

Demystifying Mutual Aid Policy and Technology



November 12, 2019

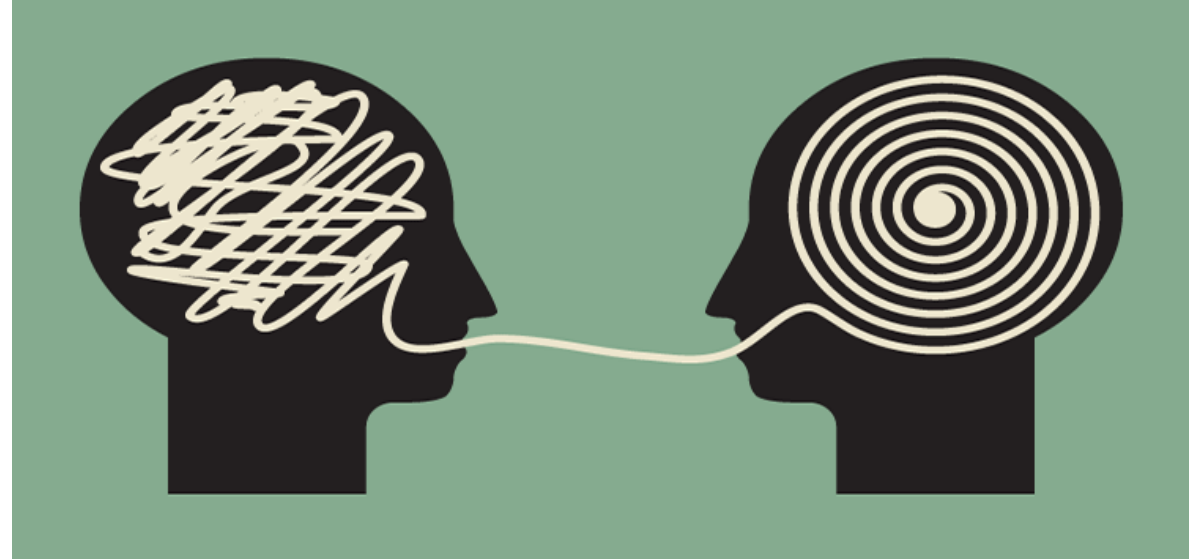
Session Overview

10:10am	Welcome and Introductions
10:15am	Back to the Basics: Resource Management and Mutual Aid Policy, Guidance and Practice
10:35am	State of the Union on Mutual Aid Technology Interoperability
10:45am	Future of the Union - What's Next on Policy, Guidance, Practice, and Technology • Local and State Fire and Emergency Response • State Emergency Management and EMAC • National Views and FEMA's National Integration Center
11:05am	Democratizing Mutual Aid Policy and Technology Priorities
12:00pm	Session Adjourned

Los Angeles Times

CALIFORNIA

Growing fire threat makes California departments reluctant to help each other





Back to the Basics: Resource Management and Mutual Aid Policy, Guidance, and Practice

FEMA National Integration Center / NAPSG

November 12, 2019



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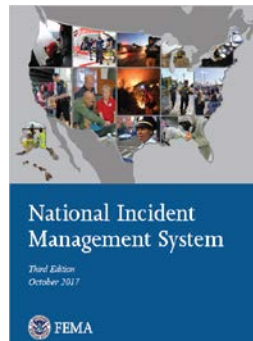
The National Integration Center (NIC) develops doctrine and tools to lead the whole community implementation of the National Preparedness System (NPS) and the National Incident Management System (NIMS).

National Incident Management System (NIMS)

NIMS provides a consistent and common nationwide approach and vocabulary to enable the whole community to work together and manage all threats and hazards.
NIMS applies to all incidents, regardless of cause, size, location, or complexity.

Enabling Effective and Comprehensive Mutual Aid

- Truly effective Mutual Aid ensures the nation has the capability to efficiently and effectively respond to catastrophic-level events
- To support this vision, the NIC provides the doctrine and tools in support of inter- and intra-state mutual aid efforts nationwide, during all types of incidents

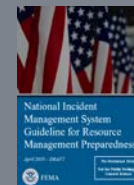


NIMS

NIMS Resource Management

Resource Typing Program

NQS Doctrine



National Incident Management System Guideline for Resource Management Preparedness



PTBs



Resource Types



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Inventorying Resources

Resource Inventorying refers to the preparedness activity done outside of incident response. Inventories include an up-to-date count and pertinent details about an organization's resources. Inventories often provide the basis for resource tracking during an incident.

When inventorying and organizing resources, jurisdictions and organizations can categorize resources by:

- **Capability:** The core capability for which the resource is most useful;
- **Category:** The function for which a resource would be most useful (e.g., firefighting, law enforcement, health and medical);
- **Kind:** A broad characterization, such as personnel, teams, facilities, equipment and supplies; and
- **Type:** A resource's level of minimum capability to perform its function:



Incident Resource Inventory System (IRIS)

IRIS is a distributed software tool provided by the Federal Emergency Management Agency (FEMA). IRIS is available for use by all agencies, jurisdictions, and communities to serve as a consistent tool to inventory resources into their own database and to search/identify their specific resources for incident operations and mutual aid purposes. IRIS is available for download to your own computer or network from the IRIS webpage at <https://www.fema.gov/resource-management-mutual-aid>.



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Typing Resources

The **NIMS Resource Typing** program categorizes resources by capability, so that it is clear what resources are being requested, deployed, and used during an incident and acts as a building block for other programs that support mutual aid.



