

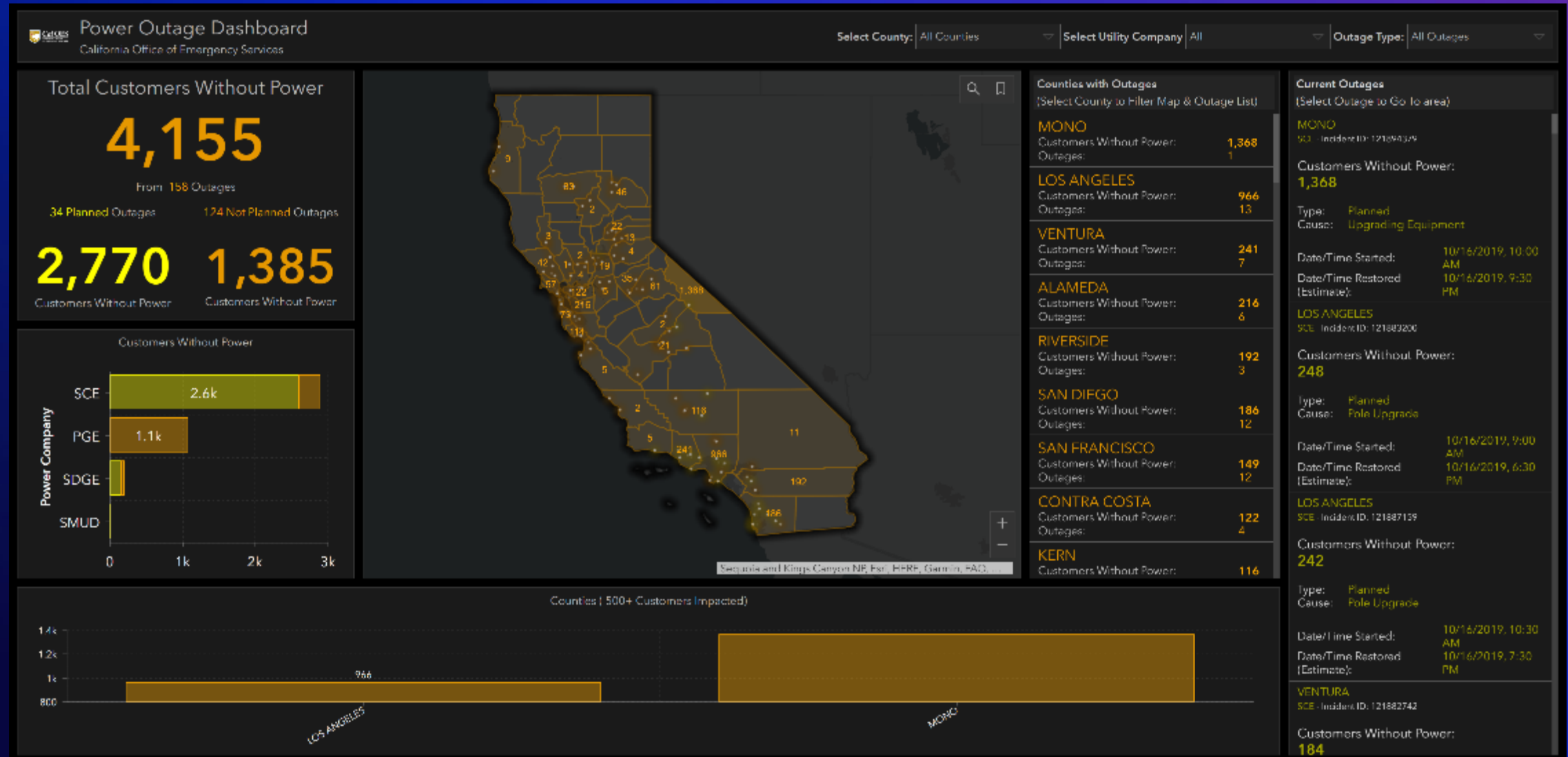
ArcGIS Dashboards: Designing Effective Dashboards

Armando Drain and Brady Hoak

2021 ESRI FEDERAL GIS CONFERENCE

**Dashboards = Maps + Key
Metrics / KPI**

Cal OES – Power Outage Status





Chief's Dashboard

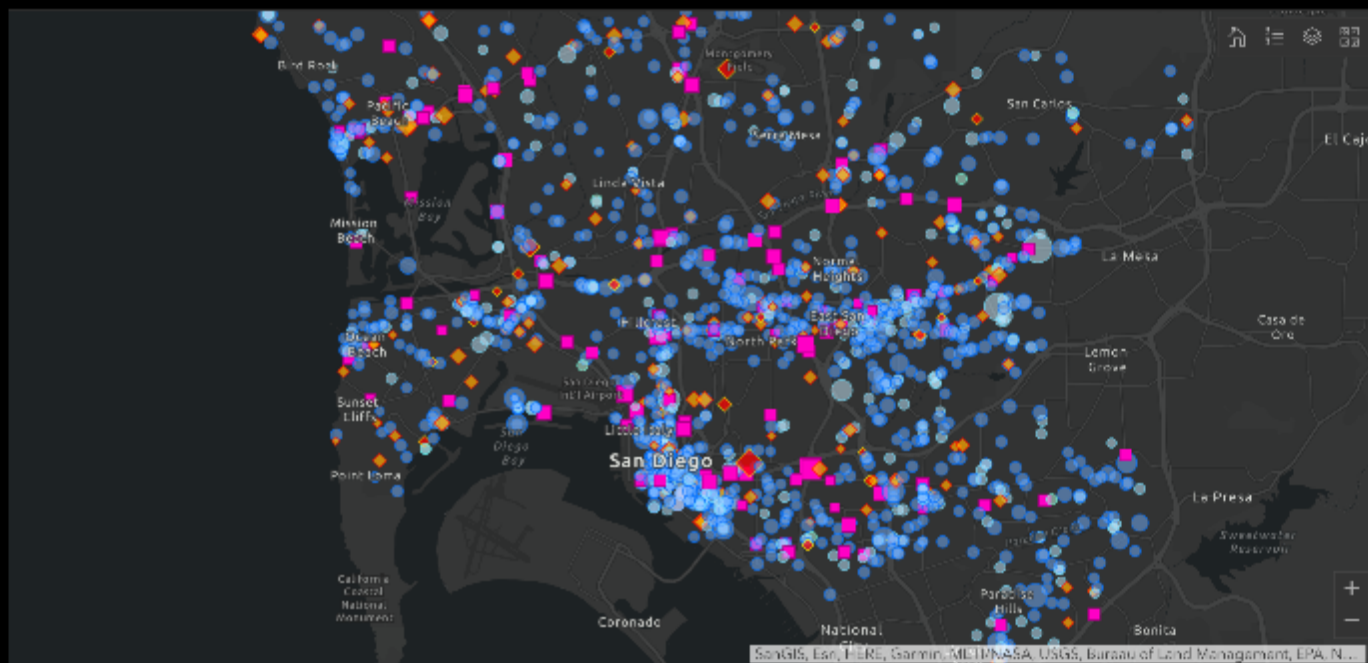
Call type filter Select one or more

Station Filter



Top 10 Calls | Longest Response Time

- Psych / Suicide Attempt (L1) | Level 1 Medical
Station 45 | Response Time: **2,906 sec**
9/3/2015, 7:41 AM
- Assault/Rape (L1) | Level 1 Medical
Station 5 | Response Time: **1,742 sec**
9/1/2015, 10:33 AM
- Engine - Special Service | Level 2 Fire
Station 17 | Response Time: **1,506 sec**
9/5/2015, 8:55 AM
- Traffic Accident (L1) | Traffic Accident
Station 25 | Response Time: **1,437 sec**
8/31/2015, 12:22 PM
- Breathing Problems (L1) | Level 1 Medical
Station 10 | Response Time: **1,324 sec**
9/2/2015, 10:46 PM
- OD/Ingestion/Poisonings (L1) | Level 1 Medical
Station 26 | Response Time: **1,242 sec**
9/2/2015, 11:57 PM
- Assault/Rape (L1) | Level 1 Medical
Station 12 | Response Time: **1,213 sec**
9/5/2015, 1:43 AM
- Assault/Rape (L1) | Level 1 Medical
Station 19 | Response Time: **1,146 sec**
9/5/2015, 12:34 PM
- Assault/Rape (L1) | Level 1 Medical
Station 10 | Response Time: **1,089 sec**
9/3/2015, 4:35 AM
- Assault/Rape (L1) | Level 1 Medical
Station 201 | Response Time: **1,072 sec**
9/2/2015, 4:32 AM



Calls For Service | 2015

Priority_Description

- Level 1 Medical
- Level 2 Medical
- Level 3 Medical
- Level 4 Medical
- Traffic Accident
- Level 1 Fire
- Level 2 Fire
- Level 3 Medical
- ALS Ambulance Only
- others

Total Calls (last 2 weeks)

Calls this year: 1,833

16%

Calls last year: 1,583

Dispatch Time



Turnout Time



Response Time



Response Times

Response Time by Station

Turnout Time by Station

Calls by Day

Calls by Station

UC 2019 Plenary – Captain Oscar Sepulveda, Pasadena Fire



Chief Officer Operations Dashboard

Active Calls

7

Last 24 hrs

47

ALARM

T32
2,376 E COLORADO BLVD
S SIERRA MADRE BL & ELOISE
AV

ALARM

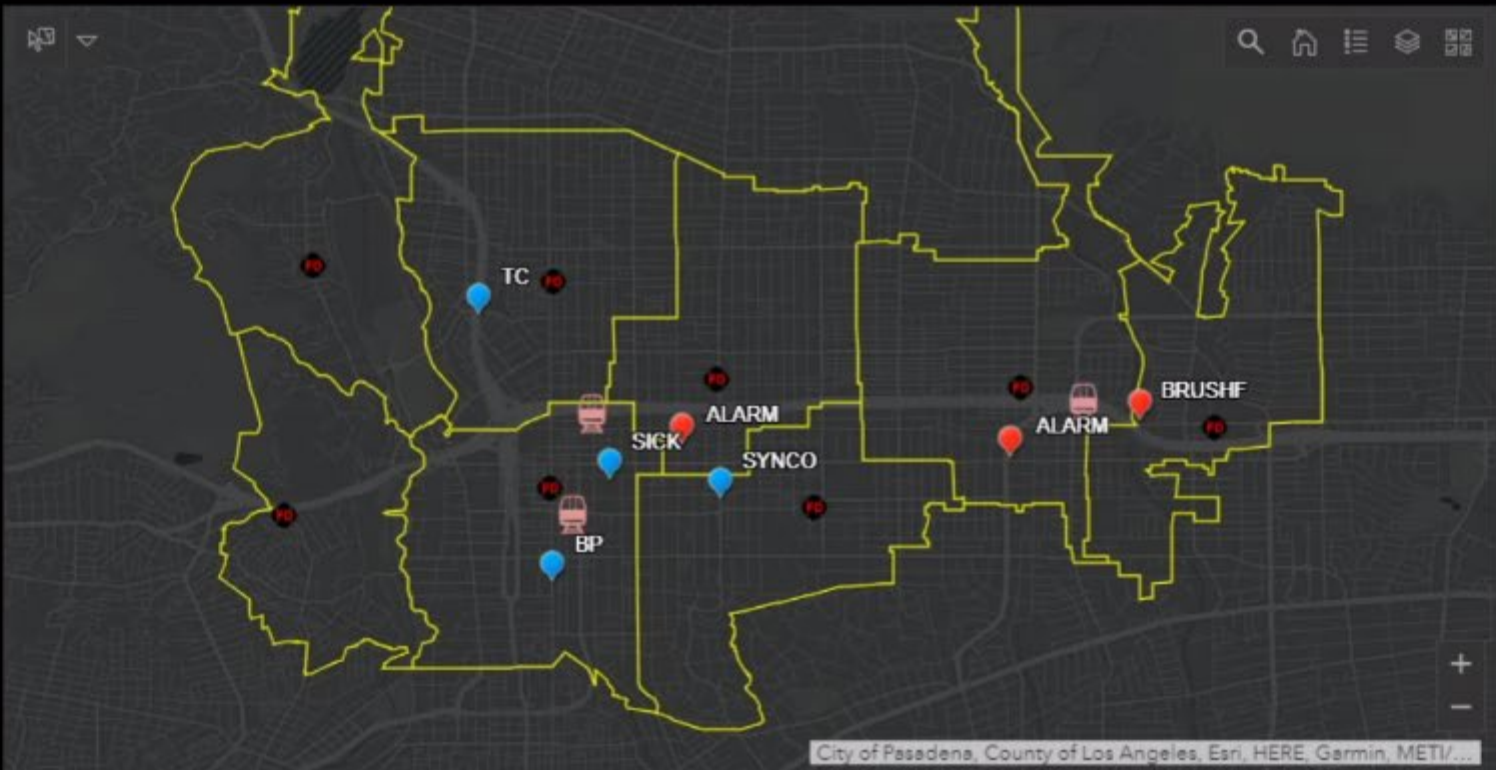
RA734
686 E UNION ST
N EL MOLINO AV & N OAK
KNOLL AV

BRUSHF

BC3, E32, E34, E37, PD1, RA32
3,035 E FOOTHILL BLVD
-- COMMUNITY EDUC CTR
E MAPLE ST & N KINNELOA AV

Active INC List

Last AVL Log



PPD

71

FIRE

11

EMS

9

Rose Bowl

20

Security

19

Requests

List

Requests

List

Requests

List

Requests

List

Requests

List

Alarm Handling

00:15

01:00

Turnout time

01:34

01:00

Travel Time

05:49

04:00

Total Response Time

07:03

06:00

Unit Utilization

01:07:40

01:00:00

Call Volume

1,141

Last 31 Days

Response Times (Last 24 Hours)



Current Filters
Agencies (10)
Incident Types (All)



ACTIVE INCIDENTS (3)



RECENT INCIDENTS (144)



