Pulling Back the SARCOP Curtain

A dive into the backend and inner workings of the Search and Rescue Common Operating Platform

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Purpose

- We get lots of "How did you guys…" questions – this seeks to answer those!
- Show how SARCOP is structured
- Major enhancements and best practices
- There will be time at the end for open forum "Ask the developer"

SARCOP Overview

- Search and Rescue Common Operating Platform
- Built to collect and share information during disasters
- Developed through a partnership between DHS, FEMA, and NAPSG
- 100+ USAR teams have access, including all 28 FEMA USAR teams
- Can be used for everything between Hurricane Ian and local SAR searches
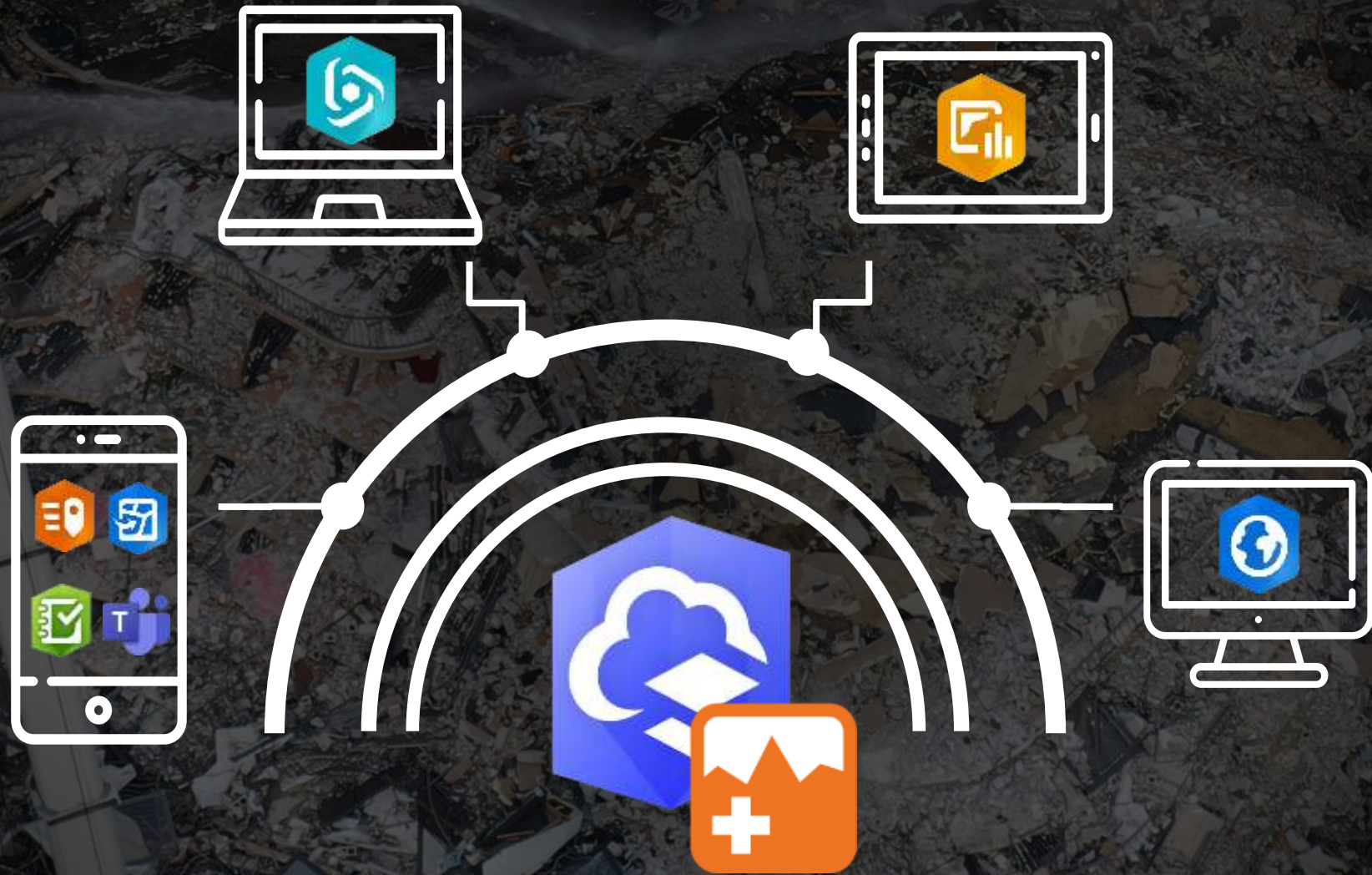- Everything is community driven
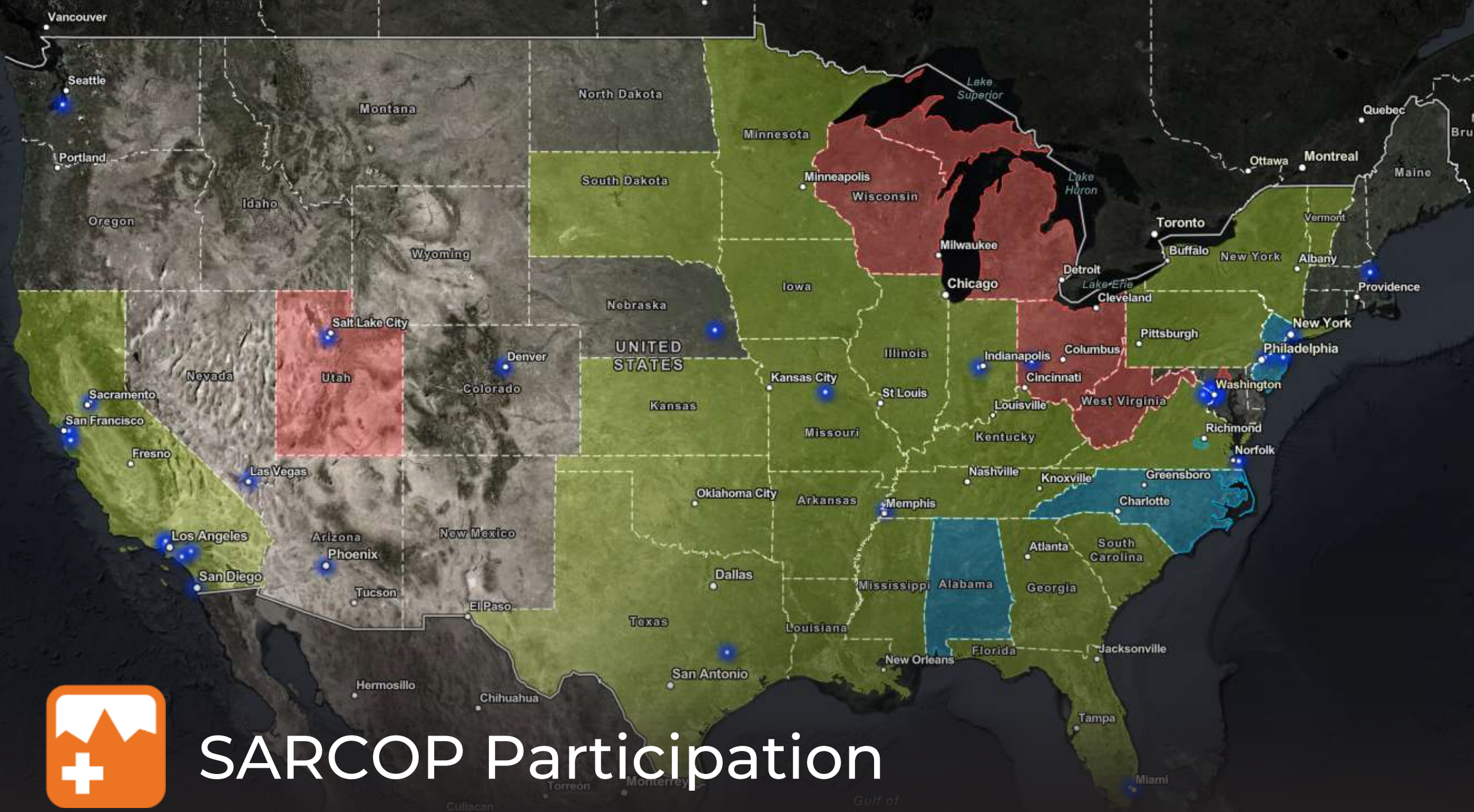
SARCOP Participation

What is SARCOP?

