



Extend the Operations Dashboard with Custom Widgets

(and more)

Tif Pun

Agenda

Operations Dashboard

Extend the app using JavaScript

Two Demos

Deploy Extensions

Resources

Q&A

Operations Dashboard



Operations Dashboard (30,000 feet overview)

- What is this app for?
 - Managing events in real-time (e.g. Boston Marathon)
 - Visualizing key performance indicators (e.g. San Diego water usage)
- What are the tools?
 - Widgets (information display)
 - Map tools (interact with maps)
 - Feature actions (execute on feature(s))
 - They can be configurable

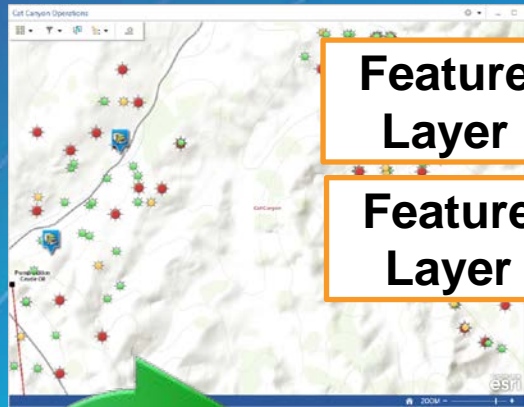
The screenshot displays the 'Casco Bay Ferry Operations (Dev Summit)' dashboard. It features a left sidebar with a 'Ferry Details' widget showing information for the 'Casco Sound' ferry, including departure time, speed, route, and passenger capacity. The main area is a map of Casco Bay with various ferry routes and locations marked. A callout bubble labeled 'Widget' points to the 'Ferry Details' section. Another callout bubble labeled 'Map Tool' points to the map's interaction menu, which includes options like 'Show pop-up', 'Highlight', 'Follow', 'Pan to', 'Select', and 'Zoom to'. A third callout bubble labeled 'Feature Action' points to a specific ferry route on the map.

Widget

Map Tool

Feature Action

Data Sources



Feature Layer

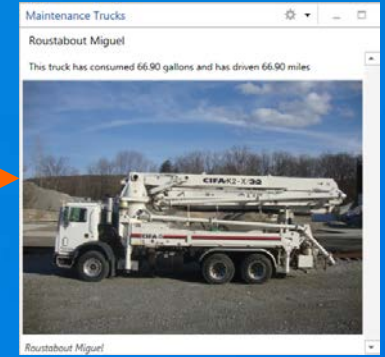
Feature Layer

Data Source

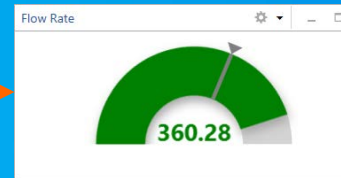
Wells
CE-08300011 Flow Rate: 358.20 k sft3/h Flow Tubing Pressure: 121.46 psig 6/28/2013 05:21 PM
CE-08300073 Flow Rate: 253.72 k sft3/h Flow Tubing Pressure: 178.02 psig 6/28/2013 05:21 PM
CE-08300083 Flow Rate: 370.39 k sft3/h Flow Tubing Pressure: 85.19 psig 6/28/2013 05:21 PM
CE-08300101 Flow Rate: 388.41 k sft3/h Flow Tubing Pressure: 180.62 psig 6/28/2013 05:21 PM
CE-08300109 Flow Rate: 310.77 k sft3/h Flow Tubing Pressure: 121.49 psig 6/28/2013 05:21 PM

Universal Coordinated Time (UTC)