MAP VIEW



Monterey
Park Fire

Medical
Emergency

N GARFIELD AVE,
MONTEREY PARK, CA

E61 RA61

10:14
AM
Today



Glendale
Fire

Medical
Emergency

N ORANGE ST,
GLENDALE, CA

BLS26 E26

10:13
AM
Today



South
Pasadena
Fire

Fire Alarm

1400 MARENGO AVE,
SOUTH PASADENA, CA
(-- MARENGO SCHOOL)

E81

10:10
AM
Today

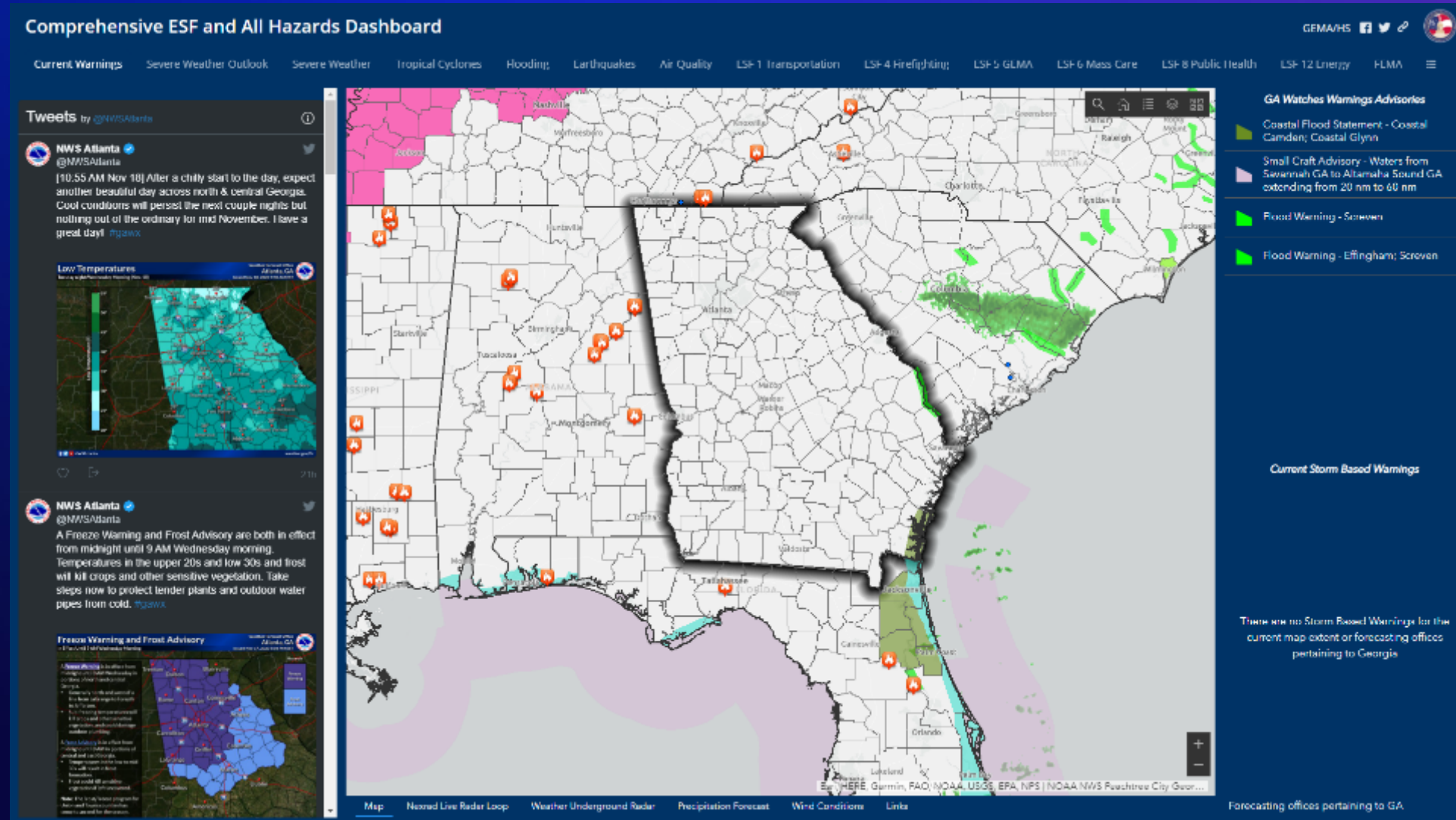
Operationalize Plans / Documents

Brief Command Staff and Elected Officials - AZDEMA

- Arizona Department of Emergency and Military Affairs using Story maps for real-time briefings in their command center. This has been used to support many wildfires as well as the 2018 National Mass Care Exercise (NMCE)



Georgia - Comprehensive ESF and All Hazards Dashboard



Orchestrate Data

Novel Coronavirus (2019-nCoV) SITUATION REPORT - 3 23 JANUARY 2020

Data as reported by: 23 January 2020¹

SUMMARY

Situation update:

- A total of 581 confirmed cases have been reported for novel coronavirus (2019-nCoV) globally;
- Of the 581 cases reported, 571 cases were reported from China;
- Cases have been reported in Thailand, Japan, Hong Kong Special Administrative Region, Taipei Municipality, China, Macau Special Administrative Region, United States of America and the Republic of Korea; All had travel history to Wuhan;
- Of the 571 confirmed cases in China, 375 cases were confirmed from Hubei Province;
- Of the 571 cases, 95 cases are severely ill²;
- Seventeen deaths have been reported (all from Hubei Province);

On 23 January 2020, the number of reported confirmed cases of 2019-nCoV has increased by 267 cases since the last situation report published on 22 January 2020. As of 23 January, China reported cases in 25 provinces (autonomous regions and municipalities). Twenty five percent of confirmed cases reported by China have been classified by Chinese health authorities as seriously ill (from Wubei Province: 16% severely ill, 5% critically ill, and 4% having died).

Currently, cases infected in China have been exported to the US, Thailand, Japan and Republic of Korea. It is expected that more cases will be exported to other countries, and that further transmission may occur.

The initial source of 2019-nCoV still remains unknown. However, it is clear the growing outbreak is no longer due to ongoing exposures at the Huanan seafood market in Wuhan; as in the last one week, less than 15% of new cases reported having visited Huanan market. There is now more evidence that 2019-nCoV spreads from human- to- human and also across generations of cases. Moreover, family clusters involving persons with no reported travel to Wuhan have been

Coronavirus disease 2019 (COVID-19) Situation Report – 30

Data as reported by: 19 February 2020¹

HIGHLIGHTS

- No new countries reported cases of COVID-19 in the past 24 hours.
- WHO is working with an international network of statisticians and mathematical modelers to estimate key epidemiologic parameters of COVID-19, such as the incubation period (the time between infection and symptom onset), case fatality ratio (CFR, the proportion of cases that die), and the serial interval (the time between symptom onset of a primary and secondary case). Reports of current analyses that have estimated these parameters are provided in this Situation Report as a summary of currently available evidence. These values should be considered preliminary and parameters will likely be updated as more information becomes available. Modelling can support decision-making but needs to be combined with rigorous data collection and a comprehensive analysis of the situation. Please see the Subject in Focus section for more information.
- Several online courses related to COVID-19 have been added to the OpenWHO platform:
 - [A general introduction to emerging respiratory viruses](#), including novel coronaviruses (available in [French](#), [Simplified Chinese](#), and [Spanish](#) as well).
 - [Critical Care of Severe Acute Respiratory Infections](#)
 - [Health and safety briefing for respiratory diseases - ePROTECT](#)

SITUATION IN NUMBERS total and new cases in last 24 hours

Globally
75 204 confirmed (1872 new)

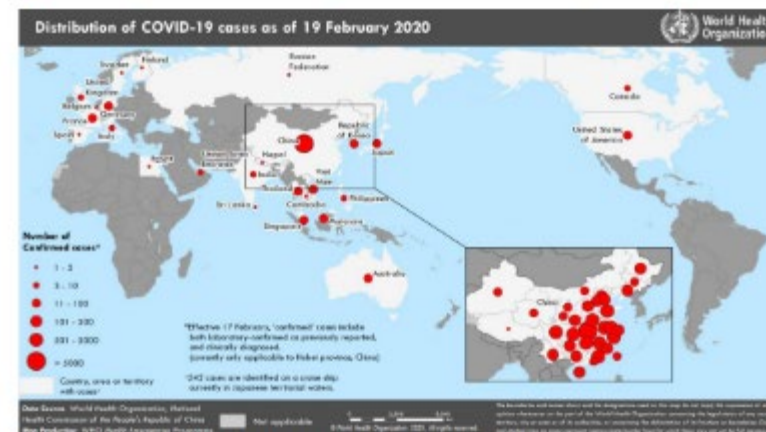
China²
74 280 confirmed (1752 new)
2006 deaths (136 new)

Outside of China
924 confirmed (120 new)
25 countries
3 deaths

WHO RISK ASSESSMENT

China Very High
Regional Level High
Global Level High

Figure 1. Countries, territories or areas with reported confirmed cases of COVID-19, 19 February 2020



¹The situation report includes information provided by national authorities as of 10 AM Central European Time

²As reported by China, which includes both laboratory confirmed and clinically diagnosed cases (currently only applicable to Hubei province, China)

Making a Difference Award

Johns Hopkins University
Center for Systems Science
and Engineering



Making a Difference Award

Johns Hopkins University
Center for Systems Science
and Engineering



Dr. Lauren Gardner
*Engineering Professor
and Co-Director*



Ensheng Dong
Graduate Student



JOHNS HOPKINS
APPLIED PHYSICS LABORATORY



JOHNS HOPKINS
SHERIDAN LIBRARIES



JOHNS HOPKINS
WHITING SCHOOL
of ENGINEERING

Center for Systems Science
and Engineering



Global Cases

56,394,215

Cases by Country/Region/Sovereignty

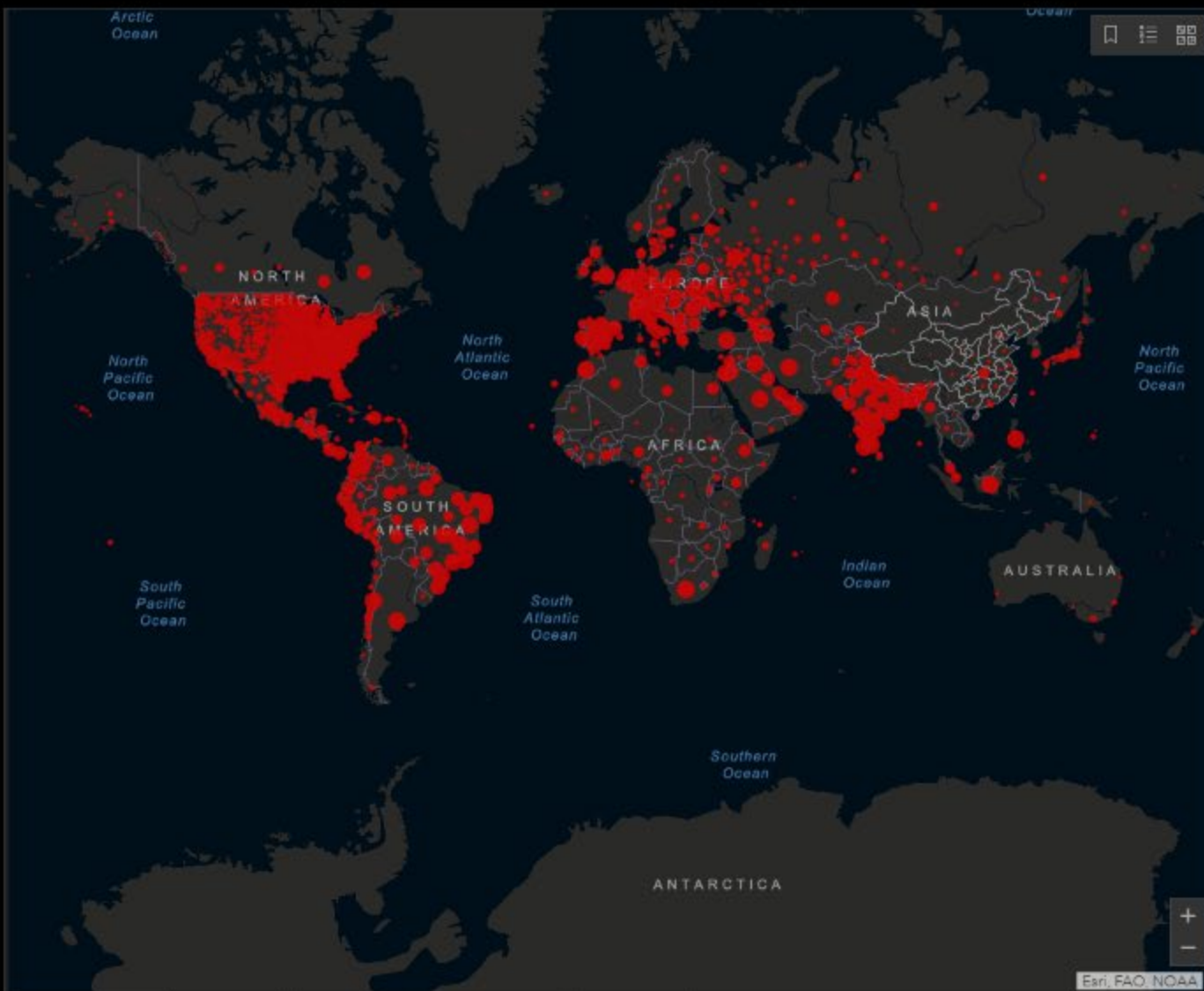
11,531,451	US
8,958,483	India
5,945,849	Brazil
2,115,717	France
1,998,966	Russia
1,525,341	Spain
1,434,004	United Kingdom
1,339,337	Argentina
1,272,352	Italy
1,218,003	Colombia
1,015,071	Mexico
939,931	Peru
867,484	Germany
815,117	Iran
796,798	Poland
757,144	South Africa
600,152	Ukraine
545,787	Belgium
534,558	Chile
529,226	Iraq
483,518	Indonesia
475,284	Czechia

Admin0

Admin1

Admin2

Last Updated at (M/D/YYYY)
11/19/2020, 5:25 AM



Cumulative Cases

Active Cases

Incidence Rate

Case Fatality Ratio

Testing Rate

191

countries/regions

Lancet Inf Dis Article: [Here](#). Mobile Version: [Here](#). Data sources: [Full list](#). Downloadable database: [GitHub](#), [Feature Layer](#).
Lead by JHU CSSE. Technical Support: [Esri Living Atlas team](#) and [JHU APL](#). Financial Support: [JHU](#), [NSF](#), [Bloomberg Philanthropies](#) and [Stavros Niarchos Foundation](#). Resource support: [Slack](#), [Github](#) and [AWS](#). Click [here](#) to **donate** to the CSSE dashboard team, and other JHU COVID-19 Research Efforts. [FAQ](#). Read more in this [blog](#). [Contact US](#).

Cases and Death counts include confirmed and probable (where reported).
Recovered cases are estimates based on local media reports, and state and local reporting when available, and therefore may be

Global Deaths

1,352,188

250,548 deaths
US

167,455 deaths
Brazil

131,578 deaths
India

99,528 deaths
Mexico

53,369 deaths
United Kingdom

47,217 deaths
Italy

46,772 deaths
France

43,417 deaths
Iran

42,039 deaths
Spain

36,347 deaths
Australia

Global Deaths

Global Recovered

US State Level Deaths, Recovered

34,187 deaths, 82,022 recovered
New York US

20,338 deaths, 889,099 recovered
Texas US

18,470 deaths, recovered
California US

17,731 deaths, recovered
Florida US

16,655 deaths, 40,090 recovered
New Jersey US

11,468 deaths, recovered
Illinois US

10,407 deaths, 137,422 recovered
Massachusetts US

9,463 deaths, 186,022 recovered
Pennsylvania US

9,065 deaths, recovered
Georgia US

8,573 deaths, 138,862 recovered
Alabama US

US Deaths, Recovered



Daily Cases

Infographic Dashboards

 Oregon Hazards Overview

Total COVID Cases
 **59,669**

[See COVID Dashboard](#)
Last update: a minute ago

Total COVID Deaths
 **788**

[See COVID Dashboard](#)
Last update: a minute ago

Current Wildfires

 **1**

[See Wildfires Dashboard](#)
Last update: a minute ago

Acres Burned
146,434.1 Acres

[See Wildfires Dashboard](#)
Last update: a minute ago

Local Drought Declarations

 **16**

[See Drought Dashboard](#)
Last update: a minute ago

State Drought Declarations

 **14**

[See Drought Dashboard](#)
Last update: a minute ago

Earthquakes (Last 7 Days)

 **0**

[See Earthquakes Dashboard](#)
Last update: a few seconds ago

Gages Forecasted at or Near Flood Stage

 **0**

(Forecasted Over Next 72 Hours)

[See Flood Gages Dashboard](#)
Last update: a minute ago

Volcanoes at Alert Level

 **0**

[See Volcanoes Dashboard](#)
Last update: a minute ago

Special Events

MARATHON COURSE MAP ★ SUNDAY, NOVEMBER 23, 2014



The image shows a control room with a large central projection screen and two smaller monitors on the right. The central screen displays a software interface for emergency services, likely Boston's EOC (Emergency Operations Center). The interface includes a map of Boston with various colored lines and markers, a sidebar on the left with incident details, and a bottom section with a bar chart and a table of requests.