Search and Rescue Common Operating Platform

SARCOP V8 vs V9

- Updated SARCOP from version 8 to version 9 in March - May 2023
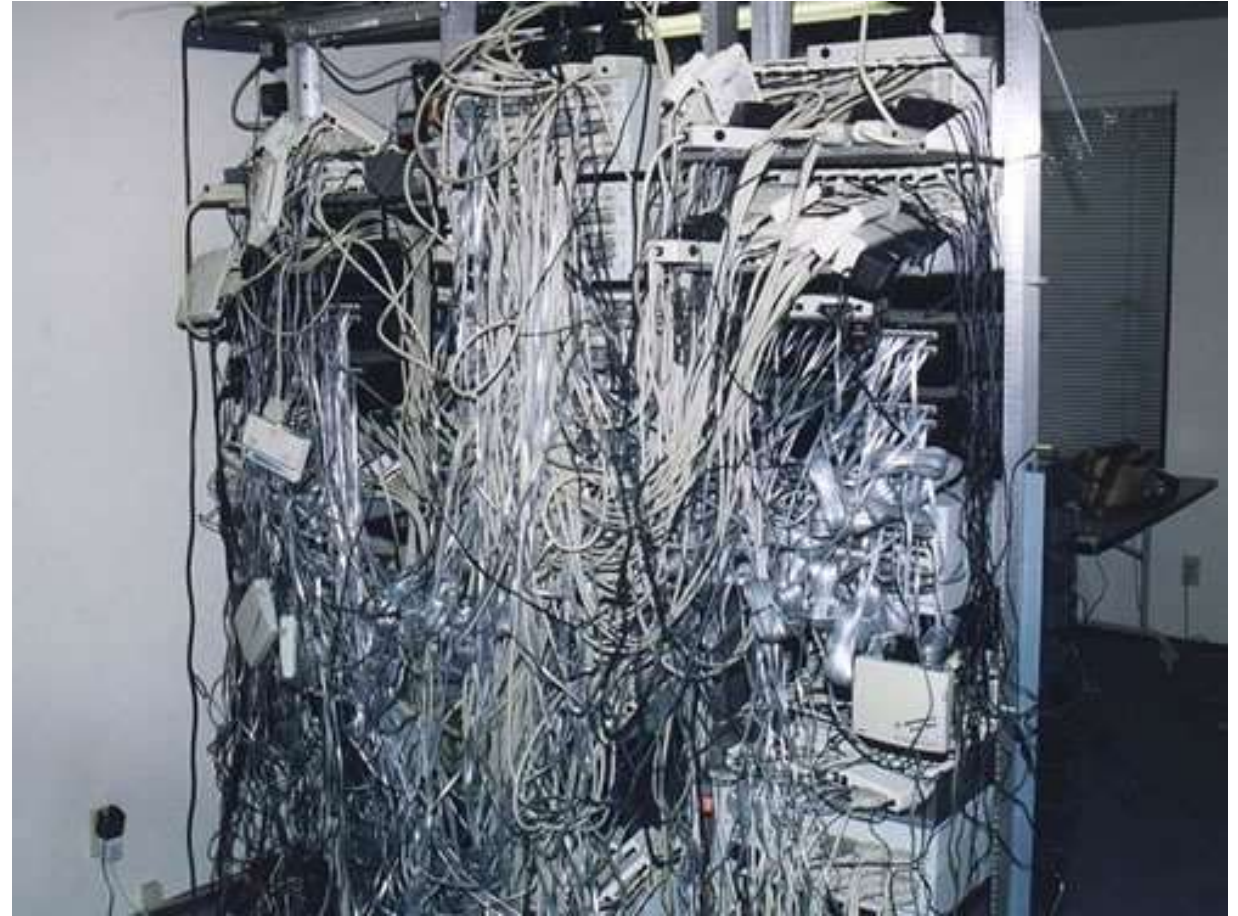- Major changes were mostly backend

