

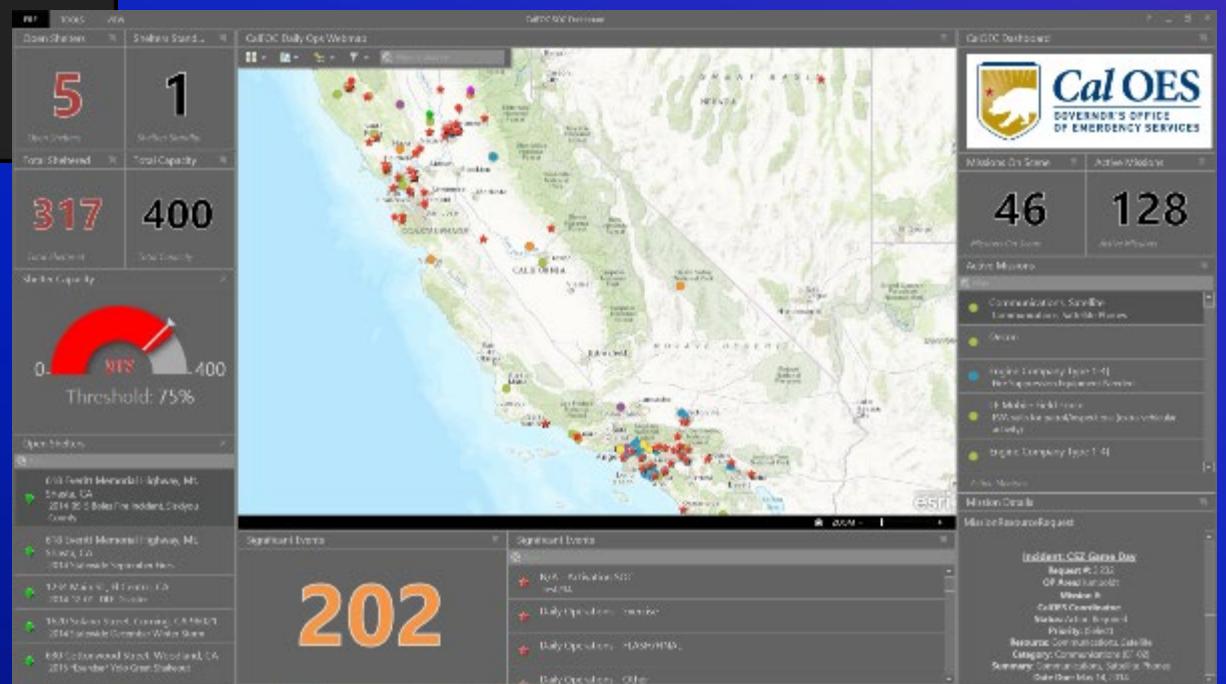
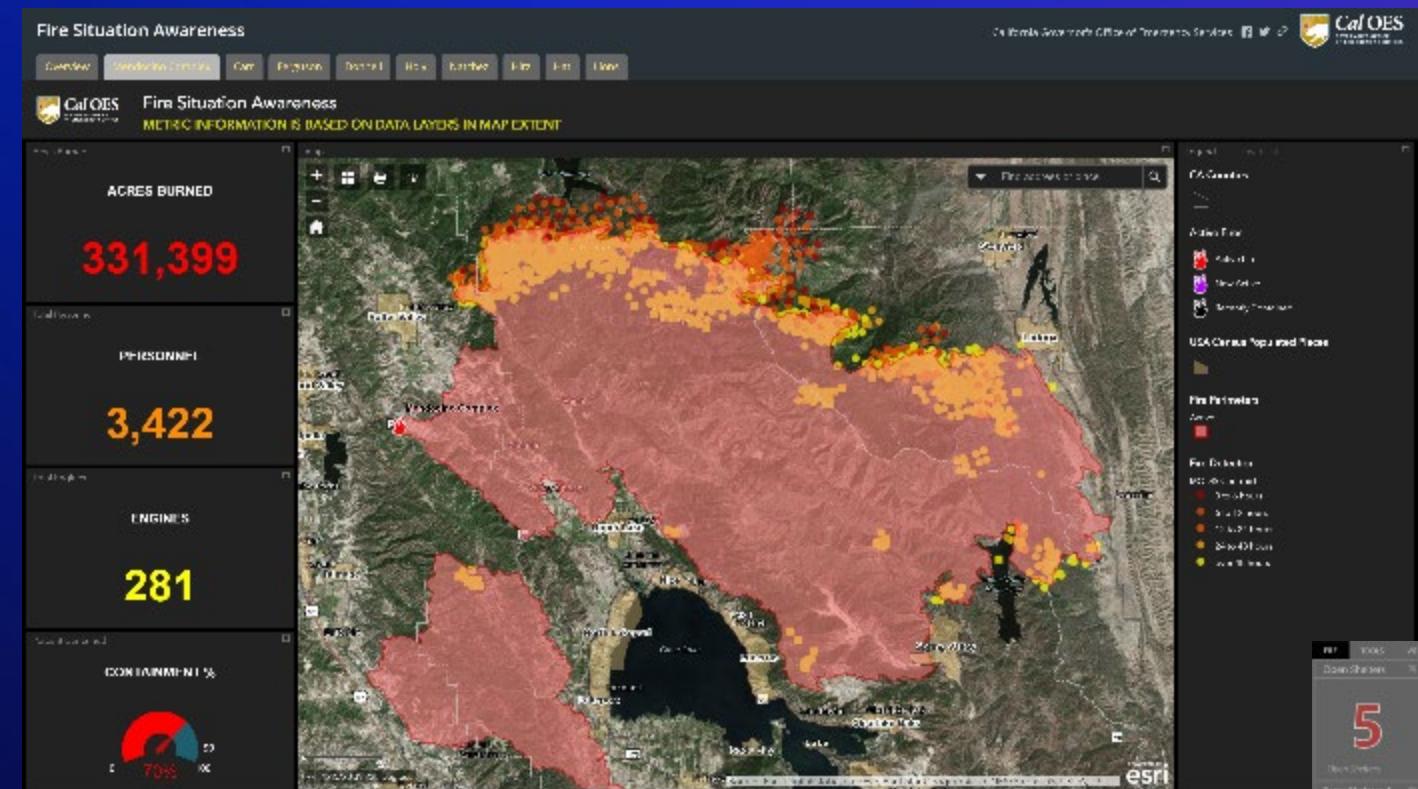


ArcGIS Dashboards: Designing Effective Dashboards

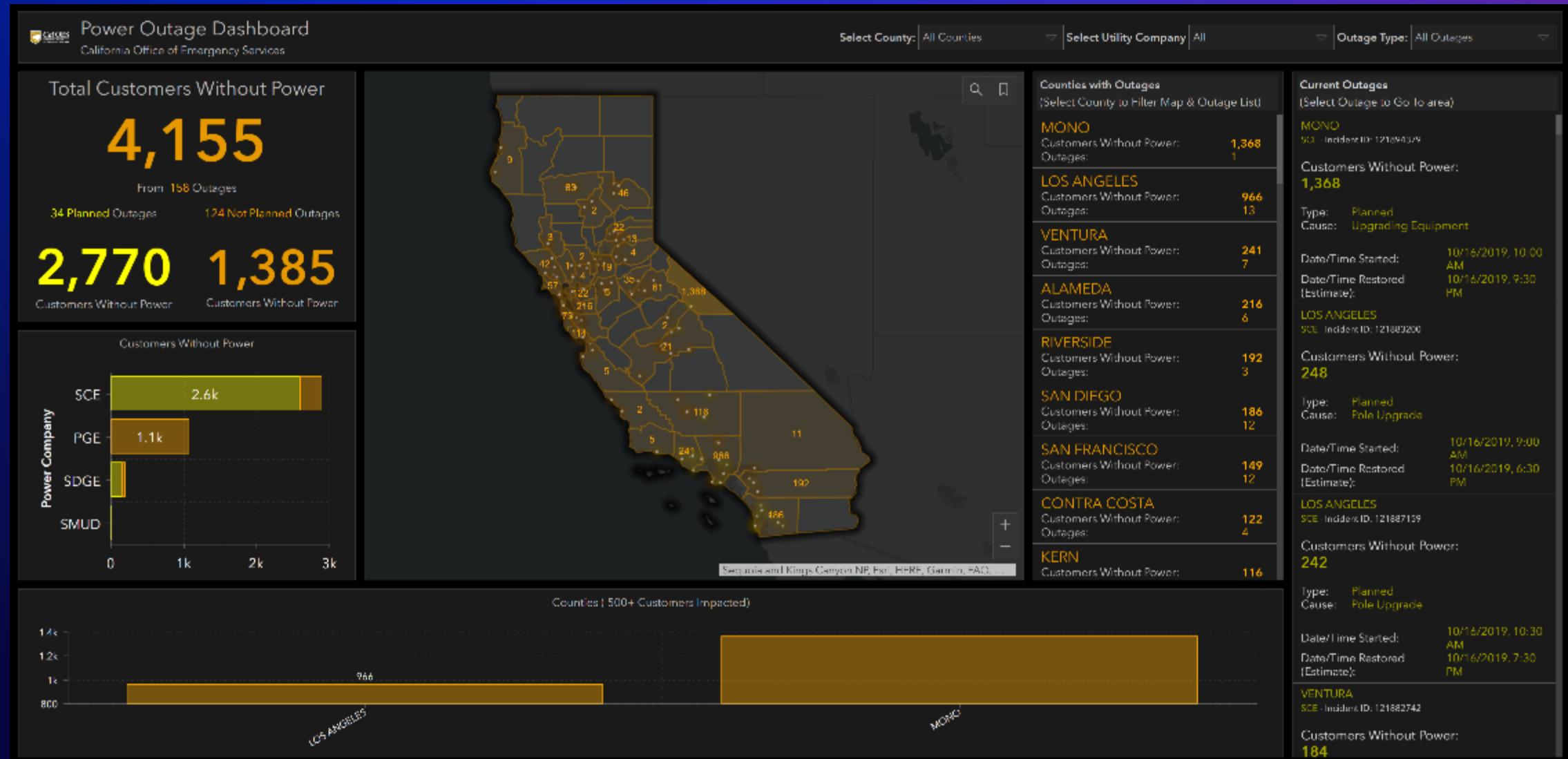
Armando Drain and Brady Hoak

2021 ESRI FEDERAL GIS CONFERENCE

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



Cal OES – Power Outage Status



Chief's Dashboard

Call type filter: Selections 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 29 | 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 20 | Response Time: 1,072 sec
9/2/2015, 6:32 AM

Cells For Service | 2015

Priority_Description	Count
Level 1 Medical	100
Level 2 Medical	80
Level 3 Medical	50
Level 4 Medical	30
Traffic Accident	20
Level 1 Fire	10
Level 2 Fire	10
Level 0 Medical	10
ALS Ambulance Only	5
others	5

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

Requests

List

FIRE

11

Requests

List

EMS

9

Requests

List

Rose Bowl

20

Requests

List

Security

19

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

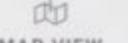
01:07:40 
01:00:00

Call Volume

1,141

Last 31 Days



 	<p>Current Filters Agencies (10) Incident Types (All)</p>
	<p>ACTIVE INCIDENTS (3) RECENT INCIDENTS (144)</p>
	<p>MAP VIEW</p>
	<p>Medical Emergency</p>
Monterey Park Fire	10:14 AM Today
N GARFIELD AVE, MONTEREY PARK, CA	E61 RA61
	Medical Emergency
Glendale Fire	10:13 AM Today
N ORANGE ST, GLENDALE, CA	BLS26 E26
	Fire Alarm
1400 MARENGO AVE, SOUTH PASADENA, CA (- MARENGO SCHOOL)	10:10 AM Today
South Pasadena Fire	E81

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)**



AZ ESF/RSF Operations Dashboard

SEPPR EMAP Accredited

Twitter Updates AZ Fires

Initial Attacks (Click Point to Zoom)

WebEQC Fire Reporting (Click Item to Zoom)

No significant fires to report.

Initial Attacks (Click Point to Zoom)

- Picket 0.1 Acres 8/28/2018 2:34 PM Discovery: Mohave County
- Walton 0.1 Acres 8/28/2018 2:12 PM Discovery: Yavapai County
- Ginger 0.1 Acres 8/27/2018 5:51 PM Discovery: Mohave County

Map: Presidio Springs, Drought

Complex 459.102% Contained

Type 2 K-3 Fires (National)

Watson Creek: 56.185 Acres 8.60% Contained

Type 2 Type 3

This dashboard provides real-time updates on fires in Arizona, including Twitter feeds, a map of the state showing fire locations, and a list of initial attacks. It also includes sections for WebEQC Fire Reporting and a specific focus on Presidio Springs.

Georgia - Comprehensive ESF and All Hazards Dashboard

Comprehensive ESF and All Hazards Dashboard

Current Warnings Severe Weather Outlook Severe Weather Tropical Cyclones Flooding Earthquakes Air Quality ESF-1 Transportation ESF-4 Firefighting ESF-5 GLMA ESF-6 Mass Care ESF-8 Public Health ESF-12 Energy FLMA ☰

Tweets by @NWSAtlanta

NWS Atlanta @NWSAtlanta [10:55 AM Nov 18] After a chilly start to the day, expect another beautiful day across north & central Georgia. Cool conditions will persist the next couple nights but, nothing out of the ordinary for mid November. Have a great day! [#gawx](#)

Low Temperatures 

NWS Atlanta @NWSAtlanta A Freeze Warning and Frost Advisory are both in effect from midnight until 9 AM Wednesday morning. Temperatures in the upper 20s and low 30s and frost will kill crops and other sensitive vegetation. Take steps now to protect tender plants and outdoor water pipes from cold. [#gawx](#)

Frost Warning and Frost Advisory 

GA Watches Warnings Advisories

- Coastal Flood Statement - Coastal Camden; Coastal Glynn
- Small Craft Advisory - Waters from Savannah GA to Altamaha Sound GA extending from 20 nm to 60 nm
- Flood Warning - Screen
- Flood Warning - Effingham; Screen

Current Storm Based Warnings

There are no Storm Based Warnings for the current map extent or forecasting offices pertaining to Georgia.