These backhoes have different capability



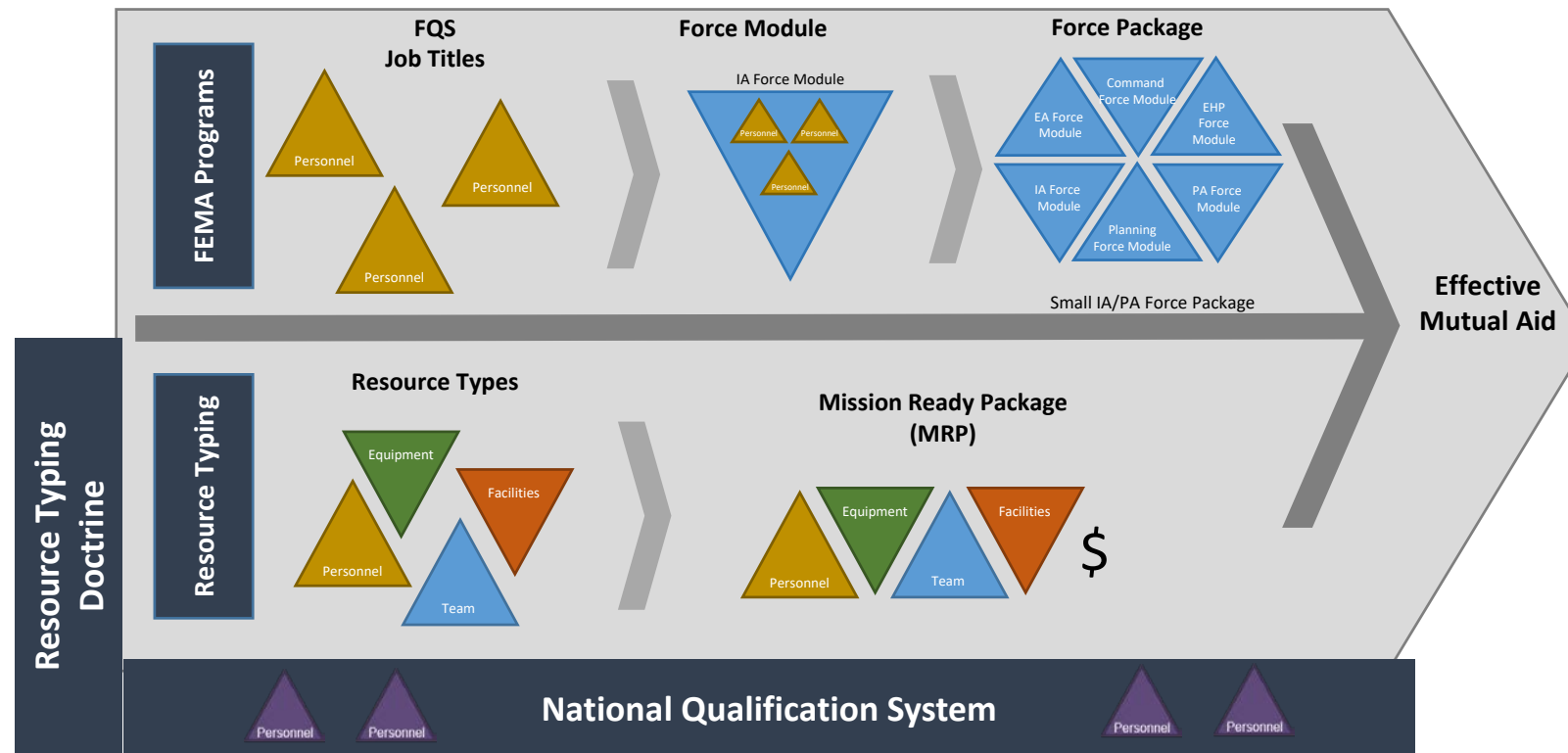
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Resource Typing: An Illustration

The NIC does not work alone; Resource Typing and FEMA-internal resource management programs work together to support the vision for effective mutual aid



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National Qualification System: Qualification, Certification, Credentialing

NQS uses a performance-based approach that focuses on verifying the capability of personnel to perform as required in the various NIMS positions.

A continuum of the integrated qualification, certification, and credentialing processes constitutes the NQS approach.



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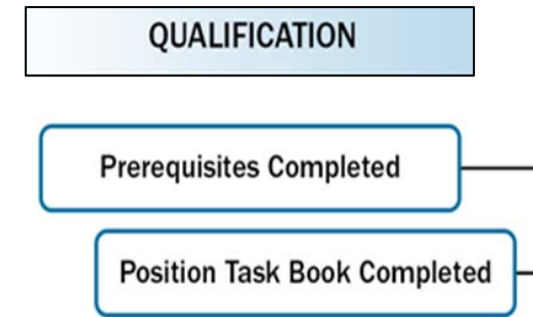
Qualification

Qualification is the process of:

- Enabling personnel to perform the duties of specific incident positions and meet any other prerequisites established for the positions; and
- Documenting that individuals have demonstrated the capabilities required for those positions.

Performance of the duties of a particular position occurs through a combination of **training, on-the-job coaching, and experience.**

A Job Title/Position Qualification and Position Task Book (PTB) establishes the minimum qualification criteria for a specific position.



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Certification

Certification is the Authority Having Jurisdiction's (AHJ) final and official documentation indicating that an individual is qualified to perform in a specified NIMS position.

A Qualification Review Board (QRB) is a panel representing the AHJ who evaluates the trainee's ability to fulfill an incident-related position.

The QRB evaluation results in a **recommendation** to the **Certifying Official (CO)** to certify or to not certify the trainee as qualified for a specific position.

CERTIFICATION

Qualification Review and
Certification/Recertification



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Credentialing

Credentials verify an individual's identity and qualifications to fulfill a specific incident-related position.

Credentials may also document other attributes of individuals, such as:

- **Qualifications:** Details on the minimum qualifications a person must demonstrate for a specific incident position.
- **Certification:** Certification of personnel based on identity vetting and position qualifications.
- **Authorization and Access:** Such items as order numbers, EMAC REQ-A, EMAC Mission Order Authorization Forms, or travel authorizations.