Data Source



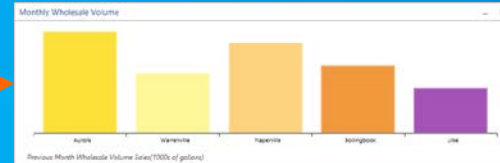
Data Source



Data Source



Data Source

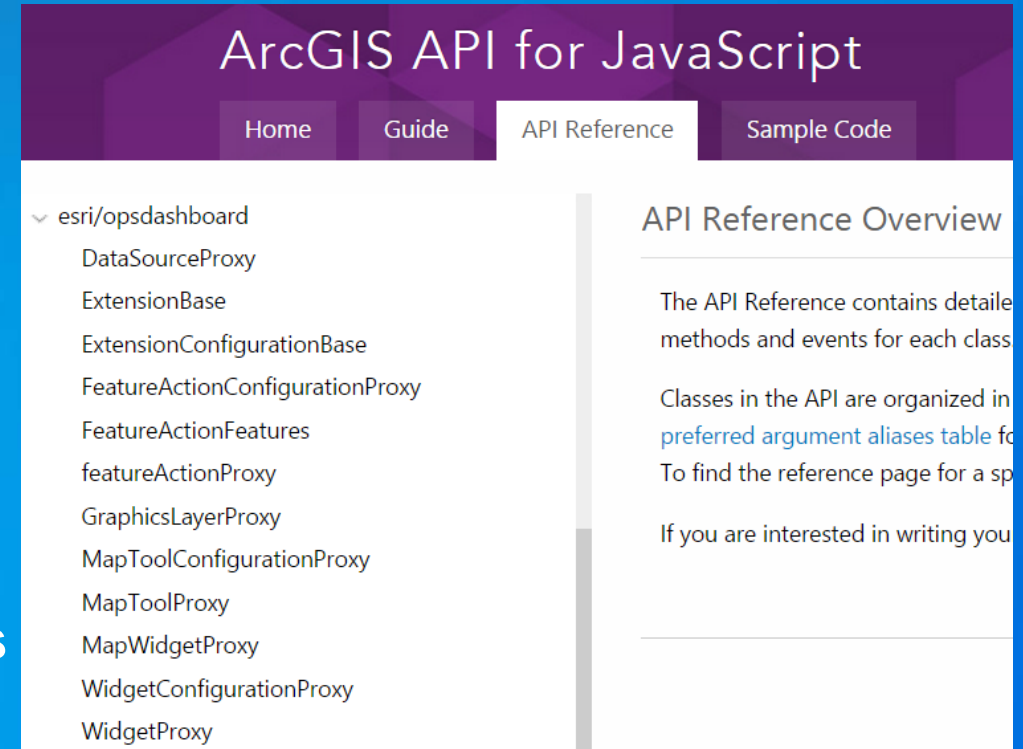


Feature Service/
Dynamic map
service

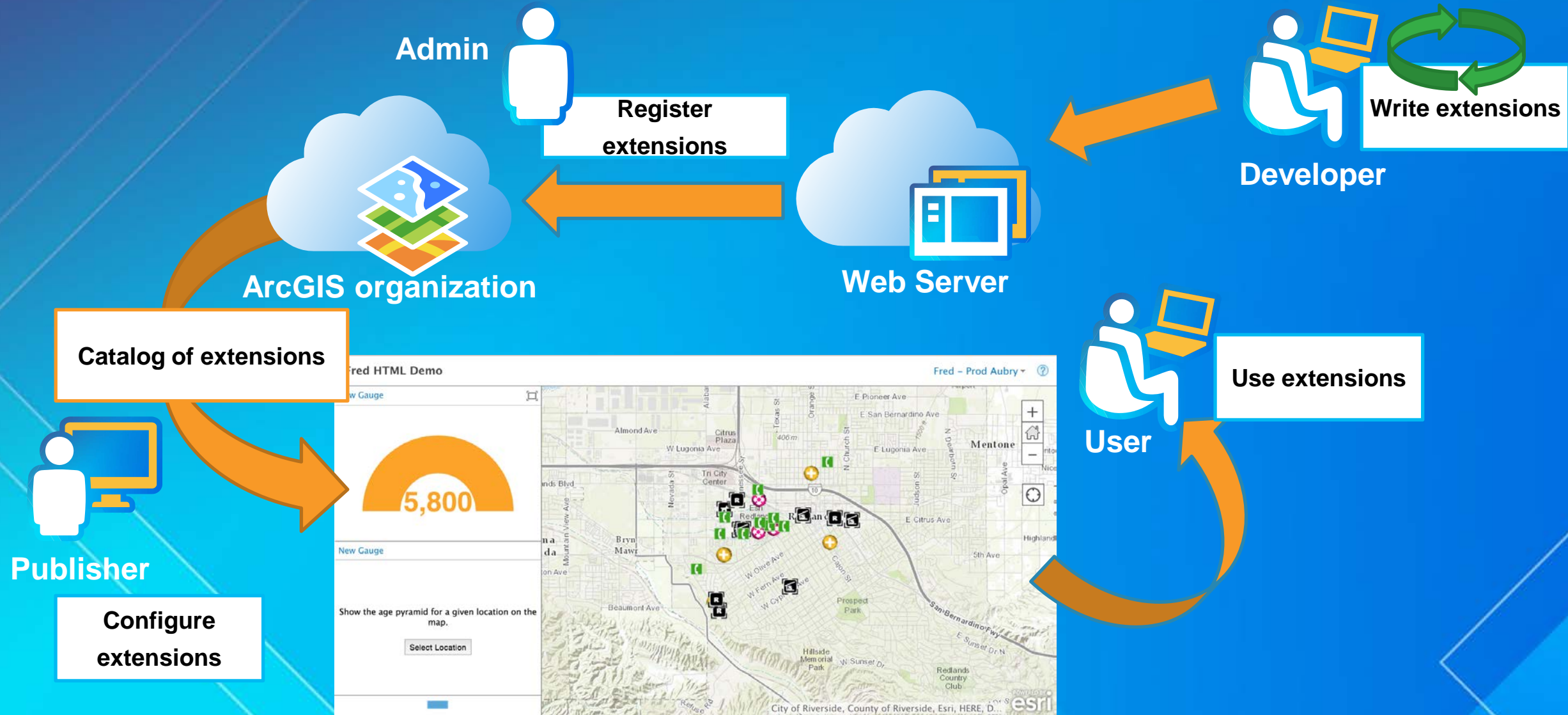
Extend the app using JavaScript

Extend Operations Dashboard?

- What's an extension?
 - A web app hosted in your server
 - Manifest + HTML (+ JavaScript + CSS)
 - Either a widget, a map tool, or a feature action
 - They can be configurable too
 - Build them using the ArcGIS API for JS
 - Code once, run in Windows and browser apps
- Some examples...
 - Bomb threat map tool
 - Real time video feed widget
 - Drive time polygon feature action