Map Next Live Radar Loop Weather Underground Radar Precipitation Forecast Wind Conditions Links

GEMA/HS [Facebook](#) [Twitter](#) [Email](#) 

Forecasting offices pertaining to GA:

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 2020³



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)

China⁴

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

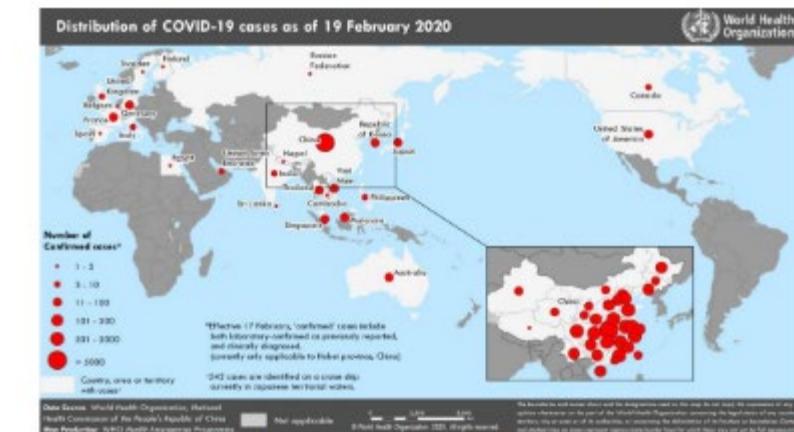
Outside of China

924 confirmed (120 new)
25 countries
3 deaths

WHO RISK ASSESSMENT

China	Very High
Regional Level	High
Global Level	High

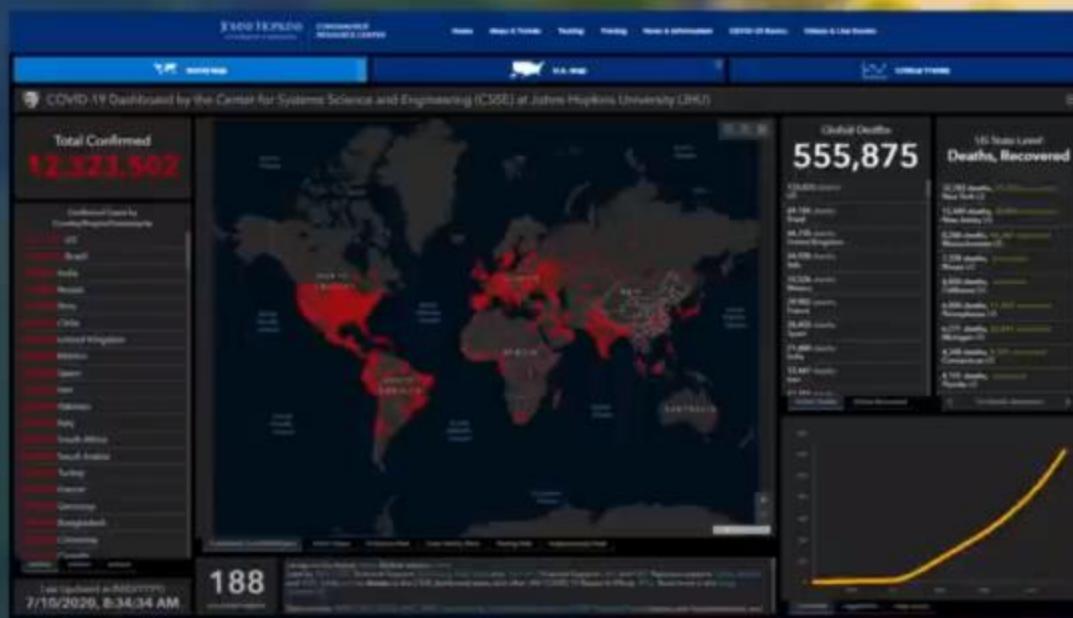
Figure 1. Countries, territories or areas with reported confirmed cases of COVID-19, 19 February 2020



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



JOHNS HOPKINS
UNIVERSITY

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

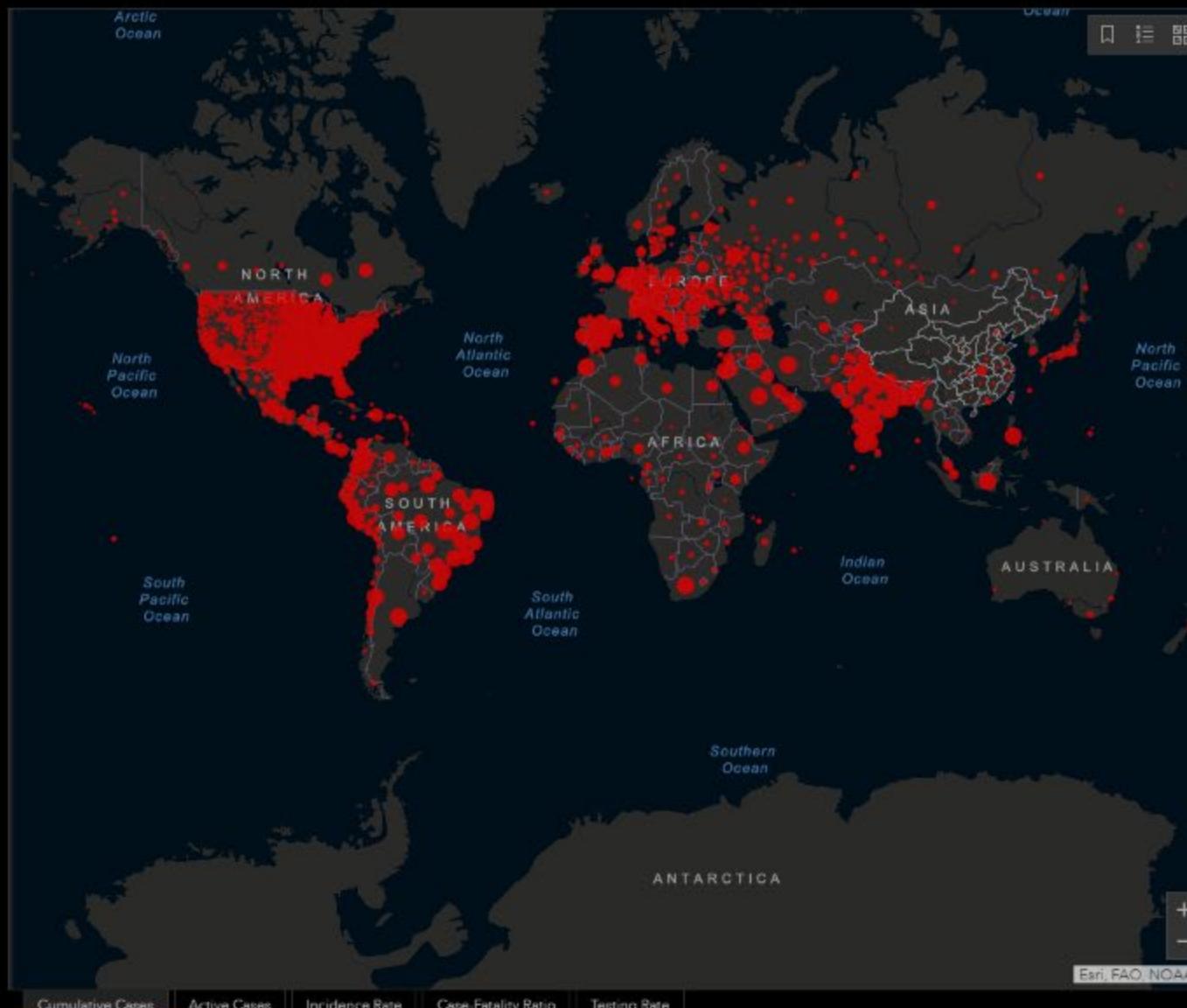
545,787 Belgium

534,558 Chile

529,226 Iraq

483,518 Indonesia

475,284 Czechia

**191**

countries/regions

Last Updated at (M/D/YYYY)

11/19/2020, 5:25 AM

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 API](#). 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

1,352,188250,548 deaths
US167,455 deaths
Brazil131,578 deaths
India99,528 deaths
Mexico53,369 deaths
United Kingdom47,217 deaths
Italy46,772 deaths
France43,417 deaths
Iran42,039 deaths
Spain

36,347 deaths

Global Deaths Global Recovered

US Deaths, Recovered



US State Level Deaths, Recovered

34,187 deaths, 82,022 recovered
New York US20,338 deaths, 889,099 recovered
Texas US18,470 deaths, recovered
California US17,731 deaths, recovered
Florida US16,655 deaths, 40,090 recovered
New Jersey US11,468 deaths, recovered
Illinois US10,407 deaths, 137,422 recovered
Massachusetts US9,463 deaths, 186,022 recovered
Pennsylvania US9,065 deaths, recovered
Georgia US

8,573 deaths, 138,862 recovered

Infographic Dashboards



Total COVID Cases
59,669

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

Current Wildfires
 **1**

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

Total COVID Deaths
788

[See COVID 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**

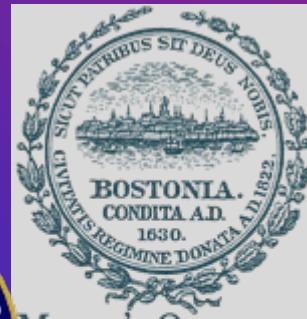
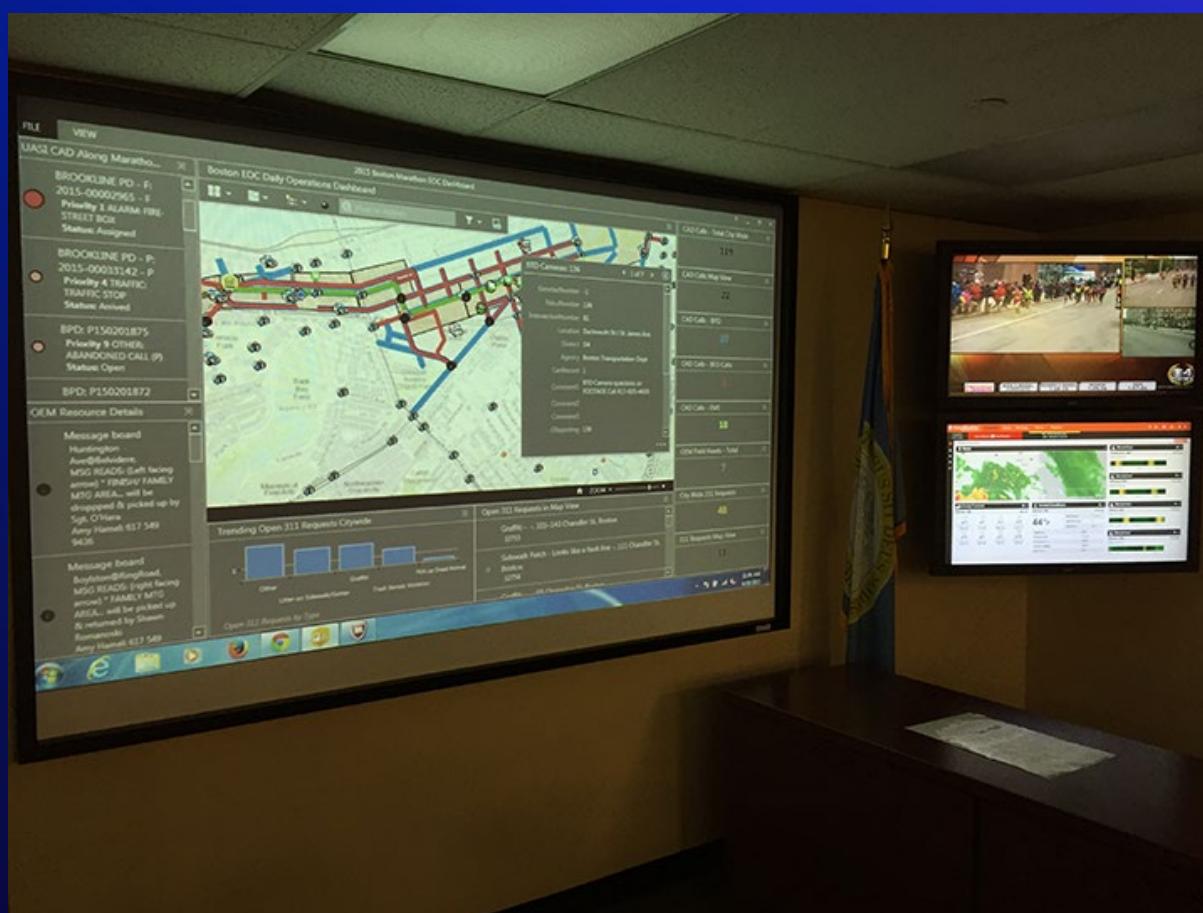
[See Volcanoes Dashboard](#)
Last update: a minute ago