CREDENTIALING

Credentials Issued
or Reissued

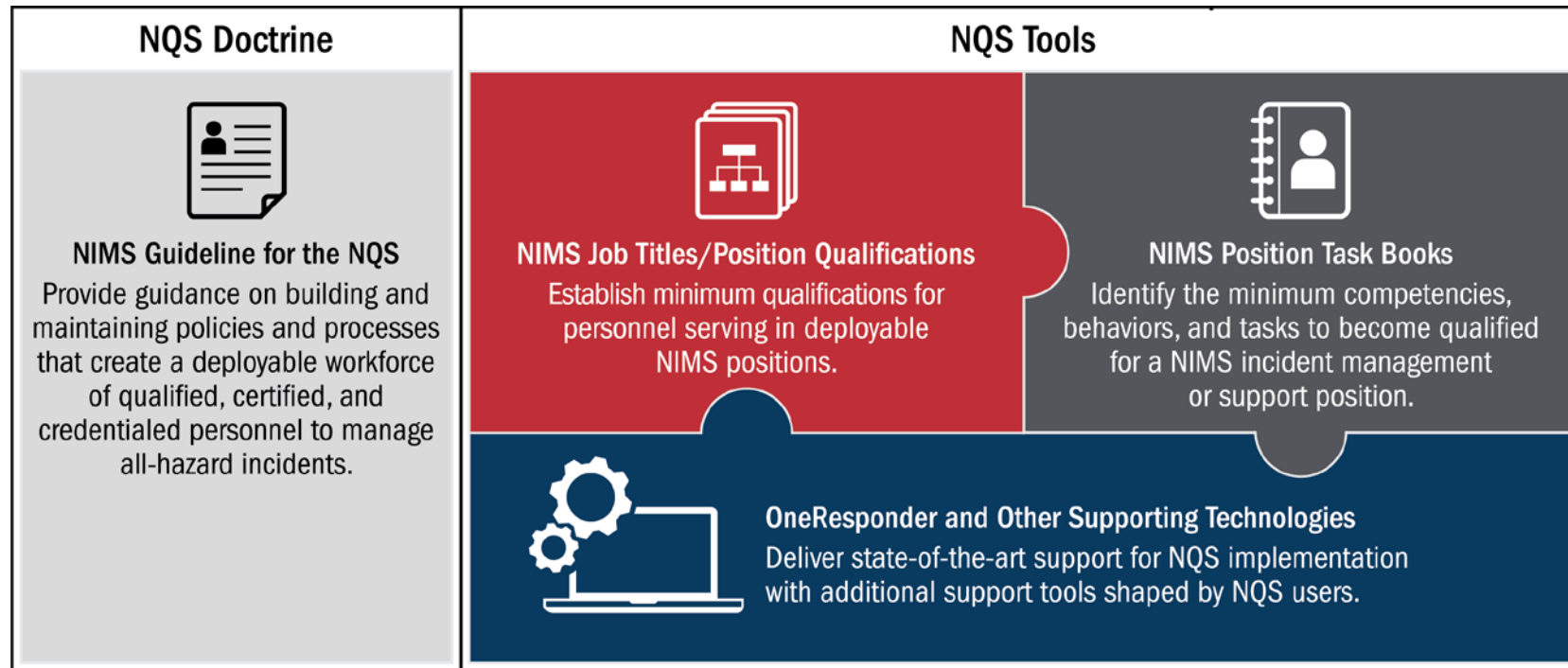


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NQS Guidance and Tools



Mission Ready Packages

An MRP is everything you would need to conduct your mission out of state, including estimated costs, for the duration of your deployment.

MRPs are built using resource typing, typically NIMS Resource Typing

Once the proper resources are identified, the AHJ adds an estimated cost

MRPs help expedite sharing of mutual aid

- **For the Provider**, the MRP is used as a tool to identify the personnel or teams and equipment needed
- **For the Requestor**, the MRP provides a quick snapshot of what a provider can offer, and an estimate of how much it will cost

NEMA-EMAC's Mutual Aid Support System (MASS) allows AHJs to create and share MRPs for others to view



Mission Ready Package (MRP) Templates

Developed by NEMA, MRPs are resource-specific logistical planning tools available for AHJs seeking to pre-plan resource deployments. AHJs using MRPs often deploy their resource and get reimbursed more quickly. MRPs include pre-scripted mission statements, limitations, required support, expected timeframes, as well as personnel and equipment costs.



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Mutual Aid Agreements

Mutual aid agreements establish the terms under which one party (**Provider**) provides resources—personnel, teams, facilities, equipment, and supplies—to another party (**Requestor**).

Most jurisdictions don't have sufficient resources to handle all events independently, mutual aid agreements provide a means for jurisdictions to augment their resources when needed, for either routine or high-demand incidents.

Developing these agreements usually occurs during “blue sky days.” These agreements are often simple (such as city-to-county fire/EMS). They can, of course, become more complicated (such as international agreements).

However, most of these agreements have several common aspects.

To learn more about these aspects, please see the NIMS Guideline for Mutual Aid.

- **Purpose & Scope**
- **Benefits**
- **Authorities**
- **Definitions**
- **Governance Structure & Operations Oversight**
- **Licensure & Certifications**
- **Interoperability of Communications**
- **Liability & Indemnification**
- **Insurance**
- **Workers' Compensation**
- **Deployment Notification**
- **Reimbursement**
- **Termination**



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Examples of Mutual Aid

Local Automatic: Automatic dispatch; usually basic contracts between neighboring AHJs

- Local fire routinely responds to Federal facility without fire capabilities

Local: More formal requests; often cover larger areas

- Utility companies working with local agencies

Regional/Intrastate/Statewide: Cover different AHJs; often sponsored by council of governments

- Mutual Aid Box Alarm System (MABAS) – Fire/rescue/EMS in IL, WI, IN, MI, MO, and IA

Interstate (Post-Declaration): Formal requests, often established through legislation

- EMAC

Interstate (Prior to/Without Declaration): Formal with legislation, but don't require declaration

- Mid-America Mutual Aid Consortium – Recognizes out-of-state licenses/certifications through statute

International: Formal; managed either through Federal agency or state

- State and Province Emergency Management Assistance Memorandum of Agreement (SPEMAMA) – US and Canada

