ArcGIS Open Data

Get Started – and Use Best Practices

Scott Moore
Esri

Agenda

- What is Open Data – and why it matters
- What is ArcGIS Open Data?
  - *Exercise 1: Explore ArcGIS Open Data sites*
- Data preparation and organization workflows
  - *Exercise 2: Create content for ArcGIS Open Data*
- Creating an Open Data site
  - *Exercise 3: Create an ArcGIS Open Data site*
- Customizing the Open Data site
  - *Exercise 4: Customize your ArcGIS Open data site **
- Promoting your Open Data site
- Advanced topics

** Time permitting*

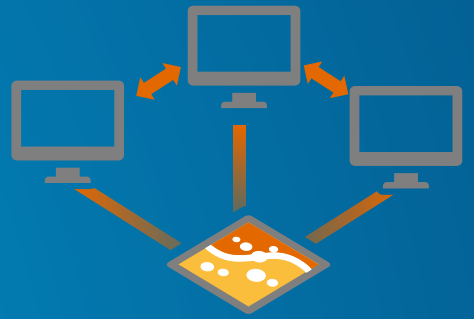
What is Open Data – and why it matters

Open Data principles

Accessible

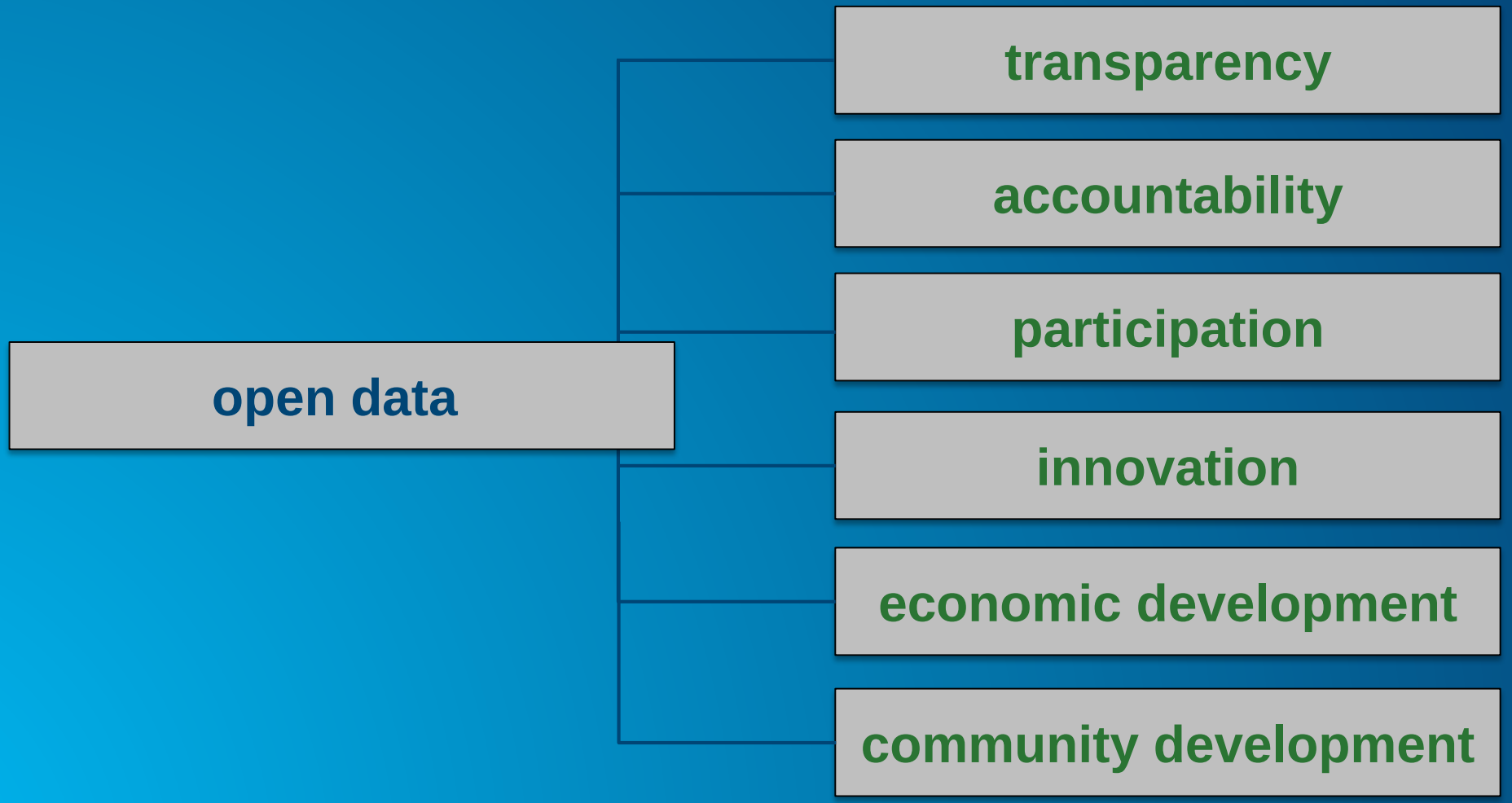
Discoverable

Explorable



Collaborative

Why does Open Data matter?



What is ArcGIS Open Data?

ArcGIS Open Data Documentation GeoNet sclarke_pnw esri

Share Live ArcGIS Open Data in Minutes

As part of your ArcGIS Online subscription, you can use ArcGIS Open Data to share your live authoritative open data. Esri-hosted ArcGIS Open Data gives you a quick way to set up public-facing websites where people can easily find and download your open data in a variety of open formats.

You Can Easily Share Data with the Public

ArcGIS Open Data uses the ArcGIS Online groups you already have to identify open data, allowing you to quickly publish or remove your open data. Your open datasets automatically sync with the latest version of your sources. It can even integrate with other open data platforms, such as CKAN.

