Use the Living Atlas as a Force (for Good) Multiplier in Nonprofit Organizations

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Esri's Non Profit Program

http://www.esri.com/nonprofit

Today, my job is prove the following (to you):

The Living Atlas of the World
will accelerate your workflows.

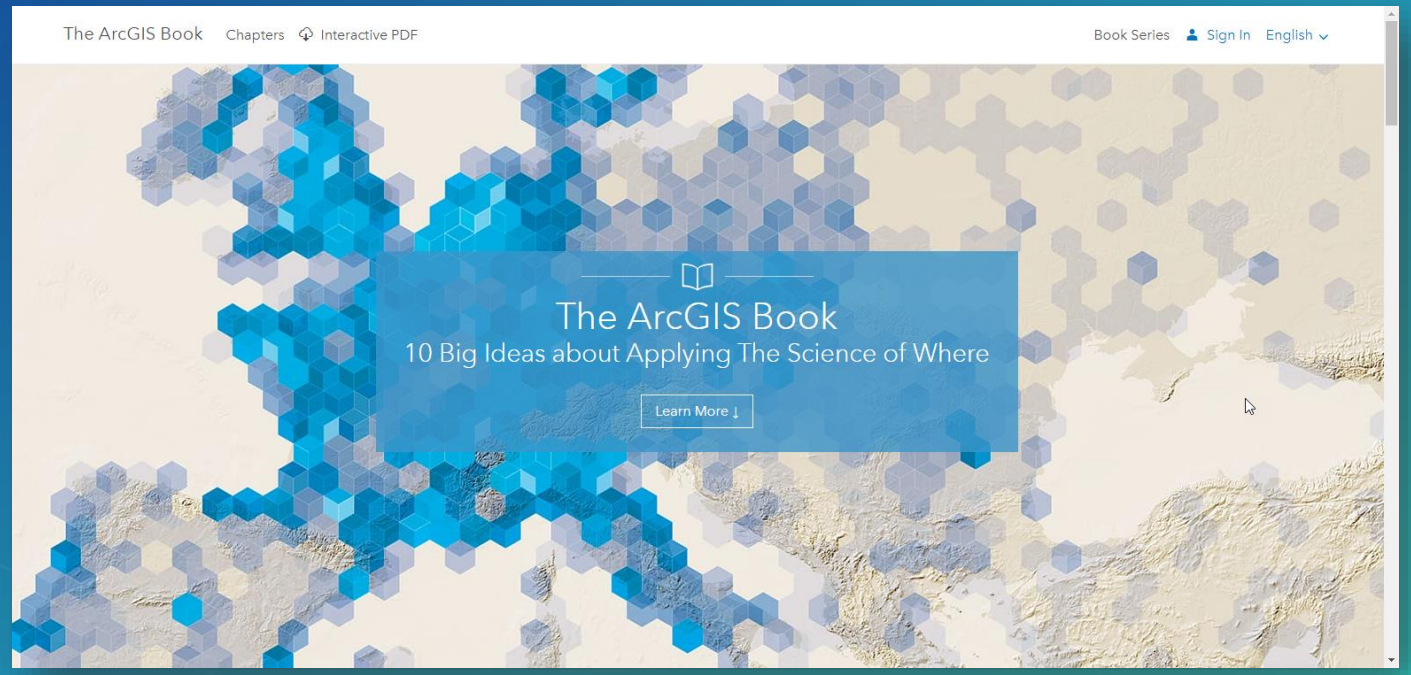
The Living Atlas of the World
Contains the context for your
mapping and analysis

The Living Atlas of the World

- Vast collection of curated, ready-to-use layers, maps, and apps.
- Let's have a look: https://livingatlas.arcgis.com
- A great way to Browse the Possibilities
- Represents the gamut of Data, Information, Knowledge, and Wisdom

The Living Atlas of the World = Gateway to Web GIS

- Using Services means
  - No need to download data
  - Some new kinds of information to learn about
  - Greater re-use and efficiency



http://learn.arcgis.com/en/arcgis-book/

Layers, Web Maps, and Story Maps & Apps

Use layers to do analysis

Share web maps and apps

Create Knowledge delivered with story maps and apps

Measure Impact and Influence to verify the realization of goals

The natural order of spatial information

There is a pattern (Strategy) the Living Atlas

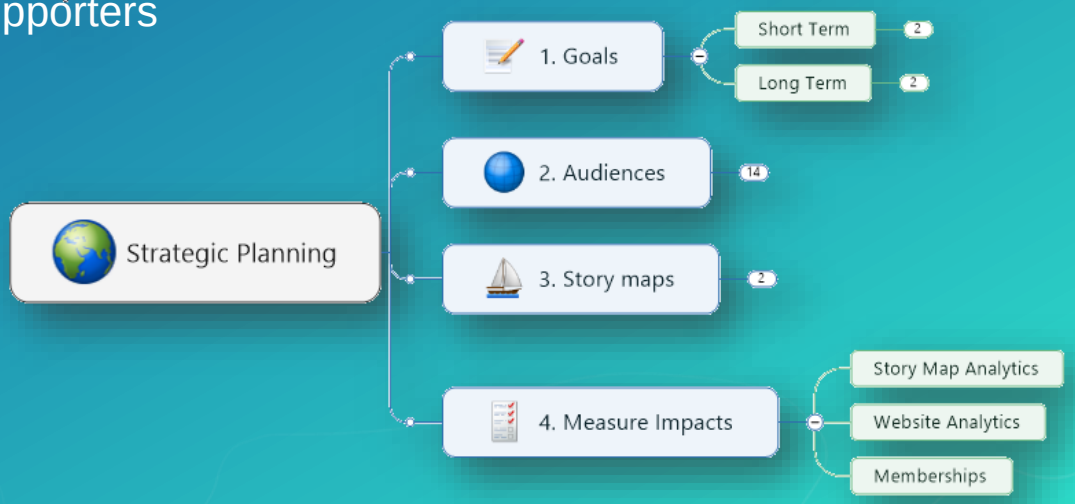
- Building Blocks: Layers and Basemaps
- Crosscutting embeddable content: Web maps and web apps
- Final Products
  - Stand-alone and embedded apps
  - Story Maps
    - Explain, Feature & Create New Markets/Audiences/Supporters
    - Report findings and results
    - Build Awareness and grow your brand
    - Summarize a project or a year of work
    - Highlight successes
    - Accumulate support for your organization's ideas
- Use this pattern to develop your own strategies