Frontend differences

- No more Survey123 for WAS

- New App: Admin Editor

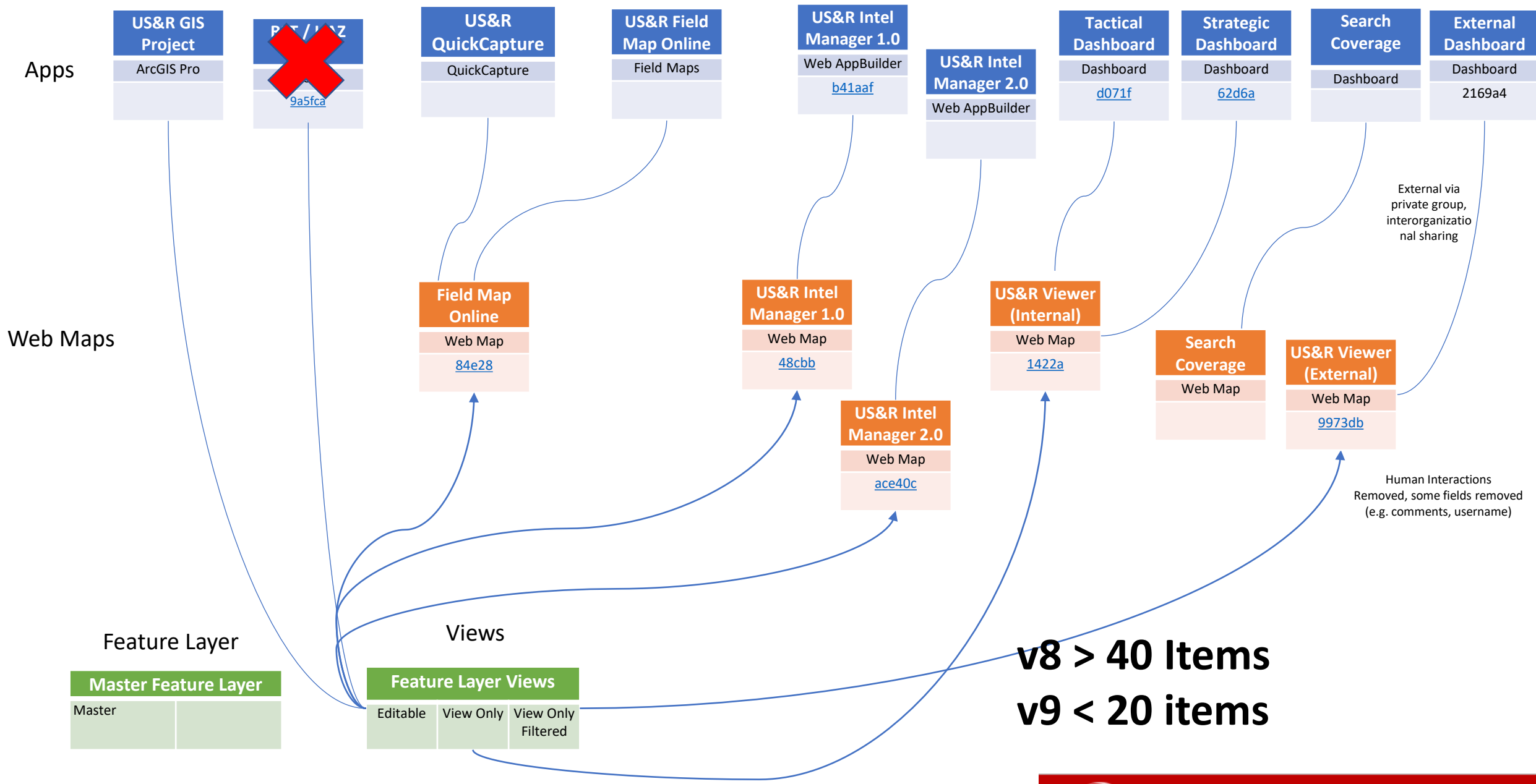- Few new tracklogs

- New thumbnail in the sandbox

Backend differences

- All the layers are contained in one layer
- Still lots of view layers, but each view has every SARCOP layer instead of individual layer having multiple views
- Only Admins can truly delete data
- Revamped post-incident archive process

Apps

US&R GIS Project	R T / L AZ	US&R QuickCapture	US&R Field Map Online	US&R Intel Manager 1.0		Tactical Dashboard	Strategic Dashboard	Search Coverage	External Dashboard
ArcGIS Pro		QuickCapture	Field Maps	Web AppBuilder	US&R Intel Manager 2.0	Dashboard	Dashboard	Dashboard	Dashboard
	9a5fca			b41aaf	Web AppBuilder	d071f	62d6a		2169a4

External via private group, interorganizational sharing

Web Maps

Field Map Online	US&R Intel Manager 1.0	US&R Viewer (Internal)	Search Coverage	US&R Viewer (External)
Web Map	Web Map	Web Map	Web Map	Web Map
84e28	48cbb	1422a		9973db

US&R Intel Manager 2.0
Web Map
ace40c

Human Interactions Removed, some fields removed (e.g. comments, username)

