disaster.data.gov provides high quality datasets that facilitate disaster response activities performed by public and private entities.

Sara Meyers, Chief of Staff for the Federal Housing Administration, U.S. Department of Housing and Urban Development

Ms. Meyers described her experience with data sharing as head of the Project Management Office (PMO) within the interagency Hurricane Sandy Rebuilding Task Force. The Task Force was established by executive order to help coordinate the federal response to Hurricane Sandy and made 69 recommendations regarding recovery efforts. The PMO was established to monitor the $50 billion in supplemental disaster assistance spent by 19 federal agencies and oversee the implementation of the Task Force’s recommendation. Although the PMO had specific oversight responsibilities, the supplemental Bill did not grant the Task Force the authority to collect data from federal agencies receiving funding through the bill. Ms. Meyers discussed the challenges in overseeing large programs across multiple federal agencies without a legislative mandate.

Ms. Meyers discussed how the PMO developed working relationships with the federal agencies in order to identify relevant data and to establish ad hoc data sharing policies. The PMO established a working group that included program managers and oversight professionals from the federal agencies that received supplemental funding to support Hurricane Sandy recovery efforts. In coordination with federal agencies, the PMO developed standards for collecting program-level spending and performance data. After extensive conversations with agency officials, the PMO was able to obtain county-level data for certain programs. Ms. Meyers noted that finding individuals within each agency who understood data, its applicability to measuring performance, and the benefits to the agencies of sharing data for this purpose was key to forging data sharing arrangements. Additionally, the PMO coordinated with each agency to develop performance metrics that reflect the program’s objectives and recovery activities. As Ms. Myers described, the success of the data sharing efforts was driven by a shared understanding of the value of collecting and analyzing data across agencies and programs in order to understand how money is being spent and coordinate efforts to ensure that needs are being met and minimize duplication. Ms Myers concluded by emphasizing the importance that stakeholders have a shared understanding of the importance of sharing data to improve program outcomes.

The lack of a technology system for collecting and analyzing budget and performance data also presented challenges. The PMO relied on basic spreadsheets to organize and analyze data provided by the 19 agencies about 60 programs. Although the PMO requested agencies provide
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data in specific standardized formats, agencies often were unable to produce standardized data. The PMO provided technical assistance to agencies in order to get the requested data in a usable format. As Ms. Meyers discussed, agencies need to be flexible when developing and implementing data sharing activities.

Ms. Meyers noted that the Hurricane Sandy Rebuilding Task Force made several recommendations about data sharing. Two key data sharing recommendations included making aggregated non-personal identifying information (non-PII) data publicly available and reviewing the System of Record Notices (SORNs) for efficiencies.

The PMO partnered with the Recovery Board to post the data it collected to a publicly available website, www.recovery.gov. The published data revealed how agencies were spending money and highlighted the outcomes each agency’s recovery efforts. The data revealed what populations were being served, and how many people / businesses have received assistance, among other things.

Elmer Roman, Oversight Executive, U.S. Department of Defense (DOD)

DOD’s efforts to promote interoperability began in the 1980’s with the development of “joint interoperability” capabilities among the services. Mr. Roman described the importance of interoperability for leveraging resources, unifying actions and avoiding duplication and discussed the challenges in establishing interoperability with other US agencies and international entities in disaster response and recovery activities. DOD has tremendous data-sharing capabilities and is working with its partners to implement the data sharing capabilities developed by DOD.

Mr. Roman discussed how data-sharing technologies can improve the efficiency of disaster recovery efforts by leveraging resources and avoiding duplicative activities. He described three data-sharing technologies that the Department of Defense (DOD) has developed to facilitate interoperability and improve the efficiency of recovery efforts among DOD, and other entities:

- **UNITY tool** is a data-sharing visualization tool for planning and coordinating disaster response missions. Unity includes mapping tools that can be used to depict the location of response and recovery activities. DOD first used UNITY to share data and coordinate with the State Department and U.S. Agency for International Development (USAID).

- **All Partners Across Network (APAN)** is the unclassified information sharing network. It enables coordination and knowledge sharing for all stakeholders, including non-DOD entities. After the Haiti earthquake, DOD used APAN to coordinate the response and recovery efforts with other government agencies and nongovernmental organizations.

- **Geospatial Tool for Security, Humanitarian Assistance and Partnership Engagement (GeoSHAPE)** integrates data from multiple sources (including unclassified geo-spatial and sensor data) and displays it in a dynamic Internet-based map to provide situational awareness, monitor the progress of recovery efforts, and inform decision-making. It is based on an open-source platform that is jointly managed by the University of Hawaii and the Office of the Secretary of Defense. DOD has used GeoShape to
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coordinate with the United Nations, and American Red Cross after Typhoon Haiyan struck the Philippines.