Left Sidebar (Incident Details):

- BROOKLINE PD - F:** 2015-00002965 - E, Priority 1, ALARM FIRE, STREET BOX, Status: Assigned
- BROOKLINE PD - P:** 2015-00033142 - P, Priority 4, TRAFFIC STOP, Status: Assigned
- BPD: P150201875:** Priority 9 OTHER, ABANDONED CALL (P), Status: Open
- BPD: P150201872:**

Bottom Section (Trending Open 313 Requests Citywide):

Category	Count
Other	10
Traffic	15
Fire	20
Police	25

Right Monitors:

- Top Monitor:** Displays a live video feed of a street scene with a crowd of people.
- Bottom Monitor:** Displays a weather map of the Boston area with a temperature of 64°F.



Boston Marathon – 2015



3 locations, real-time data sharing
Left MEMA
Center BRIC
Right Boston EOC

Ironman World Championship



FILE TOOLS VIEW WIDGETS

Incidents >...

!

1

Medical older than 5 minutes

0

Open Bike

1

Open Medical

Incidents >...
★ Medical: Bib# 1587
10/8/2016 11:21:33

All Open Incid...
★ Medical - Bib# 1587
10/8/2016 11:21:33

Medical Incidents

2016 Ironman ROC Dashboard

Map of Hawaii showing the Ironman course route.

Mobile Assets
No Features

Mobile Assets
Bike
Bike OPS
Medical
Course Control
Marshal
Run OPS
ROC Assets
Other

0

Current census in Med Tent

0

Transported to Hospital

2

Total Seen in Med Tent

Current Med Tent Census

No Features

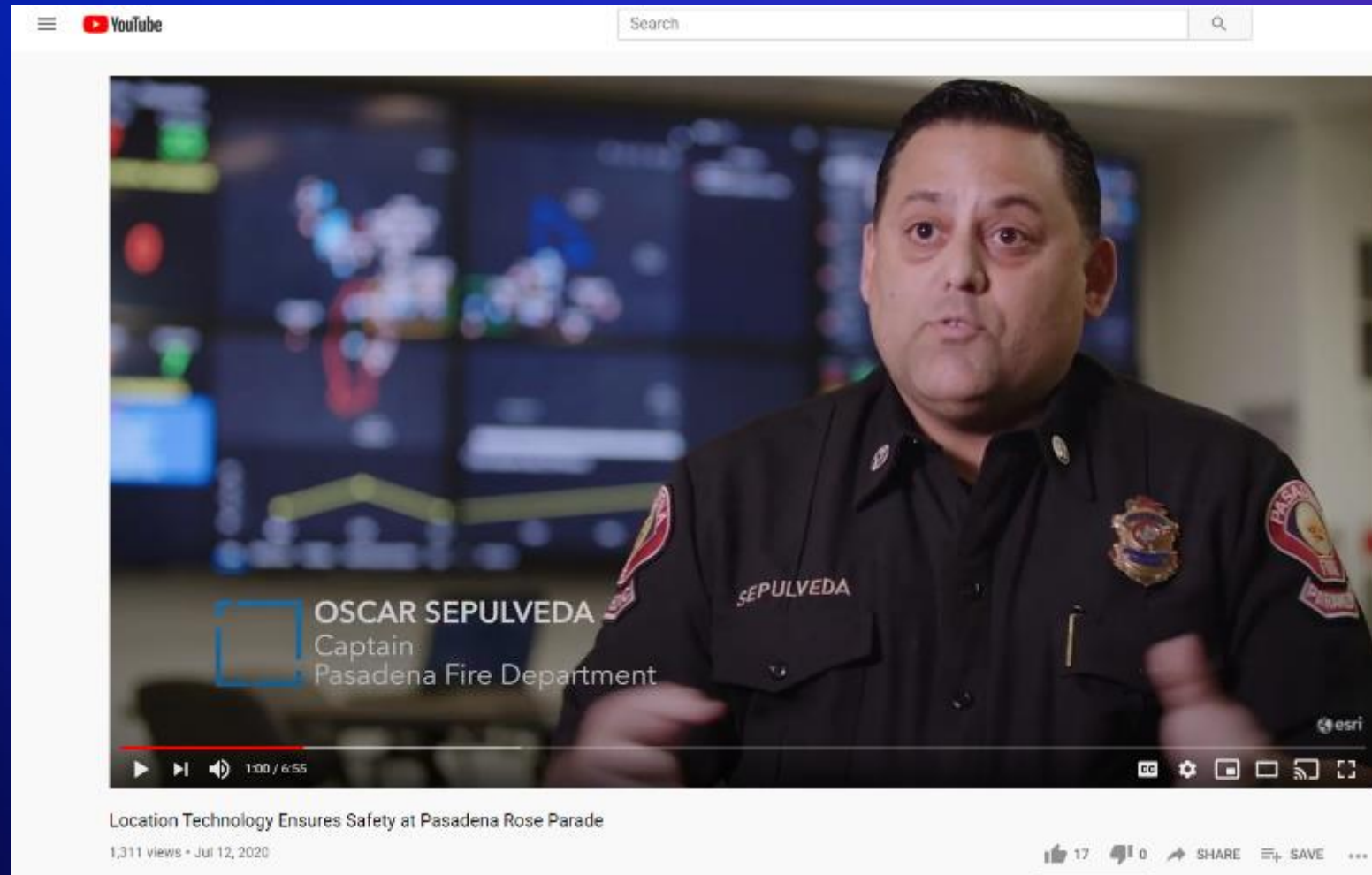
Total Event Incidents Logged

7

Total Event Incidents Including Drops

Location Technology Ensures Safety at Pasadena Rose Parade

<https://youtu.be/kfJUdoovBF4>




2019 Rose Parade Situational Awareness Suite

- Command Staff Incident Dashboard
- Operations Web App
- Social Media Monitoring
- Traffic Dashboard
- Weather Conditions


2019 Rose Parade Command Staff Dashboard

Pasadena Fire
Current Active

 7

Last update: a few seconds ago

Pasadena Fire
Calls in the last 24


 82

Last update: a few seconds ago

Open Incidents

ALARM
Incident Number: VFC19000117
Location: 412 RAYMOND -- UNION STATION
E31,

TRAUMA
Incident Number: VFC19000116
Location: RA734,



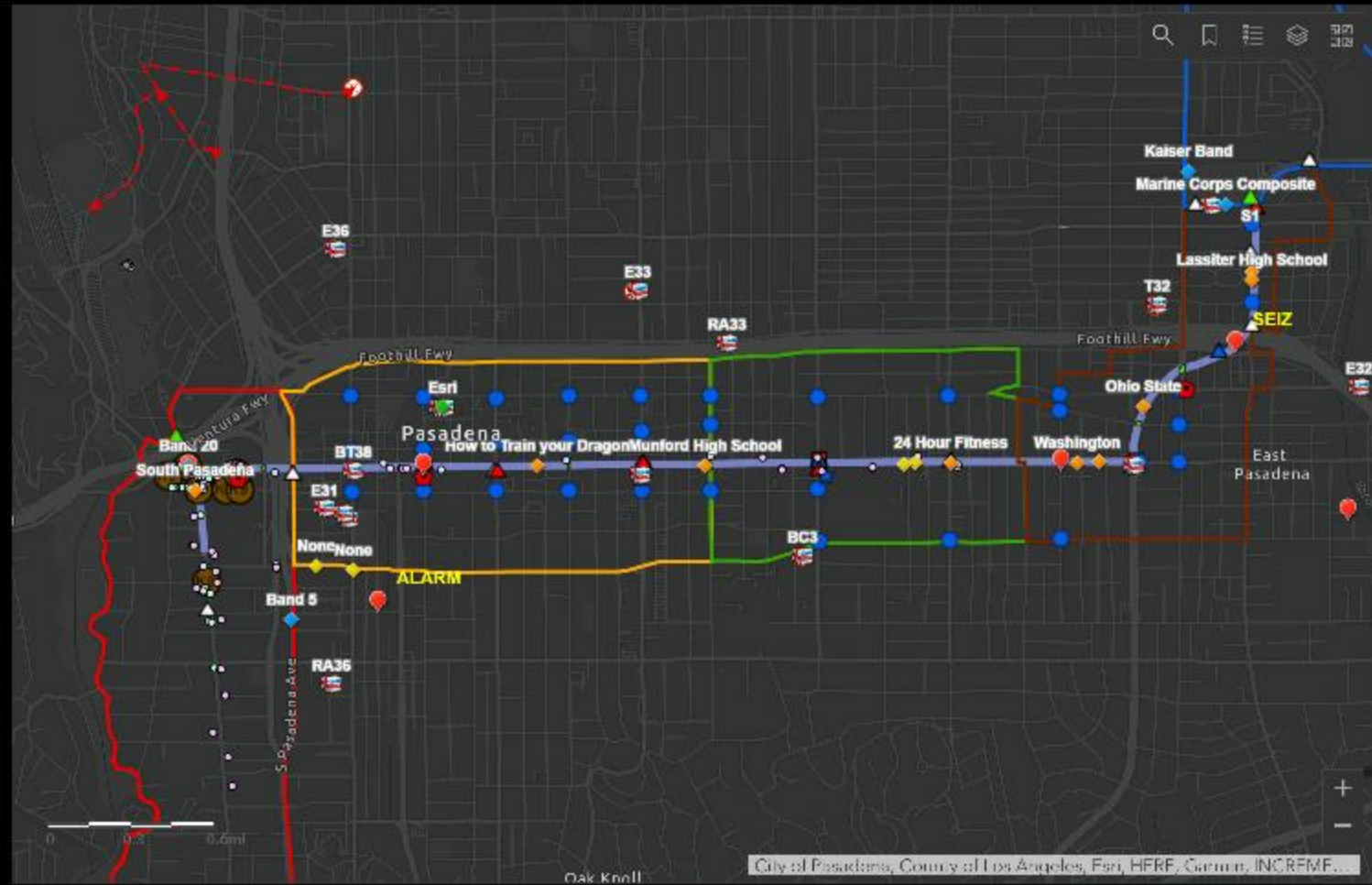
Incident Type	Count
ALARM	1
SYNCO	1
VEH	1
SEIZ	1

Open Calls By Type

Last update: a few seconds ago

Incidents (Real Time)


24 Hour History




The map displays the Pasadena area with various landmarks and fire units. The parade route is highlighted in blue, starting from the bottom left and moving towards the top right. Fire units are marked with icons and labels: E36, E33, RA33, RA35, BC3, E31, BT38, E32, E34, E37, E38, E39, RA31, and SEIZ. Other labels include Kaiser Band, Marine Corps Composite, Lassiter High School, Ohio State, 24 Hour Fitness, Washington, East Pasadena, and South Pasadena. The map includes a scale bar (0 to 0.5 miles) and a compass rose.