Special Events

MARATHON COURSE MAP • SUNDAY, NOVEMBER 23, 2014



Boston Marathon – 2015



**MAYOR'S OFFICE OF
EMERGENCY
MANAGEMENT**

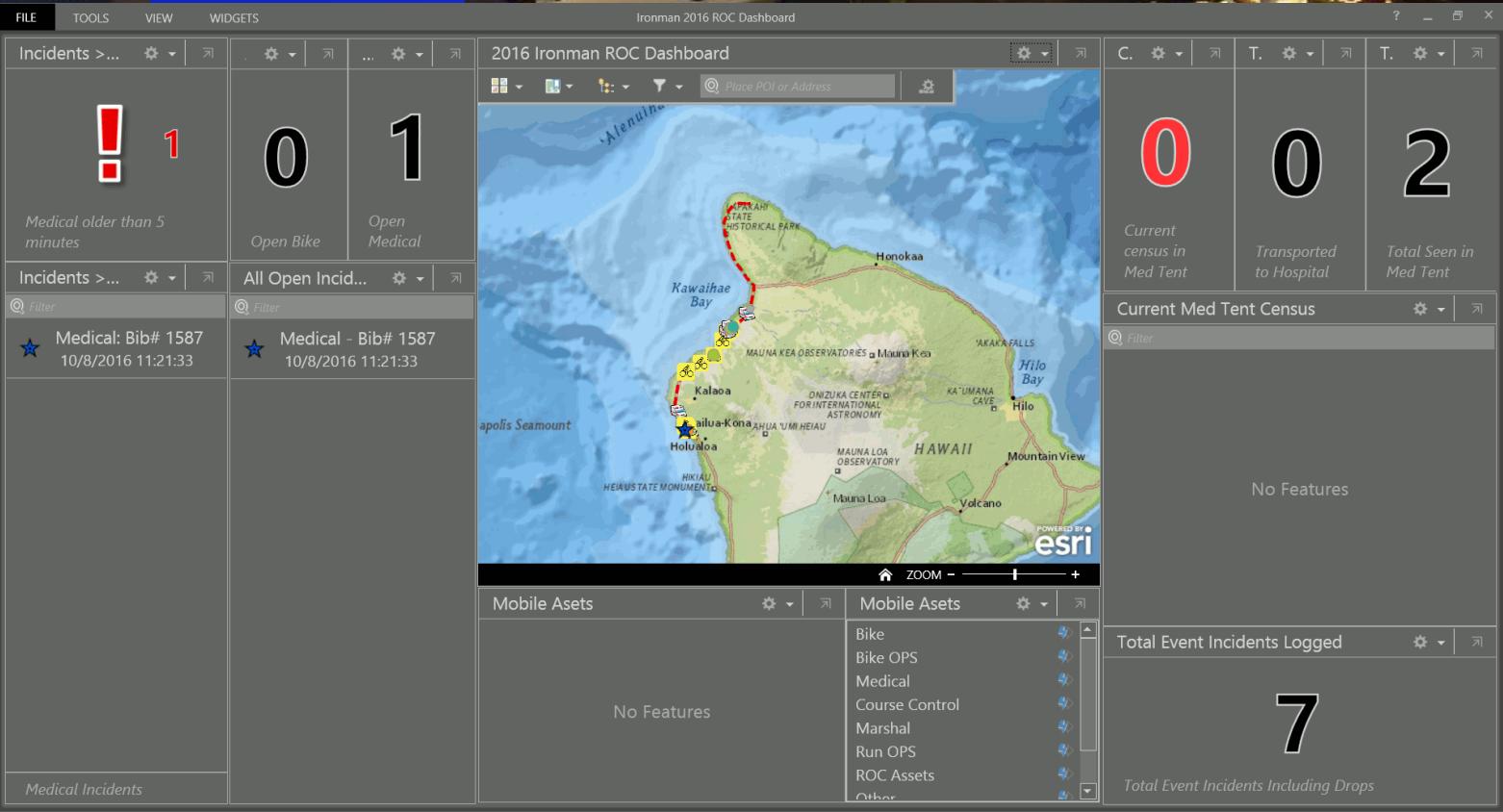
MARTIN J. WALSH
MAYOR

Boston Marathon – 2015



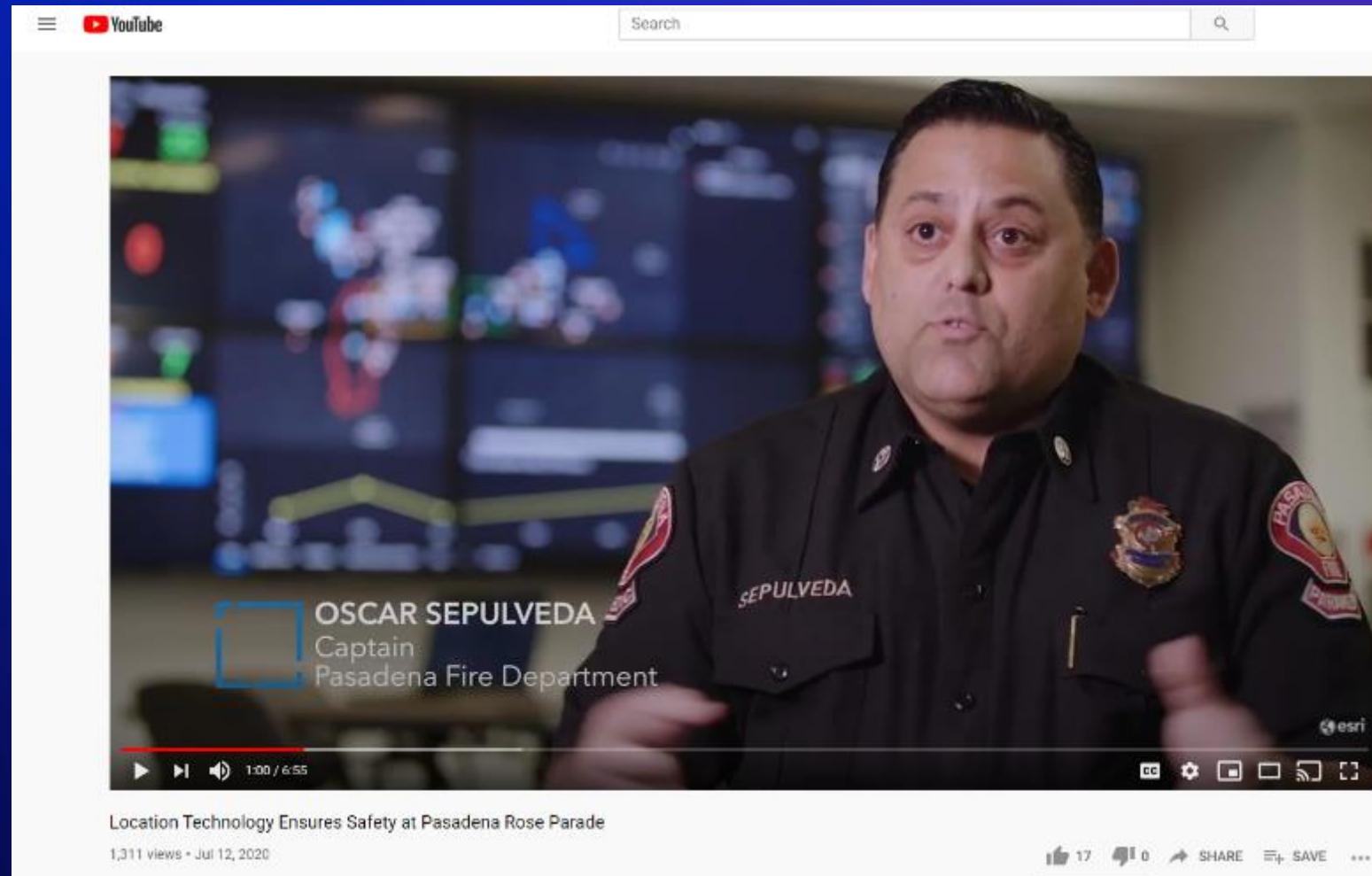
*3 locations, real-time data sharing
Left MEMA
Center BRIC
Right Boston EOC*

Ironman World Championship



Location Technology Ensures Safety at Pasadena Rose Parade

<https://youtu.be/kfJUdoovBF4>



2019 Rose Parade Situational Awareness Suite

A Story Map



Command Staff Incident Dashboard

Operations Web App

Social Media Monitoring

Traffic Dashboard

Weather Conditions

2019 Rose Parade Command Staff Dashboard

Pasadena Fire
Current Active

Pasadena Fire
Calls in the last 24

7 ↗ 82

Last update: a few seconds ago Last update: a few seconds ago

Open Incidents

ALARM

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

TRAUMA

Incident Number: VFC19000116
Location:
RA734,

Last update: a few seconds ago

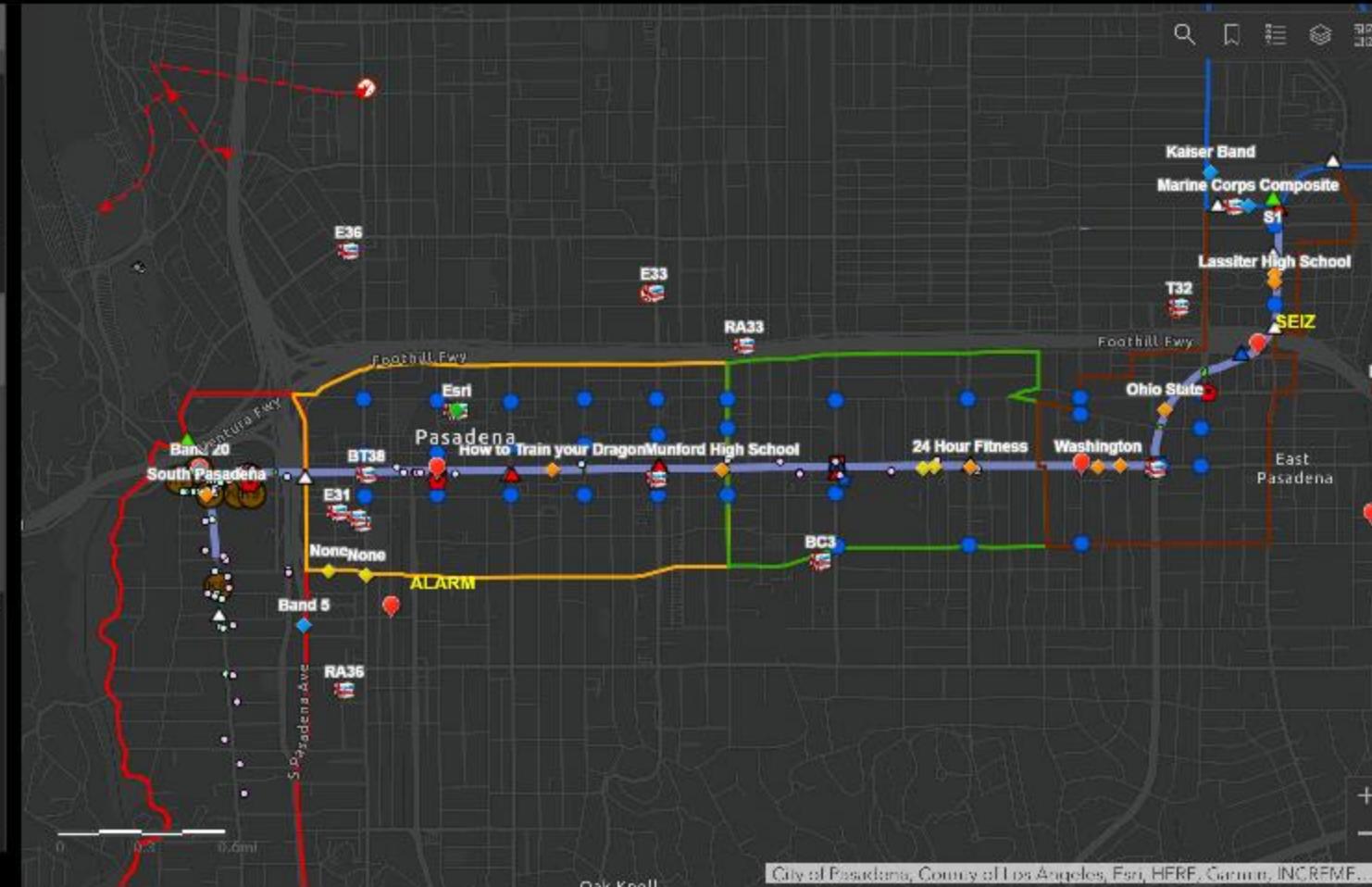


Open Calls By Type

Last update: a few seconds ago

Incidents (Real Time)