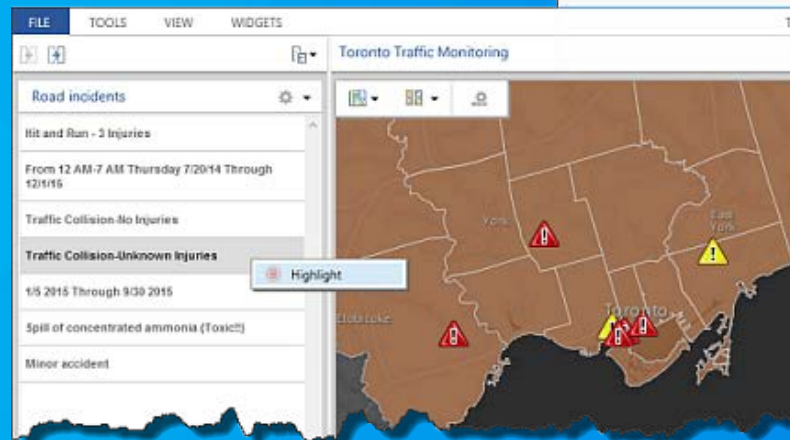
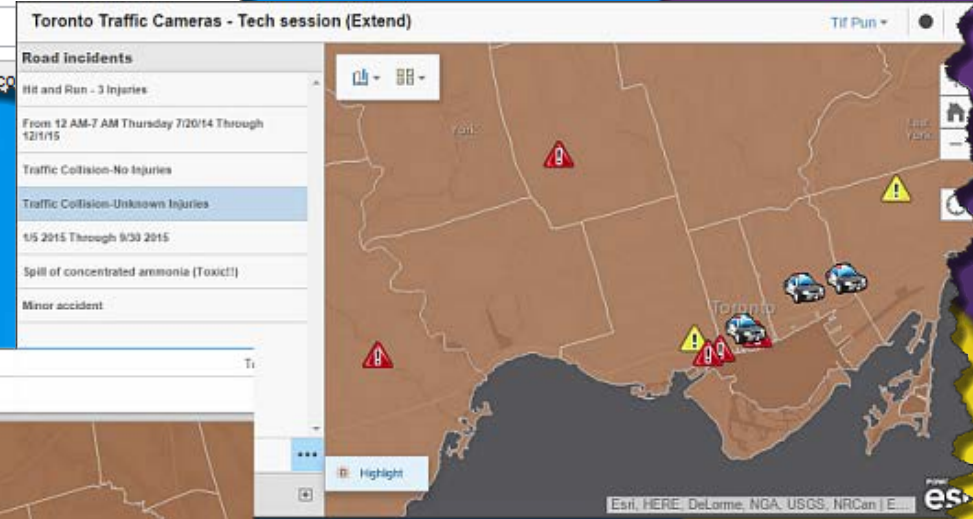
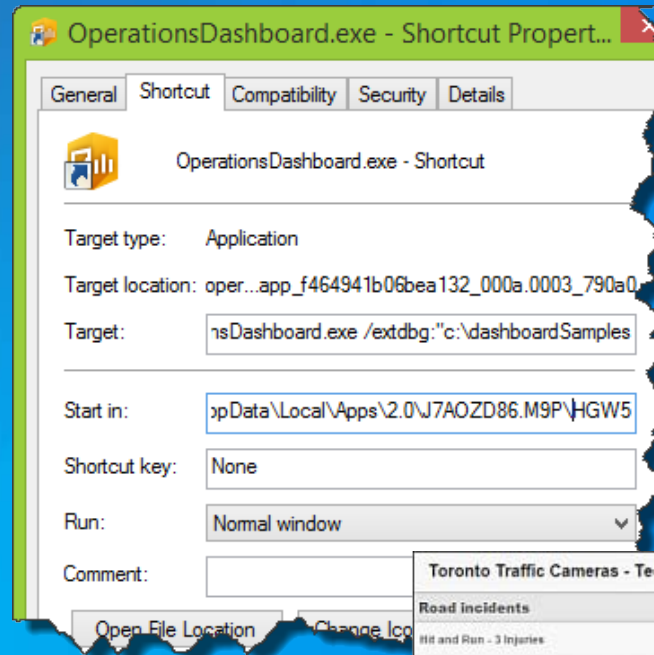