Explore ArcGIS Open Data

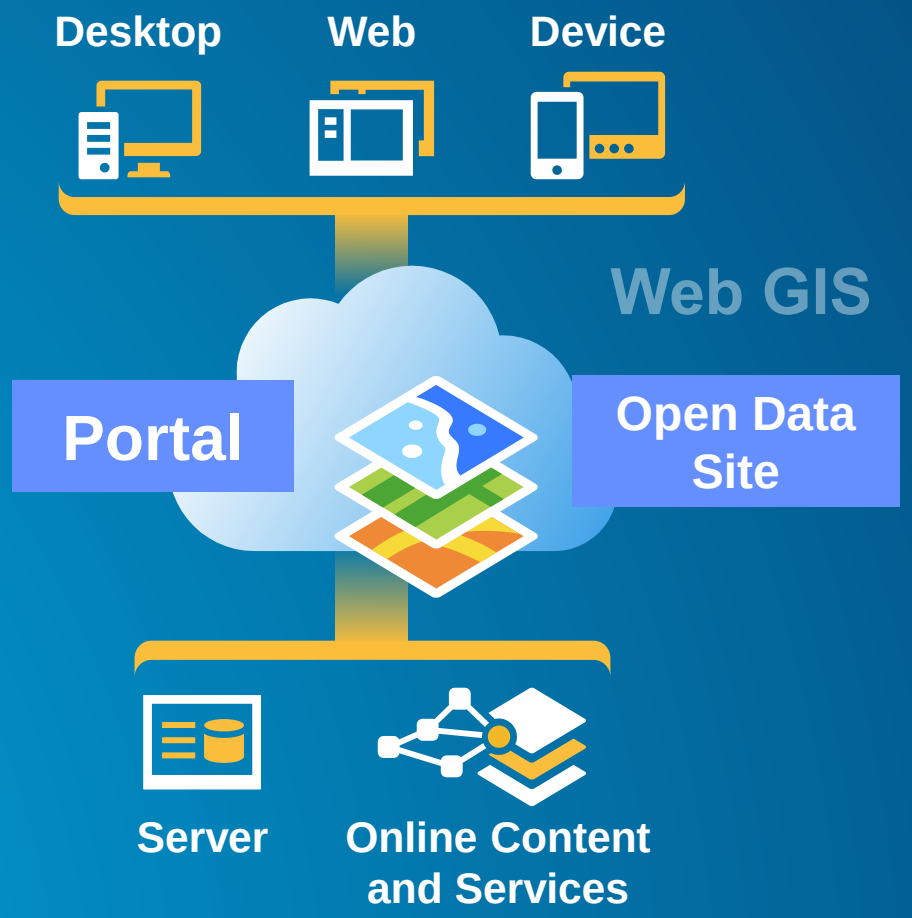
Share

Your data will be available via:

ArcGIS Open Data is part of the ArcGIS Platform

Providing open access to your published data

- Simple
- Integrated
- Open



ArcGIS Open Data is accessible

- Users can easily access the data they want
- Users can connect with the data at the source
- Users know the licensing information

FTP websites

Transportation

Description	Date of Data	SHP (zipped)	DWG	KML
Snowmobile Bylaw Trails	10 May 2012	SHP	DWG	KML
Trails - NonMotorized	2005	SHP	DWG	KML
Trails - Ski	2003	SHP	DWG	KML
Trails - Ski - GPS	2003	SHP	DWG	KML
Trails - Motorized	2005	SHP	DWG	KML
TRAIL - Motorized Winter	2012	SHP	DWG	KML
TRAIL - Motorized Summer	2012	SHP	DWG	KML
Transit Bus Routes	2012	SHP	DWG	KML
Transit Bus Stops	2012	SHP	DWG	KML
Roads - Right of Ways	2014	SHP	DWG	KML
Roads - Center Lines	2014	SHP	DWG	KML

Environment

Description	Date of Data	SHP (zipped)	DWG	KML	Extra
Vegetation Inventory 2005	Sept 2005	SHP	DWG	KML	Manual
Soil Inventory 2005 (Text)	Sept 2005	SHP	DWG	KML	
Soil Inventory 2005 (Polygons)	Sept 2005	SHP	DWG	KML	
Terrain (Text)	Sept 2005	SHP	DWG	KML	
Terrain (Polygons)	Sept 2005	SHP	DWG	KML	
Draft Water Inventory - Lakes	approx 2004	SHP	DWG	KML	
Draft Water Inventory - Rivers	approx 2004	SHP	DWG	KML	
Draft Water Inventory - Streams	approx 2004	SHP	DWG	KML	
Draft Water Inventory - Streams Indefinite	approx 2004	SHP	DWG	KML	
Draft Water Inventory - Watersheds	approx 2004	SHP	DWG	KML	
Draft Water Inventory - Wetlands	approx 2004	SHP	DWG	KML	
Sensitive Areas	approx 2004	SHP	DWG	KML	
Sensitive Areas as used by Bylaw for 2011/12 ATV and Snowmobile bylaws	approx 2011	SHP	DWG	KML	
Additional Slopes as used in the ATV/Snowmoble bylaw as additional sensitive areas	approx 2004	SHP	DWG	KML	
Protected Areas 2004	approx 2004	SHP	DWG	KML	