DOD is continuing to collaborate with other US government agencies, academic researchers, and non-government entities to facilitate the use of these data sharing tools in disaster response and recovery efforts. To ensure that these data sharing tools are accessible, remain up-to-date, and available as an open resource to disaster responders, Mr. Roman noted that the federal government should take a leadership role in owning and providing these technologies.

Don McGarry, MITRE

Mr. McGarry stated that data sharing enables effective disaster response and recovery efforts that involve federal, state, and local entities. Data sharing tools need to be interoperable with the technologies used by first responders. Mr. McGarry described how effective data-sharing technologies should be developed collaboratively among three groups: (1) (first) responders who understand the working environment; (2) technology experts who understand the potential technologies; and (3) policy experts who understand data applications and the challenges of sharing data. Without input from all three groups, a data sharing technology may not address the most critical emergency response needs. Data-sharing technologies that are developed in a coordinated manner will be useful to local entities and enable coordinated regional and national responses.

Mr. McGarry discussed the need to develop data sharing technologies that local jurisdictions can use in “routine” emergencies (i.e. traffic incidents) and can be integrated with existing technologies. Technologies should be based on basic, standardized architectures and data formats. Data standards will enable dynamic real-time data sharing. Access to timely data enables effective disaster responses. Mr. McGarry described MITRE’s work with the Department of Homeland Security’s (DHS) Office for Interoperability and Compatibility within DHS’ First Responders Group. Their collaboration has focused on developing standards and open source tools for first responder agencies across federal, state and local government.

Panel 2: Disaster Response: Creating a More Agile and Responsive Federal Work force

Moderator
- Robert Goldenkoff, Director, Strategic Issues, and Rebecca Shea, Assistant Director, Applied Research and Methods, U.S. Government Accountability Office

Panelists
- Lyn McGee, Vice President, National Security Solutions, Walter Sechriest, Solutions Director, and Chuck Simpson, Principal Consultant, Center for Organizational Excellence (COE)
- Melissa Kline Lee, Program Manager for GovConnect, U.S. Office of Personnel Management

Rebecca Shea, Assistant Director, Applied Research and Methods, U.S. Government Accountability Office
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Human Capital and Data Issues in Disaster Recovery
Speakers:
• Center for Organizational Excellence (COE) executives:
  – Lyn McGee, Vice President, National Security Solutions
  – Walter Sechriest, Solutions Director
  – Chuck Simpson, Principal Consultant
• U.S. Office of Personnel Management (OPM)
  – Melissa Kline Lee, Program Manager for GovConnect

Moderators:
• U.S. GAO
  – Robert Goldenkoff, Director, Strategic Issues
  – Rebecca Shea, Assistant Director, Applied Research and Methods
What does human capital have to do with disaster recovery?

GAO-14-723T

• Strategic human capital management plays a critical role in maximizing the government’s performance and assuring its accountability to Congress and to the nation as a whole.

• Addressing challenges in areas such as disaster response, homeland security, economic stability, and numerous other complex and evolving issues requires a skilled federal workforce able to work seamlessly with other agencies, levels of government, and across sectors.
So we’re all set, right?

- Strategic human capital management has been a GAO high-risk area since 2001.
- The federal workforce is facing fundamental capacity challenges because of budget constraints, high rates of retirement eligibility, increasing attrition, downsizing, and skill gaps.
- The gap between demands, system capacity, and speed of response is exacerbated during a disaster. Agencies, especially those that are not in the business of being first responders, have difficulty handling fast-paced challenges.
People + Agile Workforce

• The challenges communities face in the wake of a disaster are horizontal in nature—they cut across different agencies and levels of government. However, our capacity to respond is organized vertically—often in stove-piped bureaucracies, departments, agencies, and governmental units.

• The government response could be more nimble. Agencies need to work as an organic, horizontal team to rapidly integrate diverse expertise and capabilities. The key challenge is how to reconfigure work groups and assemble teams regardless of agency affiliation to meet the needs of a community.
People + Skills & Competencies

• Disaster response is not just about the usual suspects e.g. FEMA, DHS. Longer term recovery could involve such agencies as IRS, SBA, Medicaid, etc.

• But it is more than just technical skills and expertise. Competencies need to be considered as well.
People + Culture

• There has been some success transferring individuals during times of crisis. For example, in response to the 2010 Deepwater Horizon Spill in the Gulf of Mexico, several agencies pitched in with the clean-up effort.

