

DevSummit DC

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ArcGIS Web AppBuilder: Custom Widgets and Themes

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Topics

Introduce Web AppBuilder

Quick introduction of ArcGIS Web AppBuilder

Widgets

Create a simple widget
Configure the widget
Package the widget

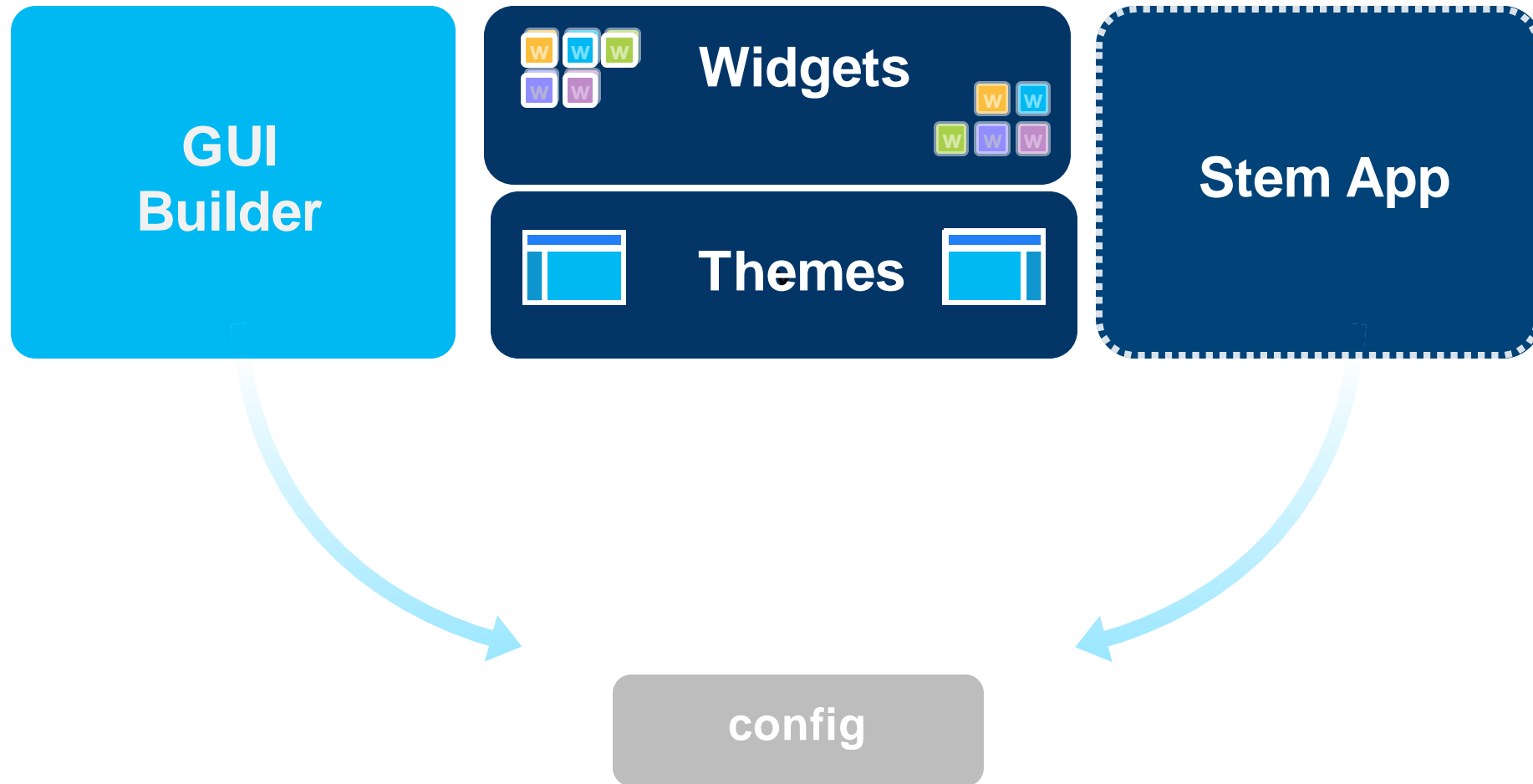
Themes

Define Web AppBuilder theme
Create a theme
Package the them
Configure the widget
Package the widget

