

# Windows Phone & Maps

Location, location, location

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Client Dev MVP

# Agenda

- ▶ Putting a map on your app - 101
  - ▶ Built-in map control
  - ▶ ArcGIS Map control
- ▶ Picking a basemap
- ▶ Adding your own data
- ▶ Putting your data in the cloud
- ▶ GPS
- ▶ The bits, licensing, misc...
- ▶ Q & A

DEMO

# Building our first map app

A photograph of a map on a table with a pen resting on it. The map shows a city grid with yellow roads and blue water bodies. A green geometric design with overlapping triangles is on the right side of the image. The text 'Building our first map app' is overlaid in green on the map.

# Creating a simple map

```
xmlns:maps="using:Windows.UI.Xaml.Controls.Maps"
```

```
...
```

```
<maps:MapControl MapServiceToken="MYTOKEN"  
    Style="Aerial" >  
</maps:MapControl>
```

# Creating a simple map - ArcGIS style

```
xmlns:esri="using:Esri.ArcGISRuntime.Controls"  
xmlns:layers="using:Esri.ArcGISRuntime.Layers"
```

```
...
```

```
<esri:MapView>  
  <esri:Map>  
    <layers:ArcGISTiledMapServiceLayer  
      ServiceUri="http://.../World_Imagery/MapServer"/>  
    </esri:Map>  
</esri:MapView>
```

# OOTB Maps vs. Esri Maps

## Windows Phone

Doesn't require additional packages

Has default map data

Shared map storage

Windows Phone only

Longitude/latitudes, always Mercator

Limited support for data

GPS location/centering: Write it yourself

Free\*

## Esri

3<sup>rd</sup> party component

Must specify map data

Map storage per app

Universal (Phone, Store, WPF)