24 Hour History



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

City of Pasadena, County of Los Angeles, Fire, HFRF, Gendar, INCREMF,

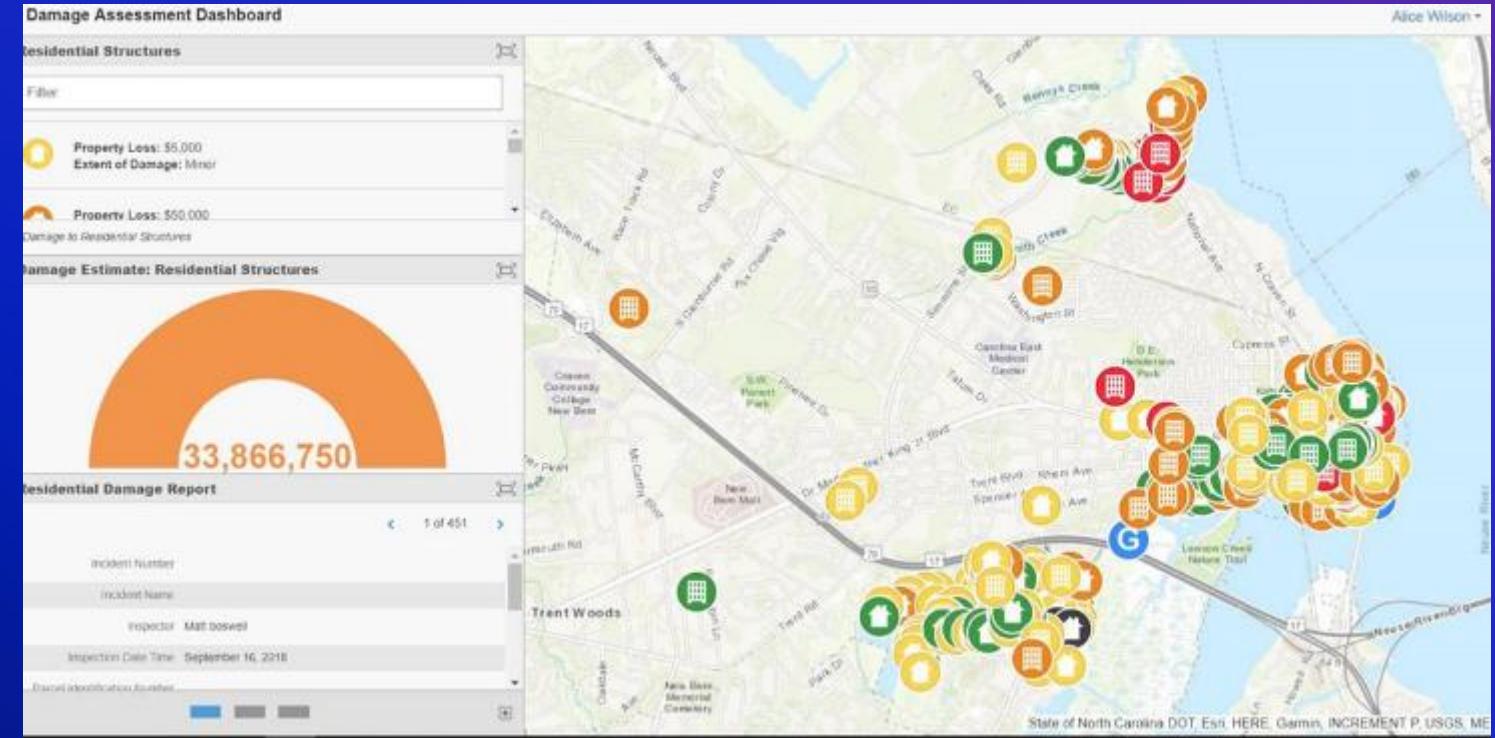
Last update: a few seconds ago

Fire Units

Summarize Field Work

City of New Bern, NC – Hurricane Florence

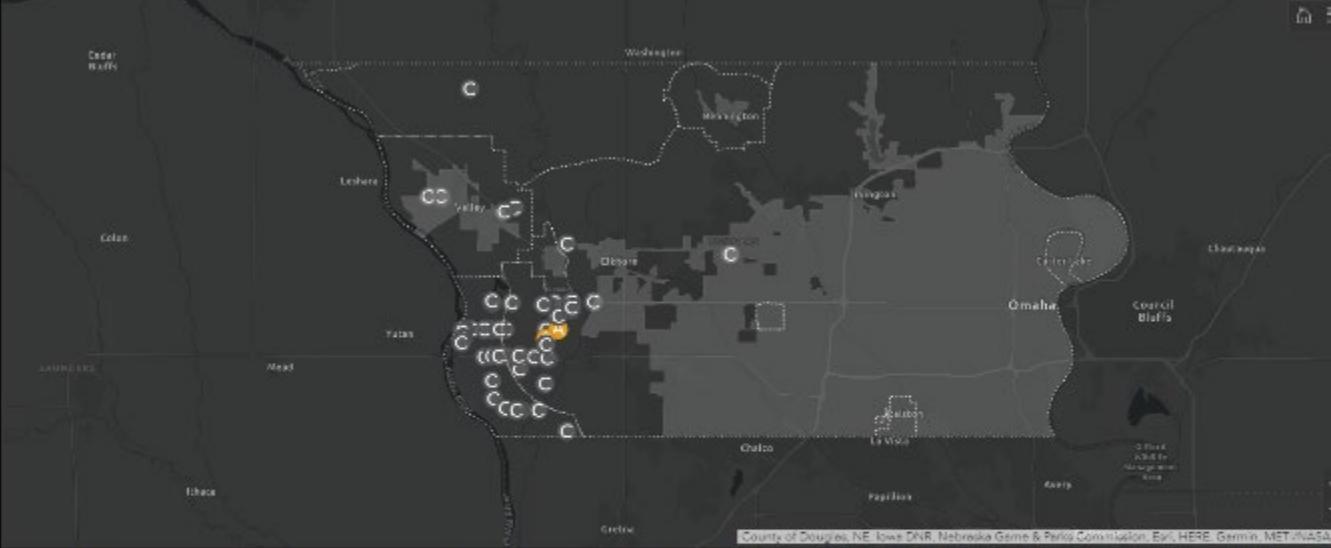
<https://www.esri.com/about/newsroom/wp-content/uploads/2018/10/use-of-damage-assessment-config-speeds-rescues.pdf>



Douglas County Nebraska

2019 Spring Flooding

Flood 2019 Damage Assessments



Damage Estimate

No Data

22nd & West Dodge Road - Looking south towards Riverside Lakes entrance
CAT C - Roads and Bridges
3/2/2019, 9:38 AM
Submitted by: douglascountyne

23rd & West Q Road - Looking South
CAT C - Roads and Bridges
3/2/2019, 12:18 AM
Submitted by: douglascountyne

Campanile Rd - 0.5mi n/o Hwy 92
CAT C - Roads and Bridges
3/2/2019, 9:31 AM
Submitted by: nebraskawingle

Pacific St - 0.5mi n/o Hwy 92
CAT C - Roads and Bridges
3/2/2019, 9:30 AM
Submitted by: nebraskawingle

Campanile Rd 0.4mi n/o Hwy 92
CAT C - Roads and Bridges
3/2/2019, 9:30 AM
Submitted by: nebraskawingle

W Dodge rd approx. 750ft w/o hwy 275
CAT C - Roads and Bridges
3/2/2019, 9:29 AM
Submitted by: whooley_dogie

Companile Rd 0.3mi n/o Hwy 92

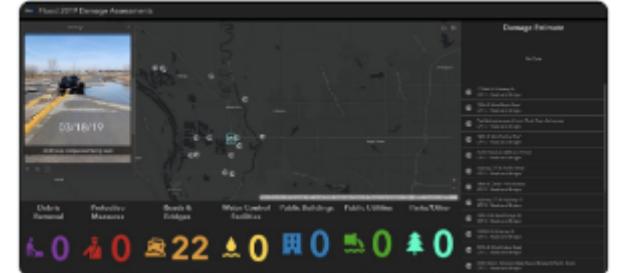
Debris Removal	Protective Measures	Roads & Bridges	Water Control Facilities	Public Buildings	Public Utilities	Parks/Other
3	0	90	0	0	0	0

Last update: 3/19/2019 10:00 AM
Public Facilities
Residential Buildings
Commercial Buildings

Last update: 3/19/2019 10:00 AM
Last update: 3/19/2019 10:00 AM

 Michael Schonlau
@MikeSchonlau [Follow](#)

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



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

9 Retweets 43 Likes

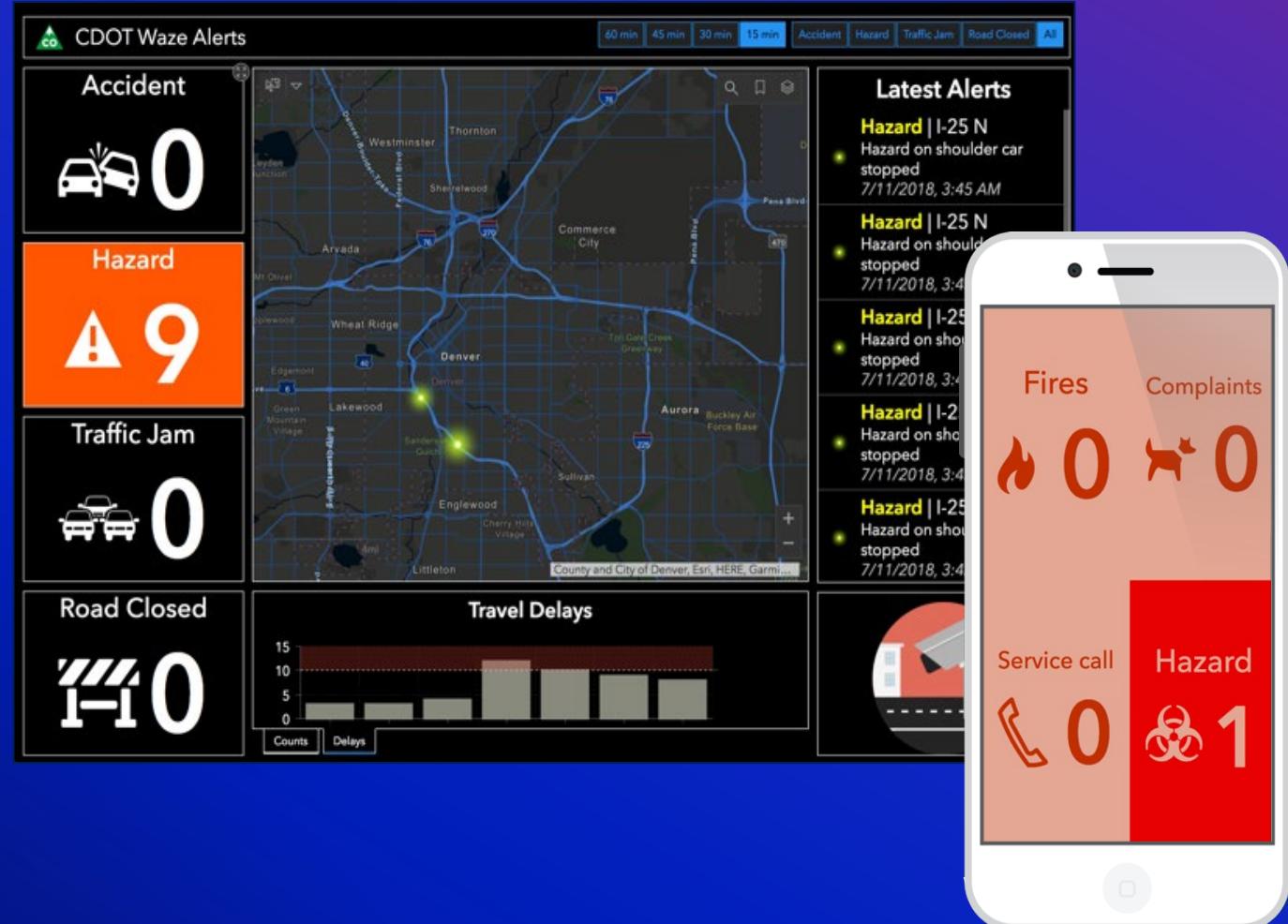
1 13 9 43

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.

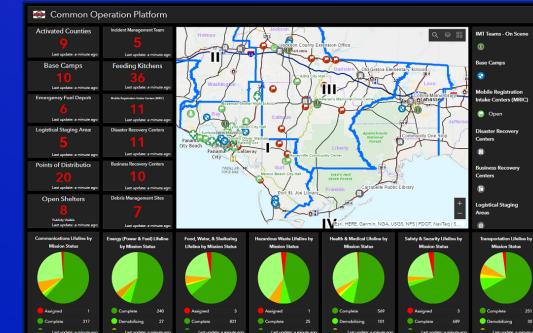
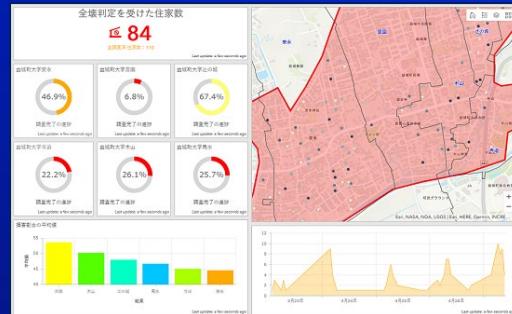
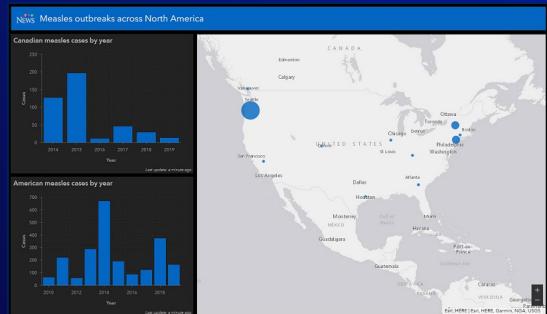
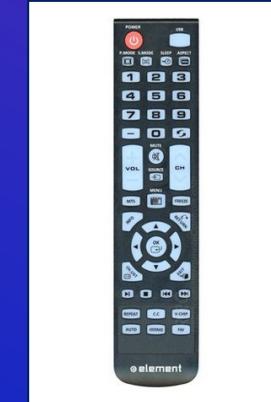


Design Approach

Build focused dashboards

Design Theory: Flexibility-Usability Tradeoff Example

flexibility



usability

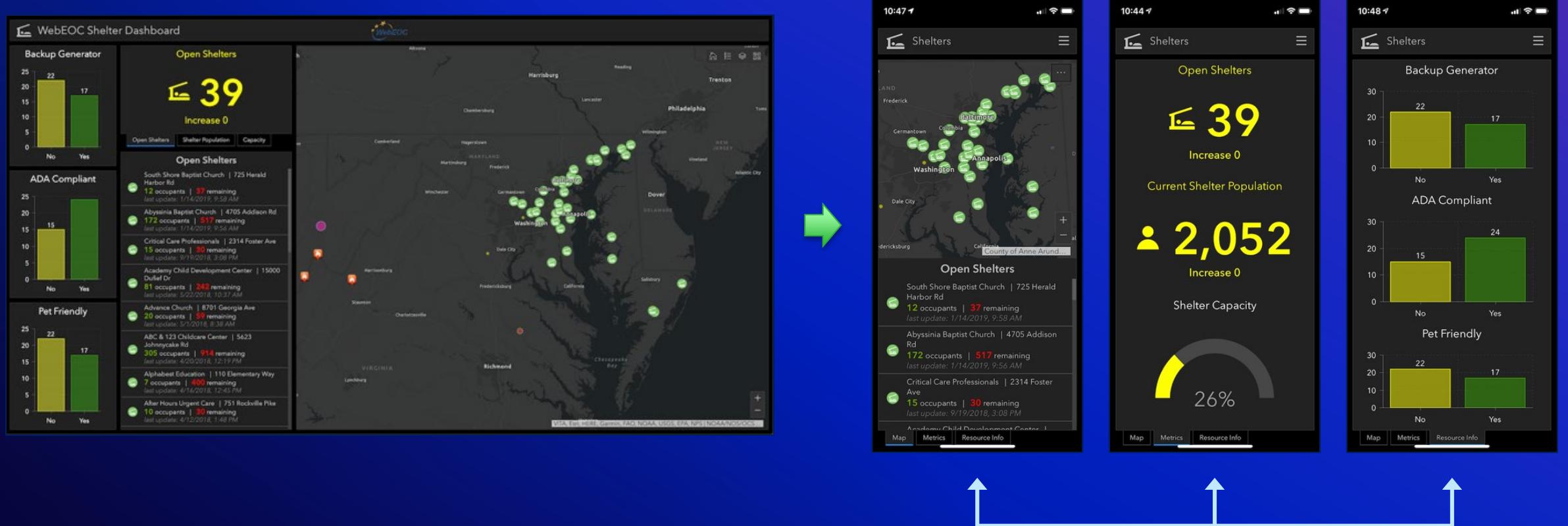
Dashboard Layout - Elements

- 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

Worker Assignment

Status	Count
Canceled	1
Assigned	3
In Progress	2
Completed	6

Last update: 2 minutes ago

Assignment Priority

Category	Priority	Count
Inspection	None	2
	Low	2
Maintenance	Medium	15
	High	1

Last update: 2 minutes ago

Assets to be Inspected

Asset Type	Count
Bioretention	13
Filtering System	104
Green Roof	93
Impervious Surface Disconnection	4
Open Channel	1
Permeable Pavement	3
Proprietary Practice	33
Rainwater Harvesting	17
Storage	9
Tree Planting and Preservation	1