Deploy

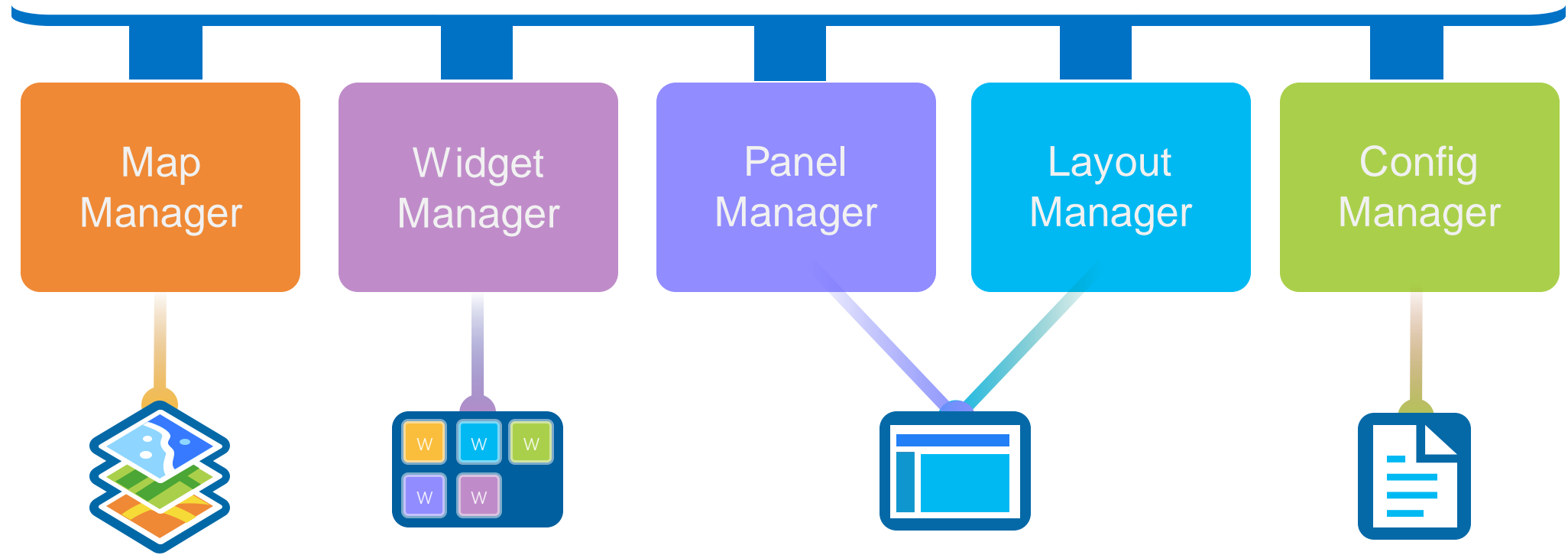
Options
Frequently Asked Questions

Web AppBuilder for ArcGIS Components



Inside Stem App

Messaging (publish/subscribe)