Use: GIS

Share: Knowledge

Create: Understanding

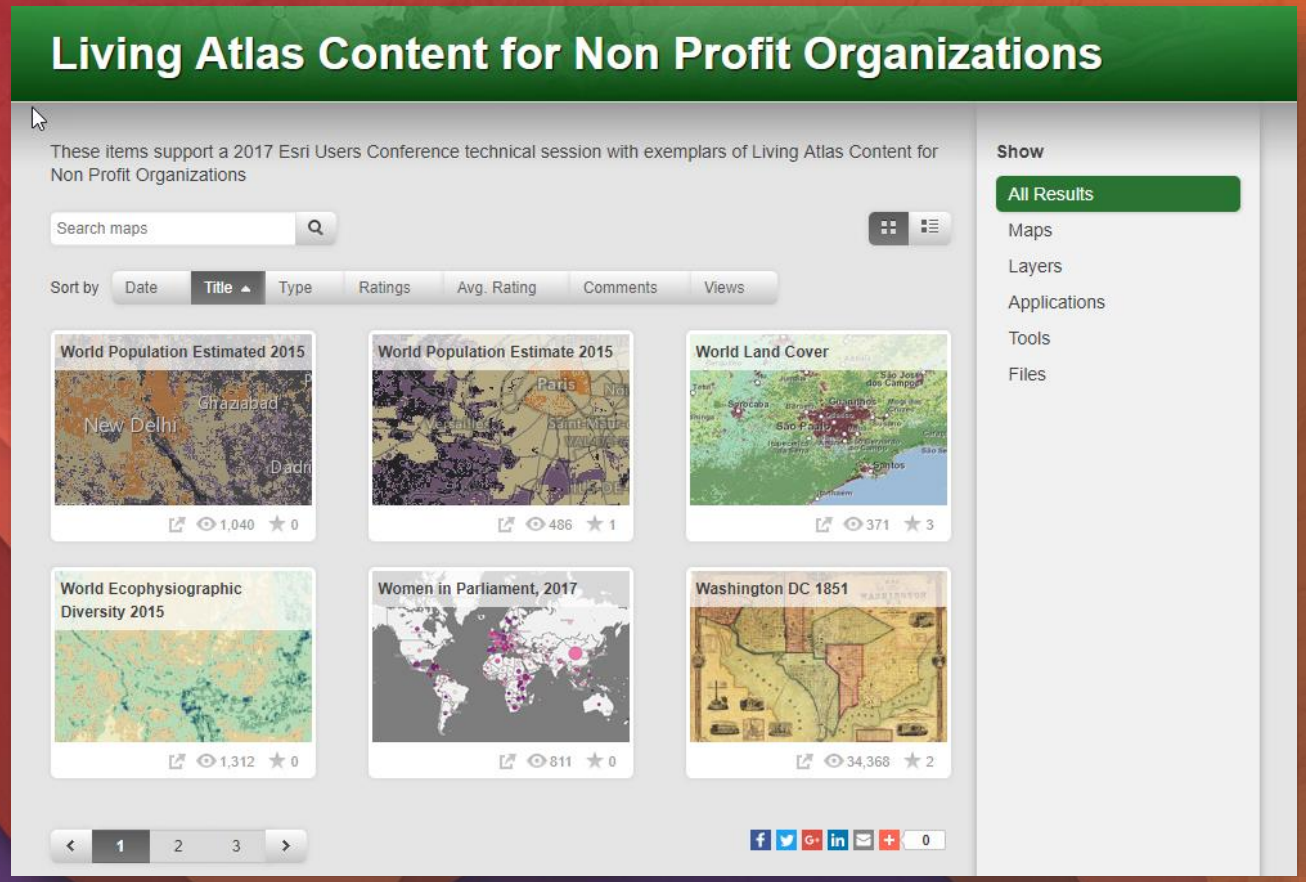
Impact: Society



Living Atlas Layers, Web Maps, Apps and Story Maps

- Curated, ready-to-use, best available
- Includes range from Layers and base maps to inspiration
- Patterns for:
  - Accelerating workflows
  - Contextualizing your work and communication

