

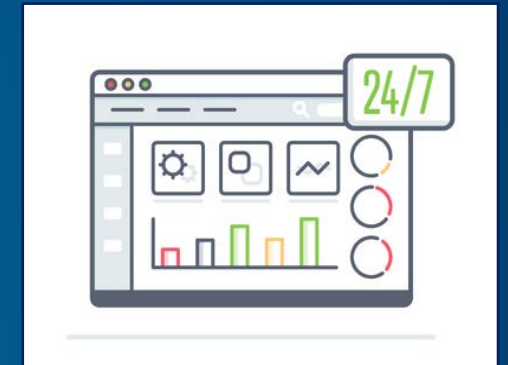
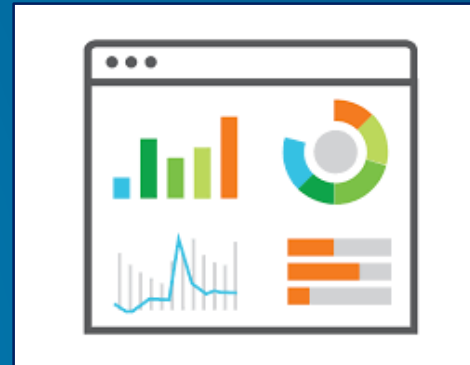
Operations Dashboard for ArcGIS

Zena Pelletier



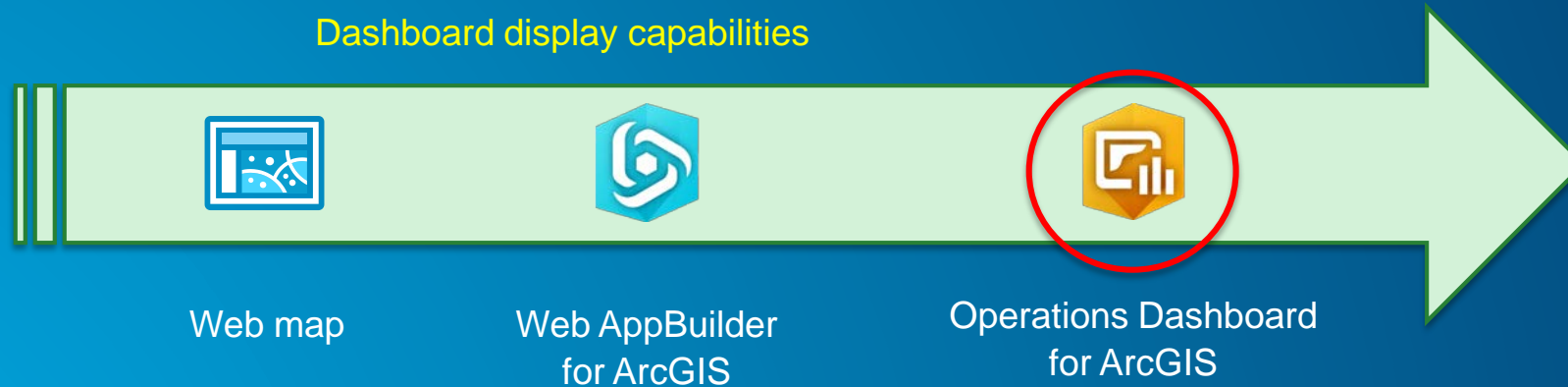
What is a 'dashboard'?

- Conceptual term, can mean different things to different audiences
- Dashboards provide at-a-glance views of key performance indicators (KPIs) for a subject or business process
 - Similar to the idea of a “report”
 - Snapshot of performance
- Data typically on a single display or screen
- Can support real-time data feeds



“Dashboards” in the ArcGIS Platform

- Data display typically includes a map or spatial context
- Several different options to create a “dashboard” (the concept) in ArcGIS



Other ArcGIS Apps

- **Insights for ArcGIS**

- Designed for spatial and non-spatial data analysis
- Results are maps, charts, and tables which can be interpreted to be a “dashboard”, but not in the traditional sense



- **ArcGIS Maps for Power BI**

- Add-in for Microsoft Power BI
- Meant to provide mapping capabilities for Power BI users
- “Dashboards” built within Power BI