Widget

HTML/JavaScript/CSS

Specific task

Configuration in JSON

NLS support

Builder config UI

Theme

HTML/JavaScript/CSS

Layout

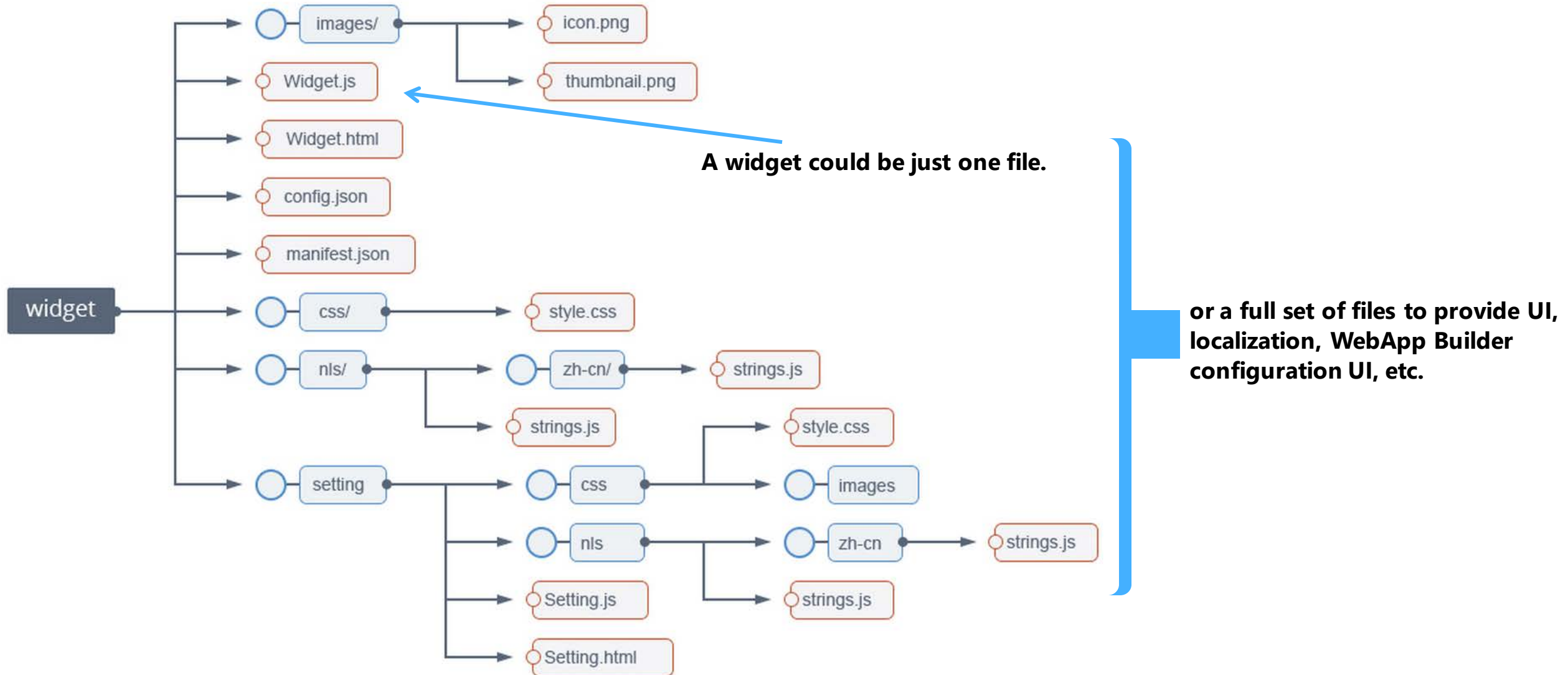
Branding

Widget panel and
behavior

Style (Color, etc.)

Theme widgets

Convention and Defaults





A minimum Widget - Widget.js

```
define(['dojo/_base/declare',  
    'jimu/BaseWidget'  
],  
function(declare, BaseWidget) {  
    var clazz = declare([BaseWidget] {  
    });  
    return clazz;  
});
```

All widgets are derived from the BaseWidget class



BaseWidget

What do you get from BaseWidget?

App config properties (label, icon, location, etc)

App config data

Widget's config data

Map object

Widget state (open, closed, active...)

Events like open/signin

Sharing data (widget communication)

Your job?

HTML Template

Widget config file

Widget name (for css)

The "guts" (i.e. business logic)

Localization





Events

Dijit **lifecycle** events

- postCreate
- startup
- ...



Widget events

- onOpen, onSignIn
- publishData
- ...



Widgets: Preloaded or in the Panel

The image shows a screenshot of an ArcGIS Web Application interface. The main map displays noise observation data points across Europe, with a legend widget open on the right side. The legend widget is titled "Legend" and contains three sections: "Citizen Observations (above 1:5.000.000)", "Noise Watch", and "Citizen observations". The "Citizen Observations (above 1:5.000.000)" section lists five categories: 1 - Very bad, 2 - Bad, 3 - Moderate, 4 - Good, and 5 - Very good. The "Noise Watch" section lists five categories: Very Bad, Bad, Moderate, Good, and Very Good. The "Citizen observations" section lists five categories: 5 - Very good, 4 - Good, 3 - Moderate, 2 - Bad, and 1 - Very bad. The "Near real time noise measures" section lists one category: NRT Noise data (1:5.000.000-) 0-45 dB.

"inPanel": false

"inPanel": true (default)

Configurable custom widgets inside the builder

```
1- {
2-   "distanceUnits": [
3-     {
4-       "unit": "KILOMETERS",
5-       "abbr": "km"
6-     },
7-     {
8-       "unit": "MILES",
9-       "abbr": "mi"
10-    },
11-     {
12-       "unit": "METERS",
13-       "abbr": "m"
14-     },
15-     {
16-       "unit": "FEET",
17-       "abbr": "ft"
18-     },
19-     {
20-       "unit": "YARDS",
21-       "abbr": "yd"
22-     }
23-   ],
24-   "areaUnits": [
25-     {
26-       "unit": "SQUARE_KILOMETERS",
27-       "abbr": "sq km"
28-     },
29-     {
30-       "unit": "SQUARE_MILES",
31-       "abbr": "sq mi"
32-     },
33-     {
34-       "unit": "ACRES",
35-       "abbr": "ac"
36-     }
37-   ]
38- }
```

Draw

change widget icon [Learn more about this widget](#)