Copy no data and reinvent no wheels



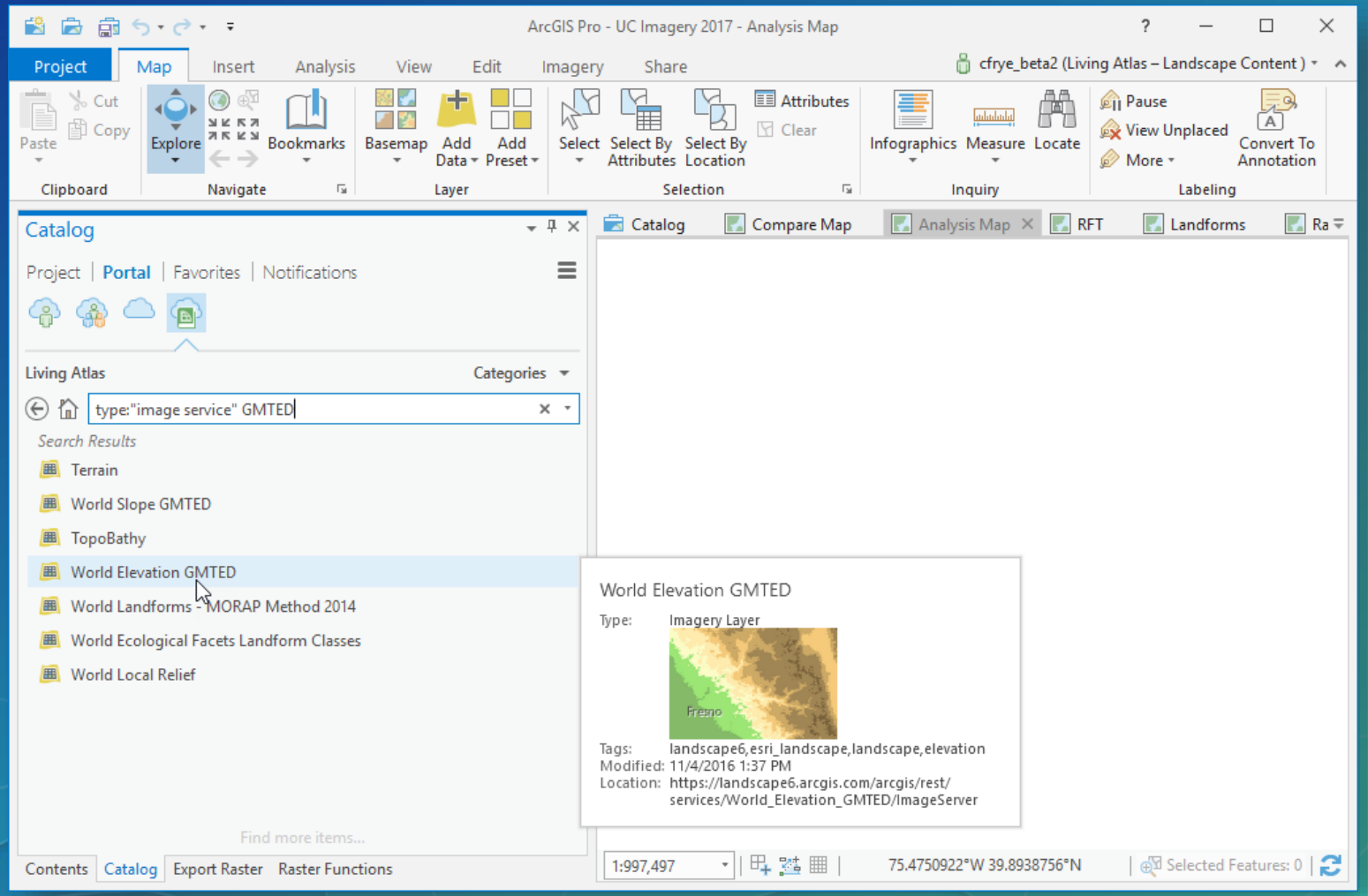
Living Atlas Examples

Additional resources (that are not layers, maps, or apps)

- Templates:
  - Historic Building Conservation & Preservation Web Map sample template
    - https://www.arcgis.com/home/item.html?id=4a5073be36dd4b9399ad7a760b2705ba
  - Community Trails Map sample template
    - https://www.arcgis.com/home/item.html?id=dcbb9ea91de24ea4ad4ab607e83e7510
  - Scanned Map Services for Historic Conservation & Preservation sample template
    - https://www.arcgis.com/home/item.html?id=26e6832240674d1eaa55ccbad971f322