Feature Layer   **Views**

Master Feature Layer	
Master	

Feature Layer Views		
Editable	View Only	View Only Filtered

v8 > 40 Items
v9 < 20 items

Proposed Architecture v9 2023/2024

SARCOP Sandbox

68fc80 SARCOP v9 SIFS Master Feature Layer

d454e1 SARCOP v9 SIFS Mobile Edit View

	Title		
☐	68fc80 SARCOP v9 SIFS Master Feature Layer	Feature layer (hosted) ▼	
☐	d454e1 SARCOP v9 SIFS Mobile Edit View	Feature layer (hosted, view) ▼	
☐	Temporary DR4724 HI Wildfires SARCOP v9 View	Feature layer (hosted, view) ▼	
☐	2686da SARCOP v9 SIFS Waypoint Search Type View	Feature layer (hosted, view) ▼	+2
☐	e1f8aa SARCOP v9 SIFS Waypoint Follow-Up View	Feature layer (hosted, view) ▼	+1
☐	Maui_OSM_Building_with_Heights_Multistory	Feature layer (hosted, view) ▼	
☐	68fc80 SARCOP v9 SIFS Time Enabled Layer view	Feature layer (hosted, view) ▼	
☐	SARCOP v9 SIFS California View	Feature layer (hosted, view) ▼	
☐	ec0e90 SARCOP v9 SIFS DOBS View	Feature layer (hosted, view) ▼	+1
☐	b664e7 SARCOP v9 SIFS Illinois View	Feature layer (hosted, view) ▼	
☐	1daa41 SARCOP v9 SIFS Intel Manager 1.0 View	Feature layer (hosted, view) ▼	
☐	29e273 SARCOP v9 SIFS Internal View	Feature layer (hosted, view) ▼	
☐	fd6b92 SARCOP v9 SIFS External Stakeholder View	Feature layer (hosted, view) ▼	+4
☐	0bc596 SARCOP v9 SIFS Deleted or Null Feature View	Feature layer (hosted, view) ▼	
☐	7bbdfe SARCOP v9 Waypoint Cluster View	Feature layer (hosted, view) ▼	

How did we swap from V8 to V9? "Operation U-Haul"

1. Started out on the sandbox

2. Build out the schema in Pro

3. Published to AGOL

4. Recreated views, maps, and apps

5. Replaced existing apps in Experience with new apps

6. Spent weeks testing

7. Cloned to FEMA org

8. Repeat step 5 on Deployment side

2. Setting up in Pro

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7. Cloned to FEMA org https://developers.arcgis.com/python/guide/cloning-content/

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Best Practices for Version Updates

- ArcPro published sublayers start count at "1", not "0"
  - Causes problems with scripts if you're not careful
- The QC json swap still needed some configuring afterwards
- Divide and conquer with your team
- Don't make the swap right before a major incident to get feedback… you're going to have a bad time

New App: Admin editor
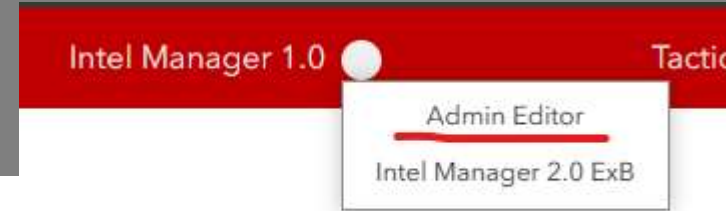
- Drawing Incident Areas, Branches, and Divisions
  - Usually drawn by IST, prevents accidental editing by Task Forces