Distances Areas

+ Add Distance

Label	Abbreviation	Conversion	Actions
Kilometers	km	0.001	↑ ↓ ×
Miles	mi	0.000621	↑ ↓ ×
Meters	m	1	↑ ↓ ×
Feet	ft	3.2808	↑ ↓ ×
Yards	yd	1.0936133	↑ ↓ ×

JSON Editor Ok Cancel

Building a UI for the user

Setting.js

- Config info
- getConfig, setConfig

Setting.html

Usual localization pattern

CSS



Add your First Widget
(Demo)

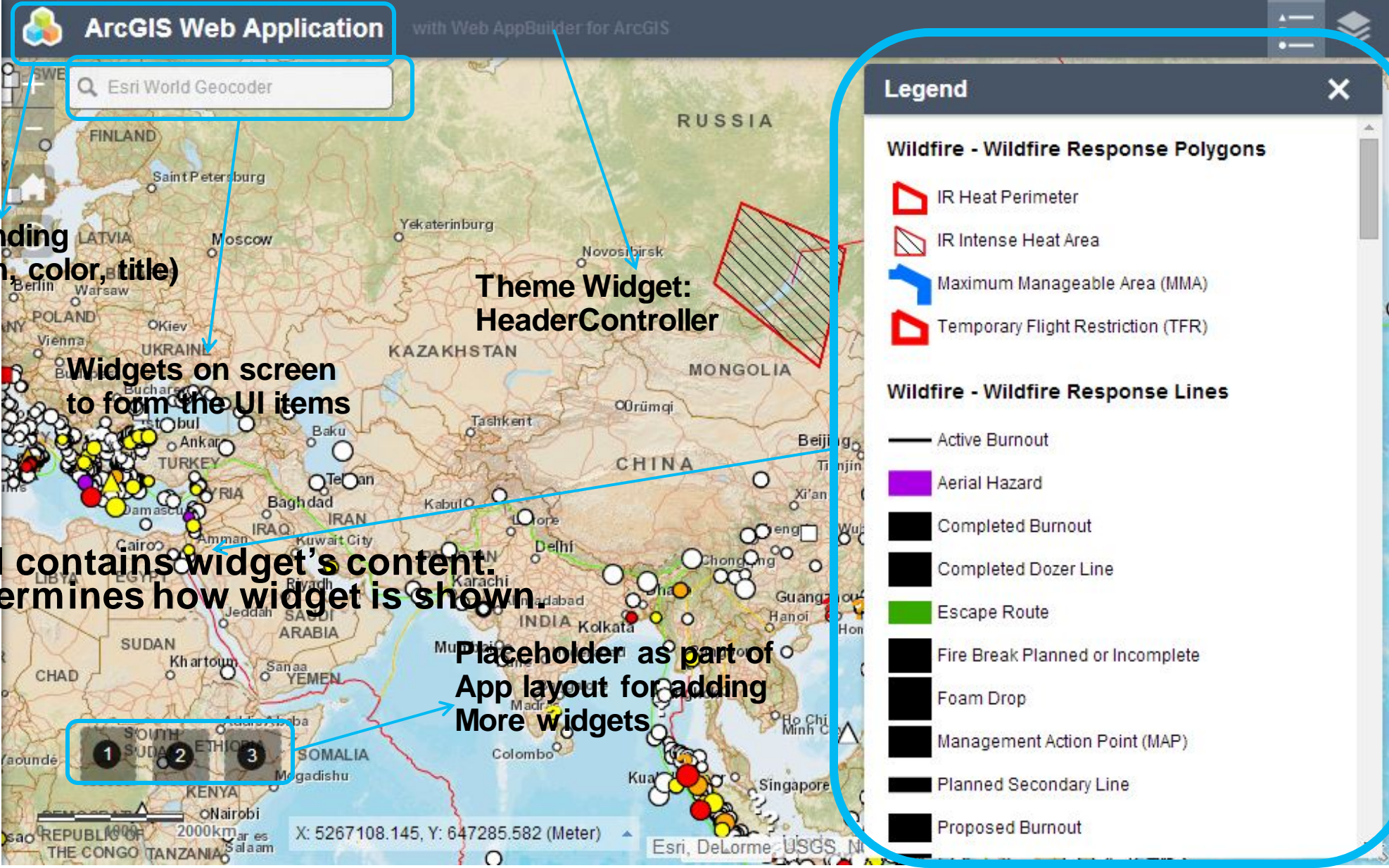


THE GOOD

THE BAD

AND THE UGLY

ART (C) ZACH PELLISSIMO 2008



ArcGIS Web Application

Esri World Geocoder

Branding
(icon, color, title)

Theme Widget:
HeaderController

Widgets on screen
to form the UI items

Panel contains widget's content.
It determines how widget is shown.