Tracked Fire Units


 BC3 fireunit

 BT38 fireunit


 E31 fireunit


 E32 fireunit


 E33 fireunit

 E34 fireunit

 E36 fireunit

 E37 fireunit

 E38 fireunit

 E39 fireunit

 RA31 fireunit

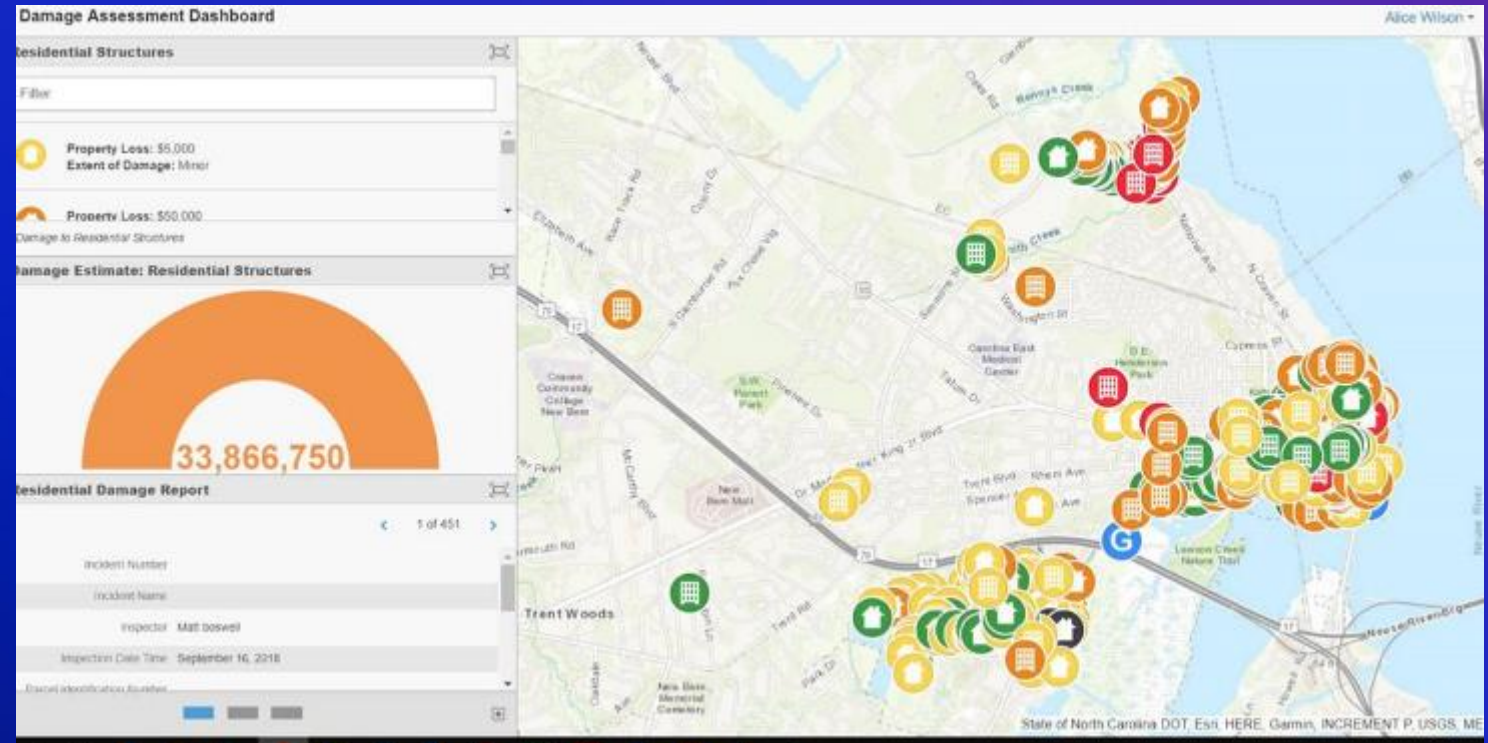
Last update: a few seconds ago

Fire Units

Summarize Field Work

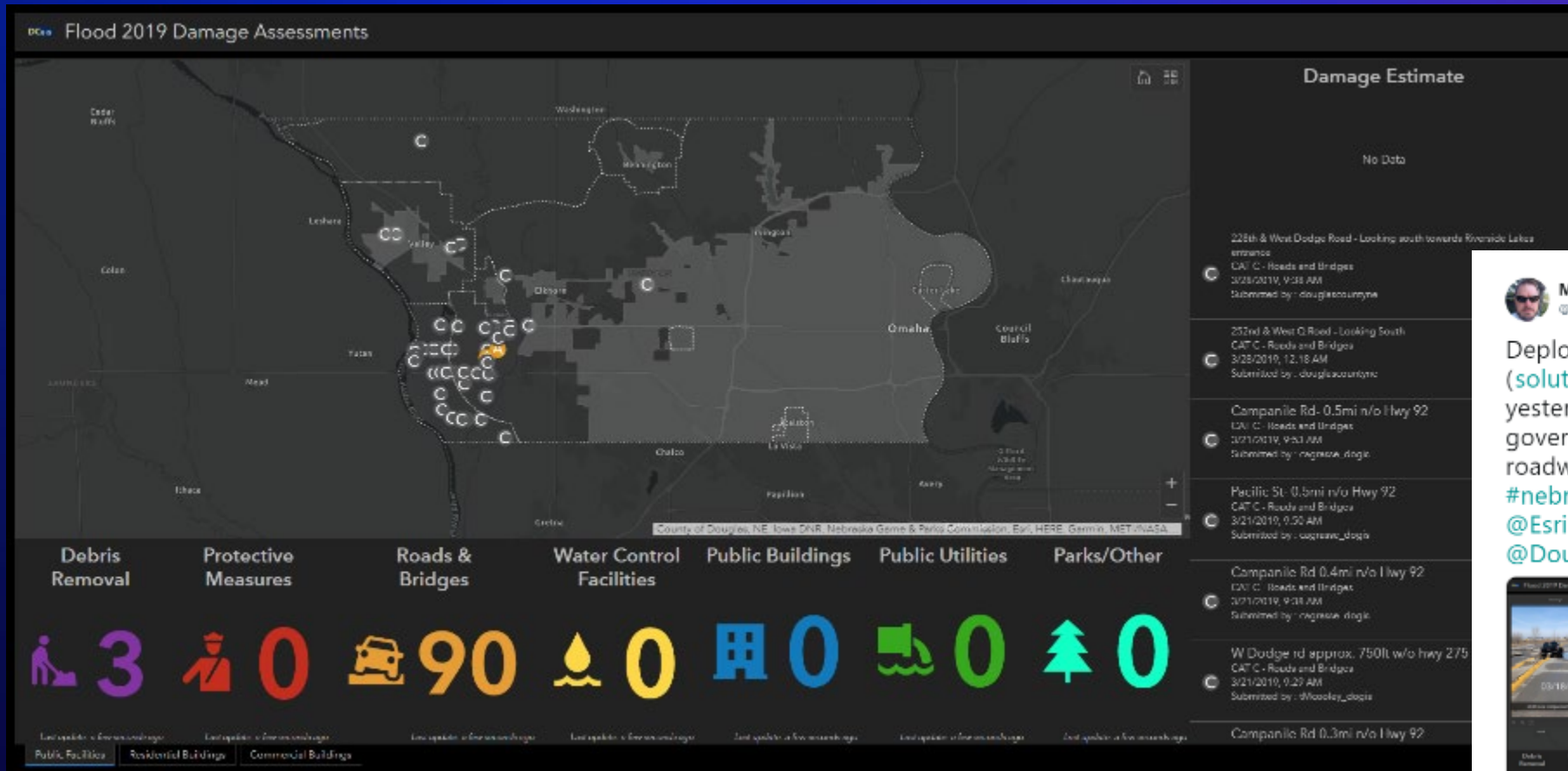
City of New Bern, NC – Hurricane Florence

<https://www.esri.com/about/newsroom/wp-content/uploads/2018/10/use-of-damage-assessment-config-speeds-rescues.pdf>



Douglas County Nebraska

2019 Spring Flooding



Michael Schonlau
@MikeSchonlau

Follow

Deployed ESRI's Damage Assessment solution ([solutions.arcgis.com/emergency-manage ...](https://solutions.arcgis.com/emergency-manage...)) yesterday for first responders and local government staff to capture preliminary roadway and building damage assessment for #nebraskaflood #flood2019 @esriSurvey123 @EsriSLGov @DouglasCoGIS @DouglasCountyNE

6:12 AM - 19 Mar 2019 from Omaha, NE

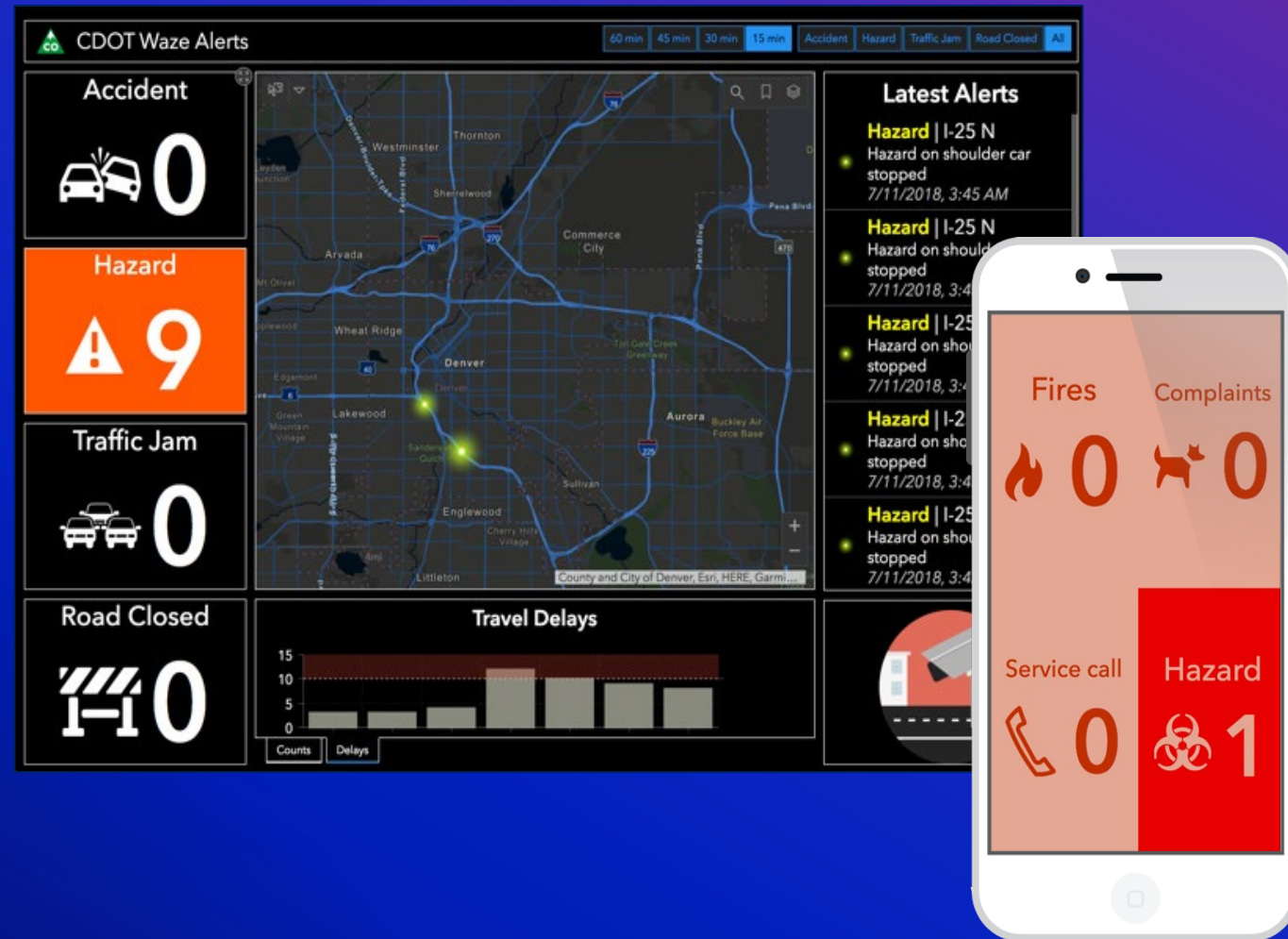
9 Retweets 43 Likes

In Summary

- **Dashboards = Maps + Key Metrics / KPI**
- **Operationalize Plans / Documents**
- **Put multiple Dashboards in “binders”**
- **Orchestrate Data**
- **Infographic Dashboards**
- **Special Events – Track activity and assets**
- **Summarize Field Work**

What are the qualities of a “Good” Dashboard?

- Know your audience:
 - What question(s) are they trying to answer?
 - In what environments are they going to view the dashboard?
 - What is their technical level?
- Express information clearly and accurately
- Focus attention to where it is needed



Don't build this... if your users need this.

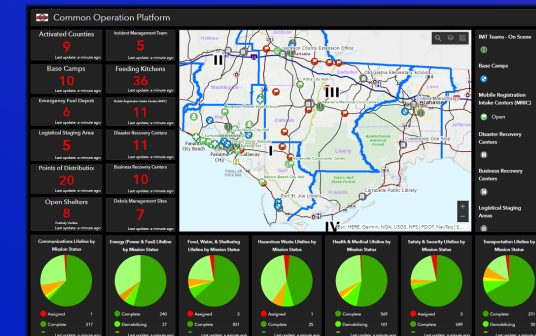
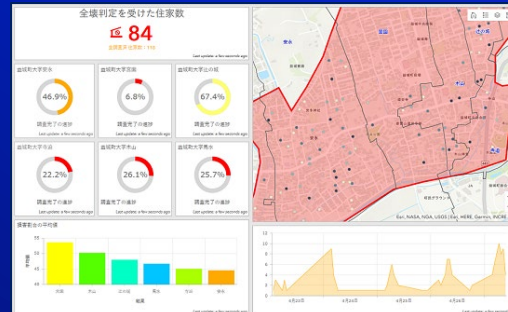
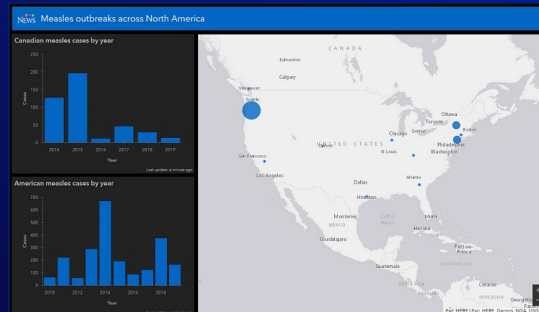
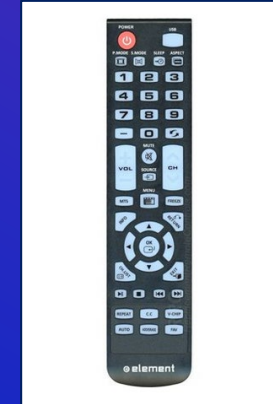


Design Approach

Build focused dashboards

Design Theory: Flexibility-Usability Tradeoff Example

flexibility



usability

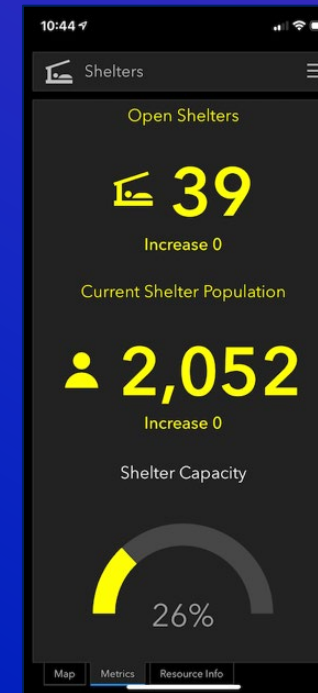
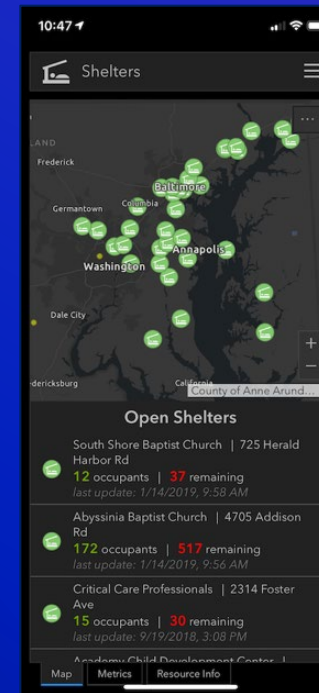
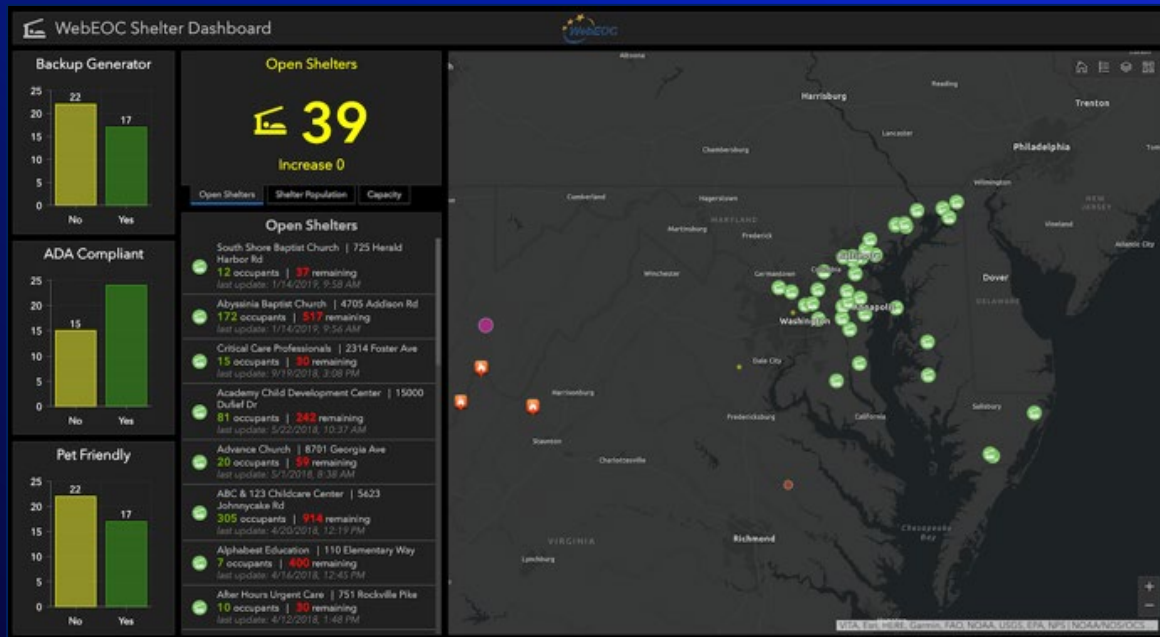
Dashboard Layout - Elements

- Configure a dashboard to the audience's requirements
- Use appropriate elements
- Provide contextual information
- Use color to focus on certain data