Extending Operations Dashboard using Esri JavaScript API



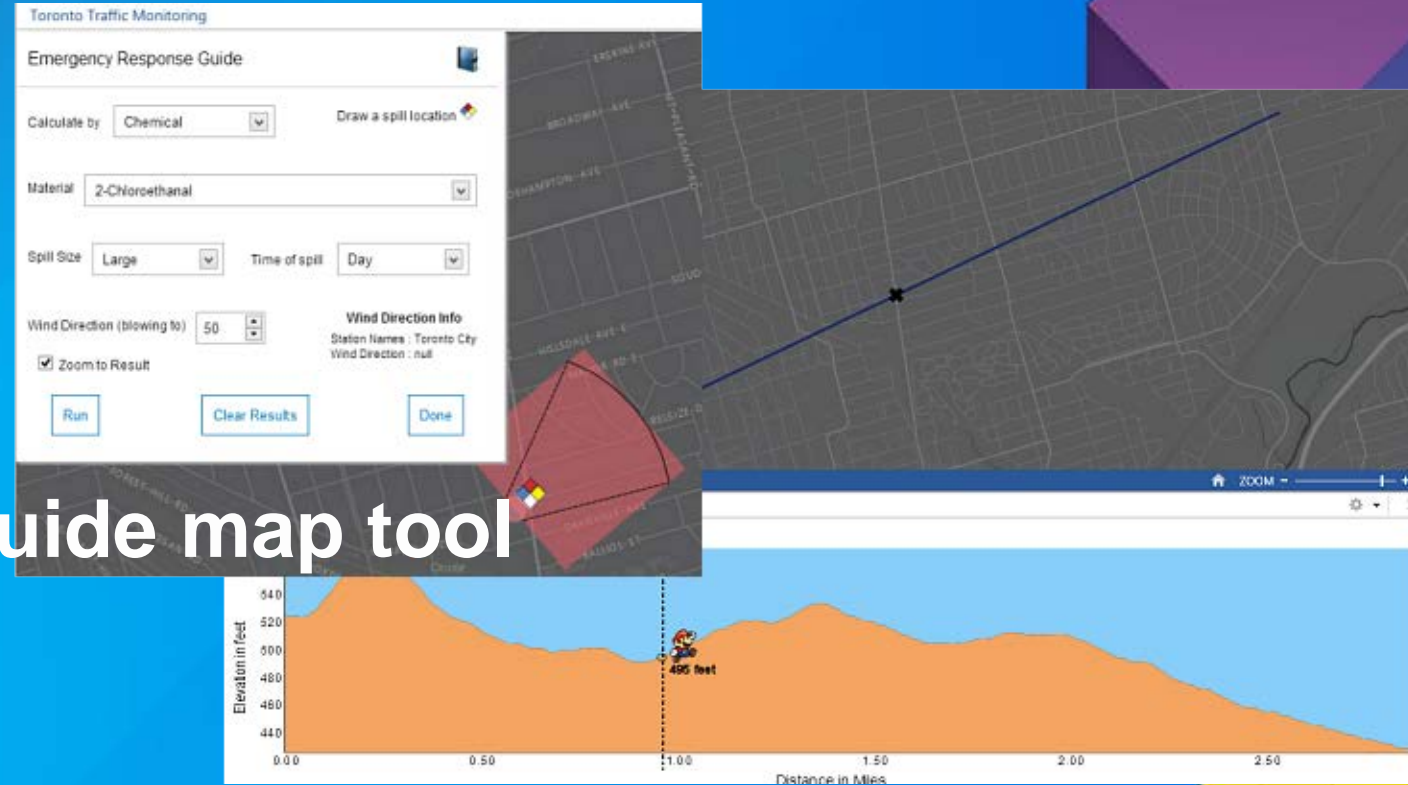
Demo 1

Set up the app to run in dev mode
Custom list widget



Demo 2

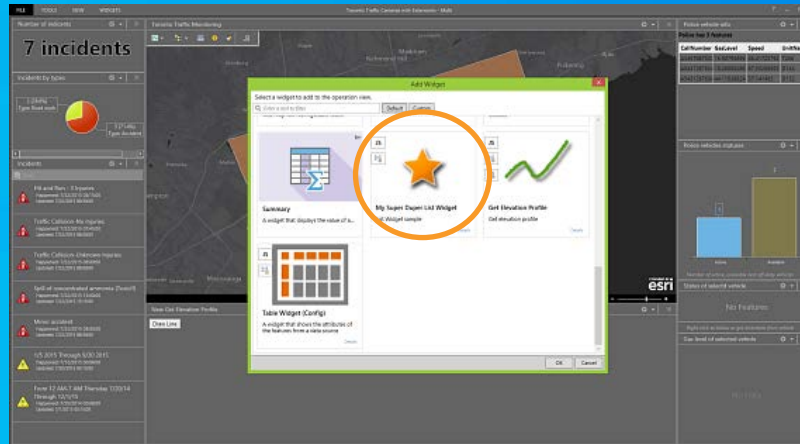
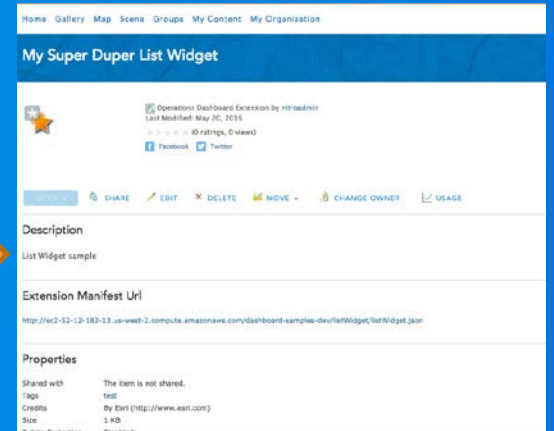
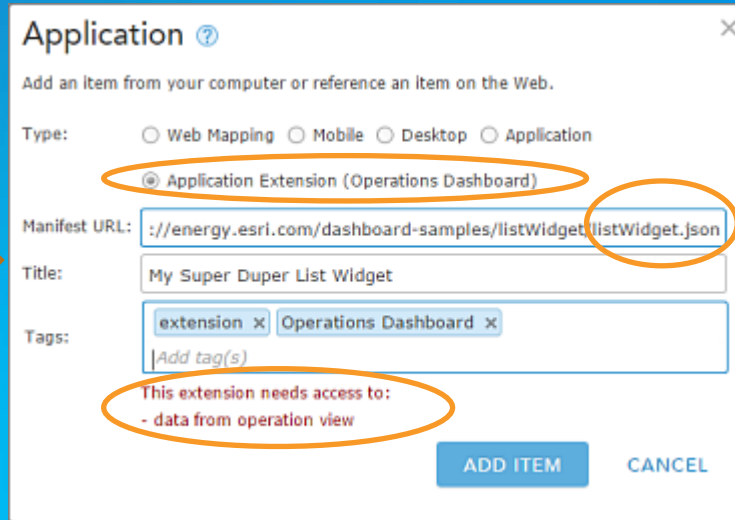