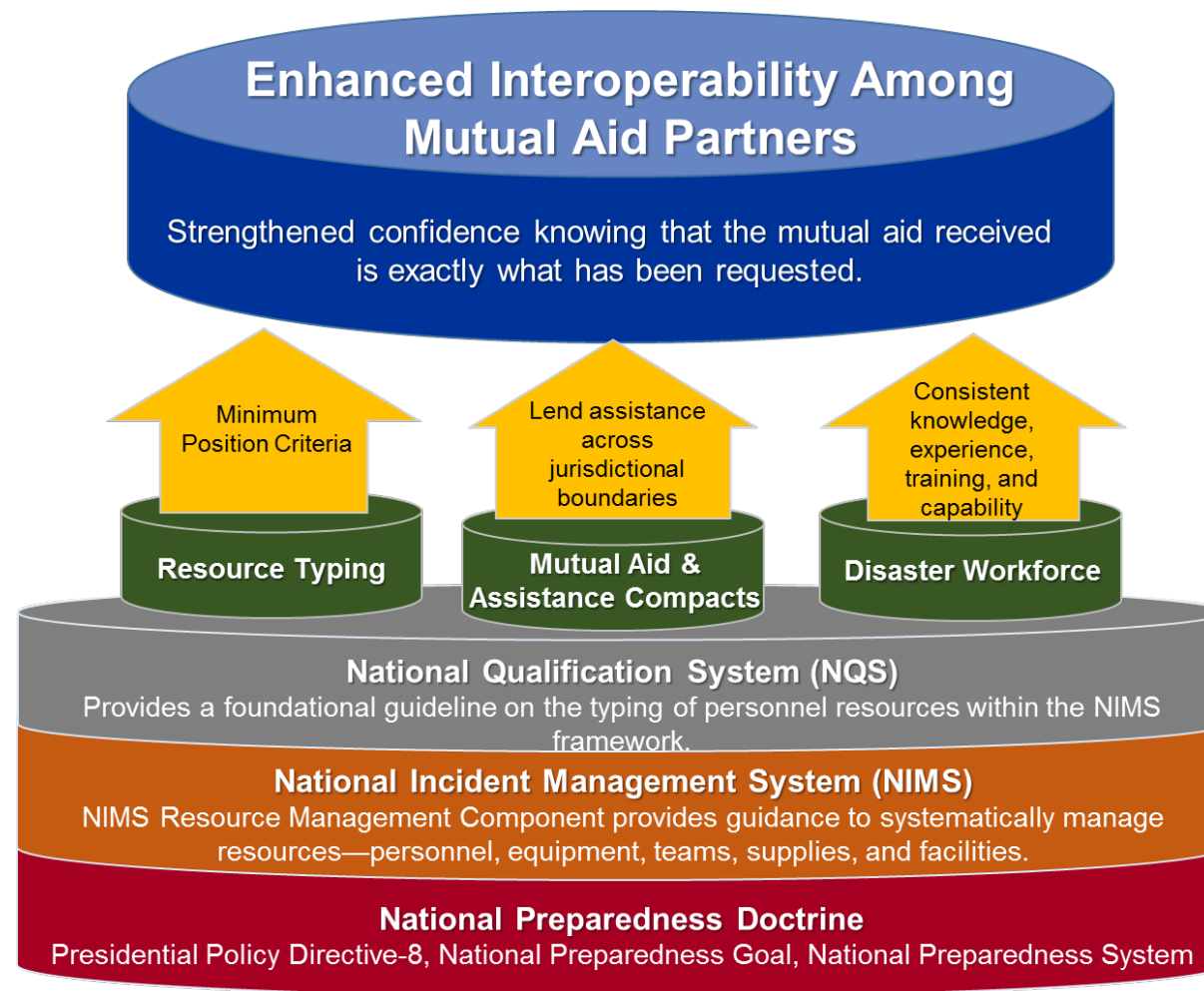


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How It All Fits Together



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Resource Typing Library Tool (RTLTL)

- A free online catalogue of national Resource Typing Definitions and Position Qualifications.
- Provides access to the latest Definitions and Qualifications published by FEMA.
- Includes an online user interface for searching and retrieving Definitions/Qualifications
- Includes web services to provide programmatic access to the Definition/Qualification data for consumption by third-party systems.



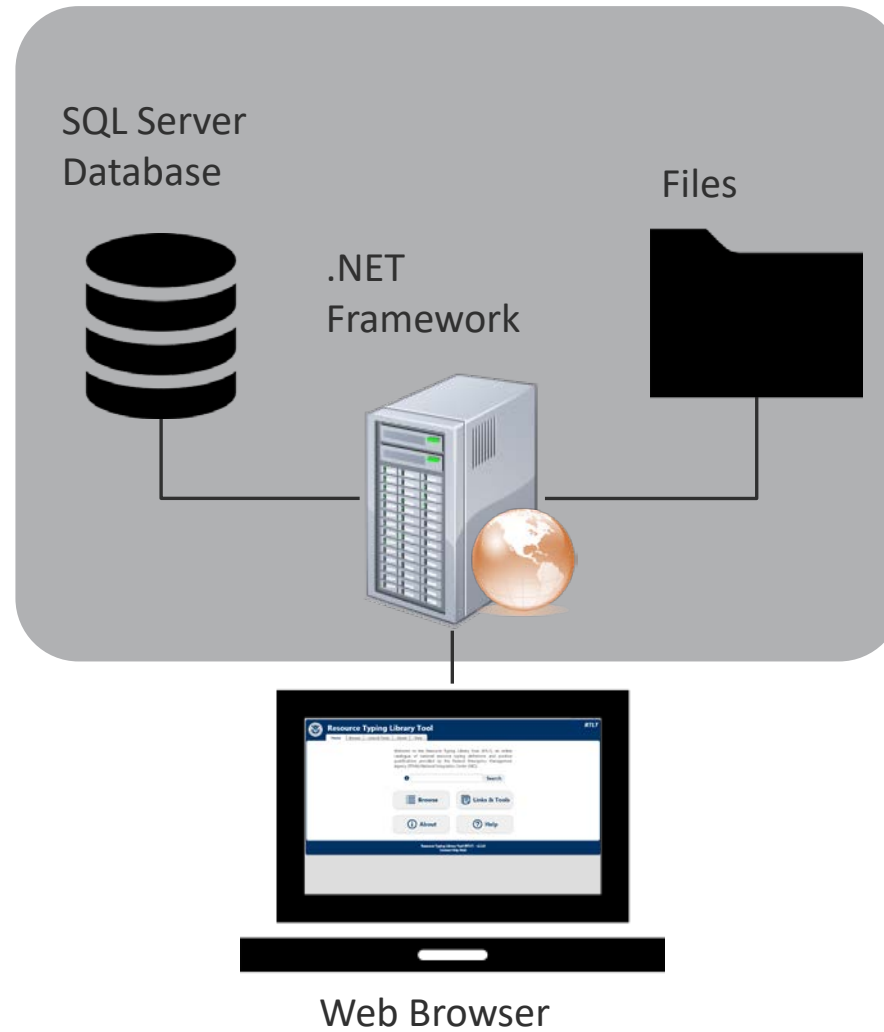
- Cloud-Based System
- Publicly accessible via Internet

ID	Type	Name	Resource Category	Primary Core Capability	Status	Actions
9-509-1284	Position Qualification	Access and Functional Needs Advisor (NQS)	Mass Care Services	Mass Care Services	Published	View View PDF
3-509-1000	Position Qualification	Advanced Emergency Medical Technician	Emergency Medical Services	Public Health, Healthcare, and Emergency Medical Services	Published	View View PDF
4-508-1035	Resource Typing Definition	Aerial Apparatus, Fire	Fire/Hazardous Materials	Fire Management and Suppression	Interim Guidance	View View PDF
7-508-1060	Resource Typing Definition	Aerial Lift - Articulating Boom	Public Works	Infrastructure Systems	Interim Guidance	View View PDF
7-508-1062	Resource Typing Definition	Aerial Lift - Telescopic Boom	Public Works	Infrastructure Systems	Interim Guidance	View View PDF