Last update: 2 minutes ago

Asset Inspection Operations Dashboard

Workers

- Not Working
- On Break
- Working

Assignments

- Unassigned
- Assigned
- In Progress
- Completed
- Declined
- Paused
- Canceled

Asset Inspection Needed

- Yes
- Done
- No

Asset Contractor

- A
- B
- C

SymGEO

Layout and Grouping Demo

Brady

#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. 2
Group as a row

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

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

AZ ESF/RSF Operations Dashboard

SERRP 

Governor's Briefing CBP Southwest Weather **ESF 4 - Firefighting DFFM** ESF 5 - Emergency Management DEMA ESF 6 – Mass Care DEMA ESF 7 - Logistics DEMA

Twitter Updates AZ Fires

Arizona Fire News
A Twitter list by [@EshreveAZ](#)
Arizona Fire News

AZ State Forestry [@azstateforestry](#)
If you haven't walked outside yet this morning - it's starting to warm up & fast. Be safe - stay hydrated - & never leave kids or pets in the car! From our friends at [@NWSPhoenix](#) an Excessive Heat Warning is in effect through Thursday.

Excessive Heat Warning
Today Through Thursday

What to do
• Hydrate before becoming thirsty
• Reduce time in the sun
• Don't leave children and pets in car
• Avoid strenuous activities
• Wear loose fitting light colored clothing

What to do
• Seek air-conditioned buildings
• Help create kids, & pets stay cool
• Close blinds during the day
• Wear loose fitting light colored clothing

Click a location below for detailed forecast.

Watches, Warnings & Advisories

Excessive Heat Warning
Flood Advisory
Air Quality Alert

AZ State Forestry [@azstateforestry](#)
#AppaloosaFire is 100% contained, all roads in the Scottsdale & Pinnacle Peak area are reopened. 187 acres. [#AZForestry](#) [#AZFire](#)

Map **Predictive Services** **Drought** **Fire Weather Outlook**

WebEOC Fire Reporting
(Click Icon to Zoom)

Woodbury: 6/11/2019, 8:23 PM Update Woodbury Fire- A type 1 incident management team will assume command at 0600 6/12. The fire is approximately 6,000+ acres with 0% containment. Expected fire growth to continue to East and South with potential to continue to spread onto State Trust lands to the South. Fire growth to the north into the wilderness has been reduced due to wind shifts.

Coldwater: 6/11/2019, 8:19 PM Update Coldwater Fire- The fire continues to burn in an area approximately four miles south of Clints Well and, at its closest point, approximately one mile East of HWY 87. The 24 hour incident strategy is to burn

Initial Attacks (Click Point to Zoom)

- Tarzan Valley:** 0.5 Acres 6/12/2019, 9:33
• AM Discovery Date Graham County
- Box :** 0.3 Acres 6/11/2019, 10:53 PM Discovery Date Gila County
- CROSSWIND:** 28 Acres 6/11/2019, 8:43 PM Discovery Date Gila County

Last update: a few seconds ago

Prescribe Fires (Click Point to Zoom)

- FY2019 Kelley West RX:**
 - 500 Acres 6/10/2019 Ignition Date
 - Reed: 221 Acres 6/10/2019 Ignition Date
 - Sunflower: 1,500 Acres 6/10/2019 Ignition Date
 - Four Mile: 3,500 Acres 6/10/2019 Ignition Date

Last update: a few seconds ago

Type 1 Fires (National)
No Fires

Last update: a few seconds ago

Type 2 ICS Fires (National)
Elk: 660 Acres & 48% Contained

Last update: a few seconds ago

Type 1 **ICS Fires** **Type 2** **Type 3**

Dashboard Layout – Display on a Web Page

Johns Creek 

Visualize Data in Dashboards

Use a dashboard to visualize and understand information in the Johns Creek DataHub.



Most Common Data

Explore the most commonly-accessed data in the DataHub



CreekView Map

Interact with property information through a map



Business Locations

Find businesses and associated information



Financial Transactions

Understand how revenue is used to deliver services to the public



Fire

Navigate fire and medical calls from the JC Fire Department



Planning

Browse building permits, code enforcement cases, and zoning



Police

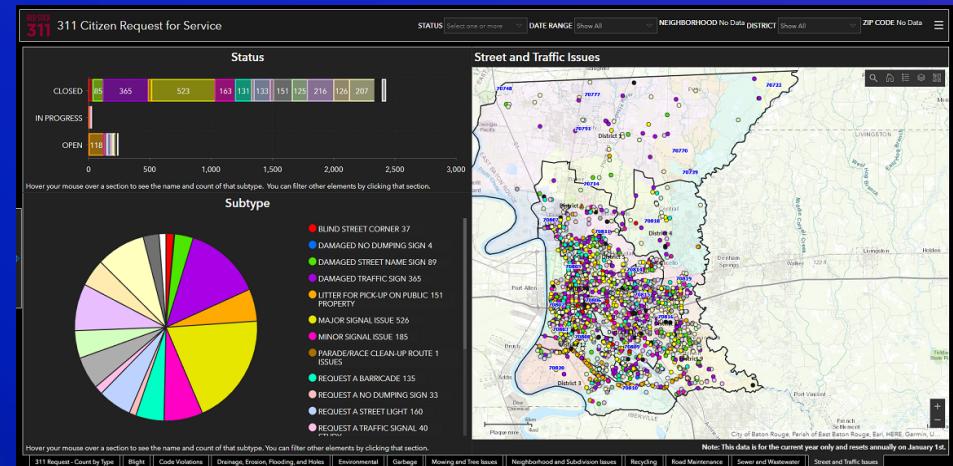
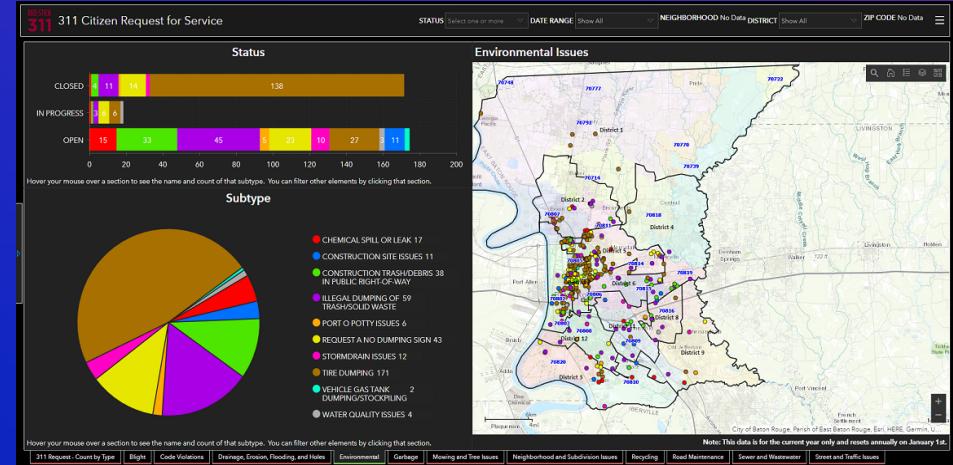
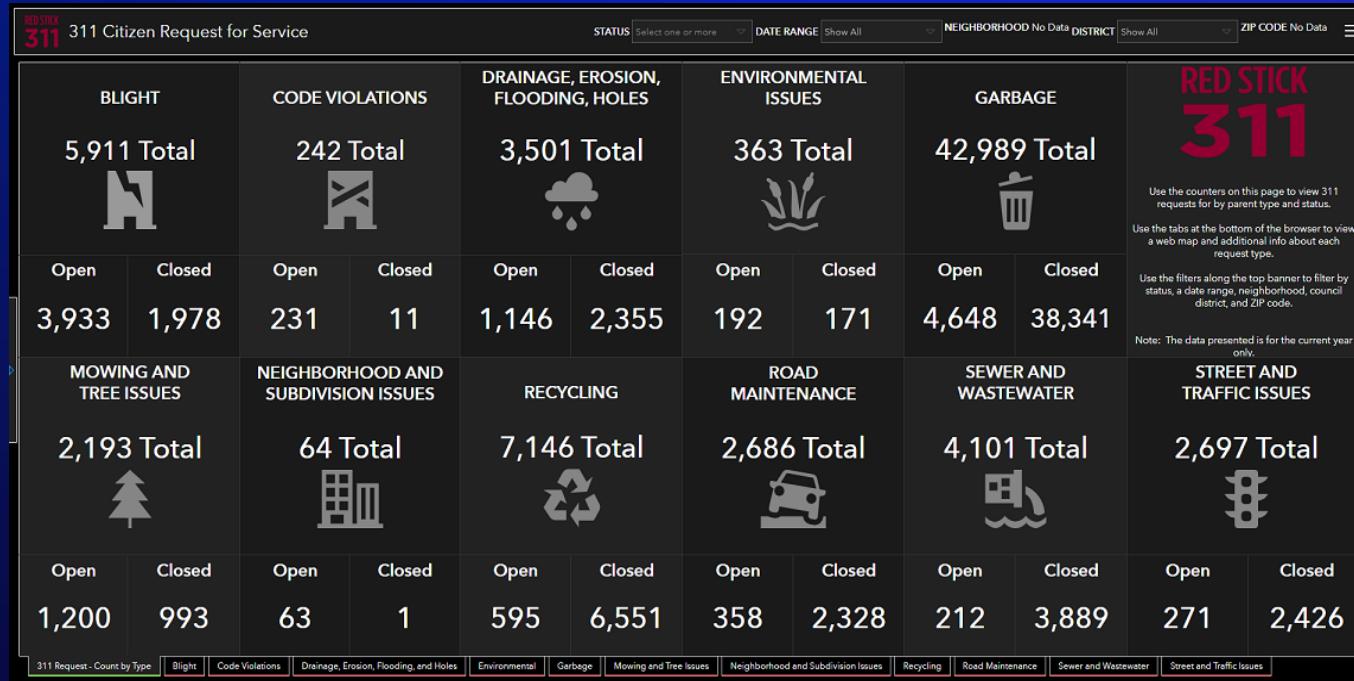
View incident information from the JC Police Department



Public Works

Dig into public works projects and tasks

Dashboard Layout – Stack Embedded Content Elements





Quick Overview of Dashboard Elements

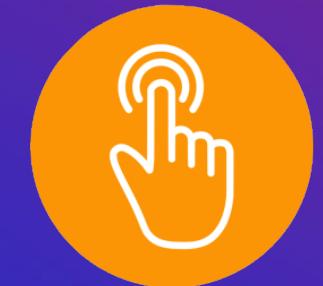
Many data visualization options

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
	Indicator
	Gauge
	List
	Details
	Rich Text
	Embedded Content

Dashboard Actions = Interactivity Configured for each Widget!



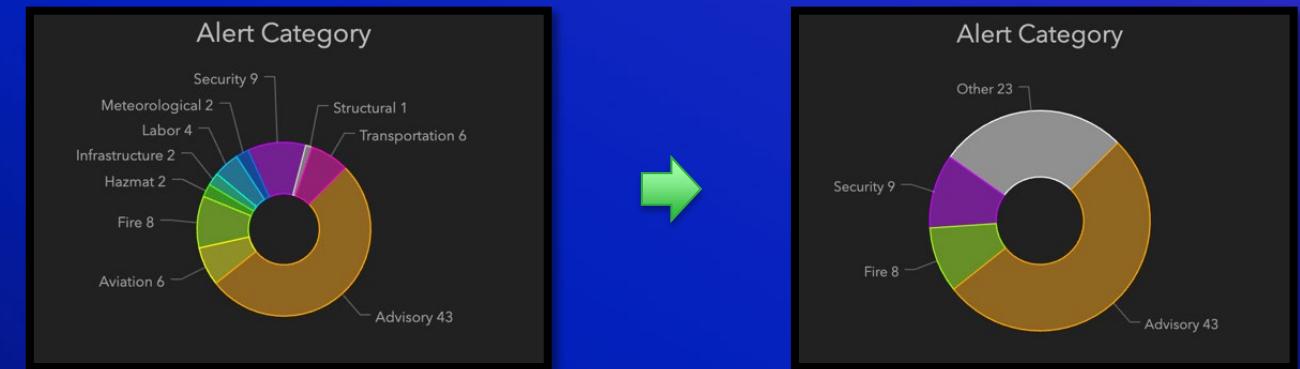
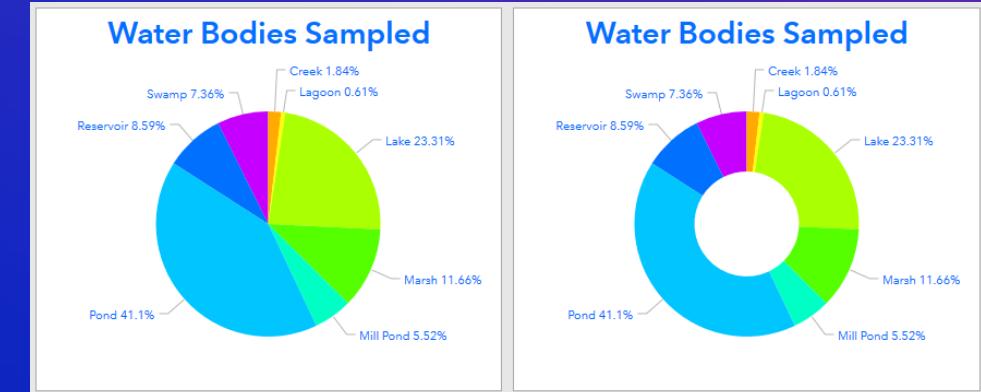
- An interactive dashboard involves:
 1. Events: map extent change or selection change (triggered by user)
 2. Actions: spatial/attribute-based filtering or map actions
 3. Defined at source elements, applied to target elements
- Configure and apply multiple filters to drill down on data
- Set up attribute-based 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