ArcGIS Open Data is discoverable

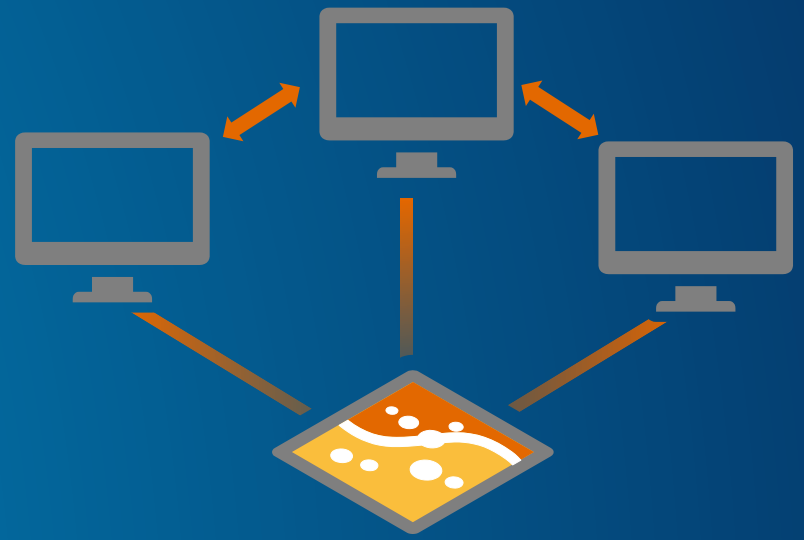
- Users can view all datasets on a site
- Users can search for specific datasets
- Users can see suggested related datasets

ArcGIS Open Data is explorable

- Users can filter and sort data
- Users can search by location
- Users can visualize data in different smart mapping and chart options