RTLT Architecture

Hosted in
FedRAMP
compliant AWS
cloud space



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ONERESPONDER

- A FEMA sponsored software service implementing the National Qualifications System (NQS)
- Provided to all State, Local, Tribal, Territorial, and NGO emergency management organizations
- Issue, track, and approve Position Task Books
- Configurable to meet local requirements
- Manage qualifications and training
- Interoperable with existing training and deployment systems



- Cloud-Based System
- Accessible via Internet with log-in credentials



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Incident Resource Inventory System (IRIS)

- **Distributed software for agencies to use in consistently inventorying their resources using NIMS definitions and principles.**
- **Assists communities in inventorying, typing, and visualizing resources in accordance with NIMS concepts/principles.**
- **Provides quick access to resources to support emergency response operations.**
- **Ensures that a "no cost" resource inventory tool is available to support response operations and NIMS resource typing compliance requirements.**
- **Improves the Nation's capability to identify and acquire a typed resource.**



- Downloadable Software



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IRIS Background

- To implement NIMS, all State, territorial, tribal, and local jurisdictions required to inventory response assets to conform to NIMS National Resource Typing Definitions.
- In 2006, FEMA tasked a group of software developers to develop a free software tool designed to allow users to enter typed resources and select specific resources based upon mission requirements, capability of resources, and response time.
- Beta version released in June 2007.
- Latest version is IRIS 6.2.8.



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Context within Resource Management

- **IRIS is designed to address the resource typing, inventorying, and organizing components of Resource Management.**
- **Resources in IRIS are categorized by resource typing definitions in accordance with NIMS.**
- **Local resource typing definitions can be created in IRIS if a national resource typing definition is not available that matches a resource.**



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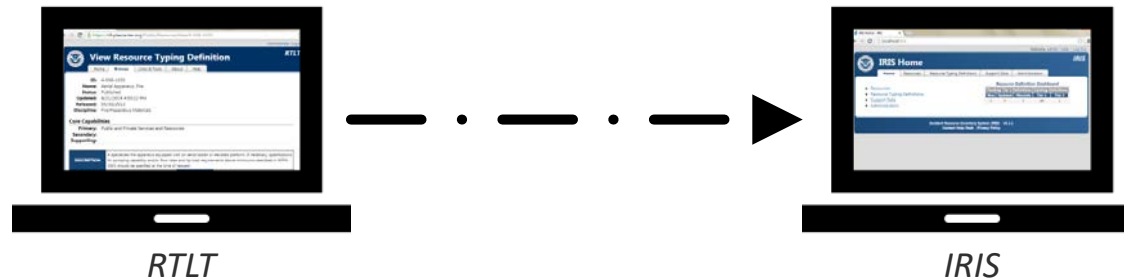
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IRIS and RTLT

- IRIS connects to FEMA's Resource Typing Library Tool (RTLT).

As FEMA publishes new and updated resource typing definitions in RTLT...

...those definitions are made available to download in IRIS.



- This ensures IRIS stays in-step with national guidance.



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State of the Union on Mutual Aid Technology Interoperability

Rebecca Harned, NAPSG Foundation

Participating Agencies and Systems

Agency/Organization	Mutual Aid System Name
National Emergency Management Association / Emergency Management Assistance Compact	• Mutual Aid Support System (or Prototype System) • Emergency Operations System
Kentucky Emergency Management, Department of Military Affairs	• KY WebEOC – Juvare Exchange – AGOL • Lifeline Dashboards
South Carolina Emergency Management Division	• Palmetto
South Carolina Office of the State Fire Marshal / ESF 4 and 9	• Palmetto
California Governor’s Office of Emergency Services	• SCOUT • WebEOC with AGOL Extension • Lifeline Dashboards
All-Hazards Incident Management Team Association / City of El Segundo, California	• Local Implementation of One Responder • Local and Nationally Deployable Asset Perspective
State of Tennessee ESF 4 and ESF 9 Lead / County of Rutherford, TN	• Resource Inventory • Local and Nationally Deployable Asset Perspective
State of Florida ESF 4 and ESF 9 Lead	• Resource Inventory • Local and Nationally Deployable Asset Perspective
State of New Hampshire Emergency Management / City of Nashua, NH	• Northeast State and Local Agency Perspective
USDA/US Forest Service	• Resource Ordering and Status System (ROSS) - IROC • IRWIN
International Association of Fire Chiefs	• National Mutual Aid System
Federal Emergency Management Agency Office of Response and Recovery	• Crisis Management - WebEOC for HQ and Region
Federal Emergency Management Agency National Preparedness Directorate	• Incident Resource Inventory System • Resource Typing Library Tool • One Responder

Observing Agencies

Agency/Organization	Related Effort
Federal Emergency Management Agency National Integration Center	• Office of Response and Recovery, Response Planning and Exercise Division • National Preparedness Directorate, National Integration Center • Office of the Chief Information Officer • FEMA Integration Team (FIT) • Office of Policy and Program Analysis
Department of Homeland Security	Science & Technology Directorate
Indiana Department of Homeland Security	Office of the Chief Operating Officer

2019 NMATE * Exercise Goal

Demonstrate and exercise policy and technology interoperability among crisis management and mutual aid systems, through seamless exchange of priority resource management information.

2019 NMATE * Exercise Objectives

- Establish and **coordinate dialogue and collaboration** among the owners and users of technology-enabled crisis management and mutual aid systems available today.
- Bring leaders, operators, and technologists together in a no-fault environment to **demonstrate and exercise interoperability** among crisis management and mutual aid technology-enabled systems.
- Identify ongoing **challenges and technology requirements** needed to support multi-jurisdictional and/or cross-discipline mutual aid operations.
- Exercise and attempt to **resolve policy and technical interoperability issues** in real-time.
- Capture and compile interoperability and information sharing: **successes, challenges, and corrective actions**.