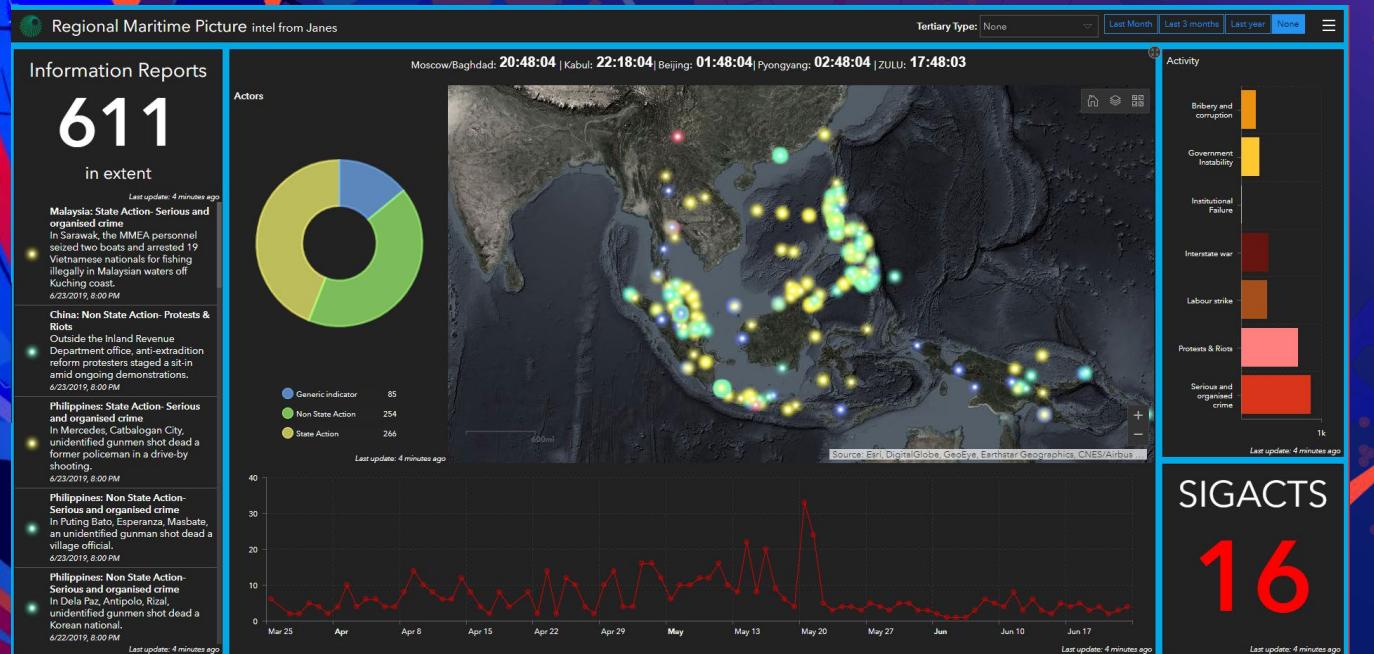
- Limit to 6 categories or less

- Use labels or legend, not both

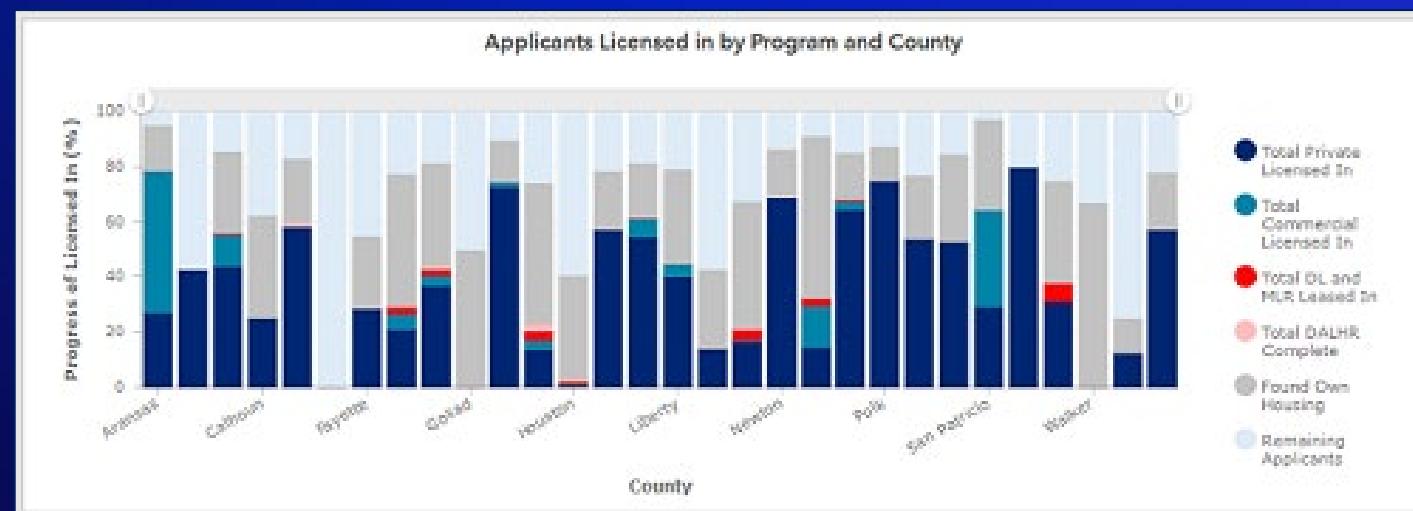


Pie Charts

Armando

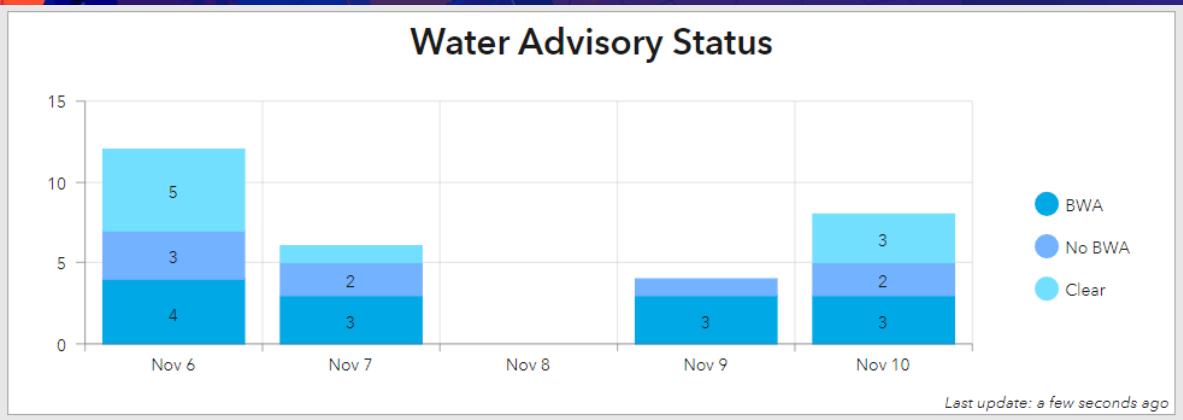


Serial Chart → Compare something between different groups or track change(s) over time



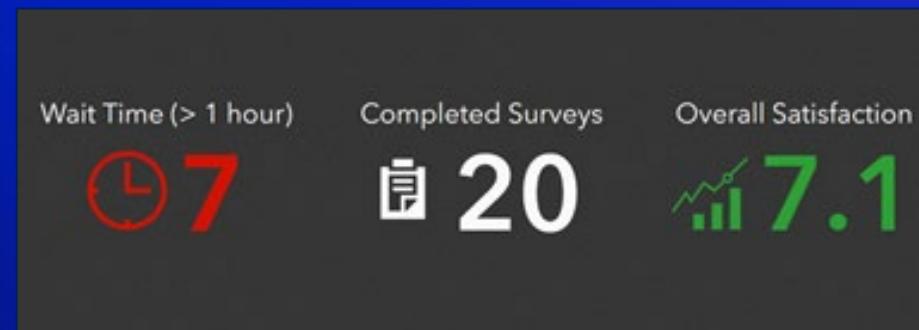
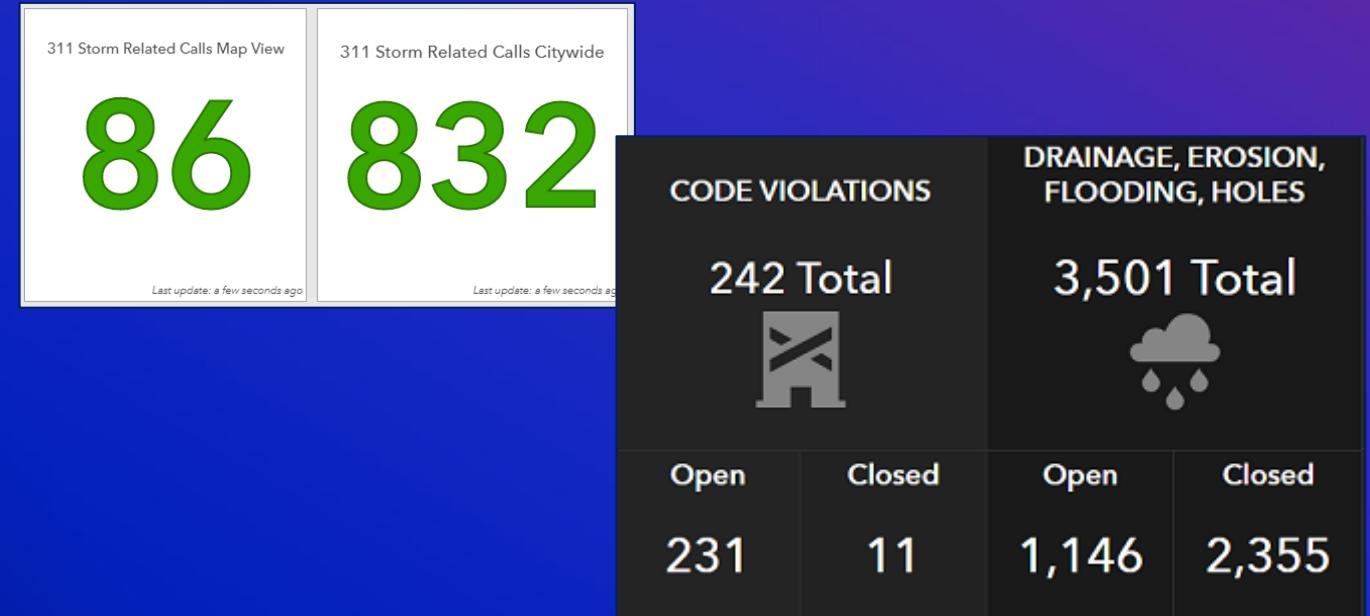
Serial Charts Demo