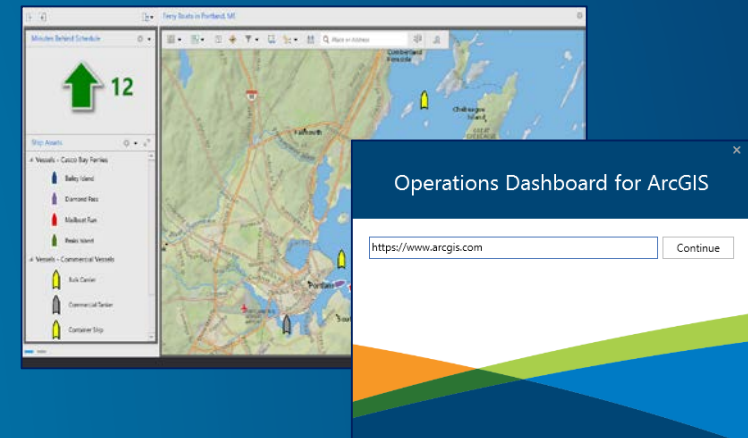


Operations Dashboard for ArcGIS | Software status

- **New Web-browser-based App**
 - Closely integrated with ArcGIS Online
 - ArcGIS Enterprise 10.6 (in Portal for ArcGIS)
 - Uses Dashboard item
 - Completely re-engineered app
 - **Released: Dec 2017**



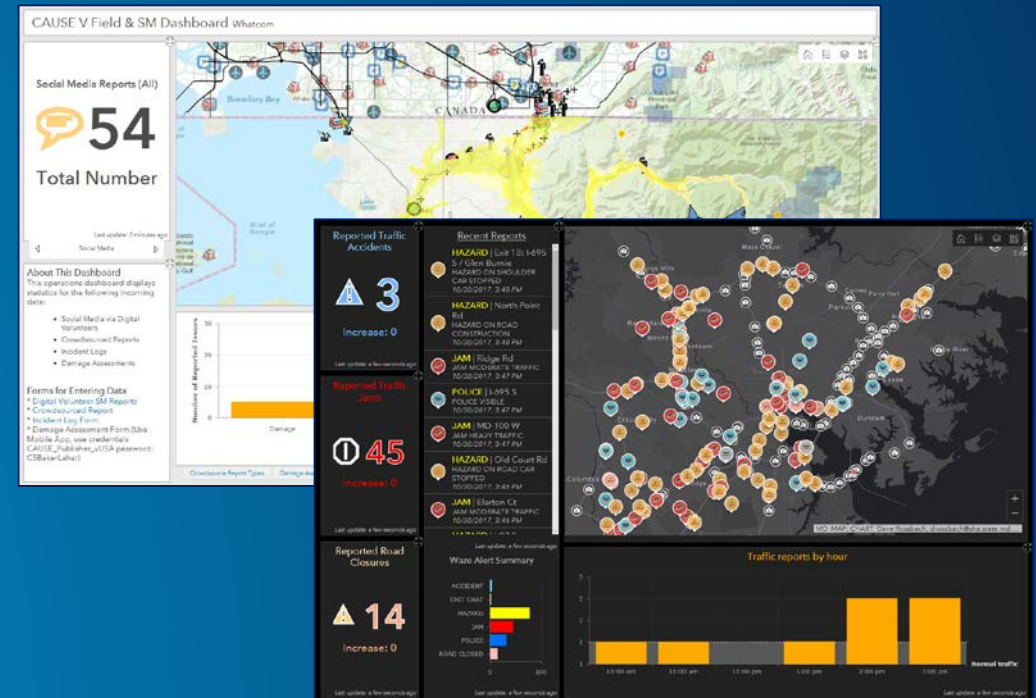
- **Legacy App**
 - Windows Desktop + Web browser-based
 - Uses Operation View item
 - Author in desktop app, view in web app
 - No longer promoted; mature support



Operations Dashboard for ArcGIS

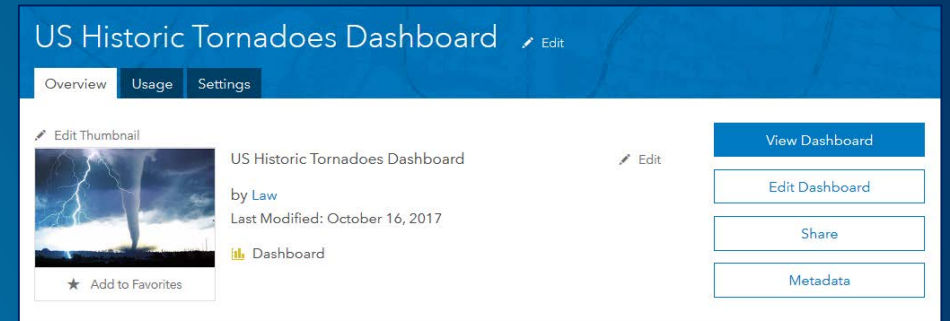


- Monitor assets, events, or activities for **'at-a-glance' decision making**
 - Provides key insights on a single screen
 - Support for real-time data
- Configurable user experience, no programming
- Web browser-based app
 - Works on desktops and tablets
- Integrated with ArcGIS Online
 - Available in ArcGIS Enterprise 10.6
- Built on the ArcGIS API for JavaScript