Any projection supported

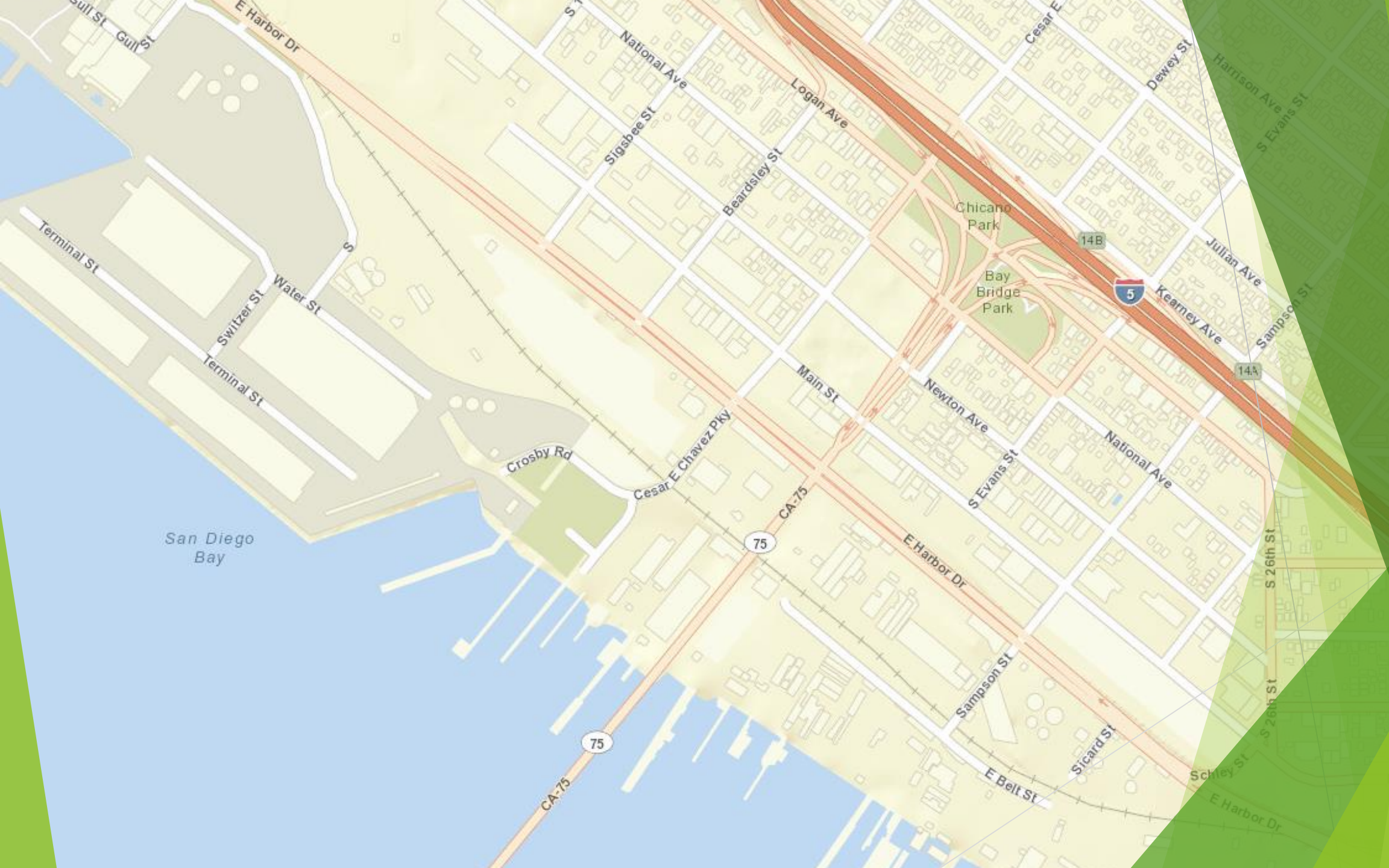
Many data formats + extensible

Flip a switch

Free\*

# Available Map Services

<http://services.arcgisonline.com/>



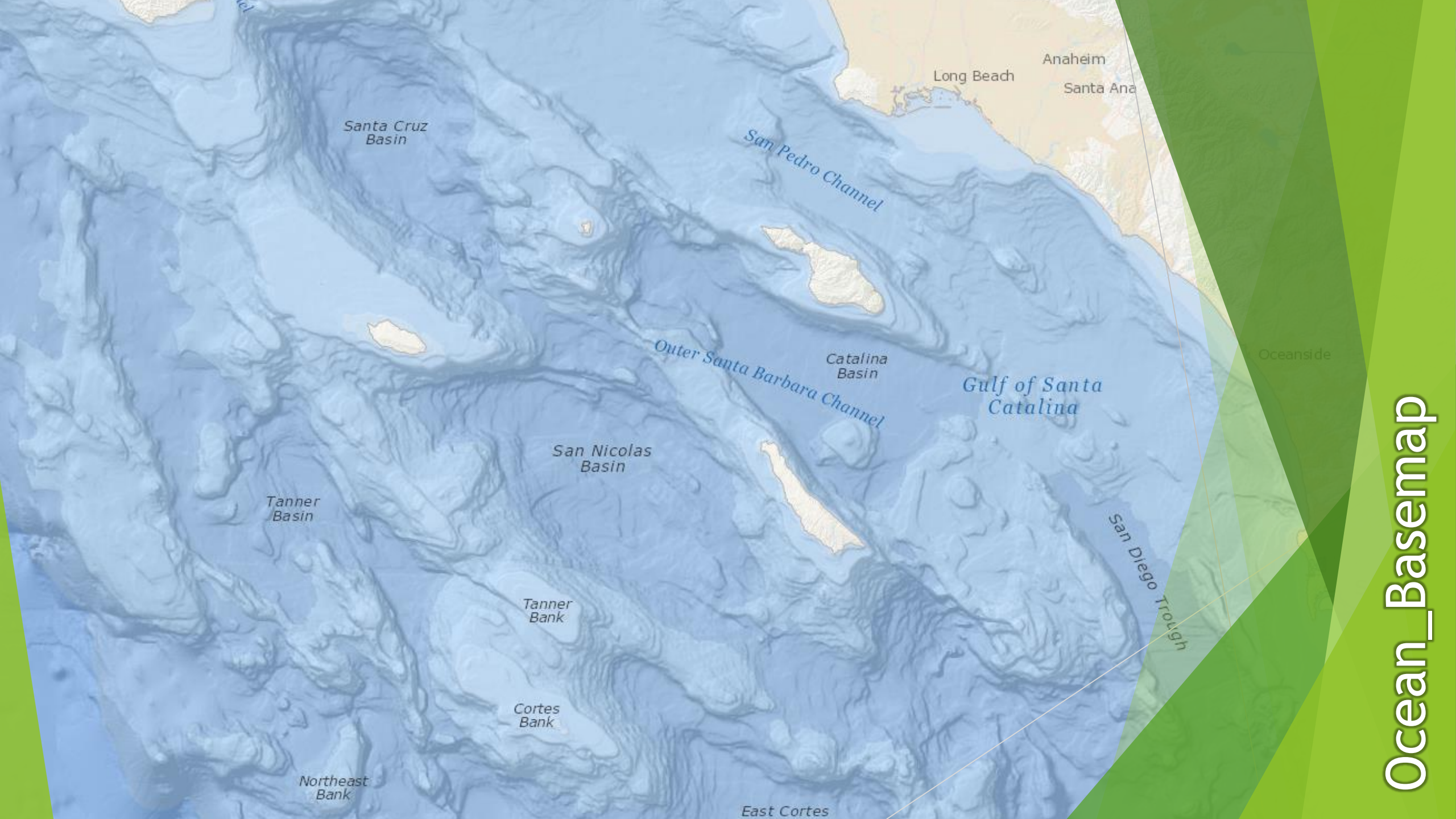




World\_Imagery



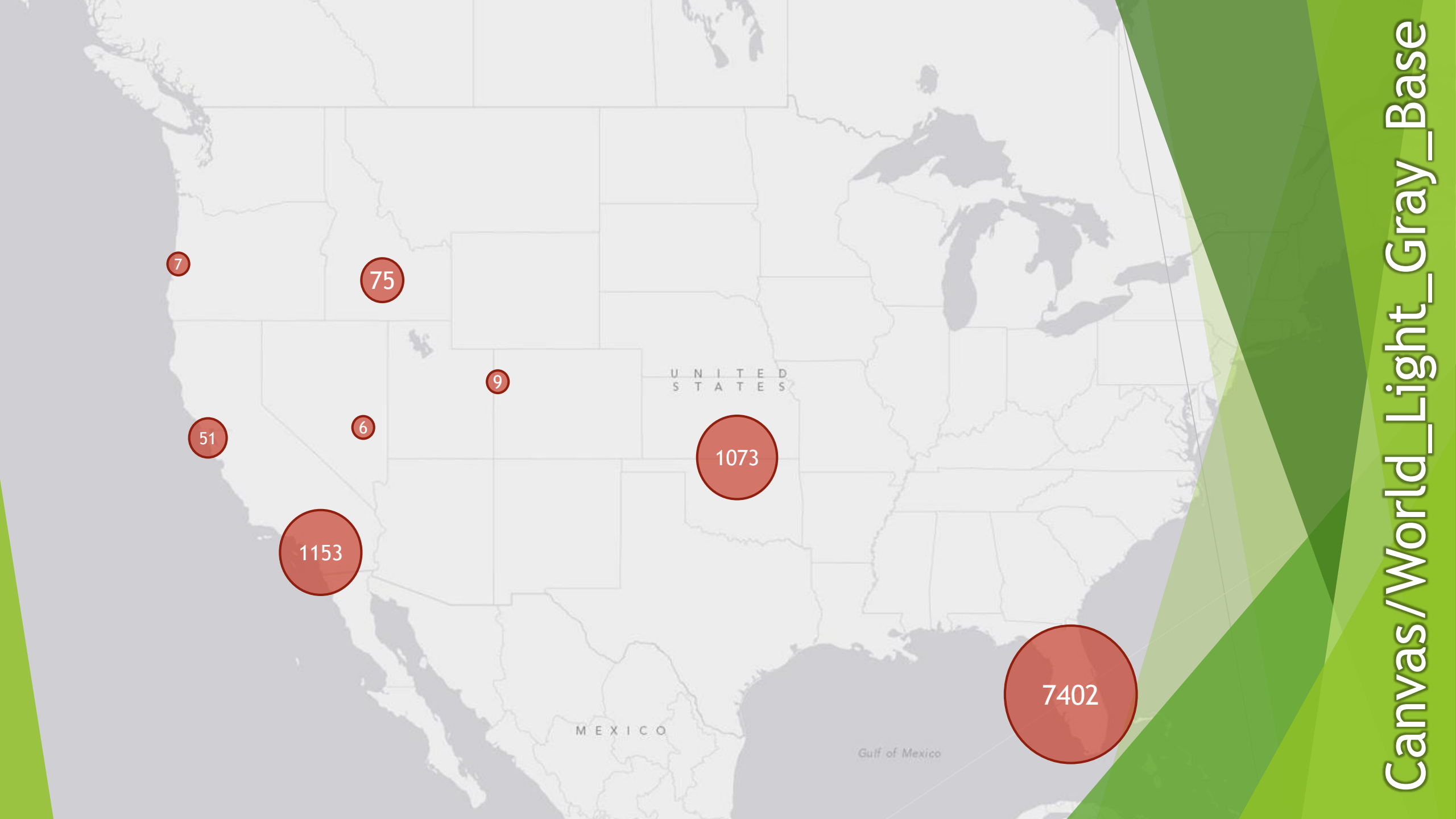
NatGeo\_World\_Map

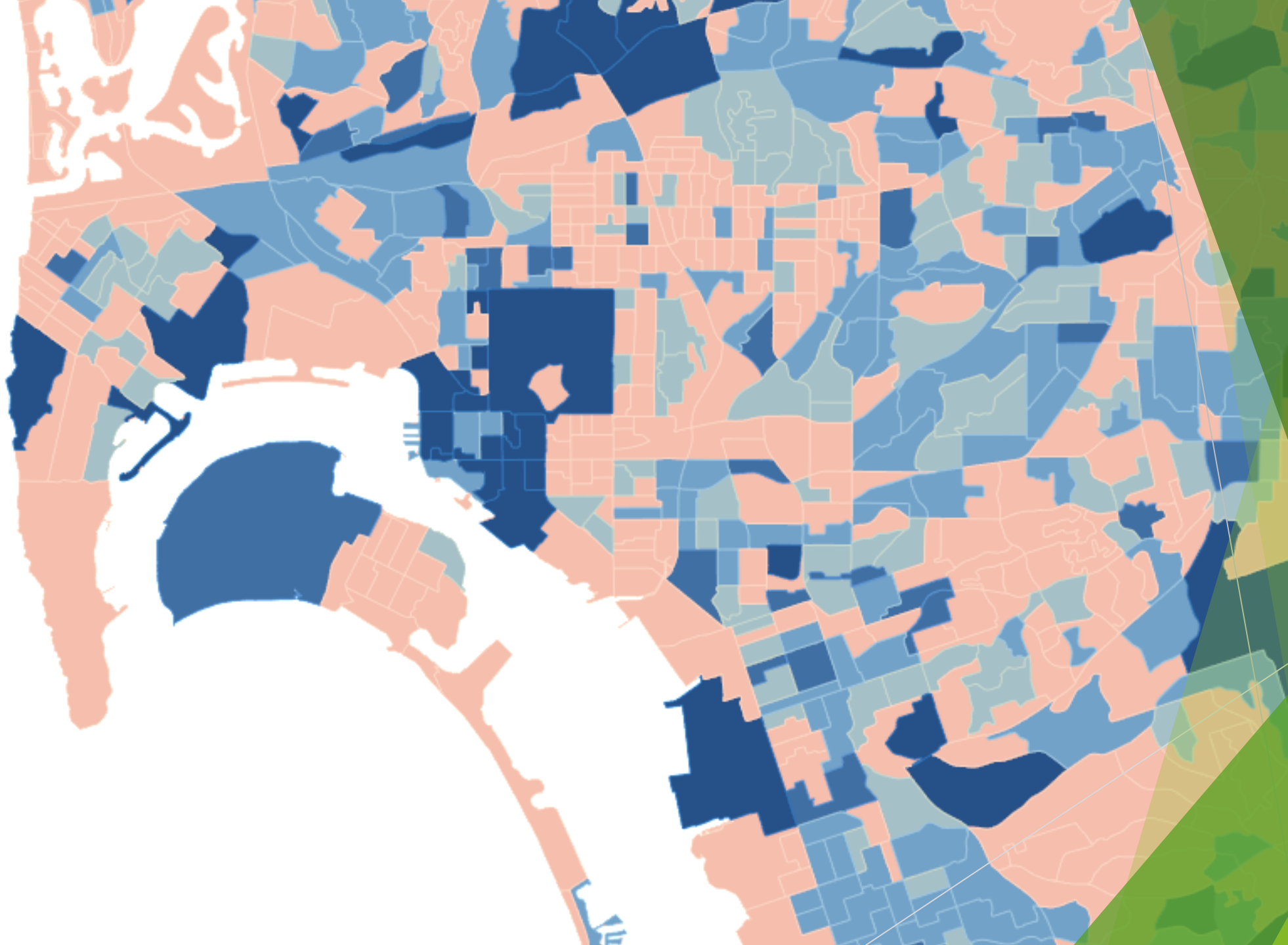


# Ocean\_BaseMap









Demographics/\*

DEMO

# Adding your data



# Recap

- ▶ CsvLayer : Shows CSV tabular data  
<http://www.poi-factory.com/>