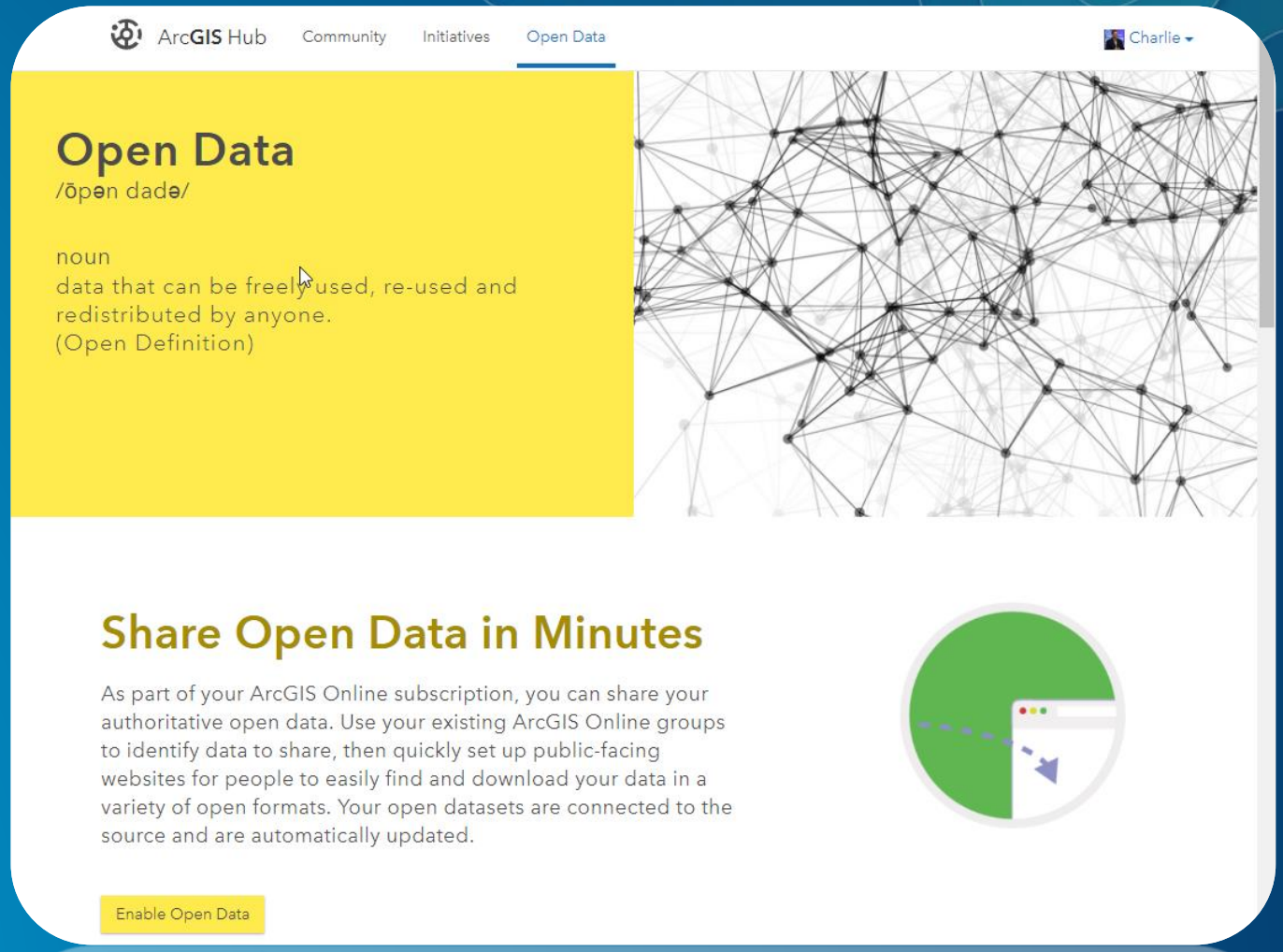
Using the Living Atlas in ArcGIS Pro

- Add Data
- Catalog



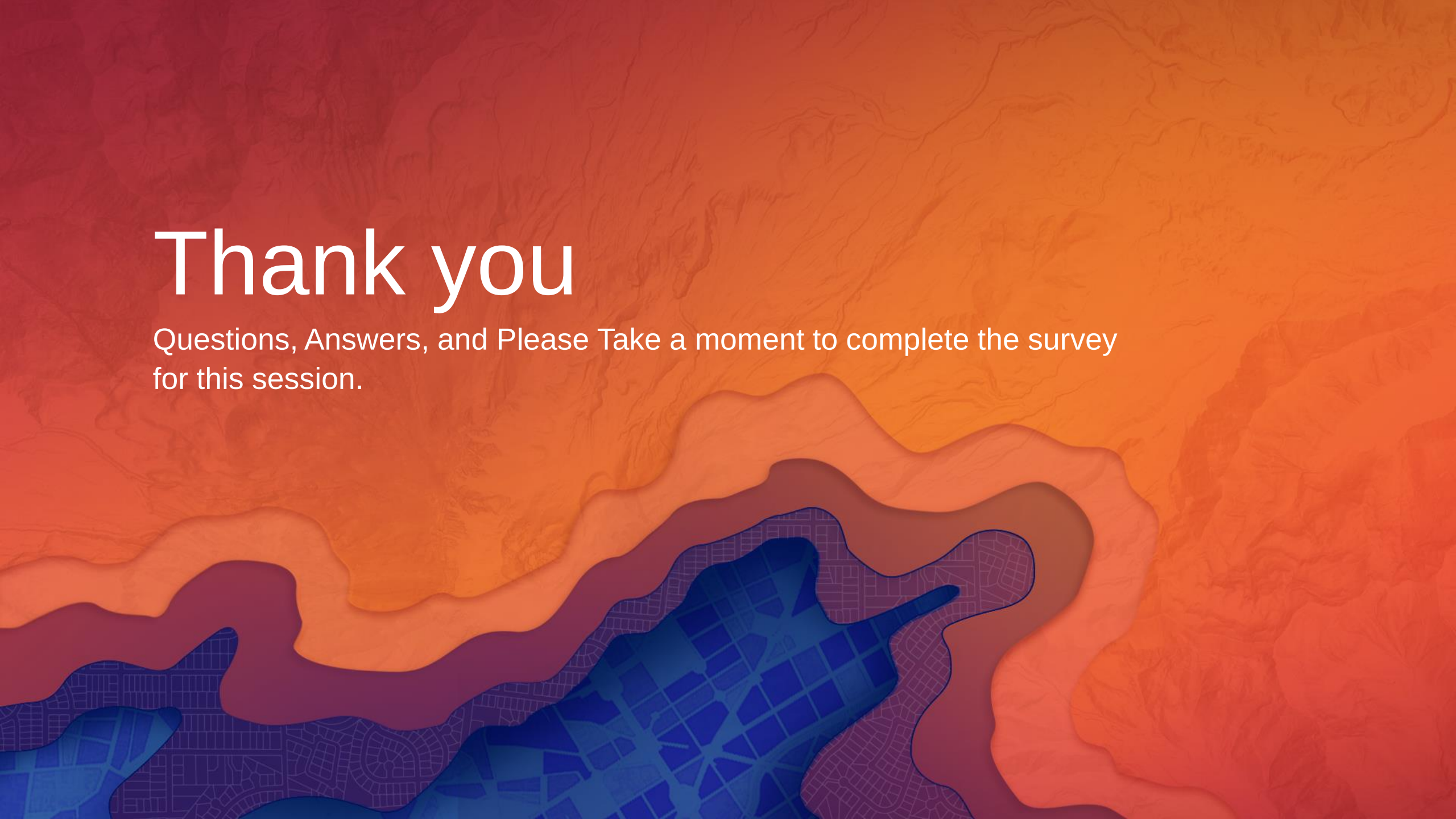
Alternate Data Source: Open Data (https://hub.arcgis.com/pages/open-data)

- In this context, the data is potentially:
  - Local - as in produced for a small locale, by the local experts
  - Built well – though perhaps not to a standard
  - Not curated to be the best available



Thank you

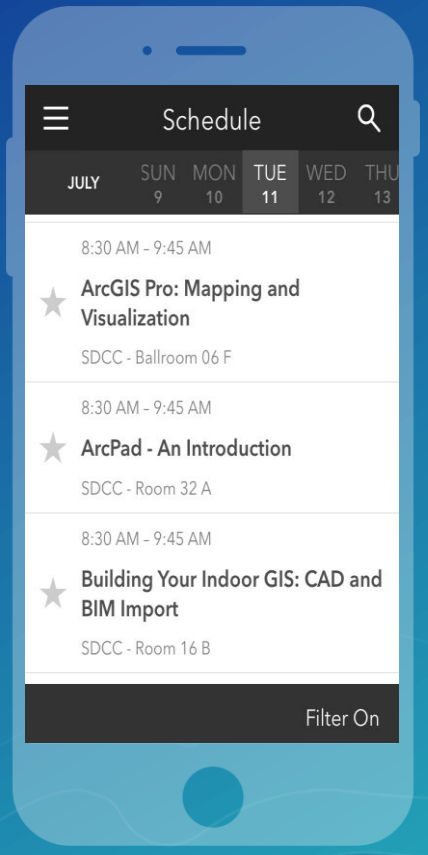
Questions, Answers, and Please Take a moment to complete the survey for this session.