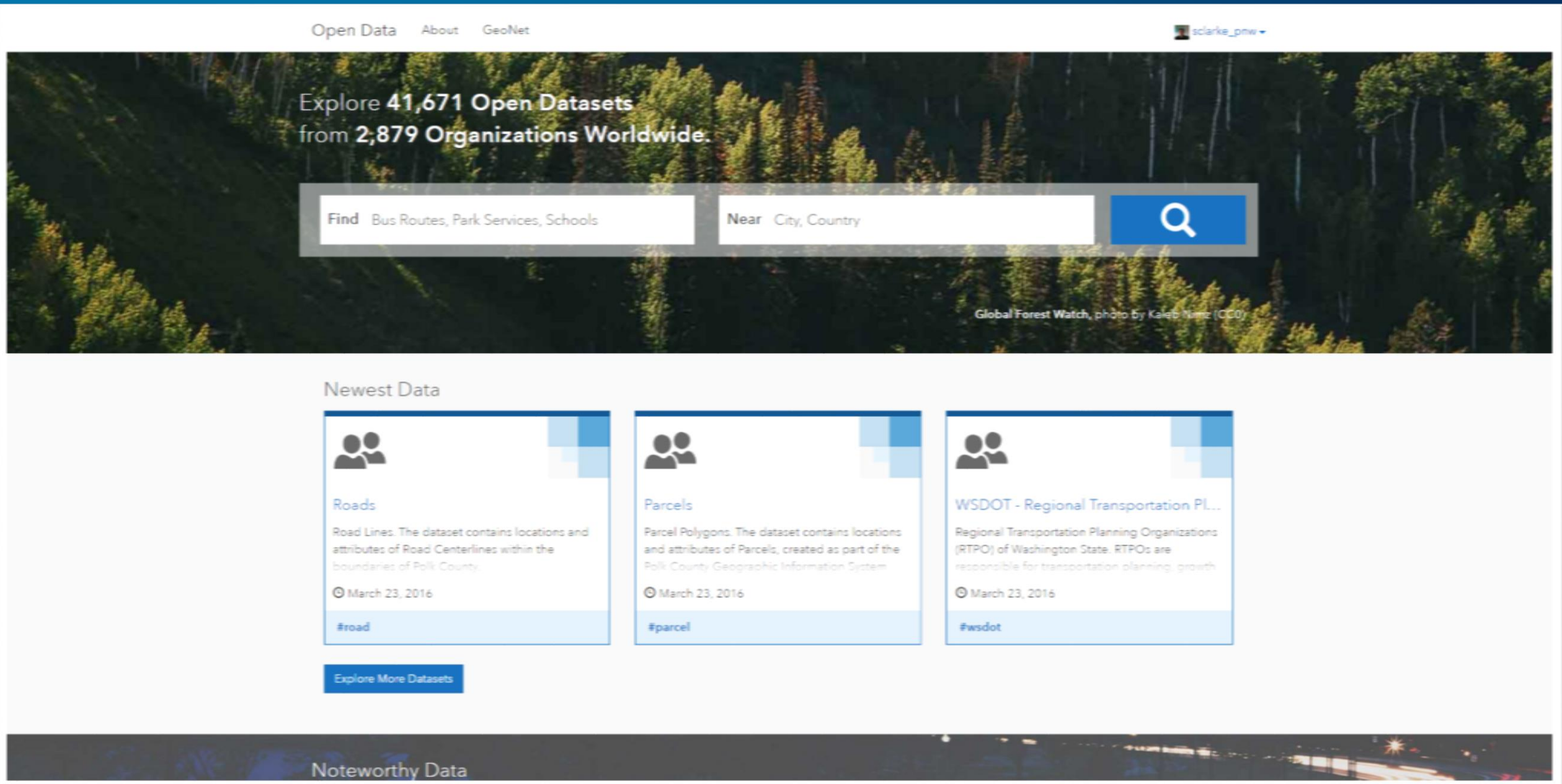
ArcGIS Open Data is collaborative

- Users can download data in multiple open formats
  - Spreadsheet (CSV)
  - KML
  - Shapefile
  - APIs: GeoJSON, GeoService, OGC WMS
- Users can share and embed datasets
- Users can add data to ArcMap or ArcGIS Online
- Data can be linked with CKAN & data.gov



Demonstration

Using ArcGIS Open Data Sites


Open Data
About
GeoNet
sclarke_pnw
Explore 41,671 Open Datasets
from 2,879 Organizations Worldwide.
Find Bus Routes, Park Services, Schools
Near City, Country
Global Forest Watch, photo by Kaleb Nimz (CC0)
Newest Data
Roads
Road Lines. The dataset contains locations and attributes of Road Centerlines within the boundaries of Polk County.
March 23, 2016
#road
Parcels
Parcel Polygons. The dataset contains locations and attributes of Parcels, created as part of the Polk County Geographic Information System.
March 23, 2016
#parcel
WSDOT - Regional Transportation Pl...
Regional Transportation Planning Organizations (RTPO) of Washington State. RTPOs are responsible for transportation planning, growth
March 23, 2016
#wsdot
Explore More Datasets
Noteworthy Data

Exercise 1: Explore ArcGIS Open Data sites

Exercise 1: Explore ArcGIS Open Data sites

- Explore sites
- Follow steps in the “For Consumers” section of the online documentation: http://doc.arcgis.com/en/open-data/consumer/find-data.htm
  - Discover data
  - View details
  - Download data
  - Explore data
  - Chart data
  - Visualize data
  - Sign in
  - Comment on data
  - Use the preview map

- http://opendata.arcgis.com/ (also lists featured open data sites)
- http://dc.esri.com/showcase
- http://clt.charlotte.opendata.arcgis.com/
- http://data.gfw.opendata.arcgis.com/
- http://imap.maryland.opendata.arcgis.com/
- http://kygovmaps.kygeonet.opendata.arcgis.com/
- http://catalogue.hrm.opendata.arcgis.com/
- http://opendata.dc.gov/
- http://geo.wa.gov/
- http://udot.uplan.opendata.arcgis.com/
- https://hifld-dhs-gii.opendata.arcgis.com/
- http://talgov.tlcgis.opendata.arcgis.com/
- http://geohub.lacity.org/