- ▶ GeoRssLayer : Rss and Atom feeds with geocoded posts
- ▶ GraphicsLayer : Throw all the graphics you want on it  
items require a Symbol and/or a renderer
- ▶ Sub-class GraphicsLayer and create your own  
...or use the GraphicsLayer.GraphicsSource property
- ▶ GeometryEngine is your new best friend.
  - ▶ Area, Length, Distance, Buffer, Intersects, Within, Crosses, Union, Cut, Geodesic calculations...

DEMO

# Moving to the cloud

*Everything is going to be connected to cloud and data... - Satya Nadella*

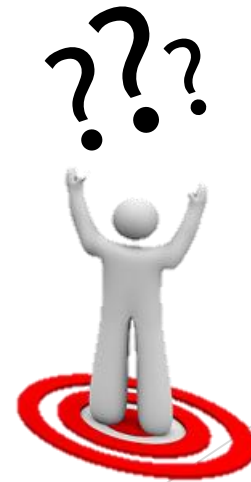
# To the Cloud!

- ▶ Data in the cloud doesn't require updating the app.
- ▶ Free Developer account gives you 50 credits a month.
  - ▶ 2.4 credits used pr. 10mb of storage = 208mb storage
  - ▶ Full list: <https://developers.arcgis.com/en/credits/>
- ▶ Create from scratch: <http://developers.arcgis.com> -> Hosted Data
- ▶ Or via your personal organization (from existing data);  
<http://YourUserName.maps.arcgis.com/>
- ▶ Supports taking data offline and sync updates on-demand

DEMO

# Where am I?

adding location to your map



# Recap: Showing Location

- ▶ Enable 'Location' capabilities in manifest.
- ▶ Use `MapView.LocationDisplay`
  - IsEnabled turns it on/off
  - AutoPanMode: Off, On, Navigation, Compass
  - LocationProvider: Custom 'GPS' or simulation

DEMO



# Going universal...

...because it's pure awesome-sauce

# Getting the bits

<http://developers.arcgis.com/net>

Click: “Join the beta”

Universal App support: Not available yet ☹️

Will be available VERY soon on the above site.