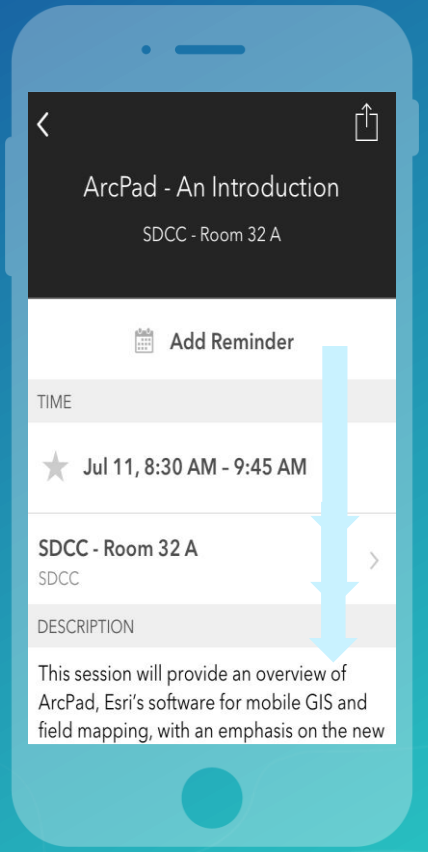
Please Take Our Survey on the **Esri Events App!**

Download the Esri Events app and find your event

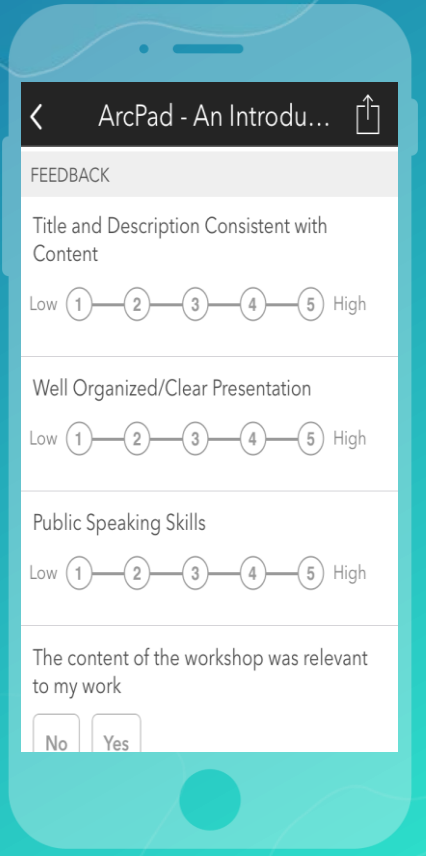
Select the session you attended



Scroll down to find the survey



Complete Answers and Select "Submit"



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OF
WHERE

World Population Estimated

- Type: Imagery Layer
- Produced By: Esri
- Notes: More than just a pretty picture, every 230-meter cell in this layer is assigned an estimate of the number of people living there. The layer is specifically designed to support economic analysis.
- Cost: Free to named users in ArcGIS Online Organizations
- Uses:
  - Zonal Statistics (Spatial Analyst)*
  - Zonal Statistics to Table (Spatial Analyist)*

New Delhi, India

* Use Make Image Server Layer tool first

Global population estimate without borders

World Land Cover 30m BaseVue 2013

- Type: Imagery Layer
- Produced By: MDA Information Systems LLC
- Notes: Classified land cover using an Anderson-style classification system with 16 classes. Produced from earliest Landsat8 program data.
- Cost: Free to named users in ArcGIS Online Organizations
- Uses:
  - Reclassify or Remap then Zonal Statistics (Spatial Analyst)* or Zonal Statistics to Table (Spatial Analyist)*
  - Weighted Raster Overlay (Spatial Analyst)

Ganges / Brahmaputra Delta

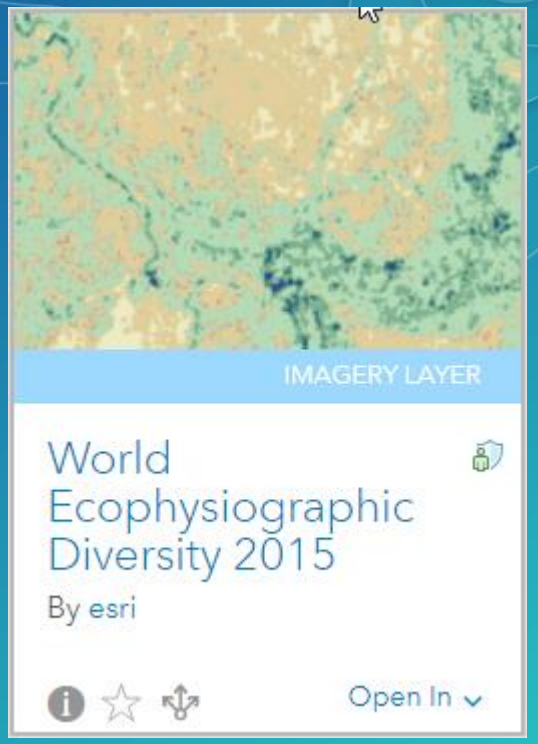
* Use Make Image Server Layer tool first