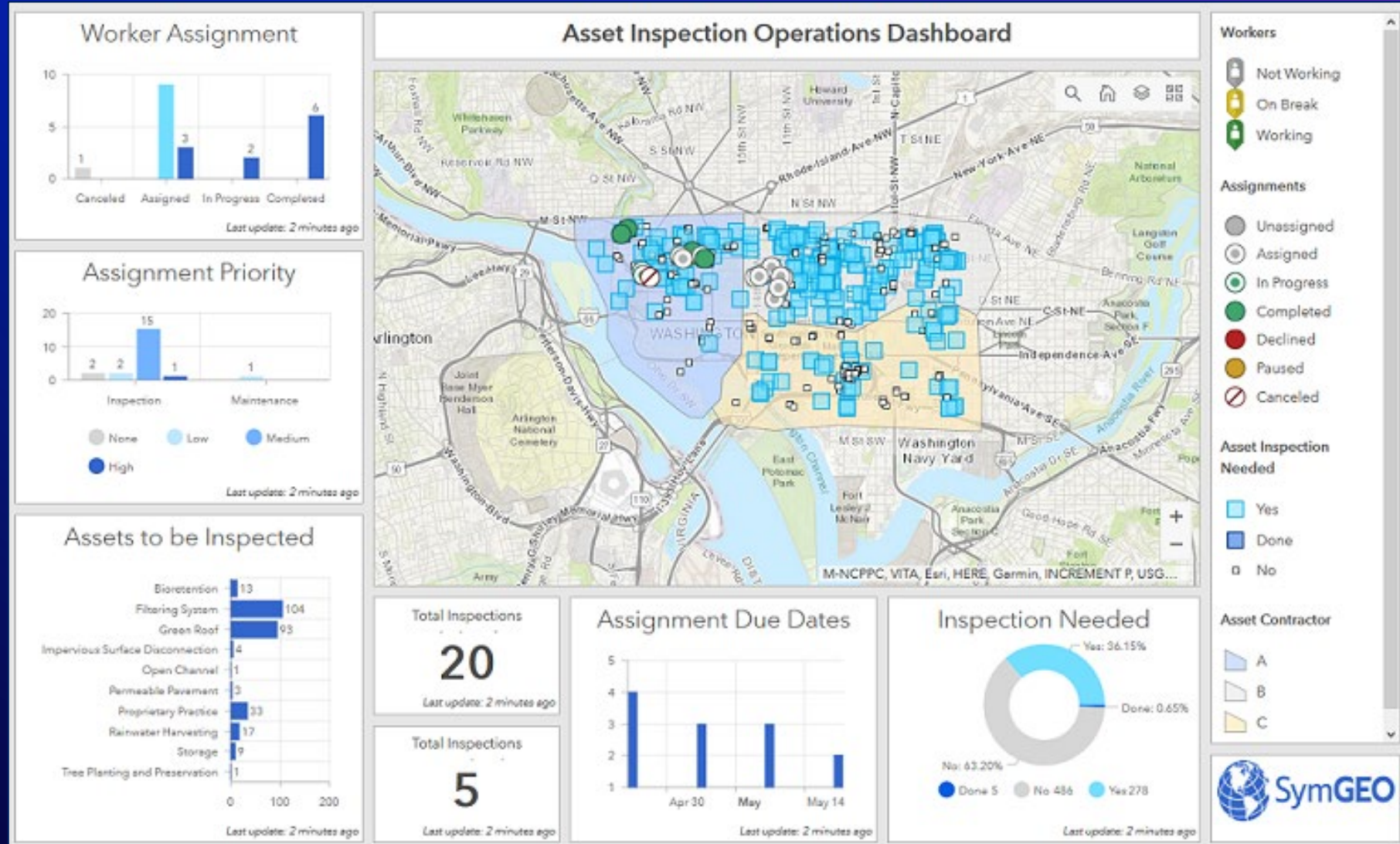


Designing Mobile Dashboards

- Need to refactor the layout for mobile devices



Dashboard Layout – Some Good Examples



#2 Incident List

9/27/2020, 8:00 PM : ACADIA PARISH (22001: Cleared :
VILLAGE OF ESTHERWOOD WATER SYSTEM

9/27/2020, 8:00 PM : ALLEN PARISH (22003: Cleared :
TOWN OF ELIZABETH WATER SYSTEM

9/27/2020, 8:00 PM : ALLEN PARISH (22003: Cleared :
NORTHWEST ALLEN WWD WATER SYSTEM

9/27/2020, 8:00 PM : ALLEN PARISH (22003: Cleared :
TOWN OF OBERLIN WATER SYSTEM

9/27/2020, 8:00 PM : ALLEN PARISH (22003: Cleared :
SOUTH OAKDALE WATER SYSTEM

9/27/2020, 8:00 PM : ALLEN PARISH (22003: Cleared :
SOUTHWEST ALLEN WW DISTRICT NO. 3

9/27/2020, 8:00 PM : ALLEN PARISH (22003: No Status :
EAST ALLEN PARISH WATER WORKS

Filter map and report count

Last update: 2 minutes ago

Layout and Grouping Demo

Brady

Group as a row

What if I can't fit everything on one Dashboard and I only want one URL?

- Use Case: Want a single URL to access and view many Dashboards

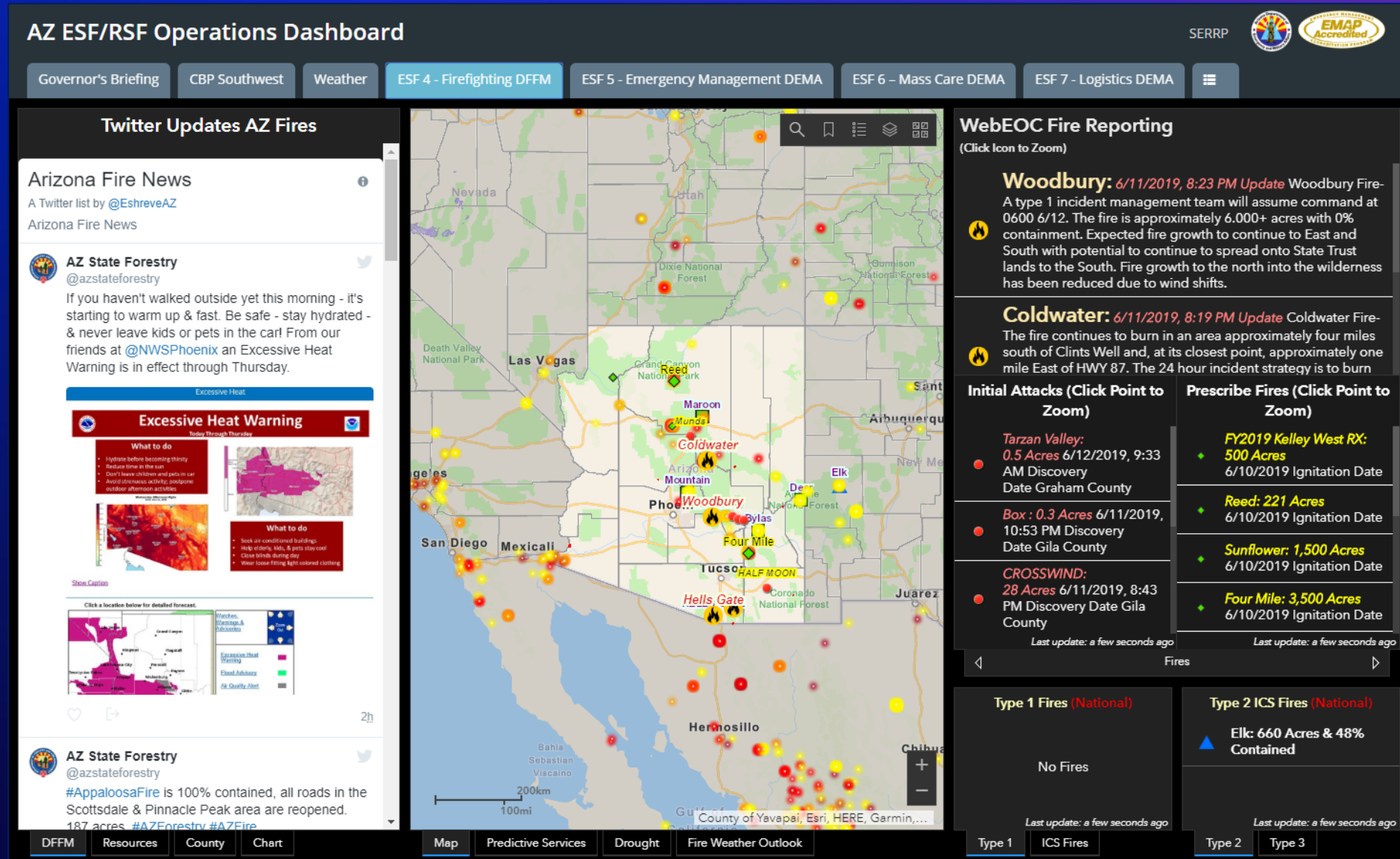
- 3 approaches to solve:

1. Use a Story Map to contain the Dashboards
2. Display several Dashboards on a web page
3. “Stack” several Dashboards on top of each other

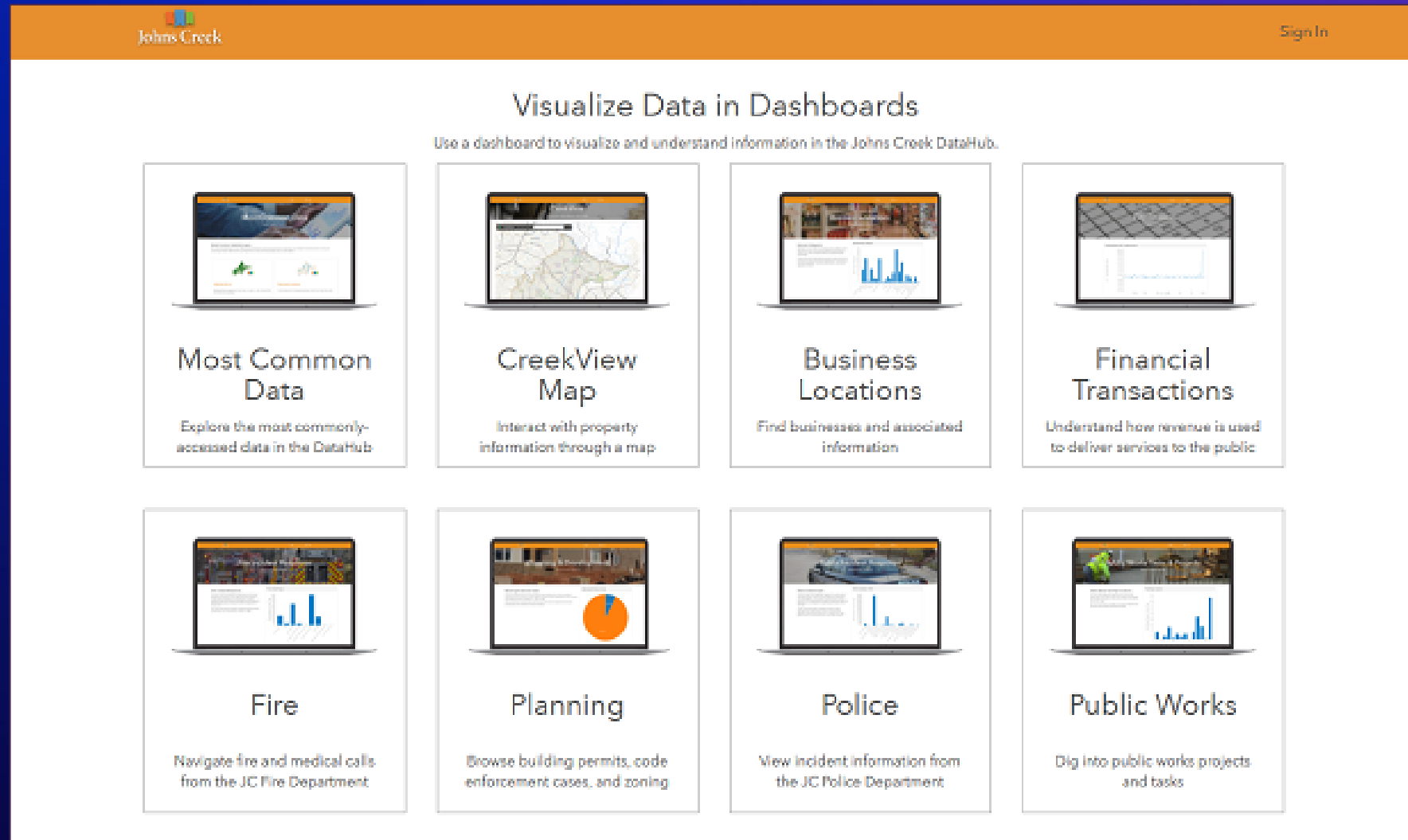


single URL

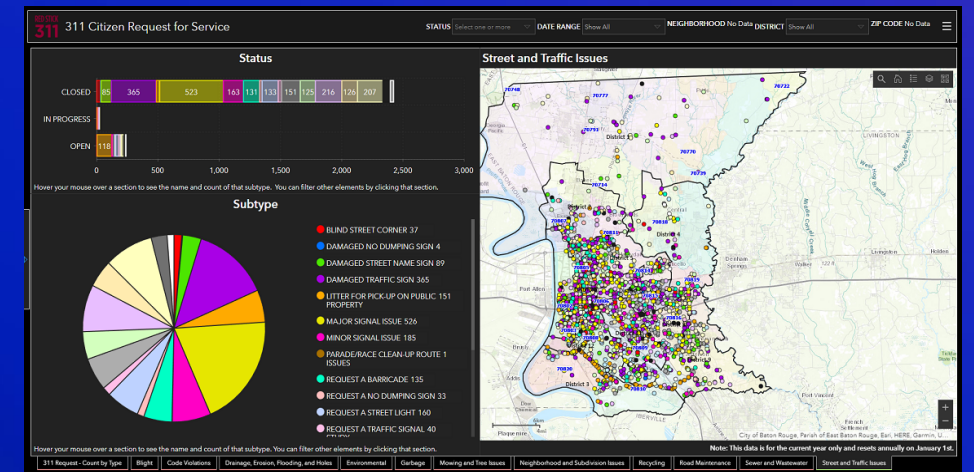
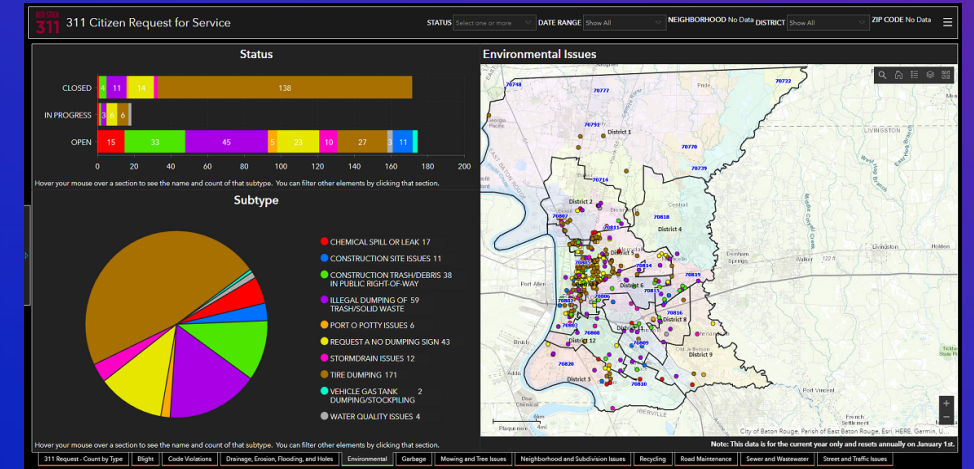
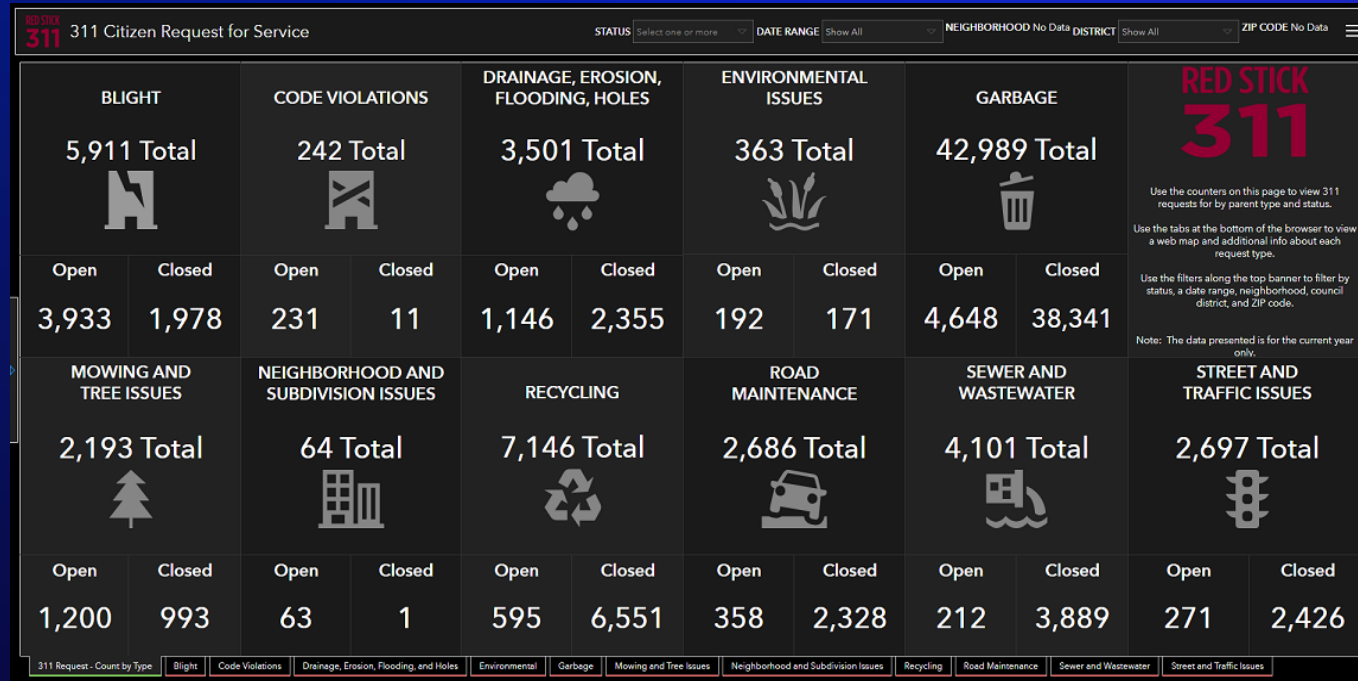
Dashboard Layout – Contain in a Story Map