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

Theme General URL Parameters

Add URL Parameter

state

Feature Parameter

Name: state

Layer: ProjectStateConcept

Unique ID Field: State

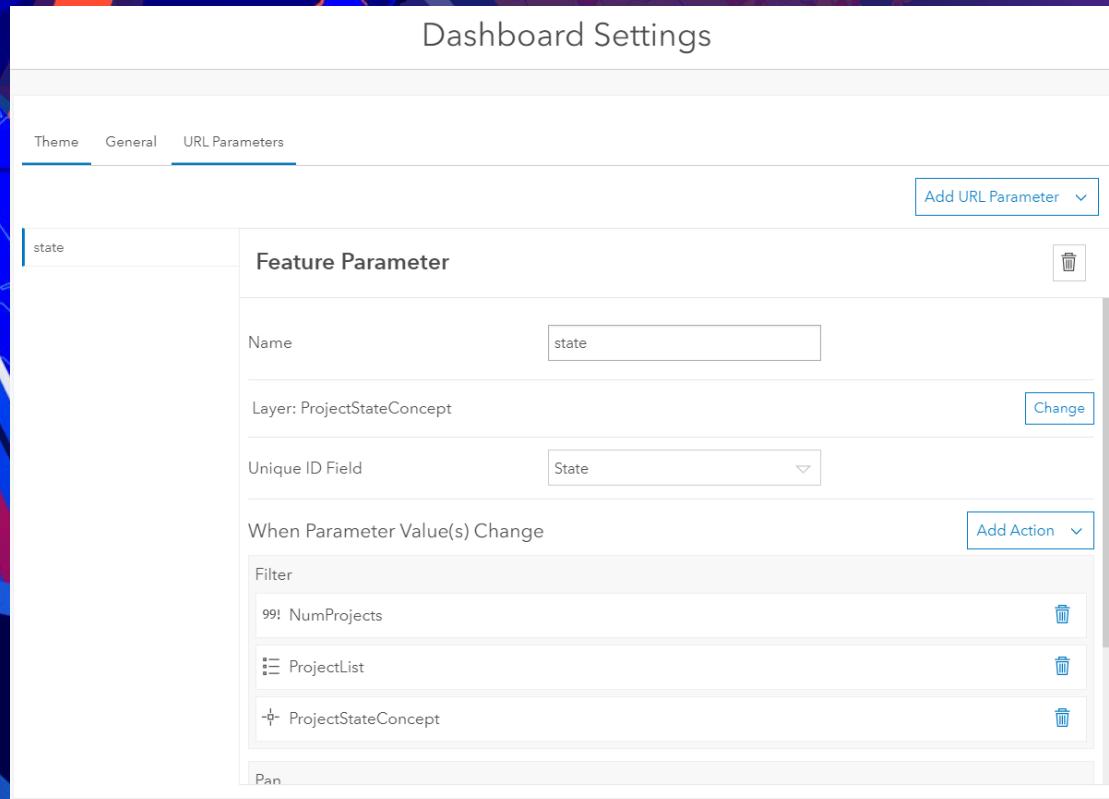
When Parameter Value(s) Change

Add Action

Filter

- 99! NumProjects
- ProjectList
- ProjectStateConcept

Pan



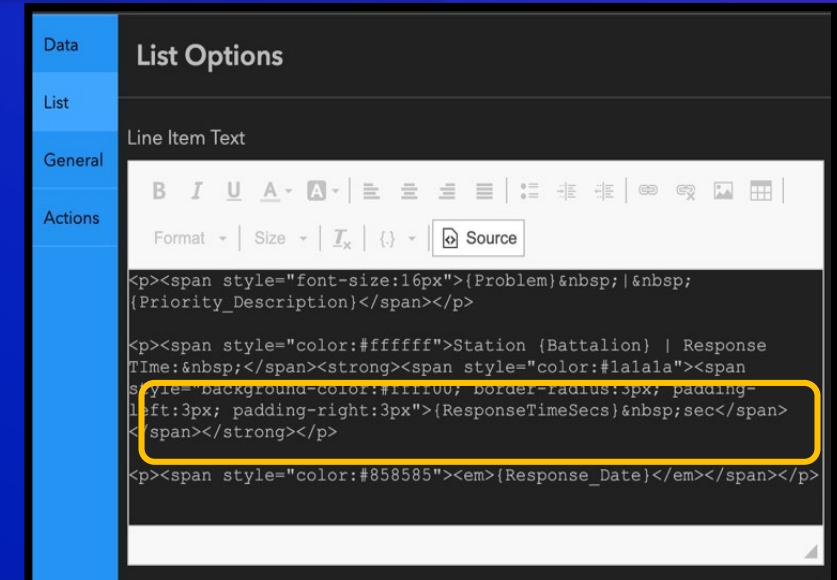
URL Parameters Demo

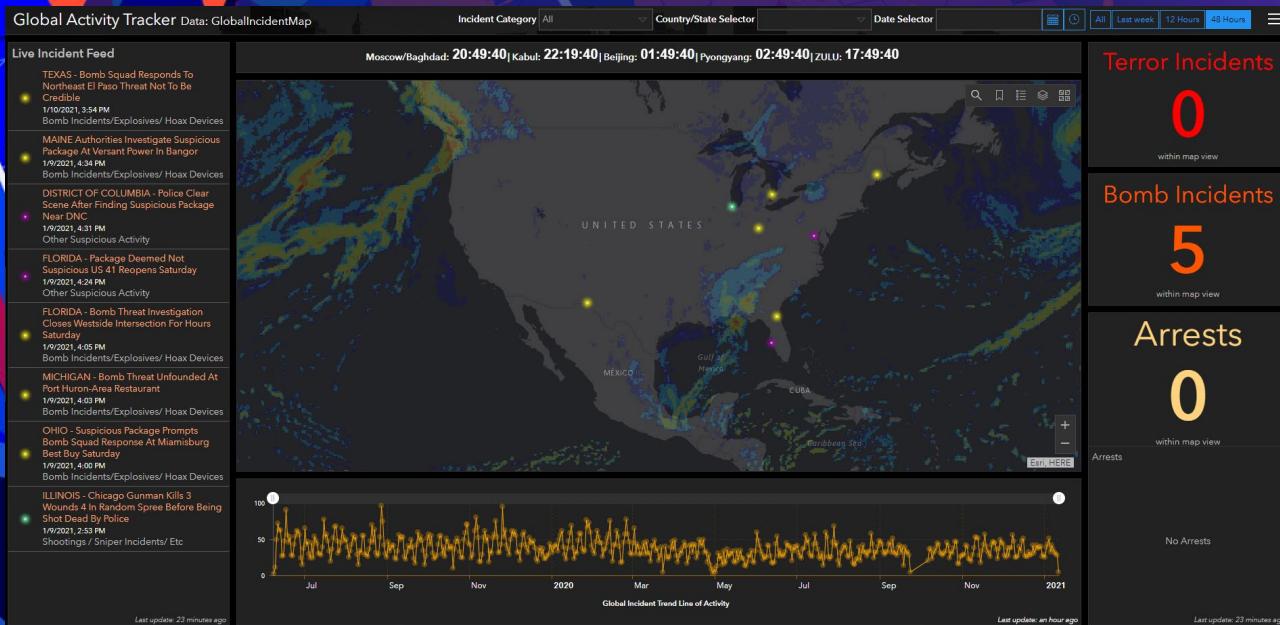
Brady

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

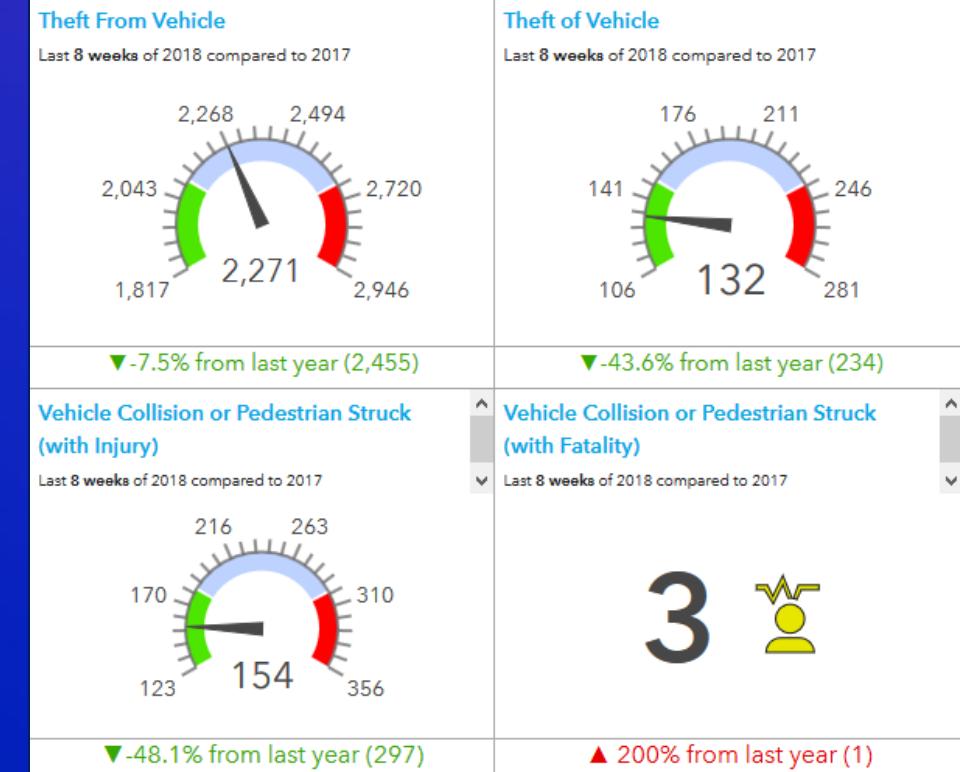


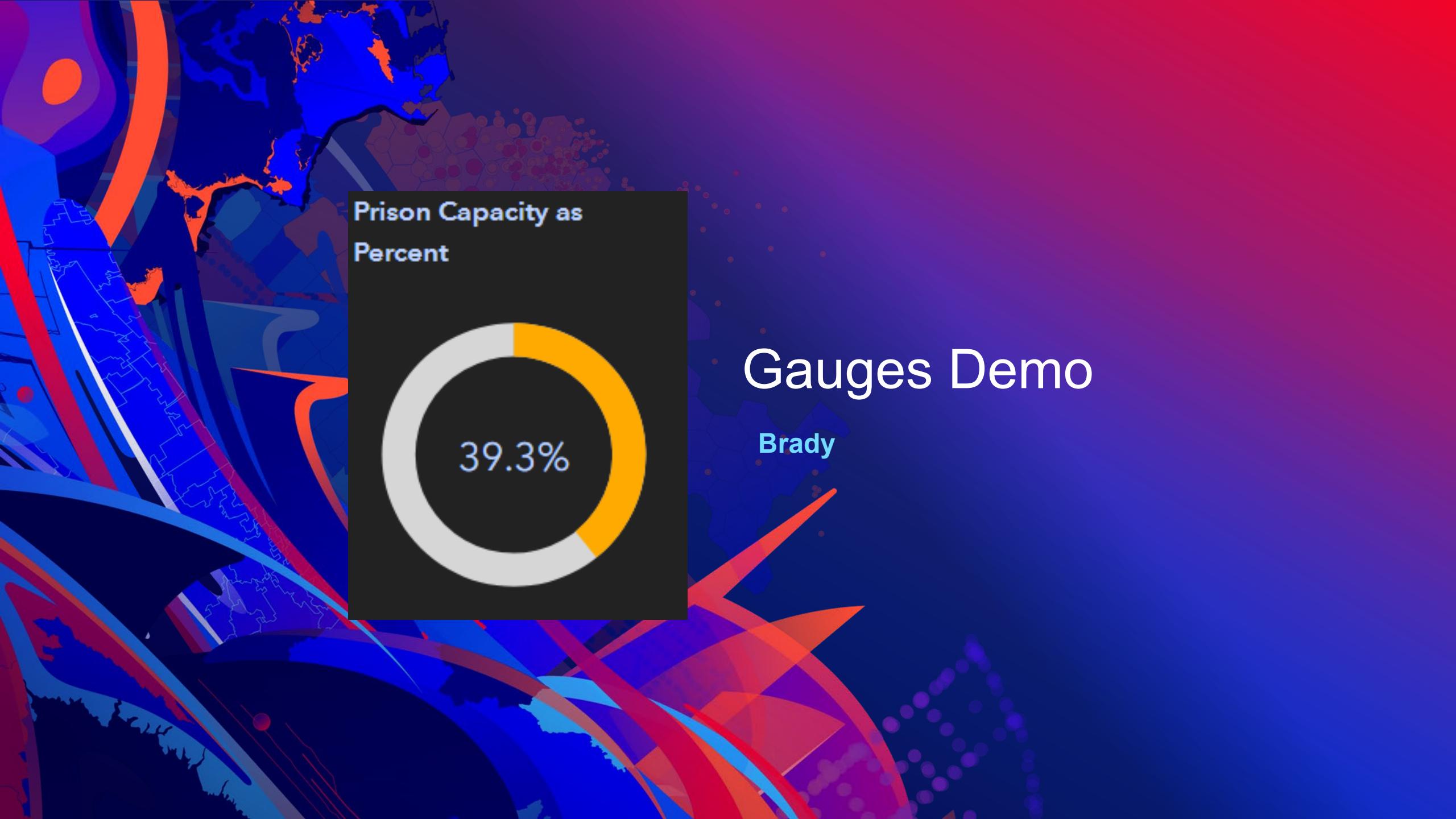


Lists
Armando

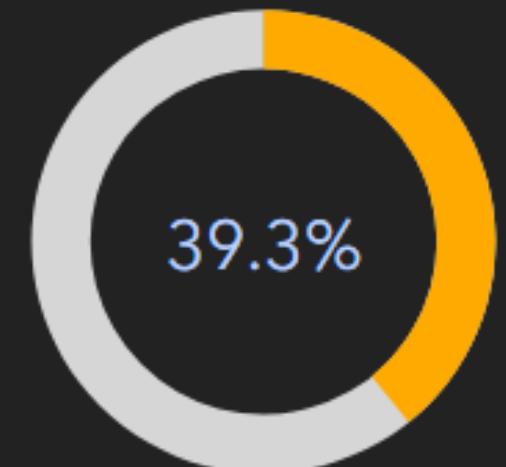
Gauge element

- Provide context
- Unit of measure





Prison Capacity as
Percent

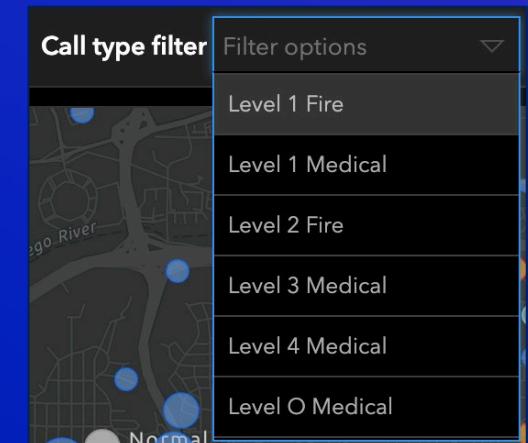
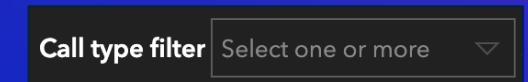
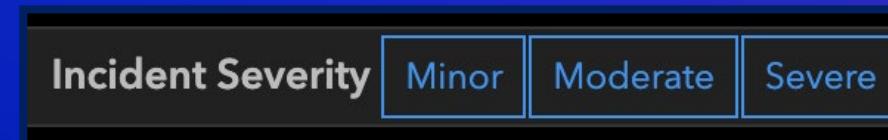
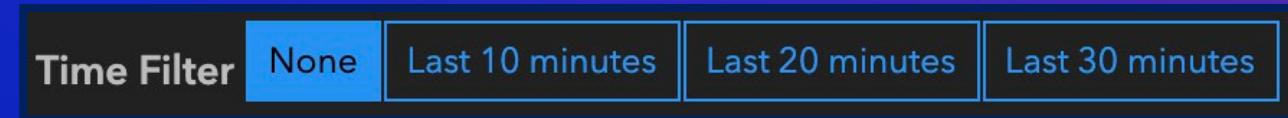


Gauges Demo

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?