Consistent Global Land Cover Classsification

World Ecophysiographic Diversity 2015

- Type: Imagery Layer
- Produced By: Esri
- Notes: Depicts the diversity of the physical setting for ecoregions, including bioclimate, landforms, and lithology. Also happens to strongly correlate with great natural scenery.
- Cost: Free to named users in ArcGIS Online Organizations
- Uses:
  - Zonal Statistics (Spatial Analyst)*
  - Zonal Statistics to Table (Spatial Analyist)*

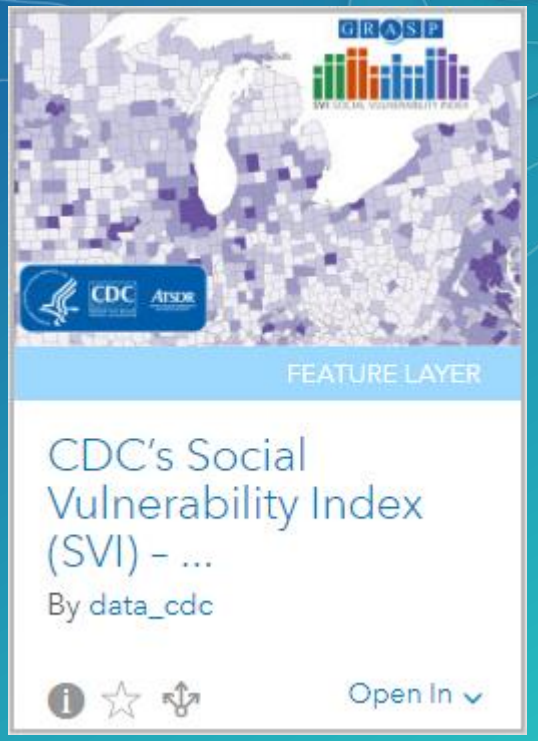
* Use Make Image Server Layer tool first



Cape Girardeau, Missouri, USA

Puerto Rico is the most diverse locale on earth

Social Vulnerability Index (SVI) – 2014 minority/language SVI, census tract level



- Type: Feature Layer
- Produced By: Centers for Disease Control (CDC)
- Notes: This index integrates many demographic variables and proximity to key infrastructure such as housing and transportation to produce an index of where populations are the most vulnerable to crises
- Cost: Free to named users in ArcGIS Online Organizations
- Uses:
  - Emergency planning and resource allocation
  - Plan and Direct education, health, and public assistance programs

Using data as building blocks to create understanding and a better plan

Intact Habitat Cores

- Type: Tiled Layer
- Produced By: Esri
- Notes: Designed to be a component in green infrastructure planning in the 48 contiguous U.S. States, this layer provides three classes of habitat “cores”: Good, Better, and Best. Habitat cores are minimally disturbed natural areas at least 100m x 200m in size. They were generated from NLCD 2011 using a methodology defined by the Green Infrastructure Center Inc.
- Cost: Free to named users in ArcGIS Online Organizations
- Uses:
  - Context in web maps

Global population estimate without borders

Number of Threatened Marine Mammal Species

- Type: Feature Layer
- Produced By: The Nature Conservancy, Center for Sustainability Science
- Notes: In coastal waters (EEZs) around the world, this layer has the count of threatened marine mammal species.
- Cost: Free - Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International Licence.
- Uses:
  - Provide context, especially for a pop-up in a web map
  - In ArcGIS Desktop: Union tool with other coastal and offshore polygons in suitability analyses.

Global summary of threatened marine mammal species

Habitat Cost Surface

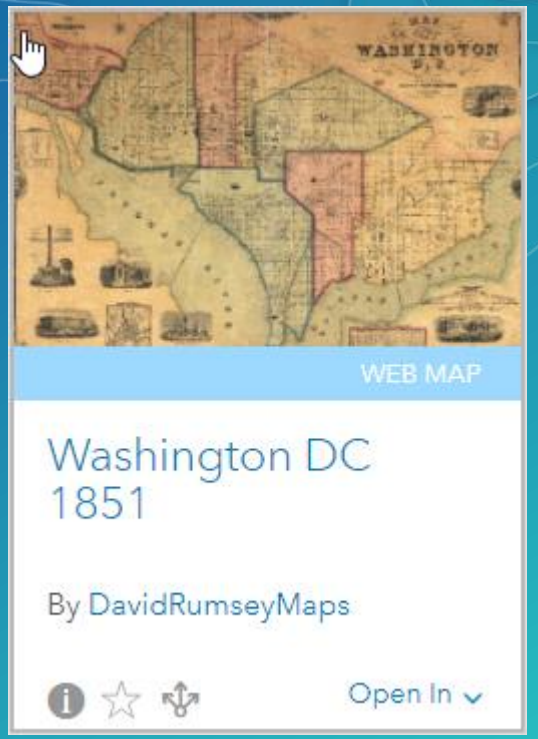
- Type: Imagery Layer
- Produced By: Esri
- Notes: Represents the cost of connectivity, i.e., movement of terrestrial species, between habitats. They were generated from NLCD 2011 using a methodology defined by the Green Infrastructure Center Inc.
- Cost: Free to named users in ArcGIS Online Organizations
- Uses:
  - Reclassify and Euclidean Distance (Spatial Analyst)*
  - Zonal Statistics to Table (Spatial Analyst)*
  - Zonal Statistics (Spatial Analyst)*

* Use Make Image Server Layer tool first

How hard is it for a desert tortoise to cross that highway?