Operations Dashboard for ArcGIS | Overview

- Included within ArcGIS Online organization
- Works with new **Dashboard item** type
 - Author and view in web browser
- Offers many **ready-to-use data visualizations**
- Enables display of key performance indicators (KPIs)
- Interactive dashboard user experience
 - Via actions and selectors
- Re-engineered and redesigned new app

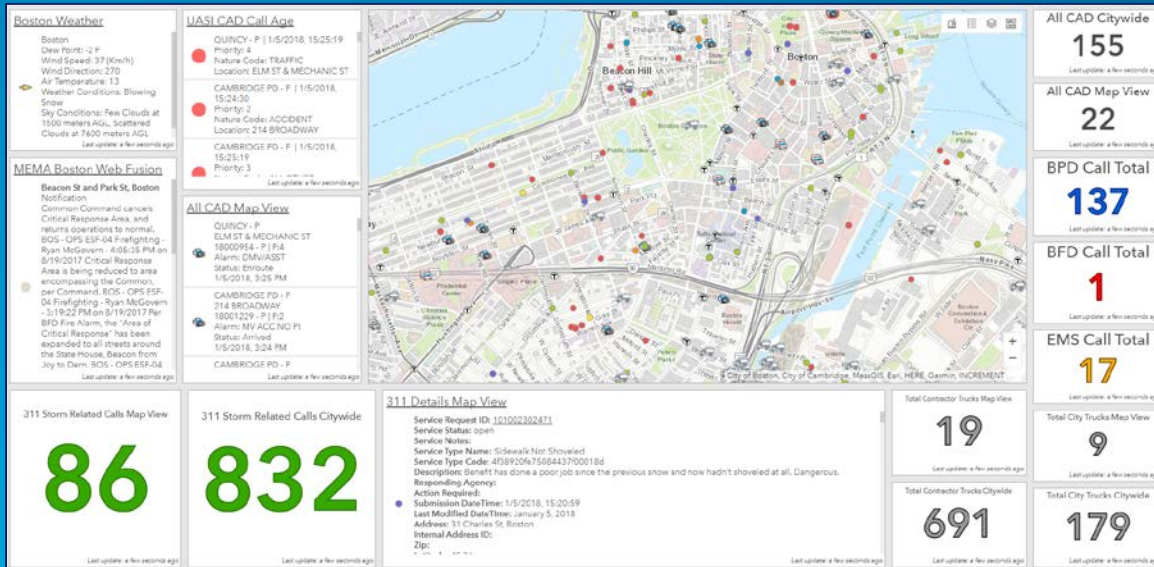


Key Usage Patterns

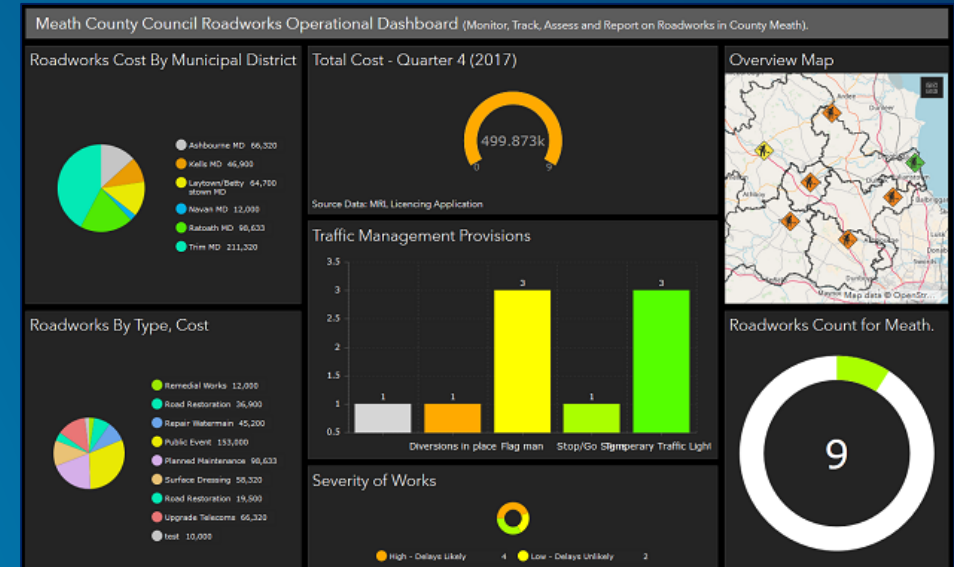
- **Monitor and manage operations/assets**
 - IoT (e.g., sensor feeds)
 - Provide common operational picture
- **Event Management**
 - Situational awareness, emergency management
 - Visualize assets, personnel, activities, weather
- **Executive summaries**
 - Visualize and compare business data
 - Reporting dashboard