Dashboard Layout – Display on a Web Page



Dashboard Layout – Stack Embedded Content Elements















Quick Overview of Dashboard Elements

Many data visualization options

Dashboard Elements

- Header
 - Side Panel
 - Map and Map Legend
 - Serial chart
 - Pie chart
 - Indicator
 - Gauge
 - List
 - Details
 - Rich text
 - Embedded Content
-
- Does a Dashboard need to have ALL of these elements?

	Header
	Side Panel
	Map
	Map Legend
	Serial Chart
	Pie Chart
99!	Indicator
	Gauge
	List
	Details
abc	Rich Text
	Embedded Content

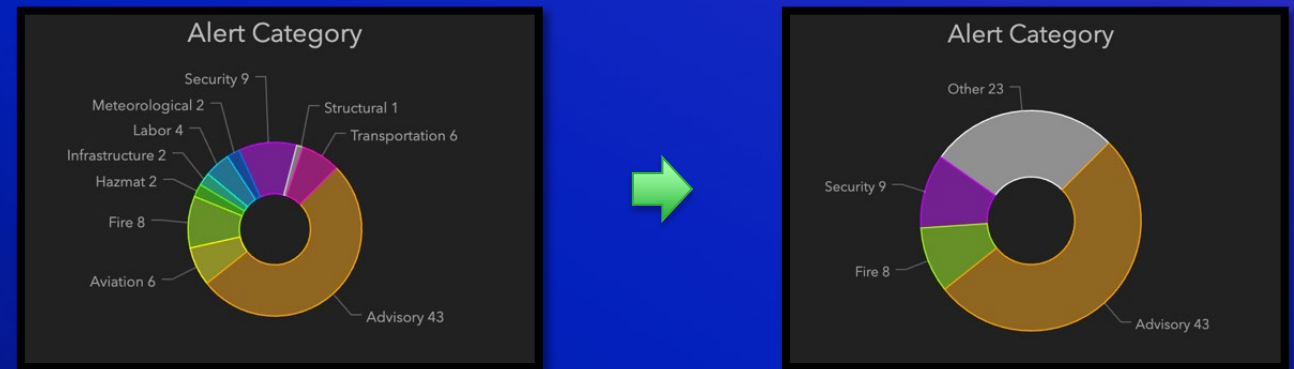
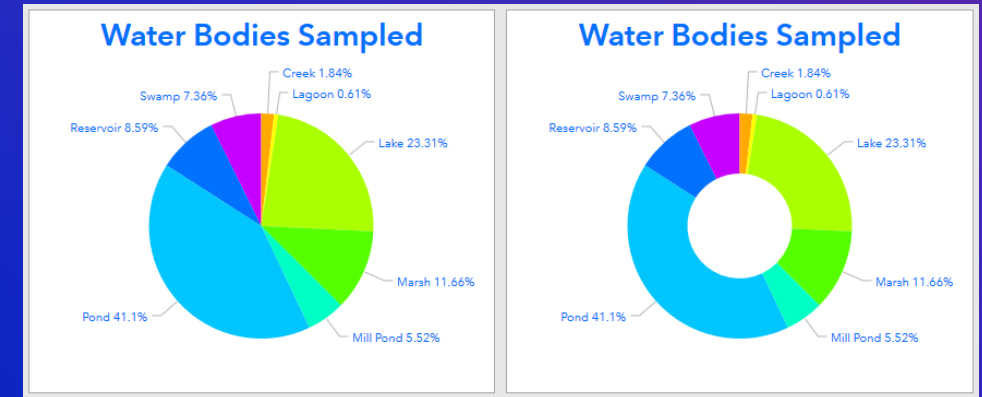
Dashboard Actions = Interactivity Configured for each Widget!

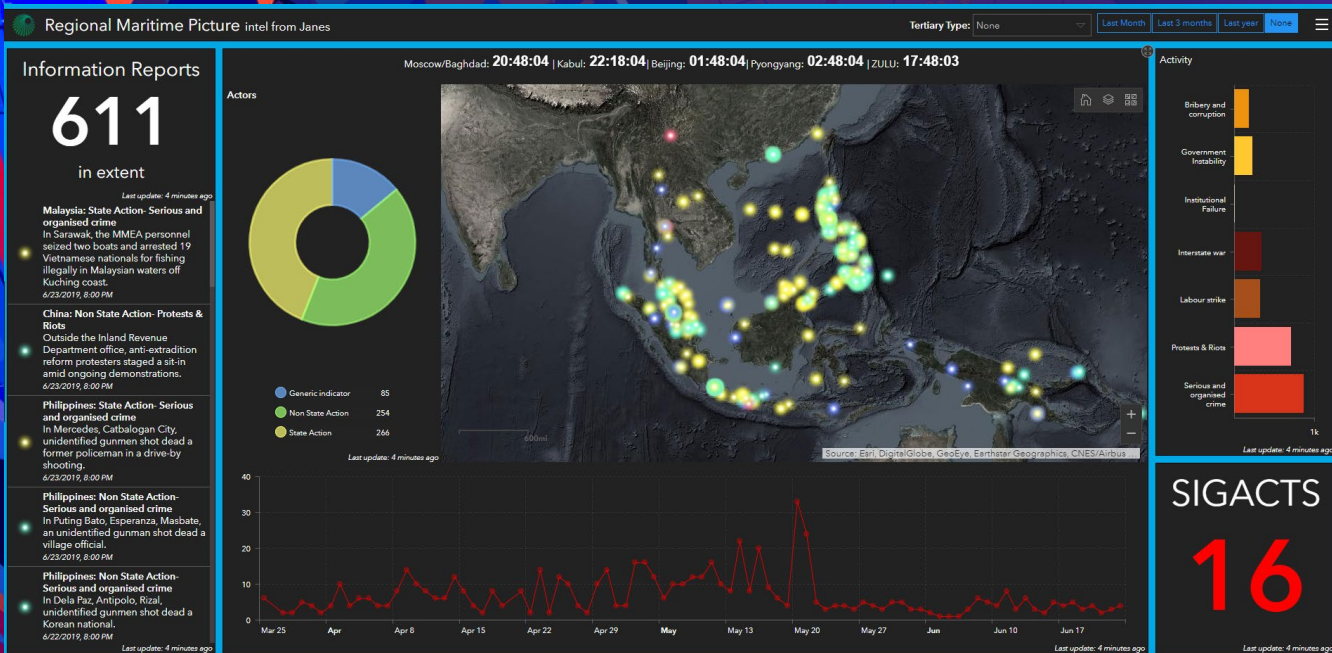


- An interactive dashboard involves:
 1. Events: map extent change or selection change (triggered by user)
 2. Actions: spatial/attribute-based filtering or map actions
 3. Defined at source elements, applied to target elements
- Configure and apply multiple filters to drill down on data
- Set up attribute-based filters to show related records
- Flexibility-usability tradeoff: *As the flexibility of a system increases, the usability of the system decreases*

Pie Chart → Show part-to-whole relationships or for data composition

- Use 'donut' style over 'pie slices' style
- Limit to 6 categories or less
- Use labels or legend, not both

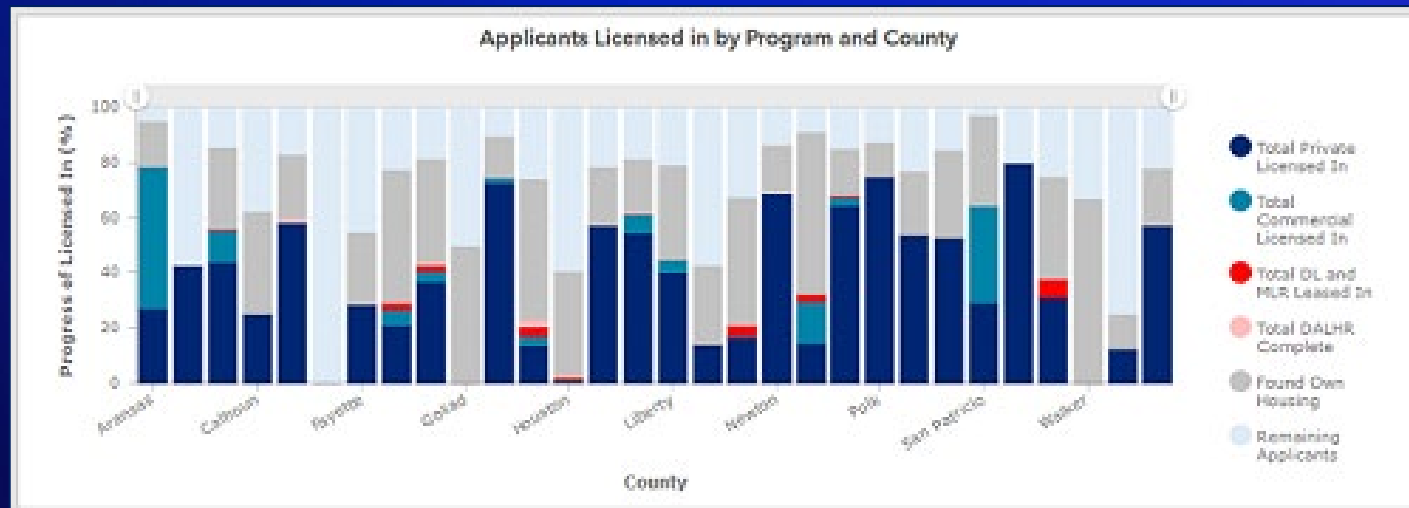
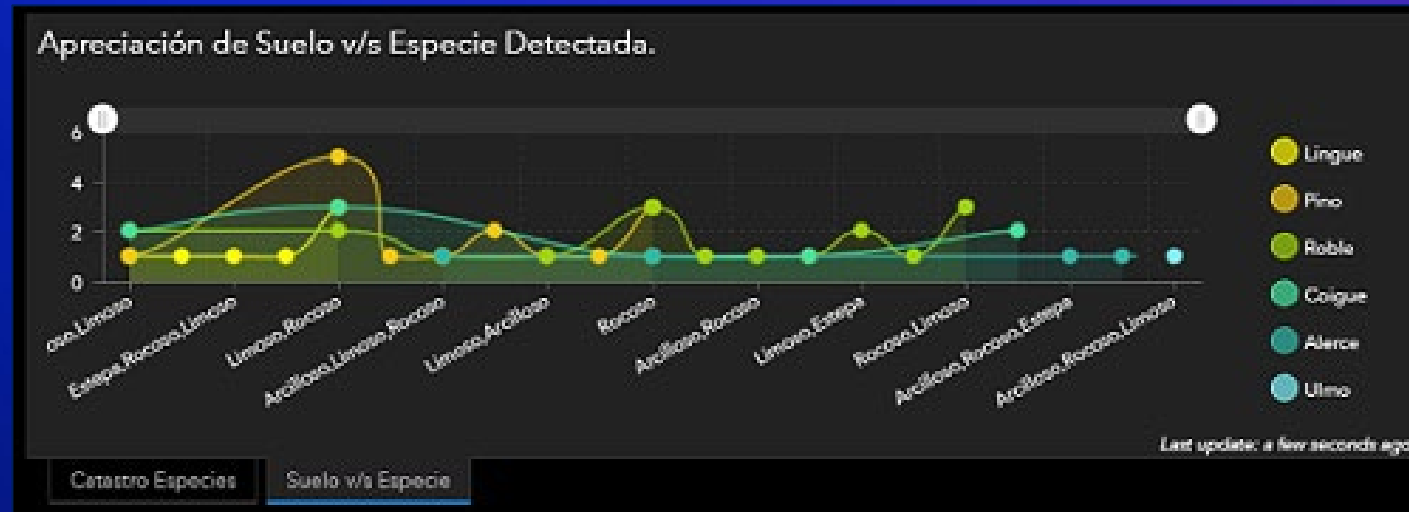




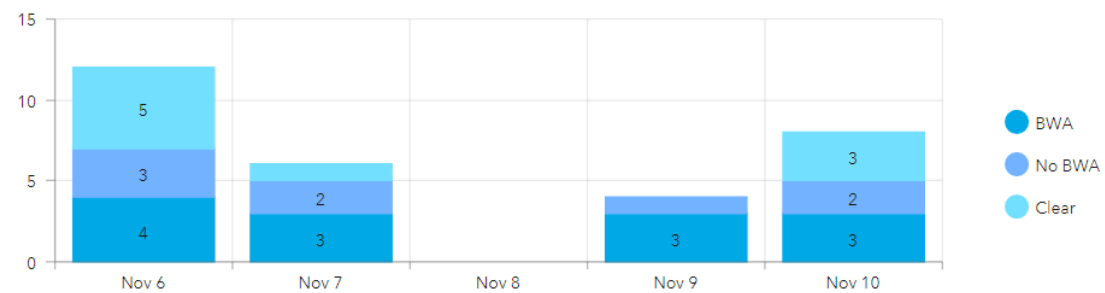
Pie Charts

Armando

Serial Chart → Compare something between different groups or track change(s) over time