New App: Admin editor

OH.
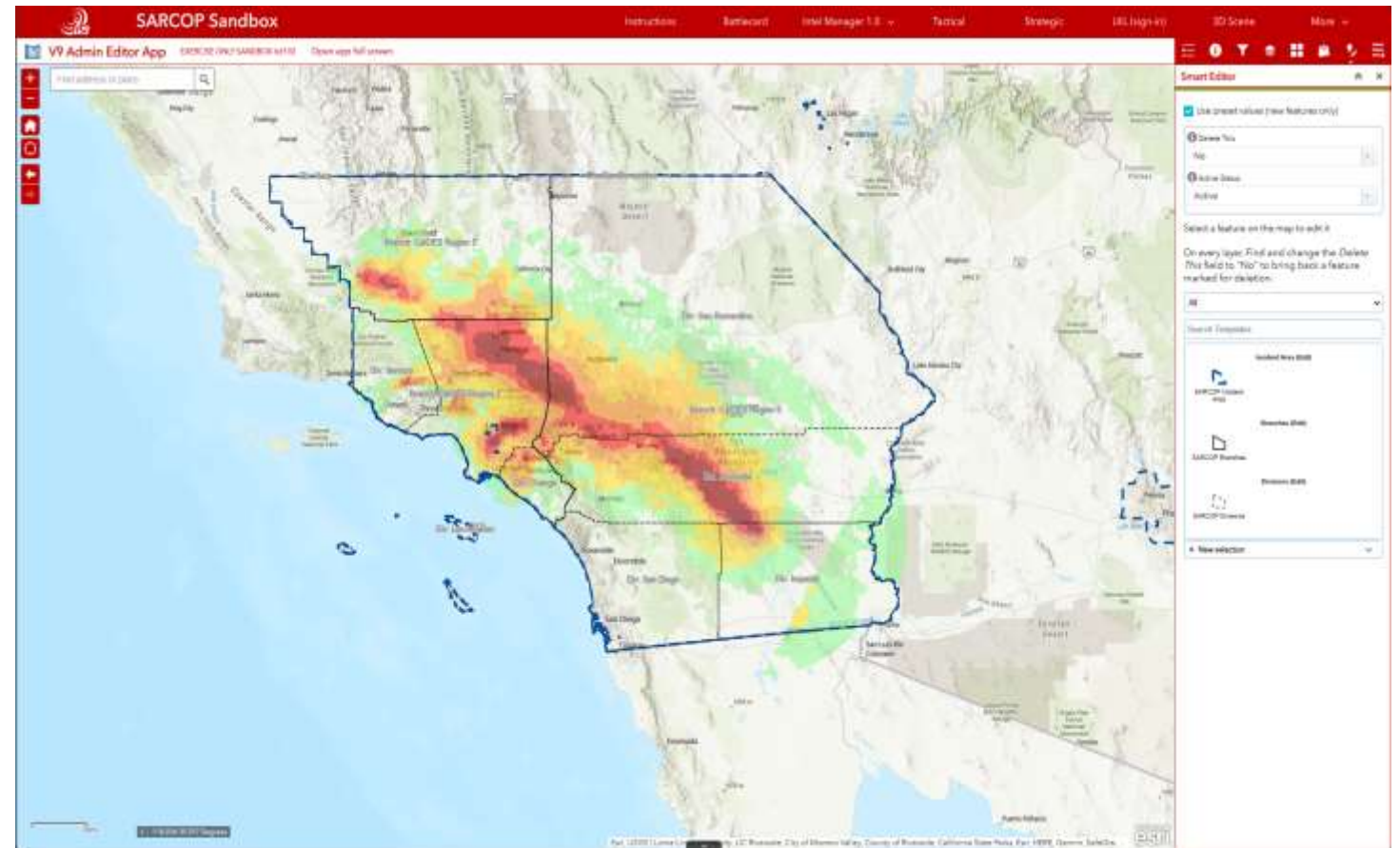
Deleting data in V8

Deleting data in V9

SEE MORE

Deleted Data

Location Tracking

- Uses Tracker built into QuickCapture and Field Maps

- Login dependent

- Sends "Last known location" every 30 sec – 1 min

SARCOP Groups

How do we share information?

Group projects like...

Two user groups for SARCOP

Internal 41484b

- Primary group for accessing and using SARCOP

- For Task Force members

- Editing capabilities for all members

- Access to external and internal layers

External d77f7d

- Primary group for <u>high level</u> access to SARCOP

- For state EMA, fire chiefs, or other high-level management

- No editing capabilities

- Access to only external apps and layers

Who can be added

- Anyone who works for a public safety agency
  - Including fire departments, task force members, and other members of public safety
- Must be validated by a manager at the host agency
  - Can't just add John Doe from FDNY, has to be validated by a known reliable member of the group
- Limited named user accounts
- Usernames are owned by the agency

Questions/ Open Discussion

Some Ideas
- Next contract year technical development
- Dashboard deeplinks and waypoint list follow-up
- UAS workflows
- Pro Tool creation/ how do we make custom tools
- How do we archive incident data – deeper dive

THANKS!

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Sessions after lunch:

Navigating the Flames:
GIS in Local Fire service
Room 502

Riding the Data Highway:
GIS Use in Transportation
Room 501

Taxonomies,
Ontologies, and
Schemas – Room 1104