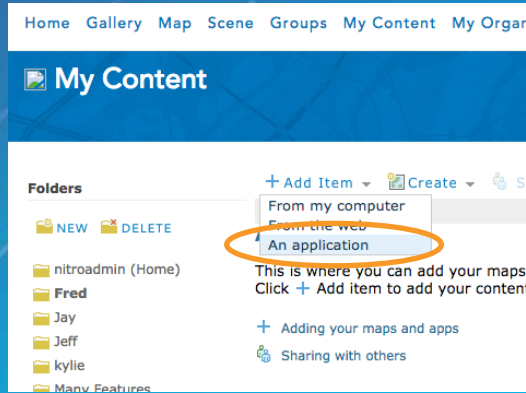
Emergency Response Guide map tool
Elevation profile widget



Deploy extensions

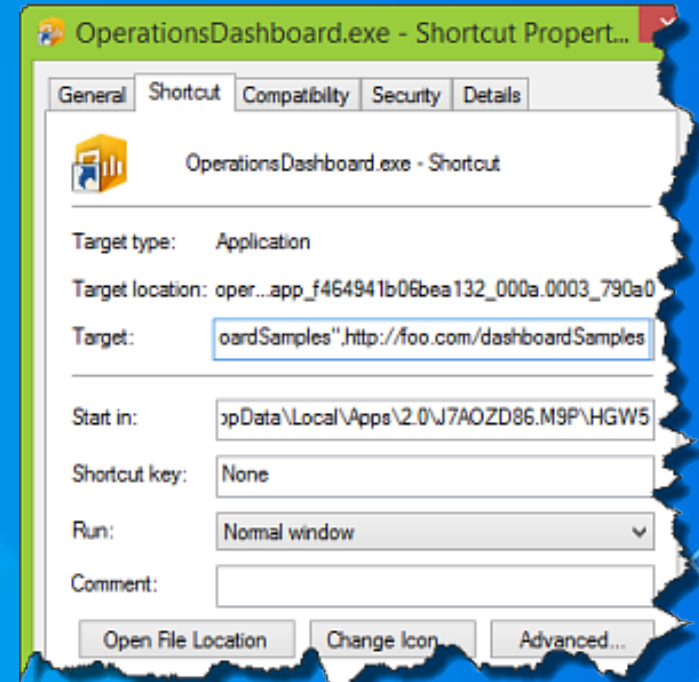
Make an extension available in the production environment

- Only admin can create Operations Dashboard Extension items.