Water Advisory Status



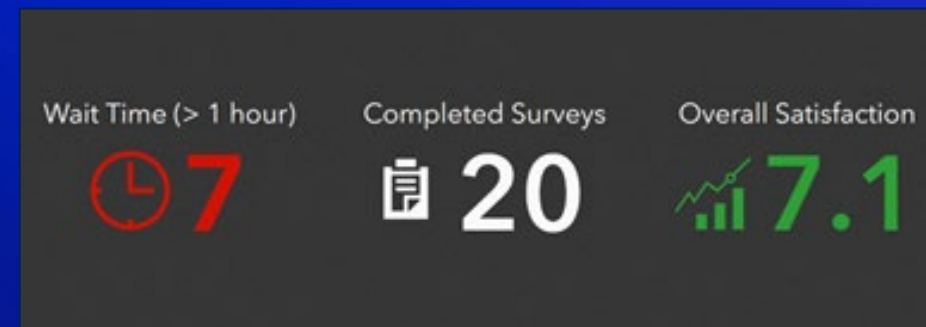
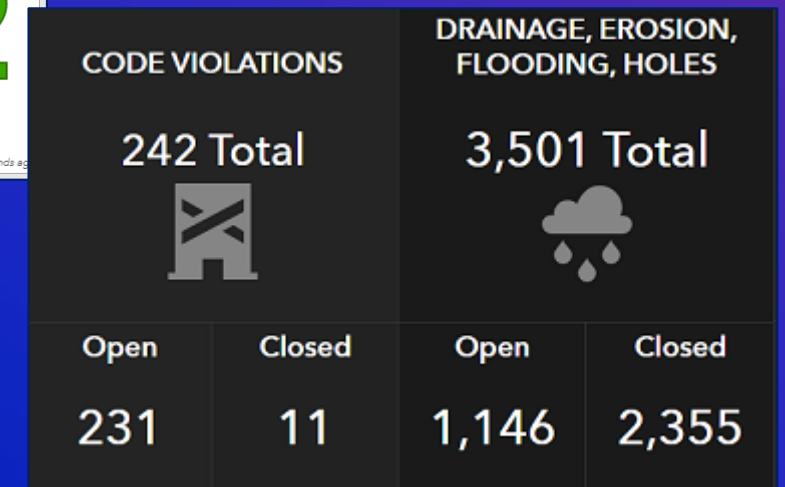
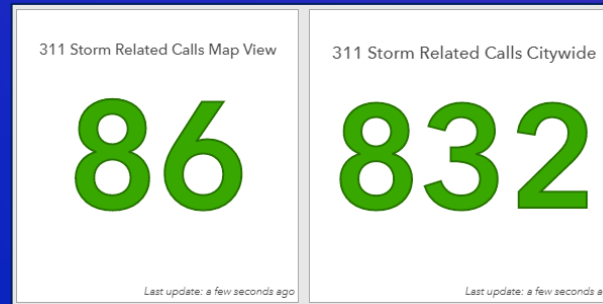
Last update: a few seconds ago


Serial Charts Demo

Brady

Indicator element

- Great performance indicator
 - Simple, easy to interpret
- Leverage other properties
 - Icon
 - Supporting text
 - Colors





Total Capacity

 **400**

157 Inmates

On Selected Floors

Indicator Demo

Brady

Dashboard Settings

ThemeGeneralURL Parameters

Add URL Parameter

state

Feature Parameter

Namestate

Layer: ProjectStateConceptChange

Unique ID FieldState

When Parameter Value(s) ChangeAdd Action

Filter

99! NumProjects

ProjectList

ProjectStateConcept

Pan

URL Parameters Demo

Brady

List element

- Only display relevant information
 - Purpose of the list
- Considerations:
 - Which attributes are needed?
 - In what order?
 - How many features?
- Leverage HTML to help format appearance

Top 10 Calls | Longest Response Time

- Psych / Suicide Attempt (L1) | Level 1 Medical
Station 19 | Response Time: **2,308 sec**
3/23/2015, 12:10 PM
- Psych / Suicide Attempt (L1) | Level 1 Medical
Station 16 | Response Time: **1,559 sec**
3/22/2015, 8:19 PM
- Unc/Fainting (Non Trauma)(L1) | Level 1 Medical
Station 45 | Response Time: **1,460 sec**
3/24/2015, 12:22 PM
- Psych / Suicide Attempt (L1) | Level 1 Medical
Station 12 | Response Time: **1,387 sec**
3/26/2015, 3:47 AM
- Breathing Problems (L1) | Level 1 Medical
Station 39 | Response Time: **1,338 sec**
3/24/2015, 12:23 PM

[illegible]

Global Activity Tracker Data: GlobalIncidentMap

Incident Category

All

Country/State Selector

Date Selector

Last week

12 Hours

48 Hours

Live Incident Feed

TEXAS - Bomb Squad Responds To Northeast El Paso Threat Not To Be Credible
1/9/2021, 3:54 PM
Bomb Incidents/Explosives/ Hoax Devices

MAINE Authorities Investigate Suspicious Package At Versant Power In Bangor
1/9/2021, 4:34 PM
Bomb Incidents/Explosives/ Hoax Devices

DISTRICT OF COLUMBIA - Police Clear Scene After Finding Suspicious Package Near DNC
1/9/2021, 4:31 PM
Other Suspicious Activity

FLORIDA - Package Deemed Not Suspicious US-41 Reopens Saturday
1/9/2021, 4:24 PM
Other Suspicious Activity

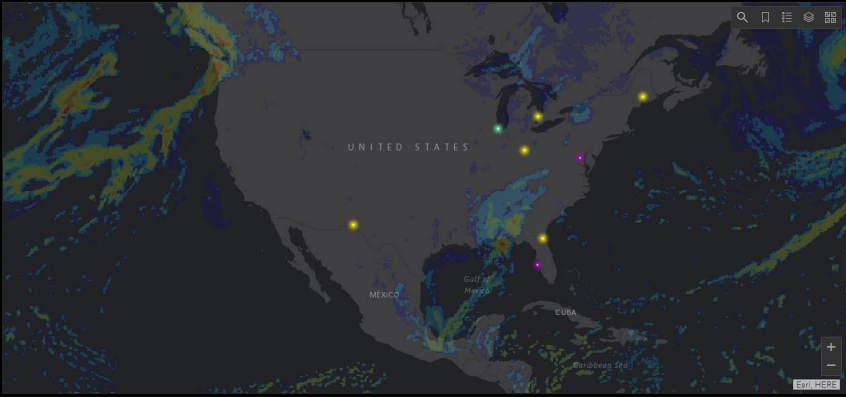
FLORIDA - Bomb Threat Investigation Closes Westside Intersection For Hours Saturday
1/9/2021, 4:05 PM
Bomb Incidents/Explosives/ Hoax Devices

MICHIGAN - Bomb Threat Unfounded At Port Huron-Area Restaurant
1/9/2021, 4:03 PM
Bomb Incidents/Explosives/ Hoax Devices

OHIO - Suspicious Package Prompts Bomb Squad Response At Miamisburg Best Buy Saturday
1/9/2021, 4:00 PM
Bomb Incidents/Explosives/ Hoax Devices

ILLINOIS - Chicago Gunman Kills 3 Wounds 4 In Random Spree Before Being Shot Dead By Police
1/9/2021, 2:51 PM
Shootings / Sniper Incidents/ Etc

Moscow/Baghdad: 20:49:40 | Kabul: 22:19:40 | Beijing: 01:49:40 | Pyongyang: 02:49:40 | ZULU: 17:49:40



UNITED STATES


Mexico

Gulf of Mexico

Cuba

Caribbean Sea

EXP. HERE



Global Incident Trend Line of Activity

Last update: 23 minutes ago

Last update: an hour ago

Last update: 23 minutes ago

Terror Incidents

0

within map view

Bomb Incidents

5

within map view

Arrests

0

within map view

Arrests

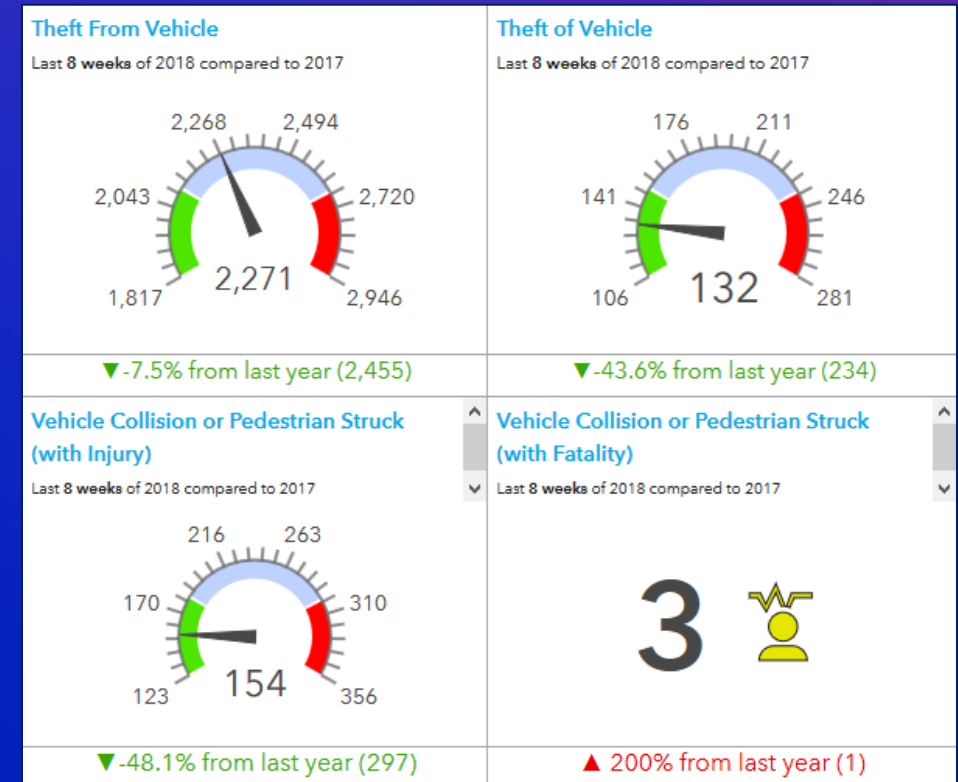
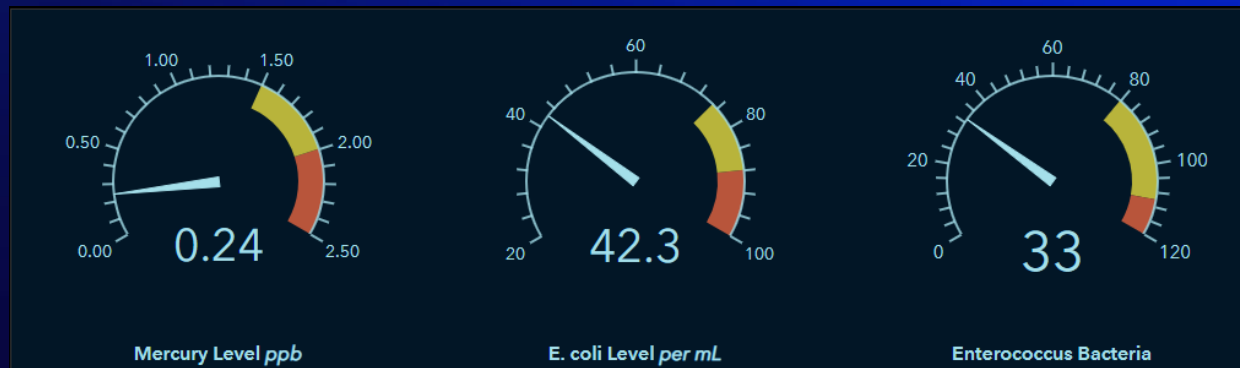
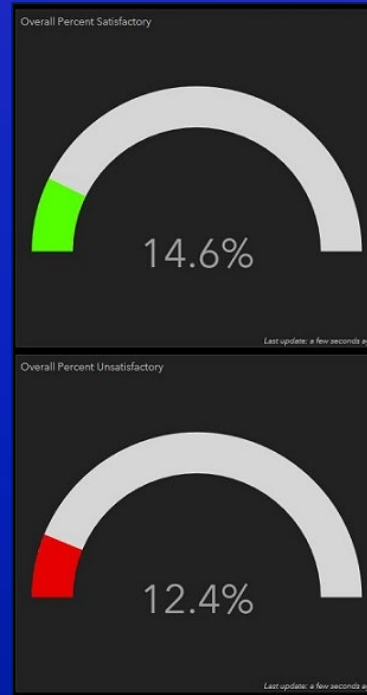
No Arrests

Last update: 23 minutes ago

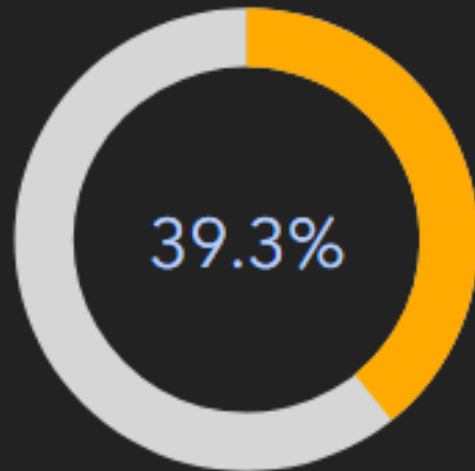
Lists
Armando

Gauge element

- Provide context
- Unit of measure



Prison Capacity as
Percent



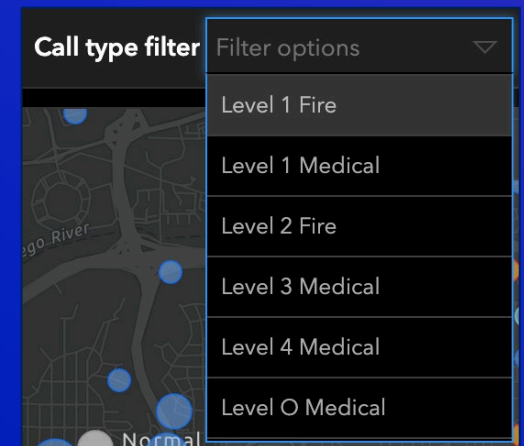
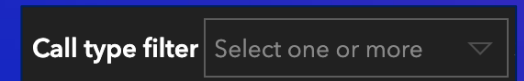
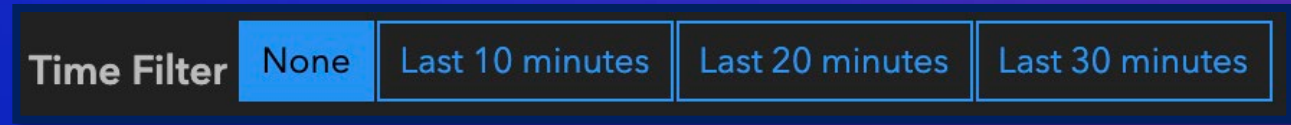
39.3%

Gauges Demo

Brady

Selectors and Filters

- Header or Side Panel?
 - Header → minimal choices
 - Side Panel → more choices
- Filters
 - How many?
 - Buttons or Dropdown?
 - Configure actions
 - Spatial or attribute?