Data preparation and organization workflows

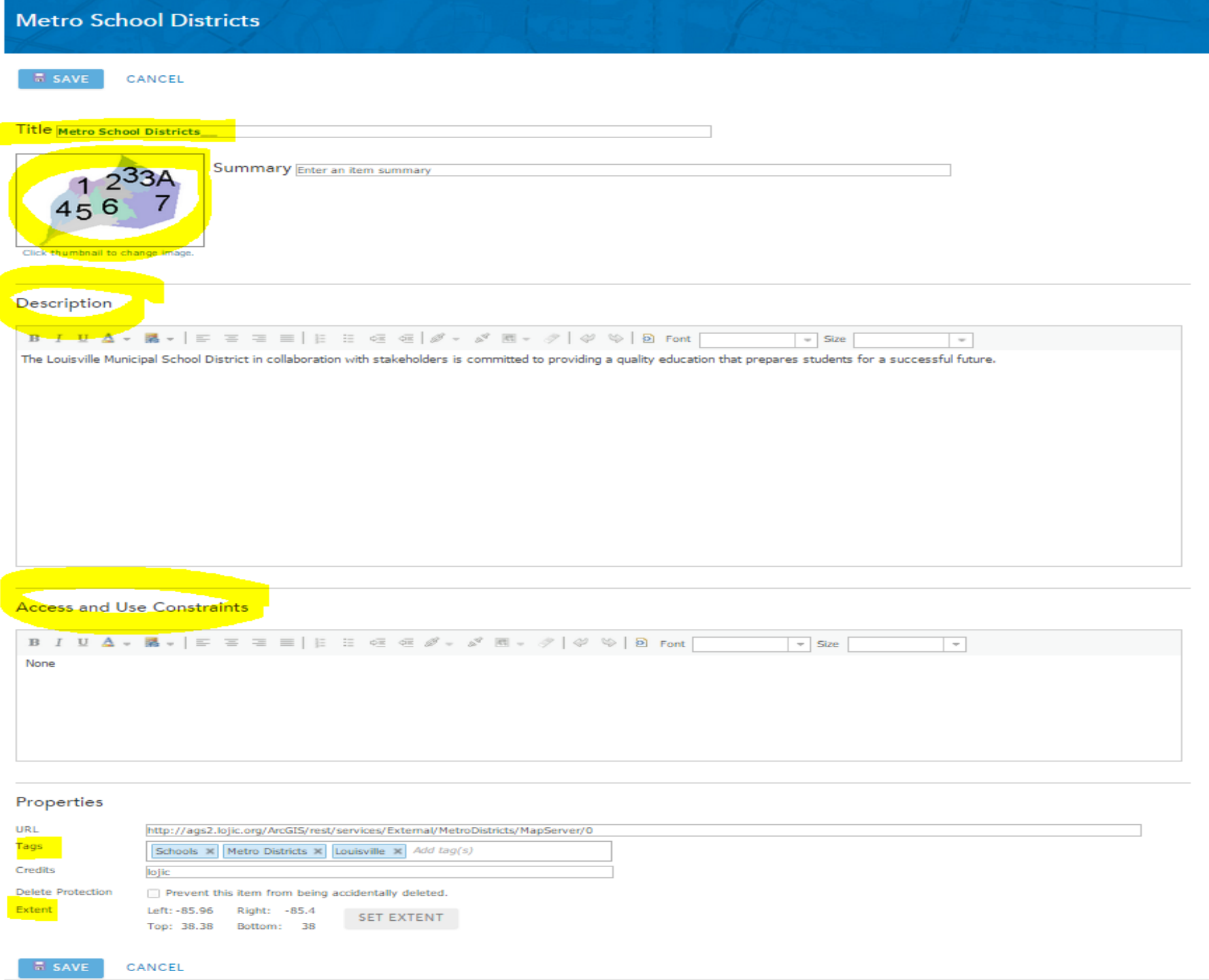
Preparing your data

Make the data easy to understand

- Set attribute aliases
  - Less than ten characters
- Set an appropriate hover field
- Hide attributes that don’t add meaning
  - Keep Object ID and Shape fields
- Online Doc has good section on “Improving data quality”

https://doc.arcgis.com/en/open-data/provider/prepare-your-data.htm

Critical Item Details



Controlled Hunts - Antelope (2015-2016)

Antelope controlled hunt areas in Idaho.