Washington DC 1851

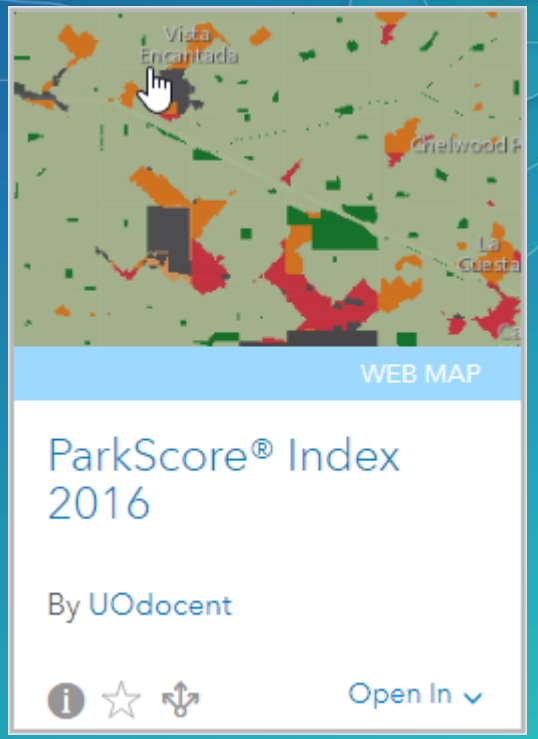
- Type: Web Map
- Produced By: David Rumsey Maps
- Notes: Shows the block and ward numbers, all major buildings, and banks of the Potomac River pre- Lincoln and Jefferson Memorials.
- Cost: Free
- Lessons:
  - Setting the default extent to useful view
  - Description links to citation and source information
  - Analysts can use Transparency slider to compare modern maps and imagery by changing the Basemap or adding layers
  - Not ready for general non-GIS use



Scanned, Georeferenced Maps used to understand how our landscapes have changed

ParkScore® Index 2016

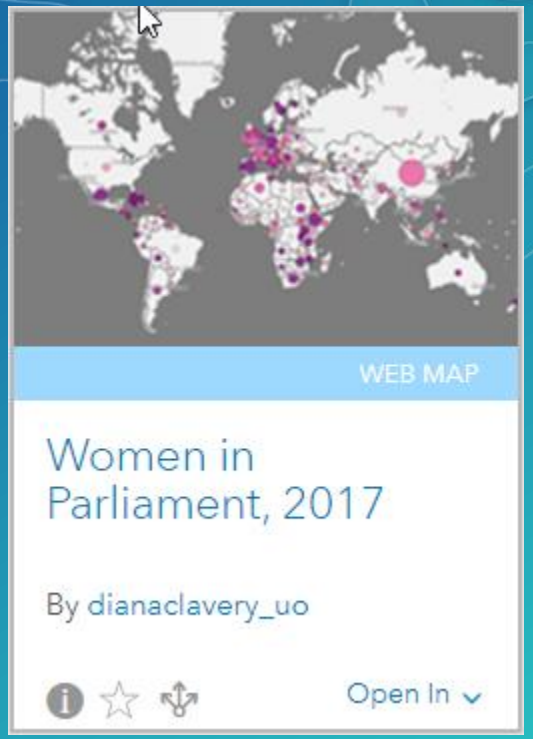
- Type: Web Map
- Produced By: Trust for Public Land
- Notes: Shows how well the 100 largest cities in the U.S. meet the need for parks.
- Cost: Free to named users in ArcGIS Online Organizations (see terms of use)
- Lessons:
  - Deliver large data collection (nearly 1,000 layers) to users



Representing the results of spatial analysis from organizations with unique expertise

Women in Parliament

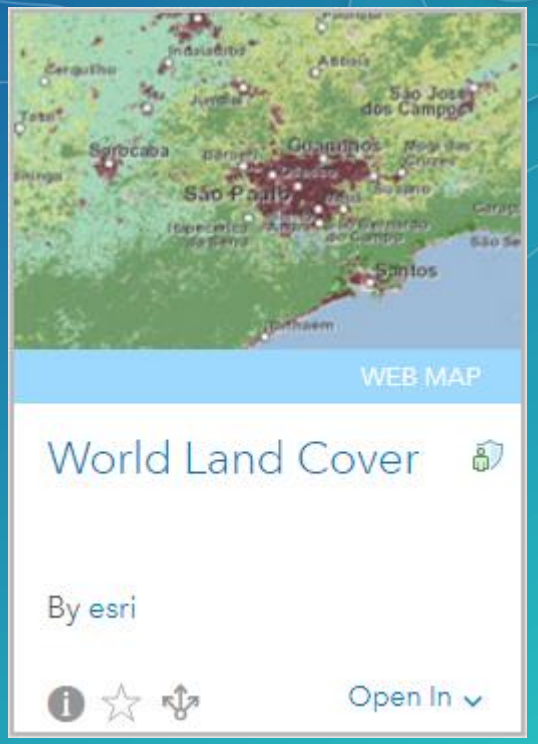
- Type: Web Map
- Produced By: Esri
- Notes: Shows the number and percentage of seats in a country's single chamber, combined higher and lower chambers of the national parliament, or other national legislature held by women in 2017.
- Cost: Free to named users in ArcGIS Online Organizations
- Lessons:
  - 3-layer Human Geography Vector Basemap (Save As to make it your own)
  - Finished pop-up / map ready for use in an app.
  - Smart Mapping applied.



Work less by re-using the work of others

World Land Cover

- Type: Web Map
- Produced By: Esri
- Notes: Use Land Cover as a base map to contextualize your work.
- Cost: Free to named users in ArcGIS Online Organizations
- Lessons:
  - Simple Pop-up for simple content
  - Non-standard Basemap



World Population Estimated

- Type: Web Map
- Produced By: Esri
- Notes: Illustrate the difference between seeing raw counts of people and population density
- Cost: Free to named users in ArcGIS Online Organizations
- Lessons:
  - Simple highly legible pop-ups
  - Ready for multiple uses, including
    - Swipe map
    - Or to Save As in a compare story map.