• Success in a more networked environment requires a whole new way of thinking about how to align different organizations, government, and nongovernment entities.

• Raises several culture based questions...
What does human capital data have to do with disaster recovery?

• A key first step is visibility over the workforce—knowing what skills and competencies employees have and where they are located.
So what is the problem?

• Most HR systems do not identify employee skills in any detail below occupational series, title and grade. As a result, leveraging employees’ skills is difficult.

• Maintaining a valid, up to date inventory of skills and competencies is difficult.

• Knowledge about existing human capital data is stove piped; skills inventory more so?
What is the Role of DUG in all this?

– Get rid of those stovepipes. Bring federal agencies, NGOs, research organizations, academic community together.

– Through the COP we share knowledge and research:
  • raise awareness of human capital data sources
  • identify gaps in research/knowledge to suggest new areas of evaluation
  • identify data quality/reliability issues and suggest improvements
  • enhance access to data
  • share analytical techniques, statistical innovation, and ideas on “big data” analytics
Panel Members

• Brief intro on presentations
  – Lynn, Walter, and Chuck (COE)
  – Melissa (OPM)
Lyn McGee, Vice President, National Security Solutions, Walter Sechriest, Solutions Director, and Chuck Simpson, Principal Consultant, Center for Organizational Excellence (COE)

Ms. McGee discussed COE’s experience in building and operating the federal government’s Enterprise Human Resource Integration (EHRI) database and how it could be used to create a flexible federal workforce that could facilitate disaster responses. EHRI is a fully integrated human resources information system that includes standardized personnel information and secured information access and sharing. Currently, EHRI does not contain standardized, detailed information about employee skills. This sort of data is maintained by individual agencies and departments. According to Ms. McGee, EHRI system developers could create a system that would facilitate the collection of standardized data on employee skills and allow managers to identify federal employees with the needed expertise to support disaster response and recovery activities. A database of employee skills across the federal government could reduce barriers and stovepipes and facilitate the development of a nimble federal workforce. Federal agencies could leverage a nimble workforce to deploy federal employees with the necessary skills in disaster recovery programs. As Ms. McGee noted, federal agencies have stovepiped missions and may resist efforts to establish a nimble workforce and share employees as sharing

Some questions for consideration

– What would a skills/competencies database look like?
– Does a data system (or combination of systems) already exist that would serve? (As is? With modifications?)
– Who should manage it?
– How should the data be collected and kept up-to-date?
– How should the information be validated (i.e., ensure the level of skill is accurately recorded)?
– Should it be combined with other data sources e.g. geospatial and census data?
– What are the access, privacy and “big brother” implications of such a database and what protections would be needed?
– What are the cultural implications of an “agile workforce”
employees could detract from an agency’s primary mission. Established an overarching disaster recovery mission for all agencies may reduce such barriers.

Ms. McGee also discussed how data standards are dynamic and often change over time. Changing data standards may create data errors. For example, if there is a standard job code, in a specific region, then the code will be invalid if the job series is changed or there is a departmental reorganization. Nonetheless, such errors could be identified and fixed through routine data verification procedures.

Ms. McGee stated that agencies / programs must develop a capacity to use data in an emergency situation. Emergency response exercises should include data verification and analysis exercises. It is important to routinely verify the accuracy of the data to ensure that the data can be used in the event of an emergency. Furthermore, Ms. McGee indicated that an overarching disaster response mission across the federal government could facilitate data sharing and the exchange of other resources, including human capital.
Deployable Civilian Employees

Identifying the Deployable Cadre to respond to disaster scenarios

- What do we know?
  - EHRI
- What do we need?
  - Data analysis skills
- How do we get there?
  - Opt In
  - Policies
  - Open sharing
What Do We Know?

- Enterprise Human Resource Initiative [EHRI]
  - Integrated HR information for 2.1M Federal employees dating back to 1972.
  - EHRI supports HR, payroll, and training data submissions from 70+ agencies and 33 providers every two weeks
  - EHRI = DW, MDR, RDR
  - Current, centralized, and integrated workforce data.
  - Data feeds send EHRI data to both FedScope.gov and data.gov, saving approximately $5.5M/year in FOIA.
  - OPM meets all federal security mandates with zero data breaches of any kind since project inception.
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EHRI Data Elements

What can we learn from EHRI? Here are some of the most critical elements from OPM’s reporting of government-wide statistics:

<table>
<thead>
<tr>
<th>Agency/Subelement</th>
<th>Pay Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Pay</td>
<td>Pay Status</td>
</tr>
<tr>
<td>Current Appointment Authority</td>
<td>Position Occupied</td>
</tr>
<tr>
<td>Date of Birth</td>
<td>Race or National Origin</td>
</tr>
<tr>
<td>Disability</td>
<td>Service Computation Date (Leave)</td>
</tr>
<tr>
<td>Duty Station</td>
<td>Sex</td>
</tr>
<tr>
<td>Ethnicity and Race Identification</td>
<td>Special Pay Table Identifier</td>
</tr>
<tr>
<td>Grade, Level, Class, Rank, or Pay Band</td>
<td>Supervisory Status</td>
</tr>
<tr>
<td>Health Plan</td>
<td>Tenure</td>
</tr>
<tr>
<td>Standard Basic Pay Supplement</td>
<td>Veterans Preference</td>
</tr>
<tr>
<td>Occupation</td>
<td>Veterans Status (Active Military Service)</td>
</tr>
<tr>
<td>Pay Basis</td>
<td>Work Schedule</td>
</tr>
</tbody>
</table>
Can you use EHRI to track who took what training course and when?

Example: Find out who took course in: FOREIGN LANGUAGES, LITERATURES, AND LINGUISTICS...

**Data Element:** INSTRUCTIONAL PROGRAM

**Definition:** An employee's major field of study.

Responsible Organization: Department of Education, National Center for Education Statistics.

Applicability: Mandatory (Enterprise Human Resources Integration HR Status, and HR Dynamics data feeds, Personnel Actions Standard Form 50/52).

Format: NUMBER_F(6)

Note: This data element is only applicable with an EDUCATION LEVEL code of 06, 10, 13, or higher. Otherwise, the positions should be blank.
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What Do We Need?

- Feds who say their agency suffers from a gap in data skills:
  - 96%
- Feds who say their managers prioritize use of data in decision making:
  - 66%
- Feds who say their agency provides adequate training in data analytics:
  - 22%
- Feds who say their agency’s biggest skills gap is turning data insights into action:
  - 45%

“It does no good to have easier access to data and integrate decision-making processes if the employees don’t understand why the data is important and how to use it.

26%
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How Do We Get There?

- An on-line “opt-in” environment
  - Self-certify
  - Increased agility
- Deployment Readiness
  - Training
  - Certifications
  - Preparation
- Data accuracy
  - Database accuracy is driven by use
  - How can we increase data utility between disasters?
How Do We Get There: Policy

- Interagency cooperation challenges:
  - OAP: Other Agency’s Problem: agencies view emergency response as the responsibility of designated agencies such as FEMA, DOD, DOS and USAID.
  - A deployed employee is paid for by employee agency, not responsible agency
  - Demand is not predictable
- We must break the code:
  - Many Federal employees already have the security clearances that are required to effectively perform in interagency operations
  - Federal employees have often been subject to medical screening and immunizations.
  - Federal employees are able to perform inherently governmental work
  - Federal civilians have the advantage of knowing and using government regulations,
  - Federal ethics rules, accountability concepts, information systems and generally accepted behavioral norms.
How Do We Get There: Open Sharing

- Why do we resist it?
  - Other agencies steal our best people
  - I can’t backfill
  - If I give you my data, I don’t know what you will do with it when you present it... Best Places to Work
  - I want to make sure my data is perfect before I share it with you
  - I don’t know what I know
  - Security, security, security
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Melissa Kline Lee, Program Manager for GovConnect, U.S. Office of Personnel Management

Ms. Lee described GovConnect, an information technology platform for “people sharing” programs across the federal program that could facilitate disaster response programs. GovConnect is currently under development, but has been piloted at several agencies in workforce agility experiments. She presented preliminary results from three workforce agility pilot programs:

- **GovProject** allows managers to initiate special projects. Employees with appropriate skills and/or interest volunteer to contribute to the project. Work on special projects is on a part-time basis. As people apply to contribute to special projects, agencies collect data on employees’ skills and interests. Managers may use this information in strategic planning and workforce development.

- **GovStart** allows employees (not managers) to initiate “passion projects.” Employees across the agency are allowed to participate in these projects on a part-time basis. GovStart may improve employee morale by empowering employees to initiate projects that improve agency programs and stimulate the development of innovative programs that support the agency’s mission.

- **GovCloud** allows employees hired by one agency to be detailed out to another agency for specific projects. GovClound is in the earliest stage of development and a pilot program is being planned.

These programs could be used to connect federal employees to special projects to support disaster response efforts.