Filter Demo

Brady

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

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

Brady

Embedded Content

Data Options

Type: Static Features

Layer: Project_Tbl - Project_Tbl [Change](#)

Filter [+ Filter](#)

Content Type: Document Image Video

URL [Fields: \(\)](#)

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

Maximum Features Displayed: 50 [+ Sort](#)

Update Project

1 of 9

Project Identification*: R8-MT-0001

Project Name*: Missoula-Granite

Fiscal Year Start*: 2023

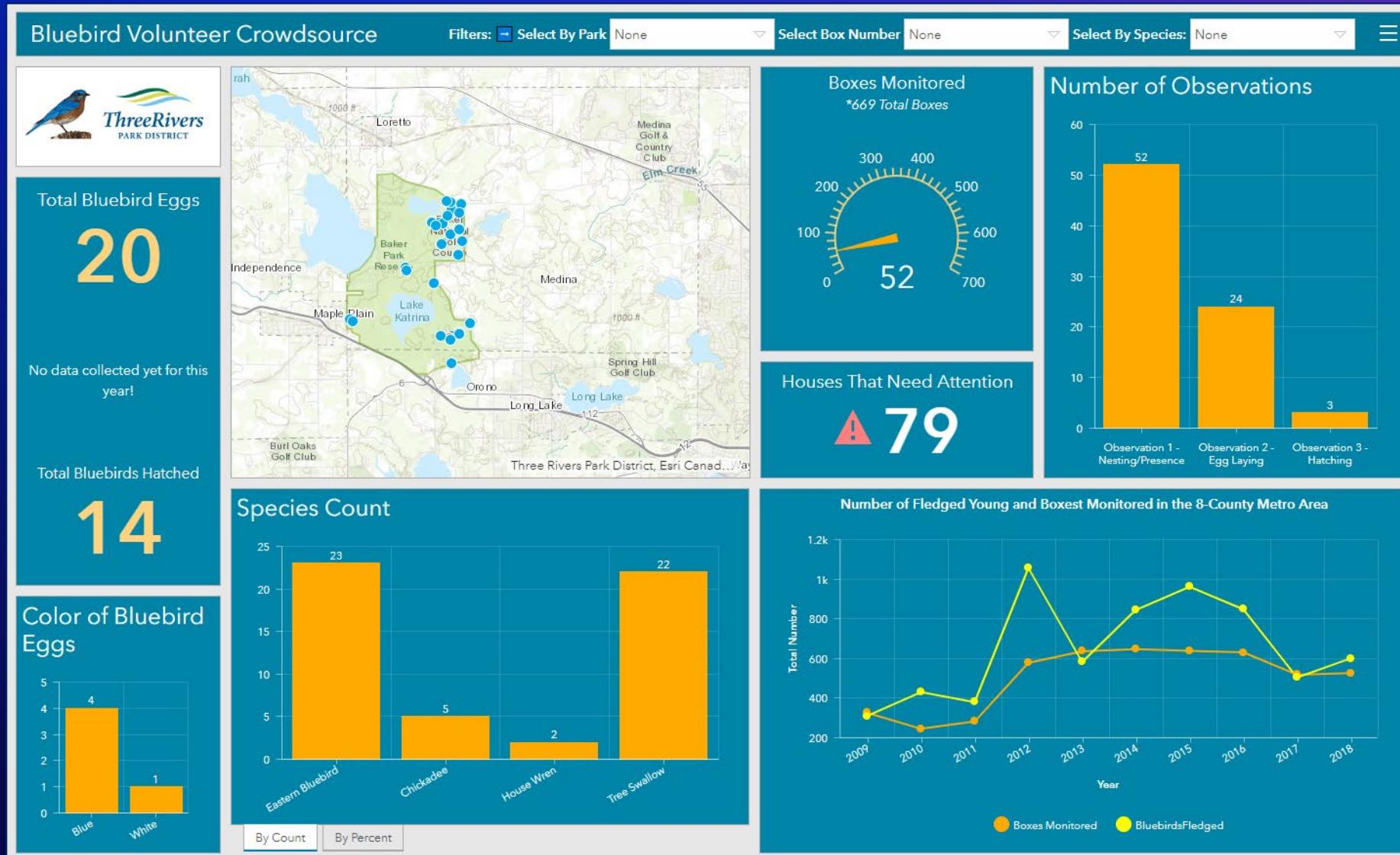
Submit

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

Common Intelligence Picture

All Last 48Hours Last Week Last Month Country: None Auto Zoom On Off

SIGACTS

138 in view Last update: 12 minutes ago

NEPAL - Pre-Monarch Forces Clash With Police During Unification Day Celebrations In Nepal General Terrorism News 1/11/2021, 10:41 AM

INDIA - BSF Jawans Recover 5 Kg Landmine In Malkangiri Bomb Incidents/Explosives/ Hoax Devices 1/10/2021, 5:33 AM

AUSTRALIA - Suspicious Package Found Near Saint Marys Catholic Church General Terrorism News 1/9/2021, 4:27 PM

INDIA - BJP Leader Escapes Attack By Gunmen In Jammu Shootings / Sniper Incidents/ Etc 1/8/2021, 4:45 PM

INDIA - Hand Grenades Explosives Seized After Exchange Of Fire Between Maoists And Security Forces Bomb Incidents/Explosives/ Hoax Devices 1/8/2021, 4:35 PM

MYANMAR - Civilian Injured - 60 Homes Damaged During Violence In Kyaukme General Terrorism News 1/8/2021, 9:13 AM

AUSTRALIA - Bomb Squad Called In After Police Find Small Possible Explosive Device In Osborne SA Bomb Incidents/Explosives/ Hoax Devices 1/8/2021, 5:20 AM Last update: 12 minutes ago

Moscow/Baghdad: 20:50:18 | Kabul: 22:20:18 | Beijing: 01:50:18 | Pyongyang: 02:50:18 | ZULU: 17:50:18

SOUTH AUSTRALIA Spencer Gulf Adelaide VICTORIA Melbourne

Esri, HERE, Garmin, FAO, NOAA, USGS | ...

AOI Regional

3D Weather

Sources: Esri, Airbus DS, USGS, NGA, NASA, CCIAR, N Robinson, NCEAS, NLS, OS, ... Powered by Esri

Global Incidents Categories Global Incidents Trends

Category	Count
Fire Incident	4
Biological Incidents	1
Bomb Incidents	43
General Terrorism News	37
Shootings	16
Terrorism Court Cases	4
Terrorist Arrests	33

Hurricanes/Typhoons Tracks

0 in view

No Hurricane/Typhoon activity

BBC Middle East News

South Korea to send delegation after Iran seizes tanker Iran says it seized the South Korean-flagged tanker and detained its crew over pollution violations. BBC | 6 days ago

Iran resumes enriching uranium to 20% purity at Fordo facility The country resumes enriching uranium to 20% purity in defiance of a 2015 international agreement. BBC | 6 days ago

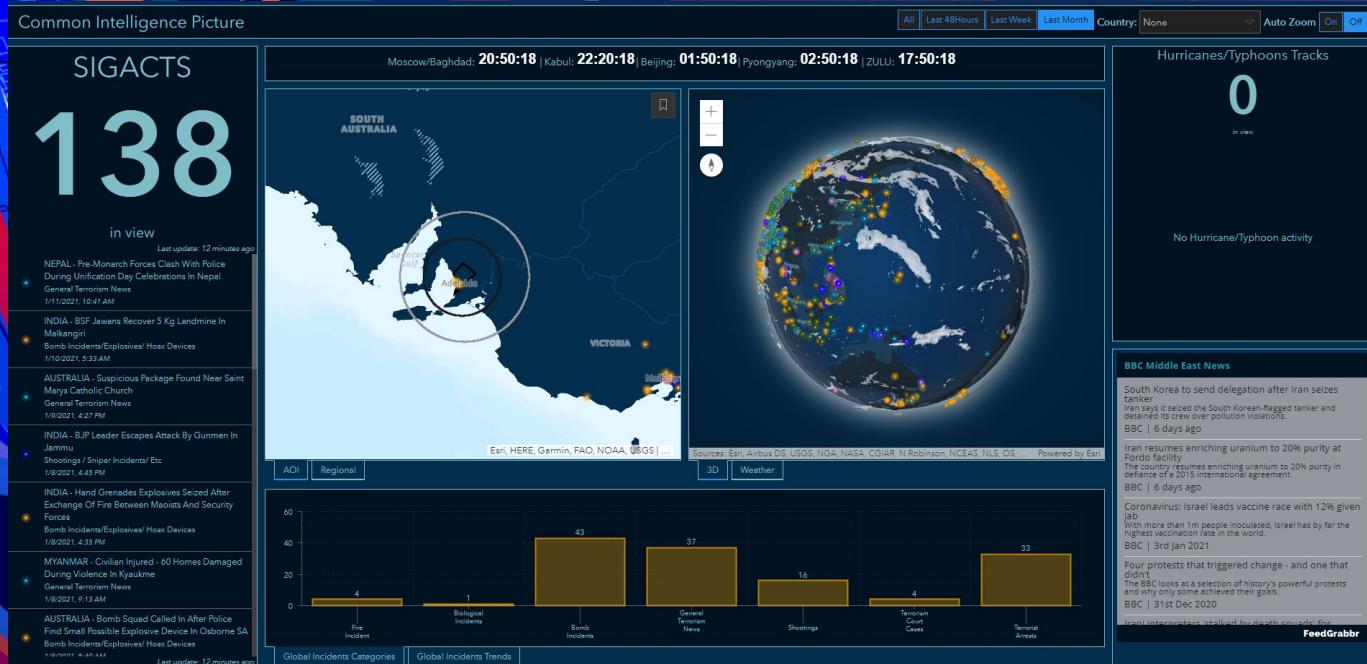
Coronavirus: Israel leads vaccine race with 12% given jab With more than 1m people inoculated, Israel has by far the highest vaccination rate in the world. BBC | 3rd Jan 2021

Four protests that triggered change - and one that didn't The BBC looks at a selection of history's powerful protests and why only some achieved their goals. BBC | 31st Dec 2020

Iraqi interpreters 'killed by death squads' for FeedGrabbr

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

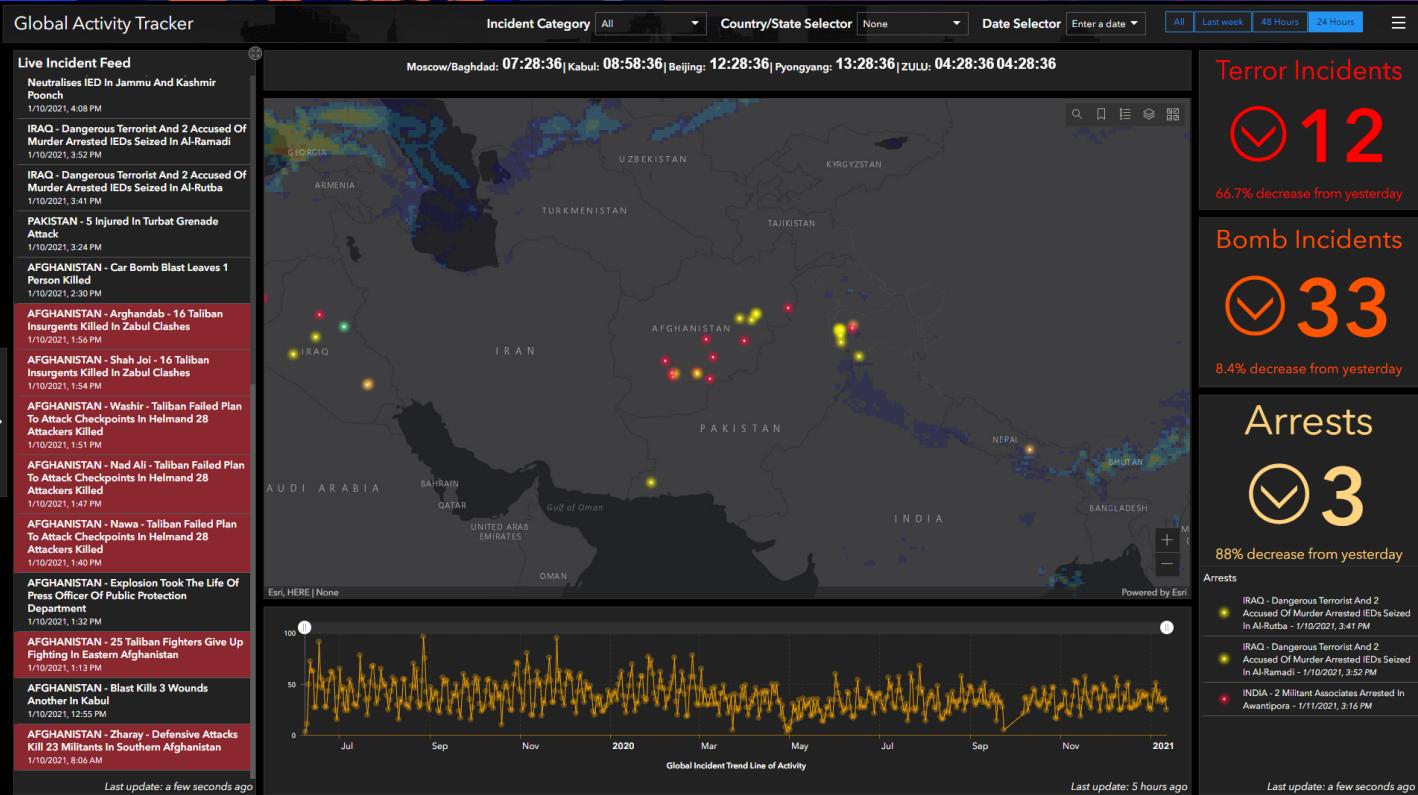


- Arcade
 - Expression/scripting language made by Esri
 - Can be authored and executed across the ArcGIS Platform
 - Some example usage:
 - Classify numeric data
 - Date differences
 - Number and date formatting
 - Concatenate text
- Symbology in the Map element
- Pop-ups in the Map
 - Details element



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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OF
WHERE®