Monitor and Manage Operations/Assets

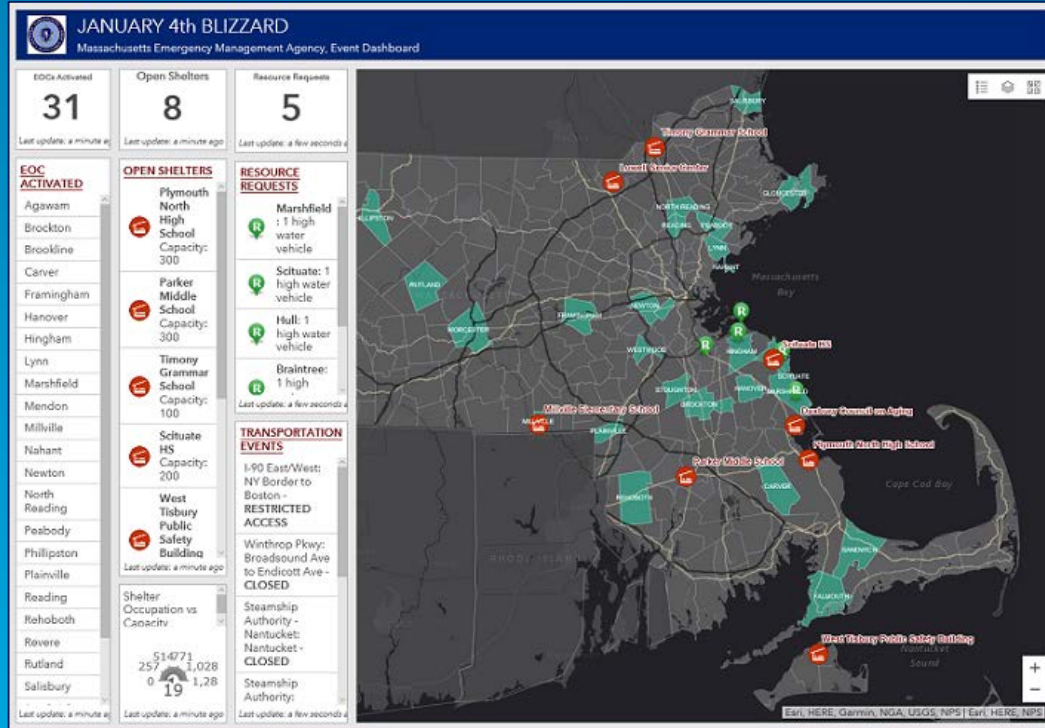


City of Boston, EOC

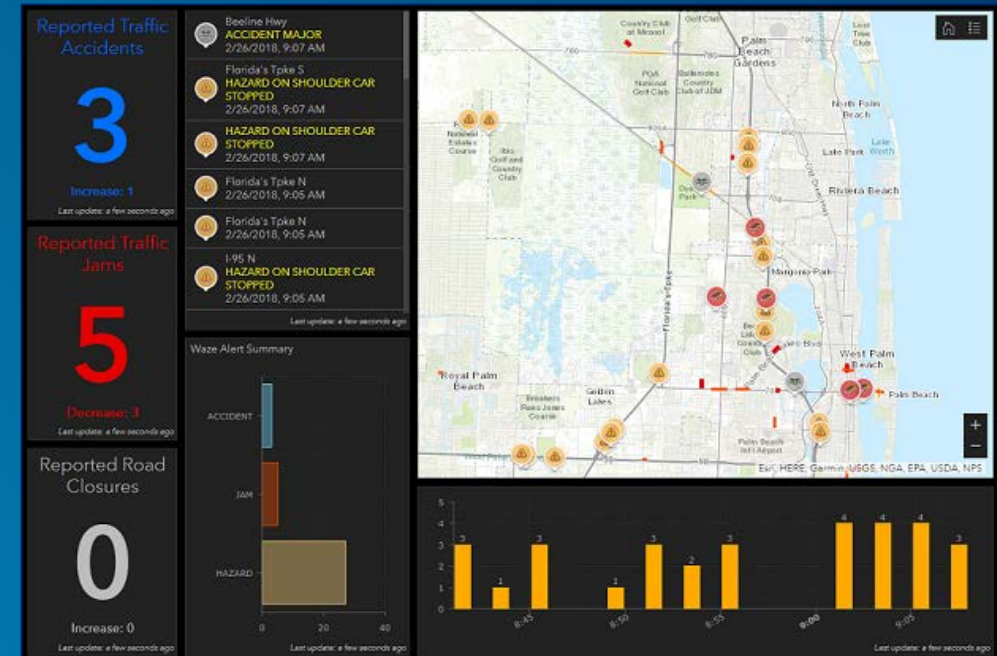


Meath County Council

Event Management

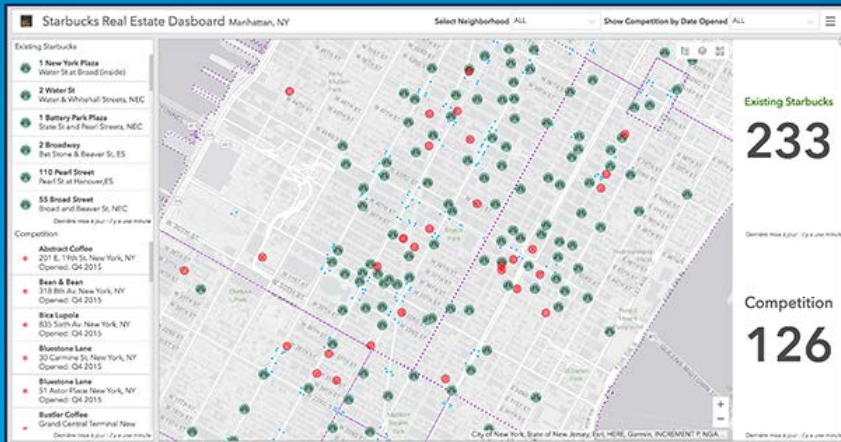


Massachusetts EMA

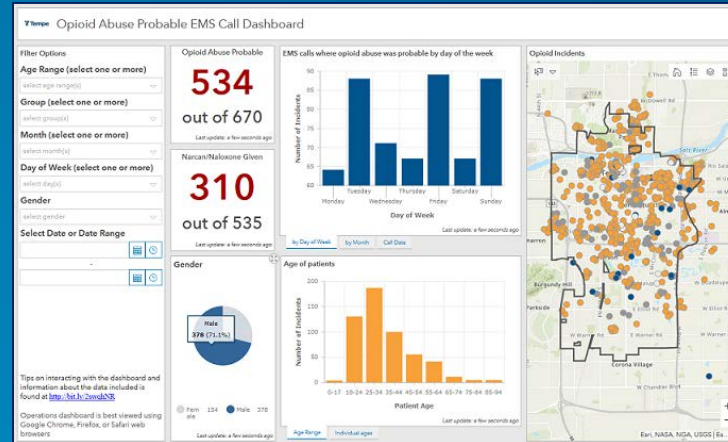


City of Palm Beach Gardens

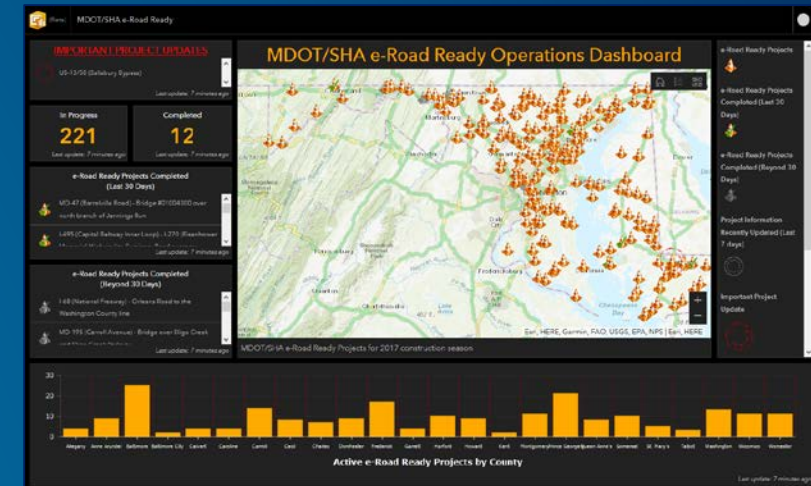
Executive Summaries



Starbucks



City of Tempe



Maryland DOT

Operations Dashboard for ArcGIS | Getting the App

- **ArcGIS Online**

- App is included with your ArcGIS organization
- Available since Dec 2017 update
- Will be updated when ArcGIS Online updates



- **ArcGIS Enterprise**

- Available at 10.6 release (Jan 2018)
- Download separate app installer from *MyEsri* site, install into Portal for ArcGIS machine
- Future releases: will be included with Portal
 - Will not have a separate installer