*Disclaimer: Currently the beta has no “Go Live” license. Sorry ☹️*

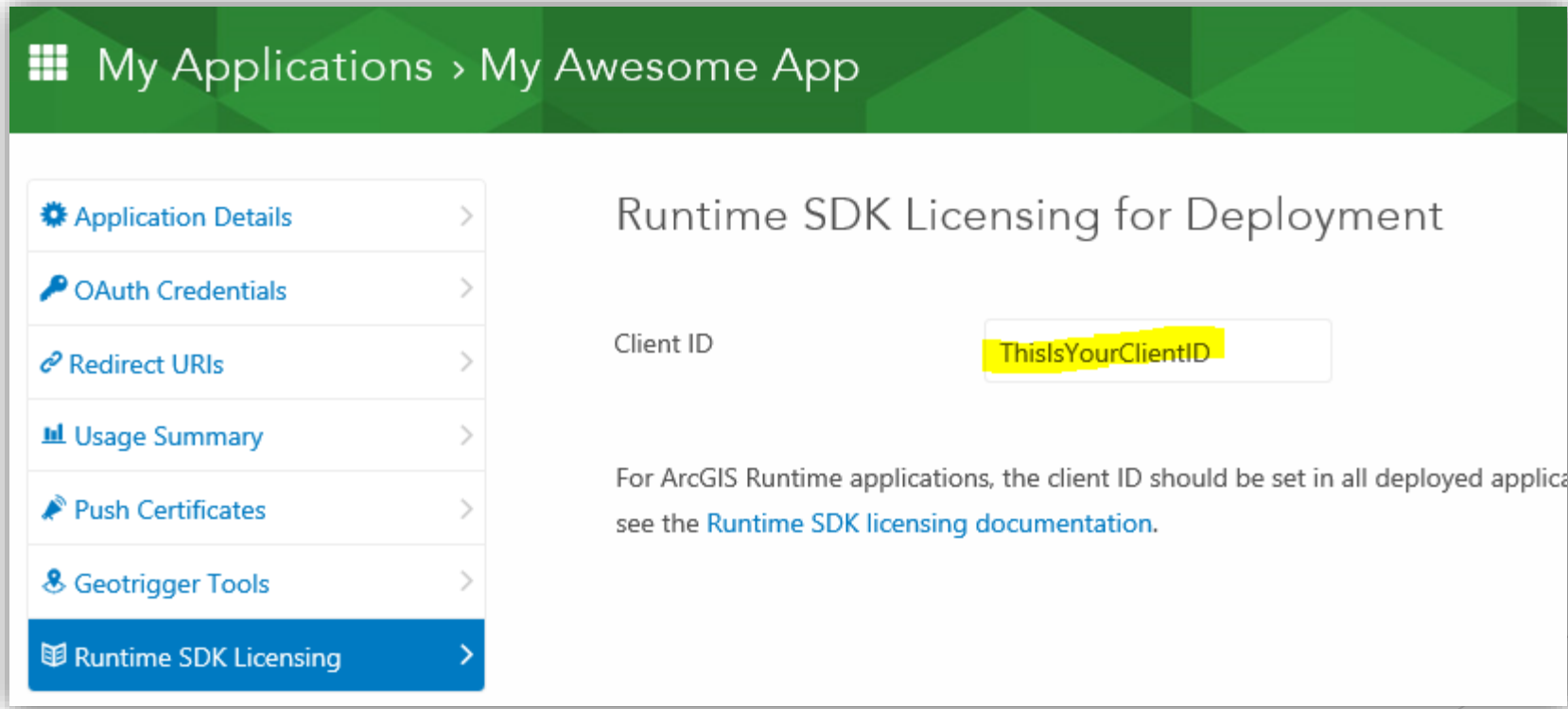
*We’re working on changing that - stay tuned!*

# Licensing your app

Create Developer Account on <http://developers.arcgis.com>

Click “Applications” Icon

Click “New Application” and fill out details



```
ArcGISRuntimeEnvironment.ClientId = "ThisIsYourClientID";
```



# Esri Climate Resilience App Challenge

*"create an app [...] that help communities see, understand, and prepare for climate risks. Apps may help communities prepare for, react to, and recover from, severe events caused by climate or enabling every day changes to reduce our carbon footprint"*

- ▶ 1st place: **\$10,000**      2<sup>nd</sup>: \$5,000      3<sup>rd</sup>: \$2,000
- ▶ Must be submitted by **June 2nd at 5pm.**
- ▶ Lots of free data: [www.data.gov/climate/](http://www.data.gov/climate/)

[www.esri.com/climate-app](http://www.esri.com/climate-app)

# Resources

- ▶ Download, forums, links, documentation:

<http://developers.arcgis.com/net>

- ▶ Esri Map services: <http://services.arcgisonline.com>

- ▶ Analysis: <http://analysis.arcgis.com>

- ▶ Toolkit controls: <https://github.com/esri/arcgis-toolkit-dotnet/>

- ▶ Samples: <https://github.com/esri/arcgis-runtime-samples-dotnet/>

- ▶ Recent session recording: <http://video.esri.com/watch/3453/building-windows-store- and -phone-apps-with-arcgis-runtime-sdk>

- ▶ Blog series by Shawn Kendrot: <http://esriurl.com/shawn>

Thank you!

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