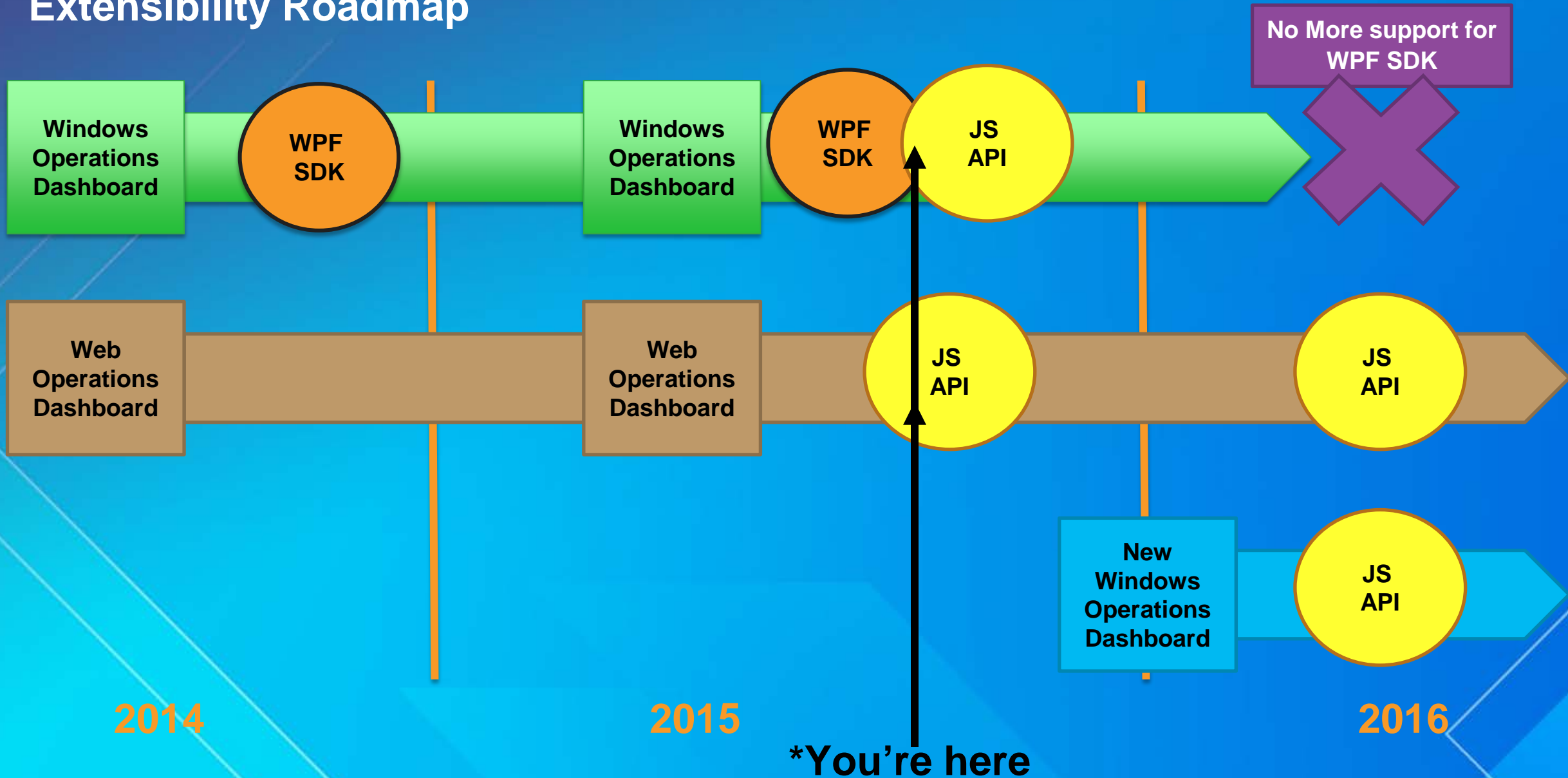


A few notes...