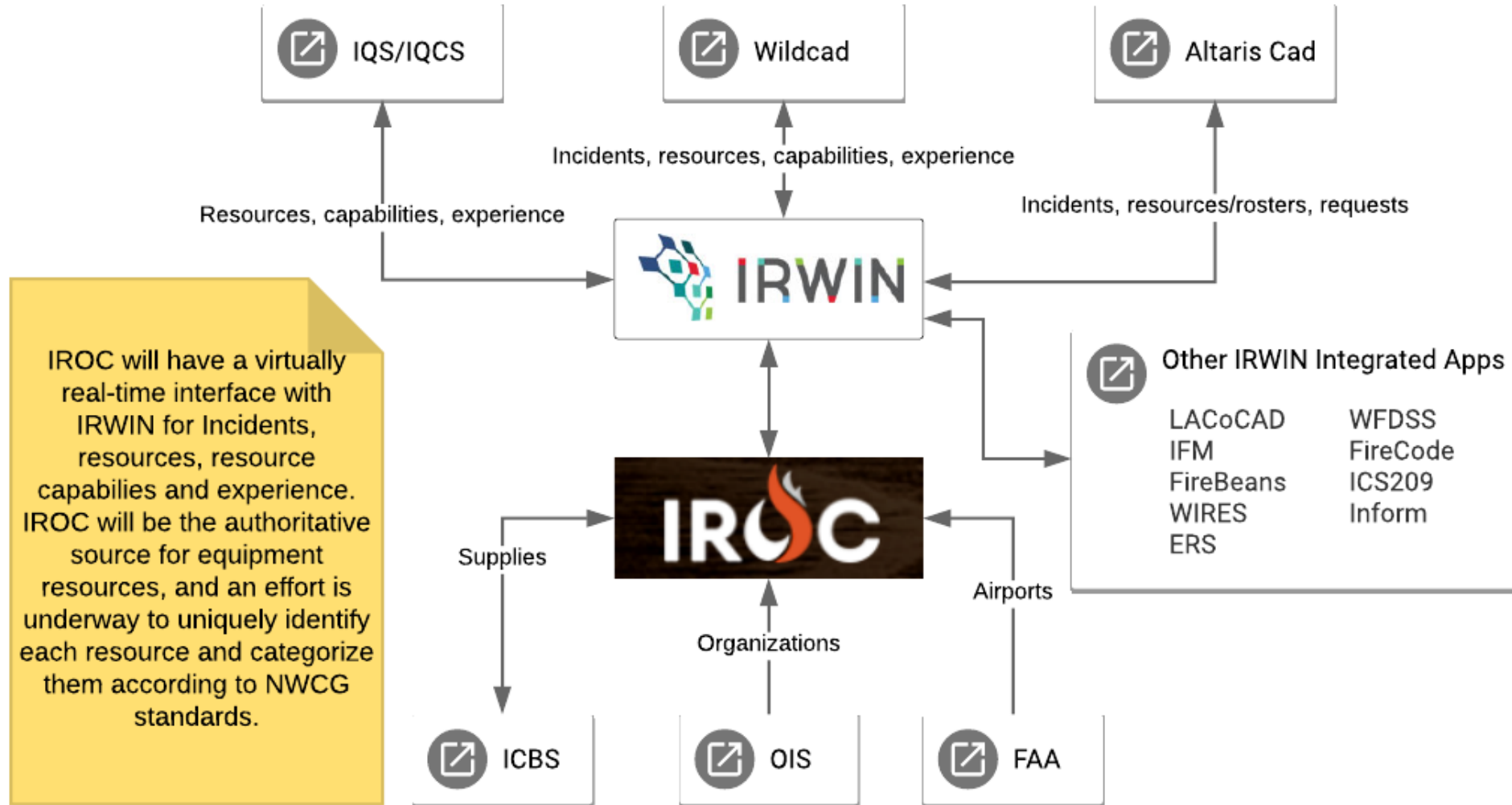
NMATE Findings – Part 1

- Several systems **successfully exercised seamless exchange of relevant resource management and situational awareness information**. Further, participating leaders demonstrated their system's functionality, capability enhancements, interoperability, and identified opportunities for improvement.
 - Exemplified by successful sharing of static and dynamic resource and situational awareness information into various systems on the fly, including: KY DEM, SC DEM, CalOES, and NMAS.
- Current resource management policy and technology initiatives across the nation are not well coordinated and aligned, resulting in **disparate policies and technologies that are not always interoperable**, sometimes resulting in operational challenges. Exemplified in participant discussions regarding the persistence of:
 - Double and triple counting of resources across systems and mutual aid partners
 - Delays in confirming, deploying, and arrival of available resource
 - Lack of understanding on how NIMS resource typing, NQS, and mission ready packaging integrate and work together

NMATE Findings – Part 2

- A common need was identified for a **nation-wide strategy and course of action to unify resource management and mutual aid policy, technology, and operations.**
- One overarching question permeated the exercise discussions: **How do we unify and streamline resource management policies and technologies to achieve better coordination and smoother operations during incidents requiring mutual aid?**