Placeholder as part of
App layout for adding
More widgets

Legend

Wildfire - Wildfire Response Polygons


- IR Heat Perimeter
- IR Intense Heat Area
- Maximum Manageable Area (MMA)
- Temporary Flight Restriction (TFR)

Wildfire - Wildfire Response Lines

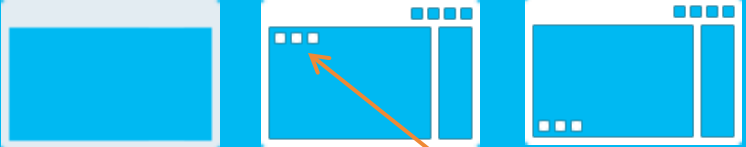
- Active Burnout
- Aerial Hazard
- Completed Burnout
- Completed Dozer Line
- Escape Route
- Fire Break Planned or Incomplete
- Foam Drop
- Management Action Point (MAP)
- Planned Secondary Line
- Proposed Burnout

What's in a Theme


Style



Layouts



On screen widget place holder position **1**



An orange arrow points from the '1' icon to the top-left corner of the middle layout icon.

Theme Widget

ArcGIS Web Application with Web AppBuilder for ArcGIS

Panel (s)

Legend

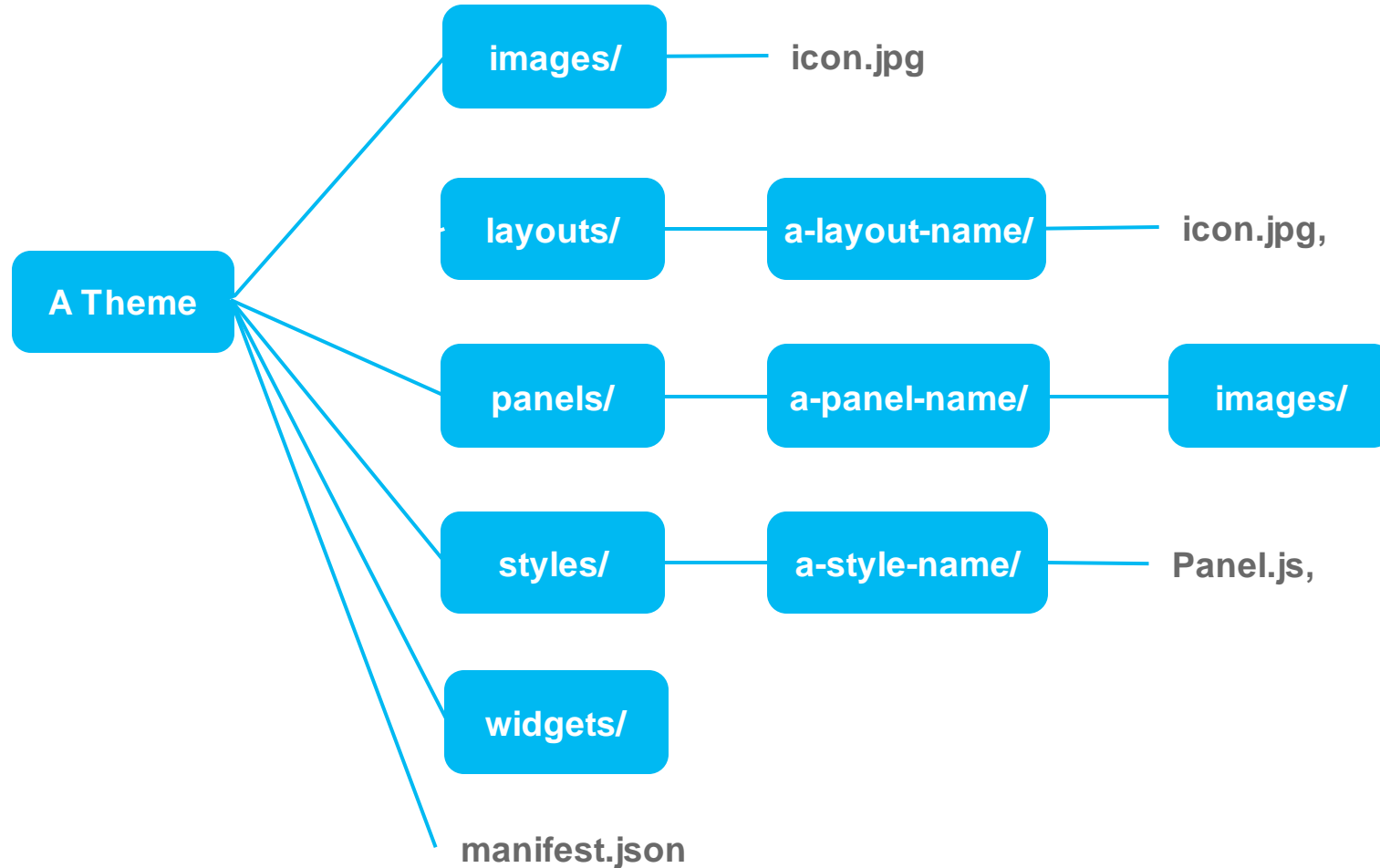
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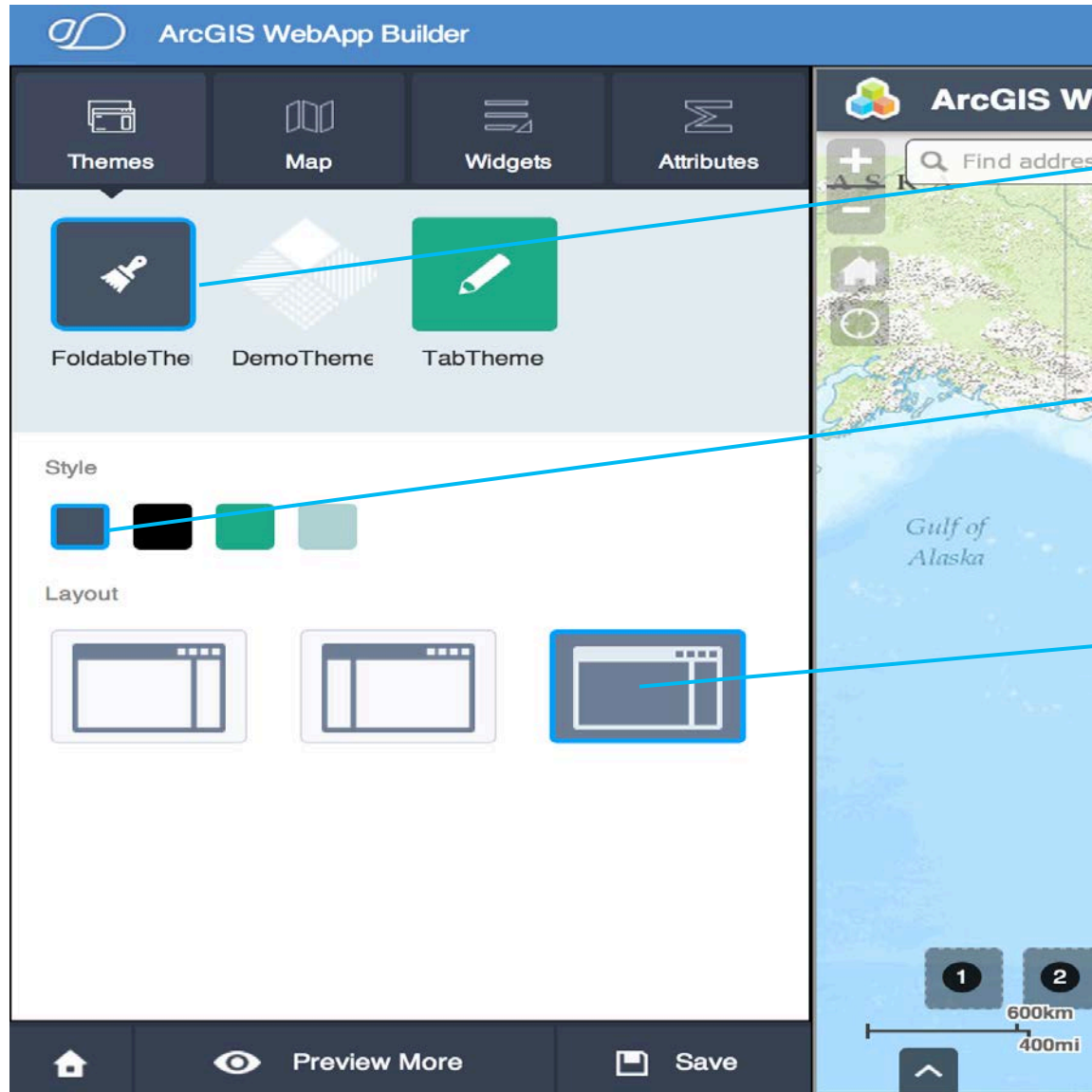
Wildfire - Wildfire Response Lines

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Theme Convention and Defaulting