Learn to author building blocks to avoid duplicating effort

Investigate Core Weighting

- Type: Web Mapping Application
- Produced By: Esri
- Notes: This application allows for scoring of locally filtered Green Infrastructure intact habitat cores which have been shared to ArcGIS Online. The habitat cores shown were derived using a model built by the Green Infrastructure Center Inc. and adapted by Esri.
- Cost: Free to named users in ArcGIS Online Organizations
- Lessons:
  - Excellent extensive documentation

Set yourself and your users up for success

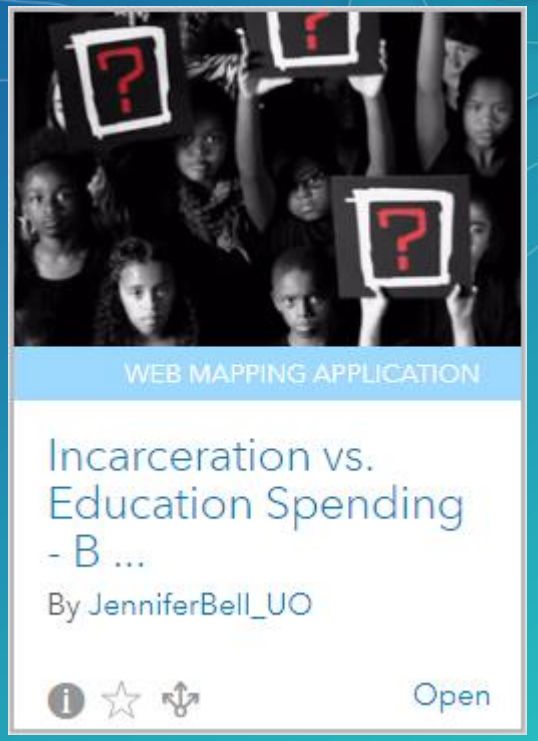
Katrina +10: A Decade of Change in New Orleans

- Type: Story Map (Tabbed)
- Produced By: Esri StoryMaps team
- Notes: Shows the impacts and changes to New Orleans over the ten years since Hurricane Katrina.
- Cost: Free Lessons:
  - How to report a big multi-faceted topic
  - Graphics and visual impact matter
  - Embedding a story map inside another story map (Flooding)
  - Draw the data you need

Lead with a map with a self-evident message

Incarceration vs. Education Spending

- Type: Story Map (Simple Viewer)
- Produced By: Esri's Jennifer Bell on behalf of i.am.angel Foundation
- Notes: Shows ratio of per person spending by U.S. State on incarceration and education
- Cost: Free Uses:
  - Lead with compelling graphics if the map isn't so compelling
  - One-topic maps are best
  - This map is intended to be a lesson on the lessons it presents



Alignment of Values to reassure or gain audience for your mission

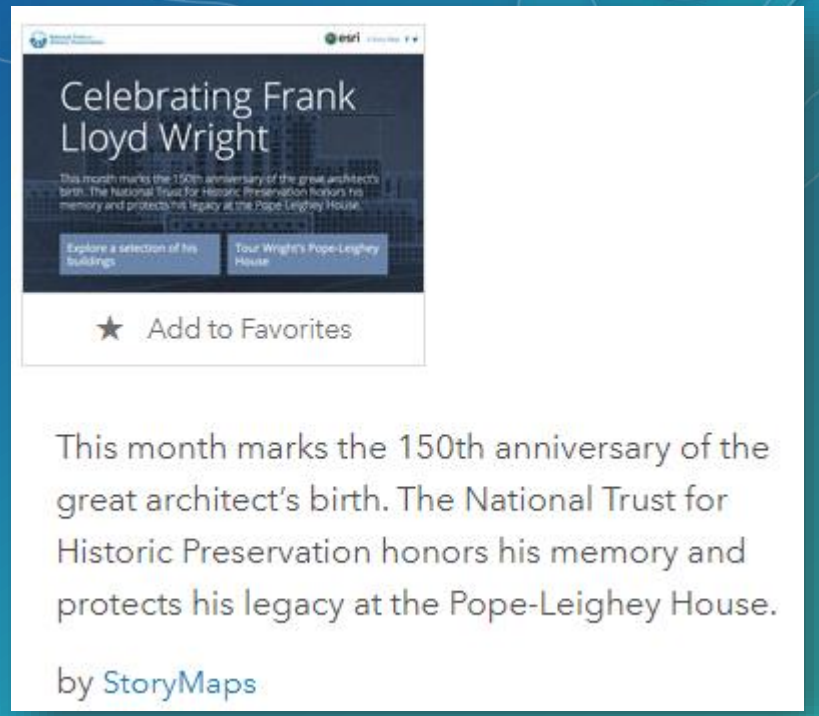
Explore a Tapestry of World Ecosystems

- Type: Story Map (Map Journal
- Produced By: Esri
- Notes: Many of the topics we use GIS on are complex and not “household names”. People, especially leaders, need a safe means to approach these topics.
- Cost: Free
- Lessons:
  - Must be global to appeal to appeal globally.
  - People love photos of landscapes paired with maps
  - When users do not think its GIS, you win

Give leaders and thinkers an easy open-ended way to approach complex topics

Celebrating Frank Lloyd Wright

- Type: Story Map (Cascade)
- Produced By: Esri StoryMaps team
- Notes: Cascade app as landing page with links to two story maps
  - tabbed with embedded shortlists on each tab
  - Cascade to give a guided tour
- Cost: Free
- Lessons:
  - Tie marketing/promotions with calendar events that appeal to your audience
  - The maps are reference maps that can alternatively drive the experience.



Feature or report on a diverse and large body of work

A Fresh Look at Cuban Trade

- Type: Story Map (Tabbed)
- Produced By: Esri: Wolfgang Hall
- Notes: Explores the history and possible future of U.S. trade with Cuba, including global import and export summaries
- Cost: Free to named users in ArcGIS Online Organizations
- Lessons:
  - Compelling, well written introduction pulls audience in.
  - Embed graphics of the legend into the narrative to keep the user interface simple

Divide and conquer complex topics

From Where I Stand

- Type: Story Map
- Produced By: Esri: Adam Pfister on behalf of UNICEF
- Notes: Illustrates variations in gender equality around the world based on the results of an ongoing survey.
- Cost: Free to named users in ArcGIS Online Organizations
- Lessons:
  - One level Cascade as a landing page
  - Apps can be embedded
  - Story Maps can be crowd sourced
  - A simple map can support a big idea
  - Showing the data makes for authenticity

Global population estimate without borders