Getting Started with Operations Dashboard

- Several ways to open the app

1. **App Launcher**

2. **Map Viewer**

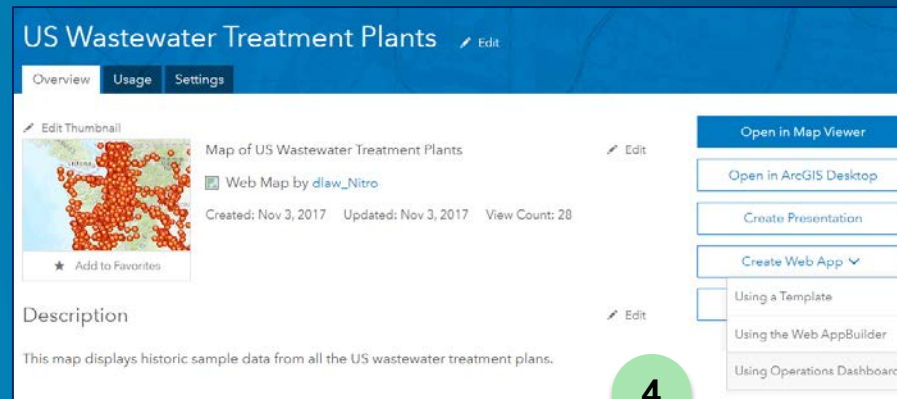
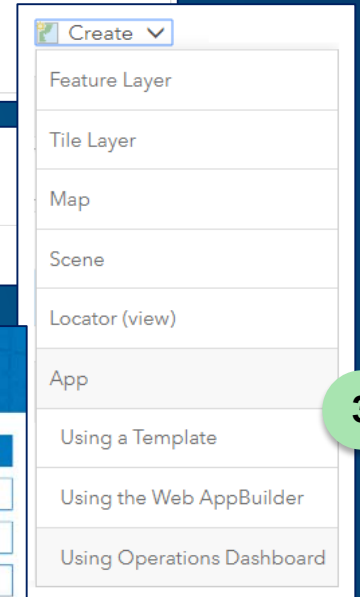
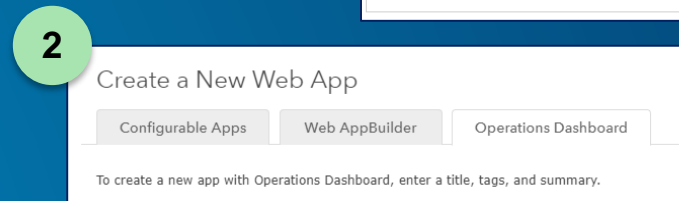
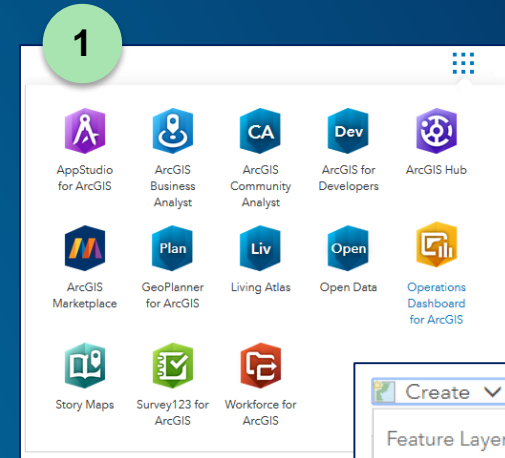
- Share > Create app > Operations Dashboard

3. **Content page**

- Create > App > Operations Dashboard

4. **Web Map item page**

- Create Web App > Using Operations Dashboard



Dashboard Home Page

- Create and manage dashboard items
 - View and edit
- Search and sort dashboards in your organization

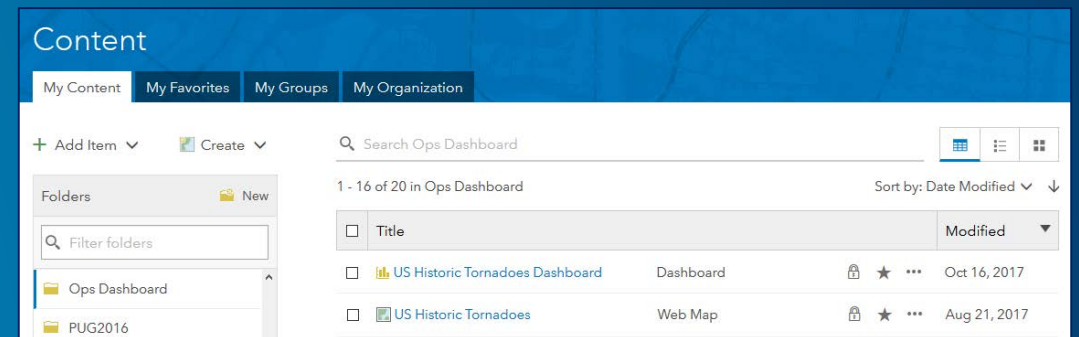
The screenshot shows a dashboard interface for the 'Product Management Team Portal'. At the top, there is a navigation bar with 'Home' and 'Operations Dashboard' on the left, and a user profile 'Derek' on the right. Below the navigation bar, the title 'Product Management Team Portal' is displayed. Underneath the title, there are tabs for 'My Dashboards' and 'Shared Dashboards', and a 'Create Dashboard' button. A search bar contains 'All my dashboards' and a 'filter' input field. To the right of the search bar are icons for refresh and sort. The main content area displays four dashboard cards:

- Philadelphia Crime Monitoring**: 27 Nov 2017 • Law. Includes a map and a gauge showing 414 incidents.
- US Historic Tornadoes Dashboard**: 27 Nov 2017 • Law. Includes a photograph of a tornado.
- Police Citations Dashboard**: 27 Nov 2017 • Law. Includes a map with data points and a bar chart.
- CDC Social Vulnerability Indexes 2014**: 27 Nov 2017 • Law. Includes the CDC logo.

Each card has a set of icons at the bottom for editing, deleting, and other actions.

Dashboard Item

- Brings data together in a single display
 - Determines how content is displayed in app
- Composed of elements
 - E.g., map, list, chart, etc.
- Works with many ArcGIS data sources
 - Online content and web services
 - Field collection data
 - Sensor data, social media, GPS locations, etc.
 - Real-time data
- Level 2 user to author



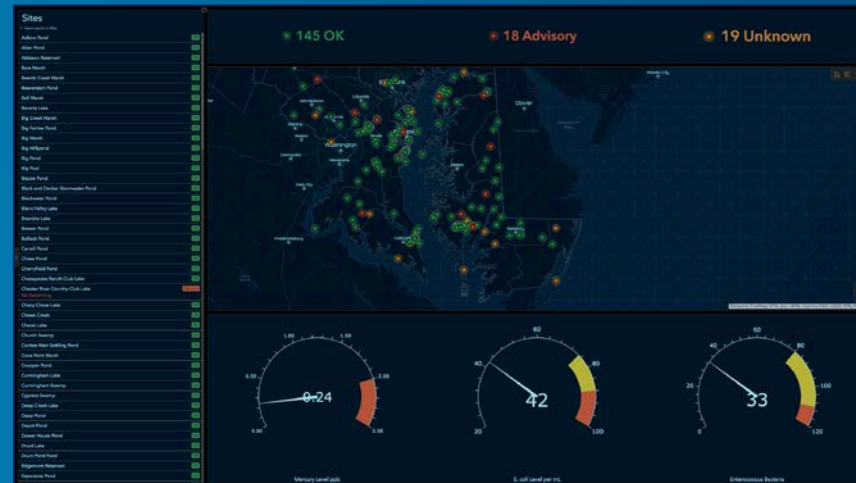
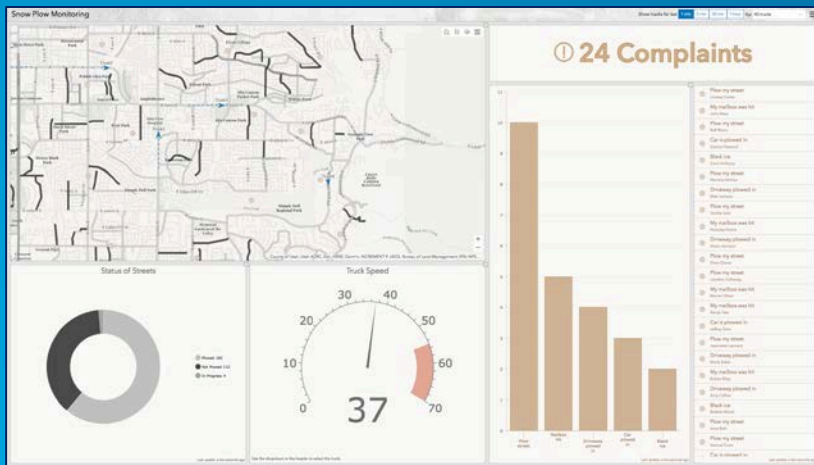
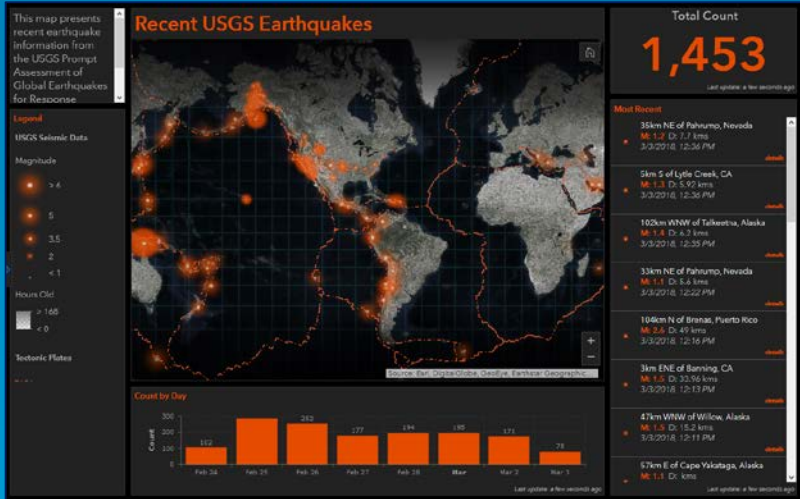
* Operation views cannot be upgraded to a dashboard