Theme Configuration inside the Builder



1

Pick a theme

2

Pick a style of the theme

3

Pick a layout of the theme

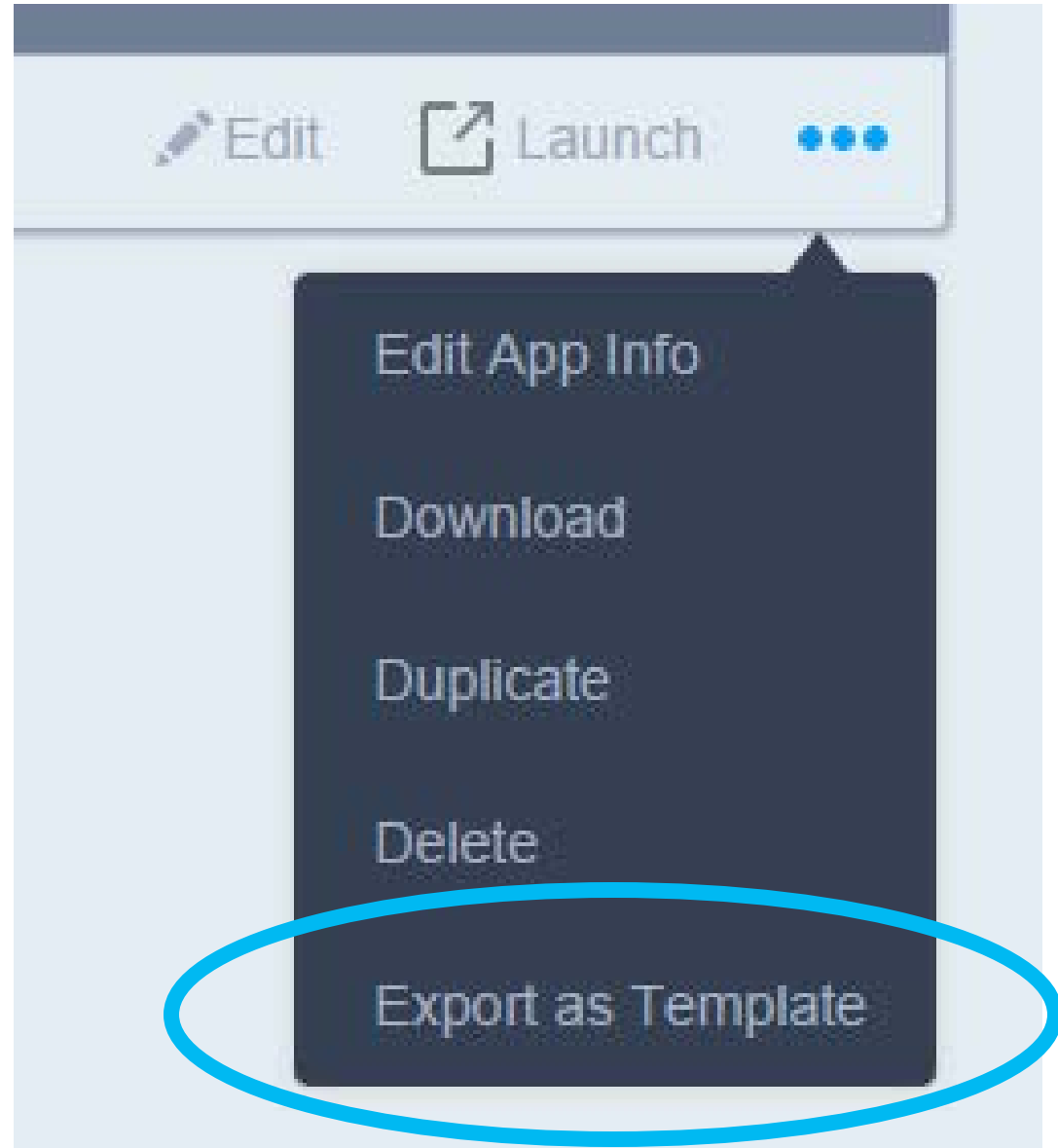


Create a new Theme
(Demo)

Deploy



From your local machine, to the cloud...



To be clear, we are not uploading our application...

Export as Web App Template ✕

You are going to export current parameter settings and create a new web app template item in your portal.

Exported template item will use the default app URL from Web AppBuilder. If you deploy this app to another web server, you need to change this URL in the item's details page.

Title:

Tags:

Description:

Save in folder:

OK

Cancel

ArcGIS Organizations show webmap authors templates that belong to a specific group

- General
- Home Page
- Gallery
- Map
- Item Details
- Groups
- Utility Services
- Roles
- Security
- Open Data

Map

Configure the components people in your organization will use to author maps.

Basemap Gallery



Select the group whose webmaps will be shown in the Basemap Gallery.