- **Requirements for web server**
 - Enable HTTPS and have a valid certificate if your org allows only HTTPS
 - Enable CORS for the ArcGIS organization domain
- **To debug an extension from a web sever instead of localhost**
 - Append the web server URL to the extdbg parameter



Extensibility Roadmap



Resources



Where to get started?

- **ArcGIS API for JavaScript?**
 - <https://developers.arcgis.com/javascript/>
- **Doc?**
 - <https://developers.arcgis.com/javascript/jshelp/operations-dashboard-extensibility-overview.html>
- **Samples?**
 - <https://github.com/Esri/dashboard-samples>

Upcoming Sessions for Operations Dashboard

- **WEDNESDAY**

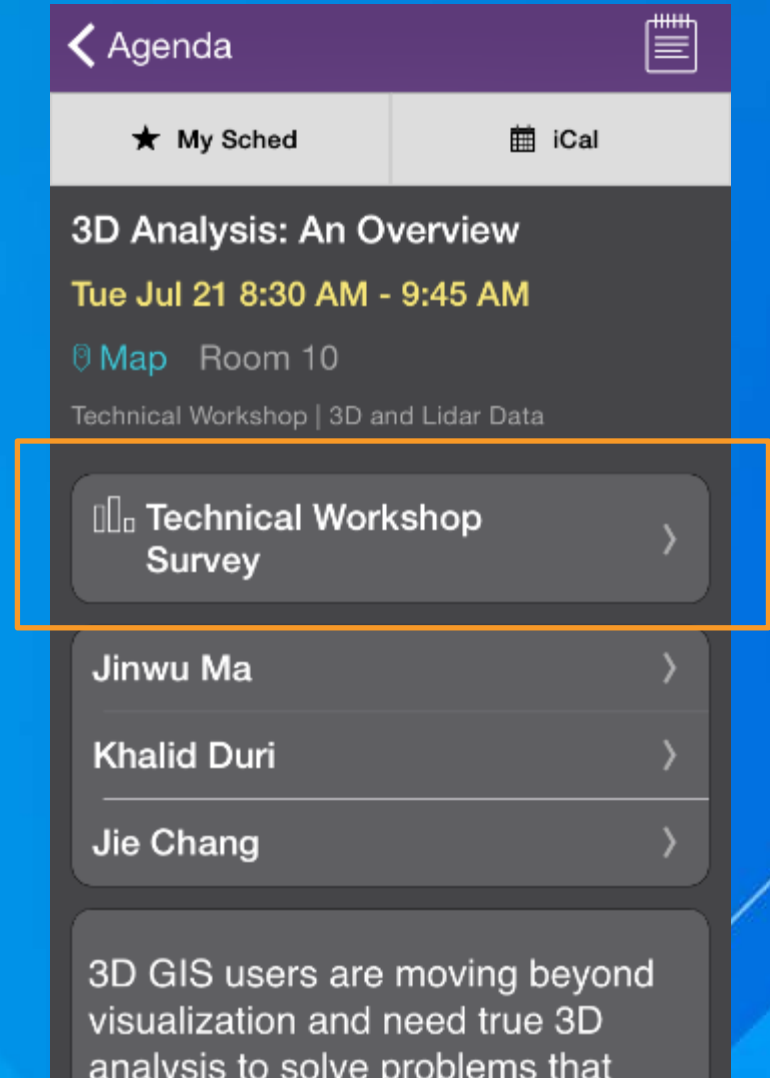
- 2:30 pm – Demo Theater 10 – Operations Dashboard: An Introduction
- 3:15 pm – Room 32 B – Extending Operations Dashboard (Tech Workshop)

- **THURSDAY**

- 3:15 pm – Room 32 A – Using Operations Dashboard (Tech Workshop)

Thank you...

- Please fill out the session survey in your mobile app
- Select **Extend the Operations Dashboard**
- **with Custom Widgets** in the Mobile App
 - Use the Search Feature to quickly find this title
- Click “Demo Theater Survey”
- Answer a few short questions and enter any comments





Understanding our world.