Floor

All 1 2

gang1 gang2 gang3 gang4 none

Admittal Date Range

Bed Assignment Date Range

1/13/2021

Days Remaining of Sentence

125 7328

Filter Demo

Brady

Embedded Content element

- Survey123 web forms
 - Support data collection workflows
- Web AppBuilder apps
 - Enable editing workflows
 - Incorporate custom widget functionality
- 3D web scenes
 - 3D visualizations



Embedded Content

Data

General

Data Options

Show data table

Type

StaticFeatures

Layer: Project_Tbl - Project_Tbl

Change

Filter

+ Filter

Content Type

DocumentImageVideo

URL

Fields: {}

https://survey123.arcgis.com/share/e7b19670afea40ea902c95cc92b6c765?mode=e

Maximum Features Displayed

50

Sort By

+ Sort

Update Project

◀ 1 of 9 ▶

Project Identification*

R8-MT-0001

Project Name*

Missoula-Granite

Fiscal Year Start*

2023

Submit

Embedded Content

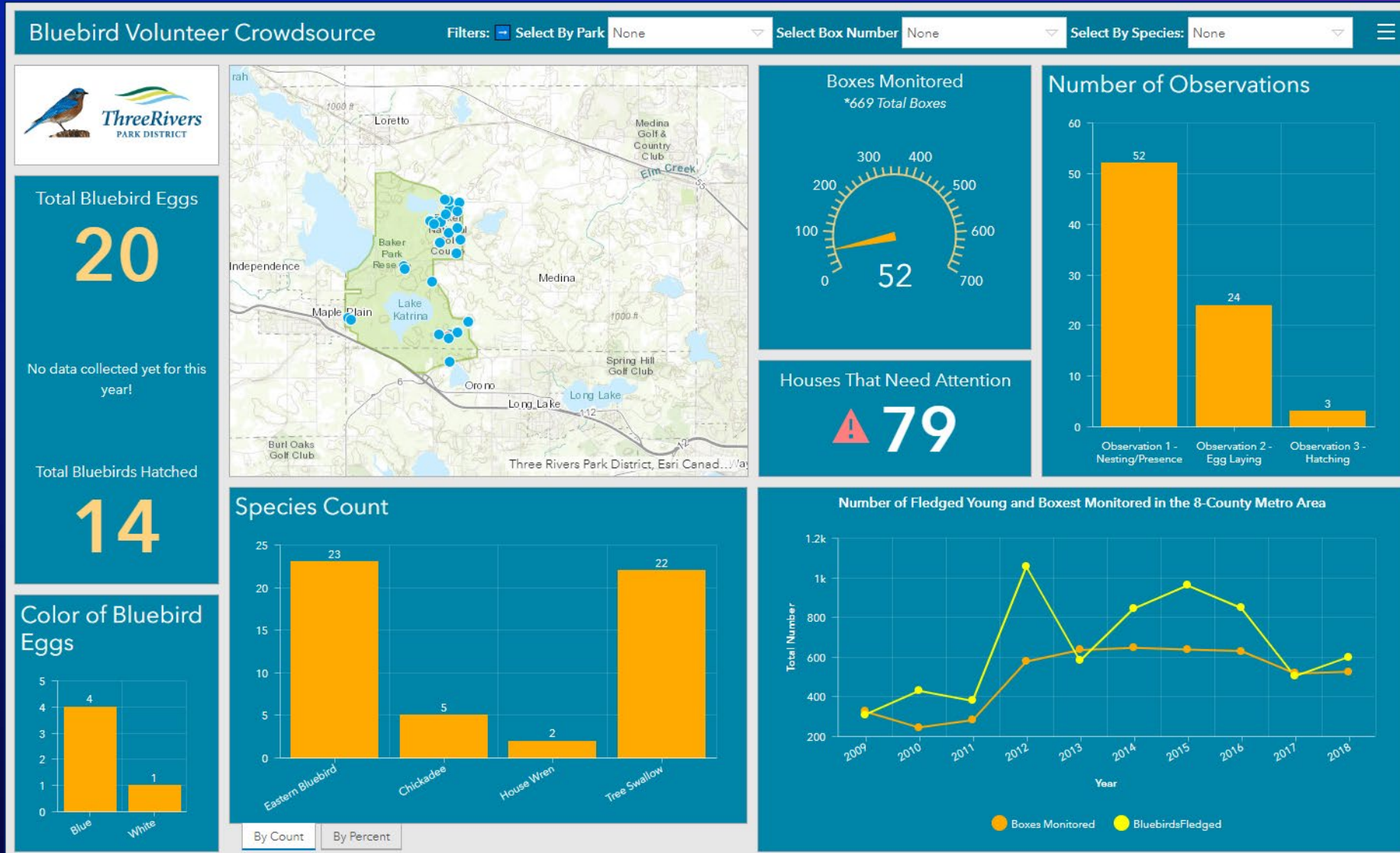
Brady

Colors can be used for Different Purposes

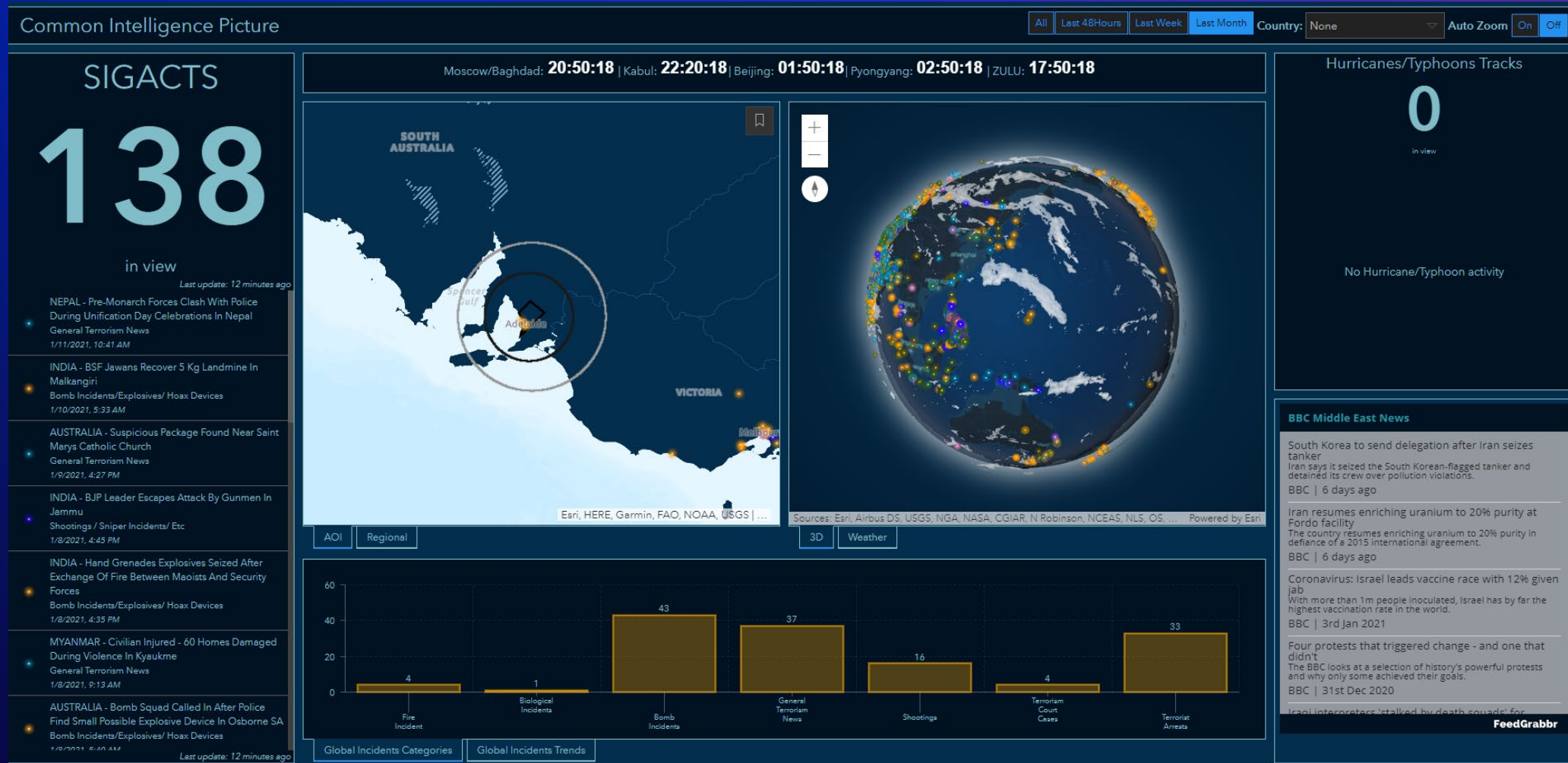
- Connect related data together across different elements of the dashboard
- For branding purposes to create a feeling of authenticity
- Evoke emotion (discomfort or relief)
- Ease eye strain and reduce harshness in dim lighting environments
- Create a captivating aesthetic

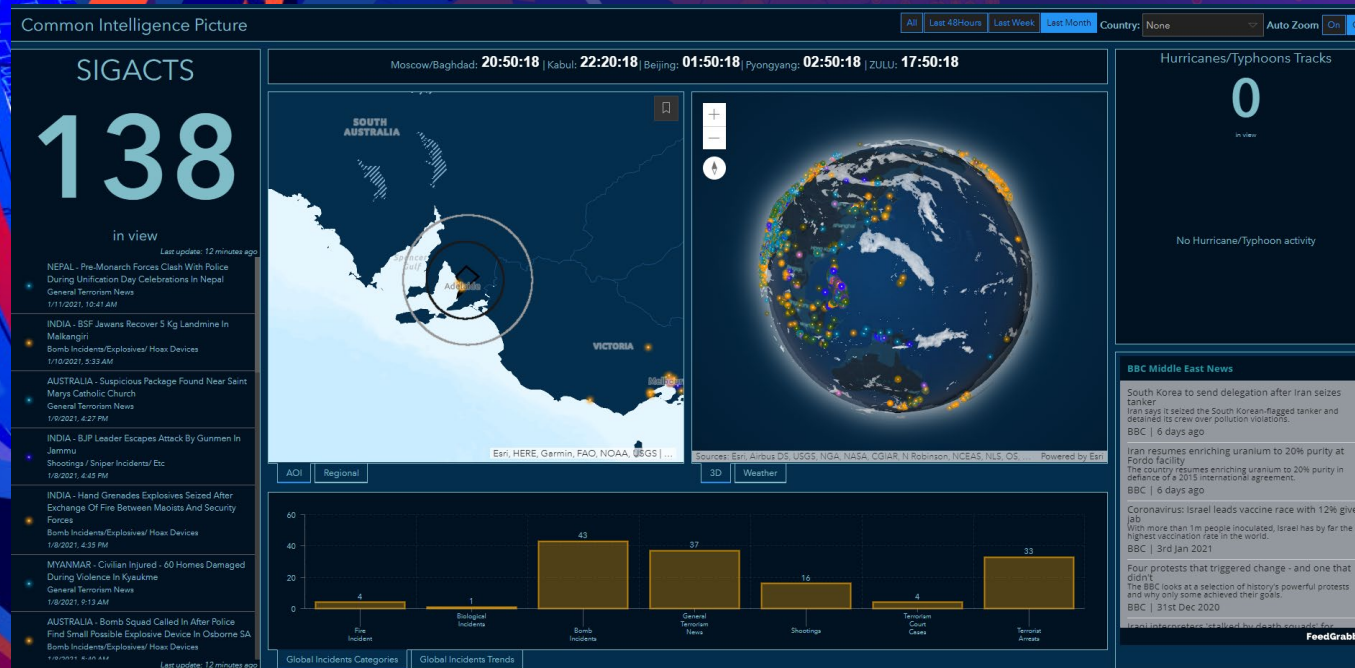


Colors – Example 1



Color - example 2





Esri dashboard examples

Armando Drain

ArcGIS Dashboards Beta

- **Arcade integration**
 - expressions in List and Indicator elements
- **ArcGIS Javascript 4.x based**
- **Increased performance**
- **Percentile statistics in Indicator, Gauge and Serial Chart**
- **Additional data sources (feature collections, csv layers, tables)**
- **Counting with non-empty values and distinct values**
- **Take advantage of new capabilities of Map Viewer Beta**

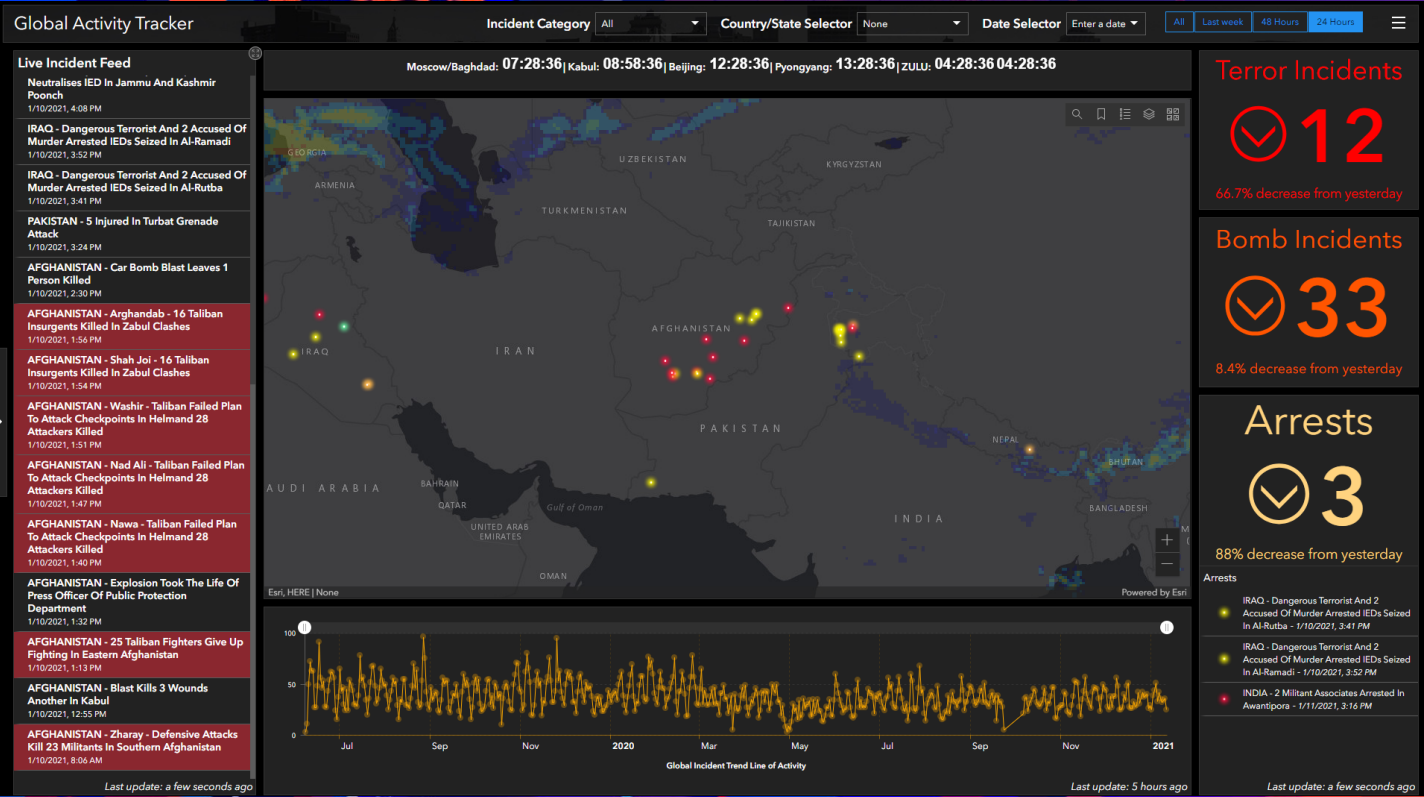


Arcade support in ArcGIS Dashboards beta



- Arcade
 - Expression/scripting language made by Esri
 - Can be authored and executed across the ArcGIS Platform
 - Some example usage:
 - Classify numeric data
 - Date differences
 - Number and date formatting
 - Concatenate text
- Symbology in the Map element
- Pop-ups in the Map
 - Details element





ArcGIS Dashboards Beta

Armando

Resources

- [ArcGIS Dashboard product page](#)
- [ArcGIS Dashboard help documentation](#)
- [ArcGIS Dashboard – Useful Links blog](#)
 - Contains links to many example Dashboards



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SCIENCE
OF
WHERE®