Esri Default

Web App Templates



Web application templates contain sample layouts you can use to build web mapping group contains the web app templates you want to use.

custom-templates Sorted by: title Ascending

Share the Esri default web application templates to this group when you click Save

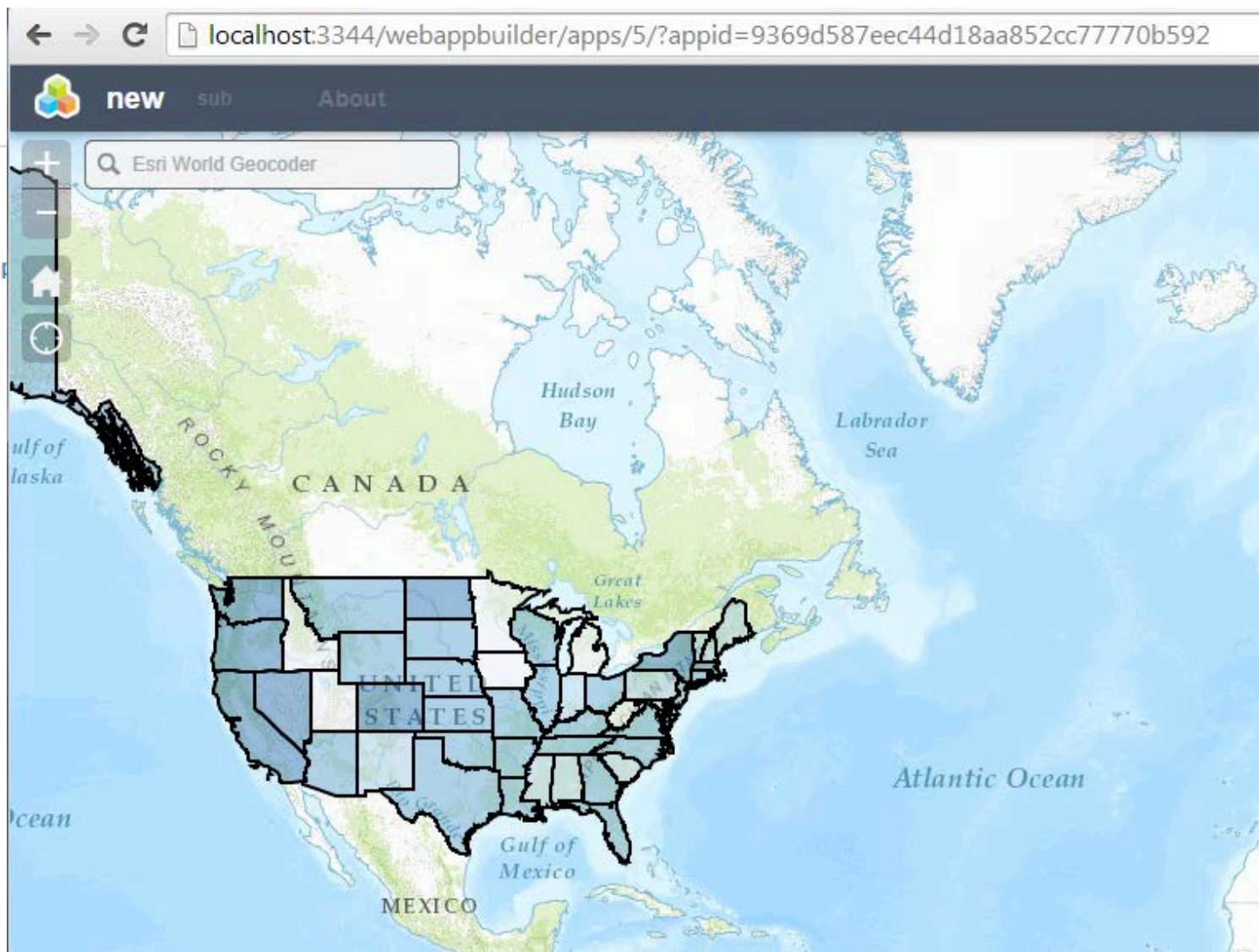
Share the item(s) with:

- Everyone (public)
- Esri Hackathons
- These groups:
 - Alameda County Apps (Data)
 - custom-templates
 - Hack for LA 2014
 - HackForPasadena

But the template (and new apps) still run on your web server

Properties

URL	http://kodos.esri.com:3344/webappbuilder/apps/5?appid=9369d587eec44d18aa852cc77770b592
Code Attachment	None
Purpose	
API	JavaScript
Shared with	Everyone (public)
Tags	us, renters
Credits	





Understanding our world.