Dashboards

- Can be broadly categorized into 2 general types
 1. **Interactive** → End user interacts with the dashboard to obtain more info
 - Can apply actions and selectors for an interactive UE
 - E.g., Click one element, affects changes in other element(s)
 2. **Unattended display** → Designed to provide updates, no interactivity with end user
 - Typically consume data sources that update, elements would reflect updates
 - E.g., Real-time data, IoT



Esri Demo Dashboards

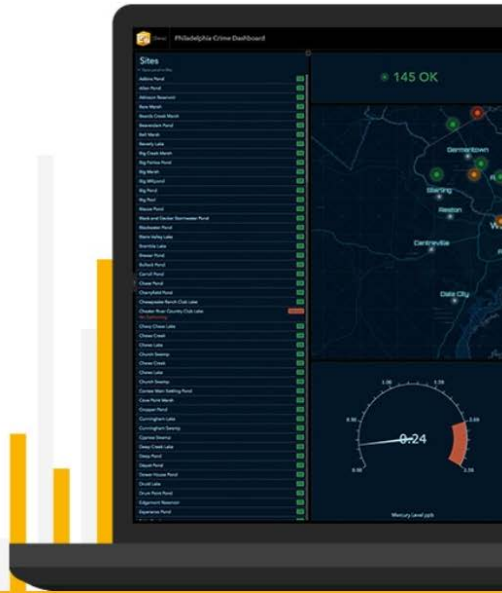




Operations Dashboard

for ArcGIS

Make decisions at a glance



Demo

Web Maps for Dashboards – Best Practices

- Set appropriate refresh intervals
- Exclude irrelevant data from operational layers
- Toggle operational layer visibility
- Set visible range
- Adjust pop-ups
- Use bookmarks
- Style your data
- Include labels for map layers
- Choose appropriate colors



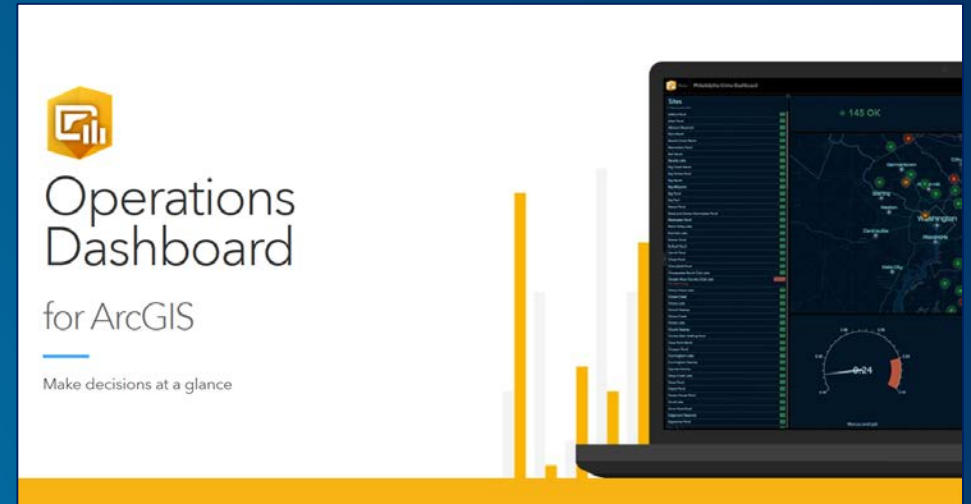
Designing Dashboards

- Consider the audience for the information product
- Dashboard should help enable “at-a-glance” decision making
- Interactive or unattended display
- Design and implement visualizations cautiously
 - Avoid the “kitchen sink” approach
 - Built specific focused apps
- Share with others



Additional Resources

- Operations Dashboard [help documentation](#)
- GeoNet forum: [Operations Dashboard for ArcGIS](#)
- Blogs
 - [Some Example Operations Dashboard for ArcGIS Apps & Resources](#)
 - Esri UK blog - [Learn about: Operations Dashboard](#)
- Esri Training webinar
 - [Real-Time Decision Making with Operations Dashboard for ArcGIS](#)





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