U.S. Forest Service Model

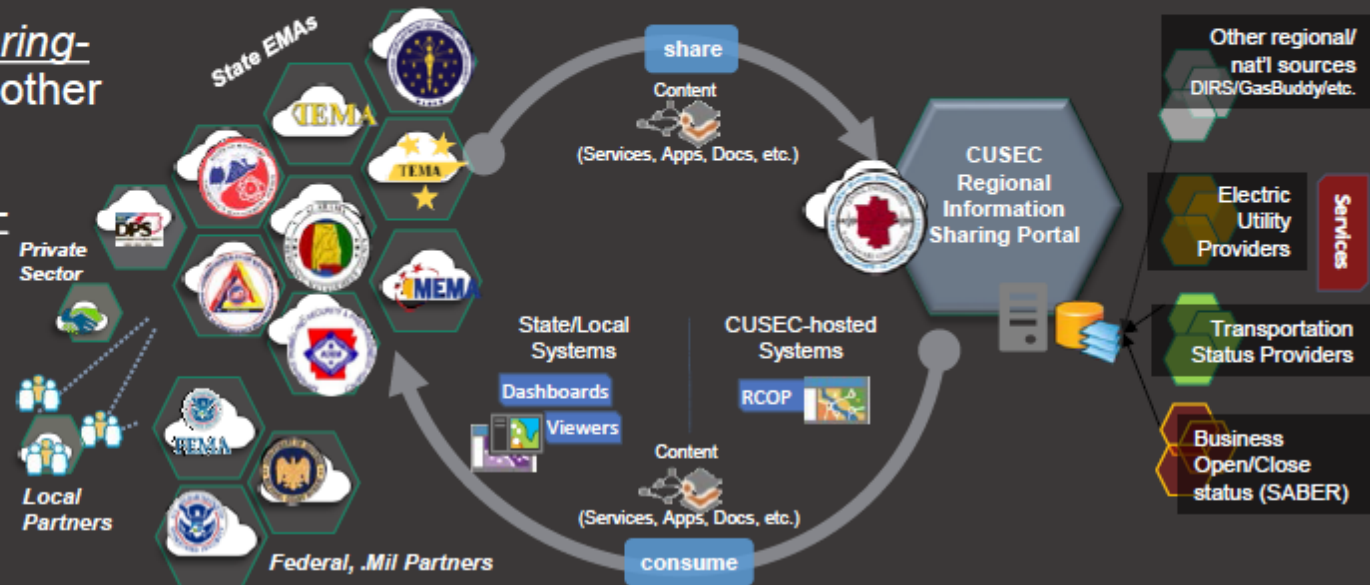


CUSEC Model

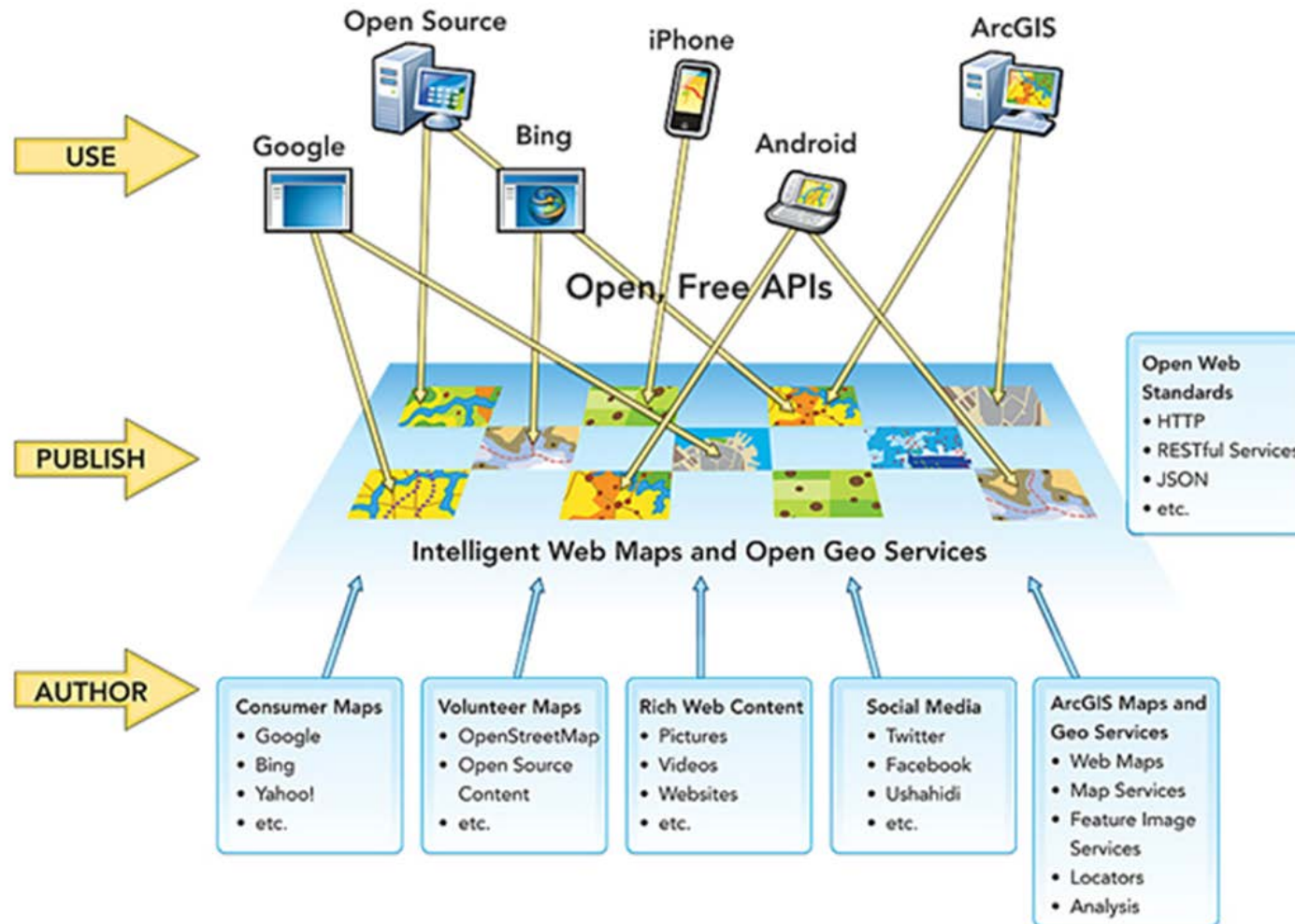
CUSEC Regional Information Sharing Portal (RISP)

Key Components:

1. Coordinated Information Sharing-CUSEC Member States and other partners
2. Information Product Delivery-RCOP Viewer/Dashboard Series
3. Automation Scripts-Data integration, Power Outages, Social Media, etc.
4. Historical Data Analysis-Power outages, WebEOC integration



Generic GIS-Based Model



Top *Policy Challenges* and Gaps - Part 1

- The nation needs a cohesive resource management **information exchange framework and guidance** to support appropriate information sharing in support of mutual aid operations.
 - Framework must have an adaptable design that can be implemented across all stakeholders and the full spectrum of mutual aid.
 - Conflicting policies at different levels of government inhibit interoperability.
- **Policies need to be reviewed and updated** to ensure they are keeping pace with operational needs and technology capabilities in support of business and operational requirements.
 - Need for consistent and wide-scale **adoption of existing information sharing and cyber security standards**.
 - Agreement is needed on which **attributes for resource data need to be shared** to support appropriate and safe information sharing.

Top *Policy Challenges* and Gaps - Part 2

- **Increased outreach, education, and implementation** of standardized resource typing, inventorying, mission ready packaging, and the NQS at the local level.
 - Need for guidance on how to type resources that are either not addressed by or don't meet minimum criteria defined in existing NIMS resource typing definitions and position qualification sheets.
- **Need for guidance and education** on how to use NIMS resource typing definitions and the national qualification system as the foundation for developing mission ready packages

Top *Operational Challenges* and Gaps

- Mutual aid operations in medium and large-scale incidents continue to face challenges in the **double and triple counting of resources**, often leading to confusion and extended time in determining resource availability.
- Local agencies **need a better justification for** using and maintaining their **resource inventories**.
- Mutual aid processes are often driven from the top down, by people who often do not own the resources and do not understand ground-level operations. **Mutual aid processes need to be driven foremost by operational needs.**
- State-level resource inventorying and operational tracking needs to be improved before it is deployed.

Top *Technology Challenges* and Gaps

- There are **gaps in technology policy** to support interoperability and information exchange among technologies.
- There are **gaps in existing standards** needed to support consistent and interoperable resource management information sharing.
- There are **gaps in defining how cyber security and data safeguarding protocols apply** to mutual aid and crisis management systems.
 - Need for research on and guidance to be developed on cyber security and data safeguarding for mutual aid and crisis management systems.
- Large amounts of data are available, often resulting in **information overload** by operators and decision makers.
- The **lack of a unified, nation-wide resource management information sharing framework** is leading to disparate technologies that are either: not appropriately connected to share data or are not technologically interoperable.

Future of the Union: What's Next on Policy, Guidance, Practice, and Technology

Local and State Fire and Emergency Response

State Emergency Management and EMAC

FEMA, National Integration Center

Democratizing Mutual Aid Policy and Technology

What are the mutual aid issues of greatest interest to you?

To Discuss	Discussing	Discussed	Action

Kanban

LEAN COFFEE

1 Create a Kanban board.



2 Brainstorm topics
Write all topic ideas on post-it notes, one topic per post-it. 2-3 minutes.



3 Pitch your topic(s)
Explain your topics to the group in 1-2 sentences.



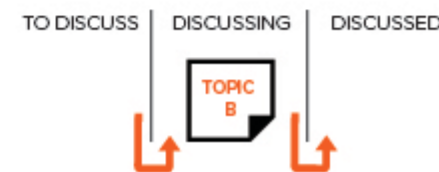
4 Prioritize what to discuss
Dot vote on topics. Each person can use 2-3 dots and put multiple dots on one topic.



5 Manage flow of conversation
At the end of each 8 minute round, have a silent vote. If the majority is thumbs up - keep discussing



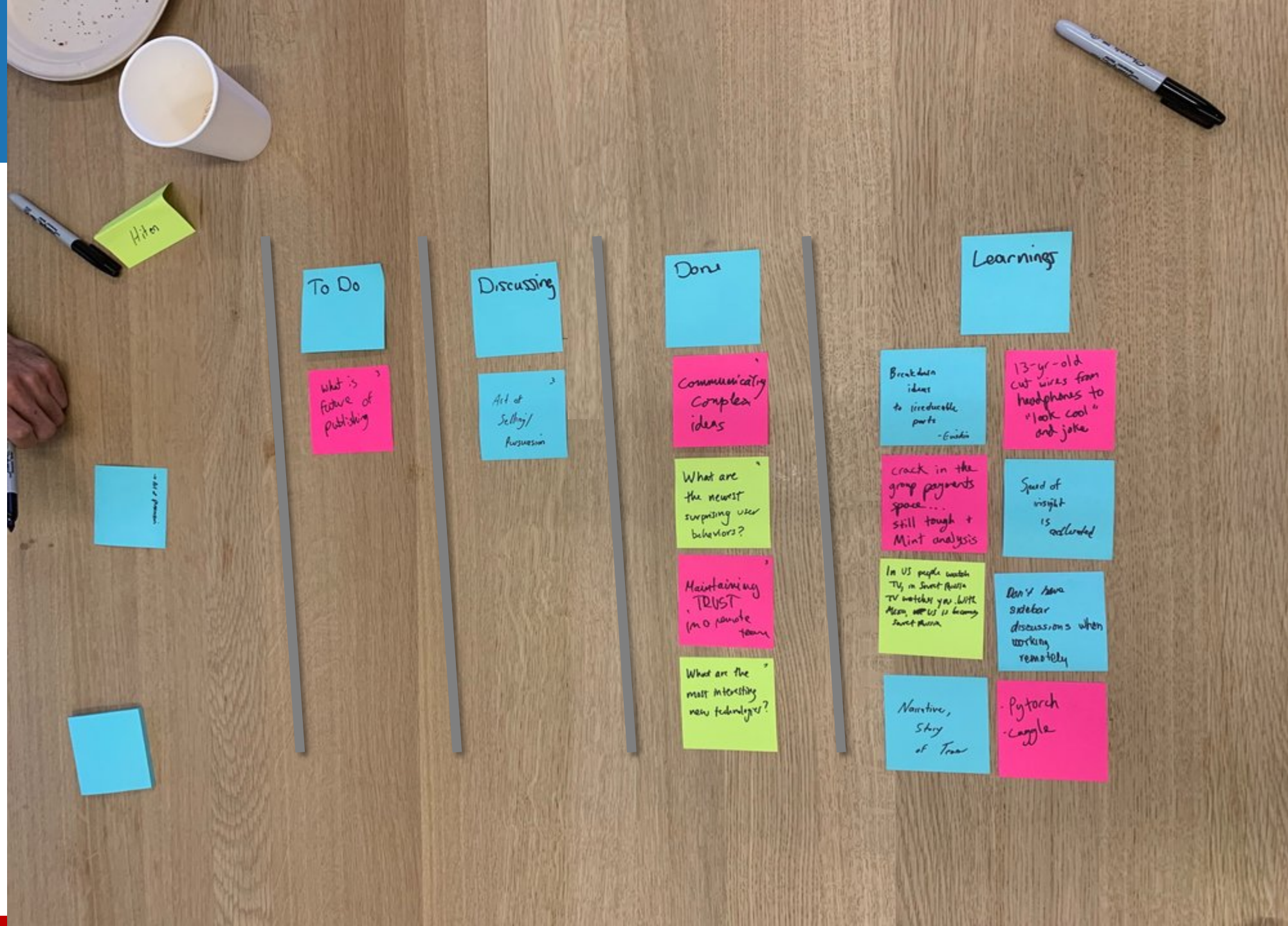
6 Discussion!
Pull topics from "to discuss" into "discussing". When complete move it over again.



7 Lock in the learning
Discuss the topics and what you've taken away.



Example of What Our Walls Might Look Like When We Conclude



Instructions for Wi-Fi



Wireless network: Jellyfish

1. Open a web-browser.
2. Browse to any non-Google site. A login screen will display.
3. Select “Guest Account” and complete the credentials form.
4. You will receive an email and text message with a username and password to connect to the wifi.

- You may need to step out into the lobby to get a cell connection
- Write down / save your password, you will need it for your laptop.