Feature Layer by fishgame1
Source: Feature Service
Last Modified: April 9, 2015

(0 ratings, 9 views)

Sign in to rate this item.

Facebook Twitter

OPEN

Description

24k version of Idaho Fish and Game's (IDFG) 2015-16 Antelope Controlled Hunt Areas. This file was produced by IDFG from the legal descriptions available in the current, published hunting regulations. For more information about antelope hunting in Idaho click here.

Access and Use Constraints

This dataset is intended for public-use for informational purposes only.

Idaho Fish and Game does not assume liability. No warranty expressed or implied is made by IDFG regarding the utility of this data on any other system, nor shall the act of distribution constitute any such warranty. The data represented in this file is true and accurate to the best of our knowledge but is considered a best representation only. Users must assume responsibility in determining the usability of this data for their purposes.

Layers

Antelope_Controlled_Hunt_Areas

Properties

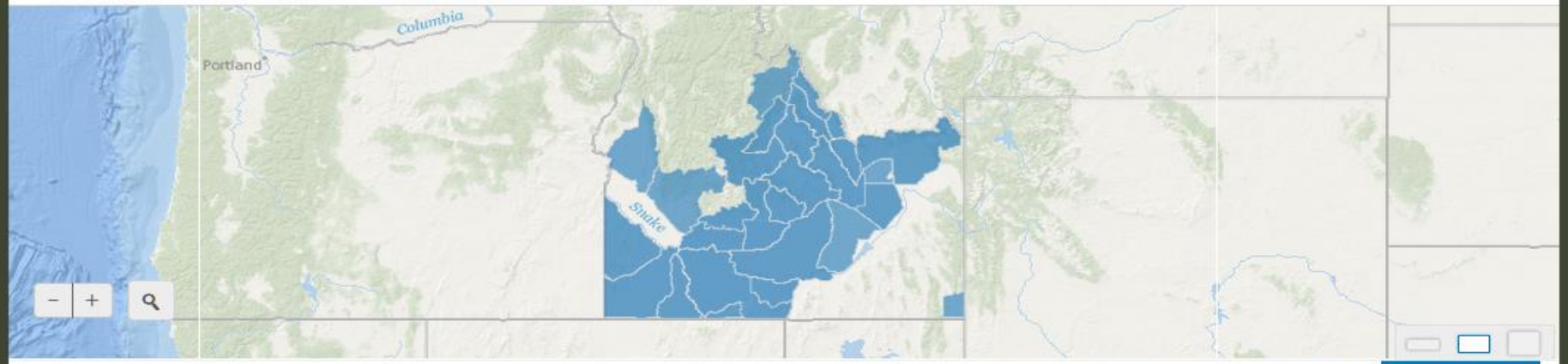
Tags	Idaho, IDFG, Idaho Fish and Game, controlled hunts, antelope, hunting, wildlife, wildlife management
Credits	Idaho Fish and Game
Size	5 MB
Extent	Left: -117.22 Right: -110.86

Geospatial Open Data Portal

Search for open data

SEARCH WITHIN MAP

My Activity



Controlled Hunts - Antelope (2015-2016)

OPEN IN ARCGIS | SHARE | SUBSCRIBE | Download Dataset

Details | Table | Charts

DESCRIPTION

24k version of Idaho Fish and Game's (IDFG) 2015-16 Antelope Controlled Hunt Areas. This file was produced by IDFG from the legal descriptions available in the current, published hunting regulations. For more information about antelope hunting in Idaho click here.

DATASET ATTRIBUTES

AreaID Number	min: 31 max: 1,272 avg: 455.58 count: 38
AreaNote Text	All of Unit 29 except the Poison Creek drainage. (1), All of Unit 30 and that portion of Unit 21A sou... (1) ...(36 more)
AreaRank	min: 158 max: 221 avg: 183.03 count: 38

ABOUT

IDFG Open Data

By fishgame1 on April 09, 2015
Updated: a month ago

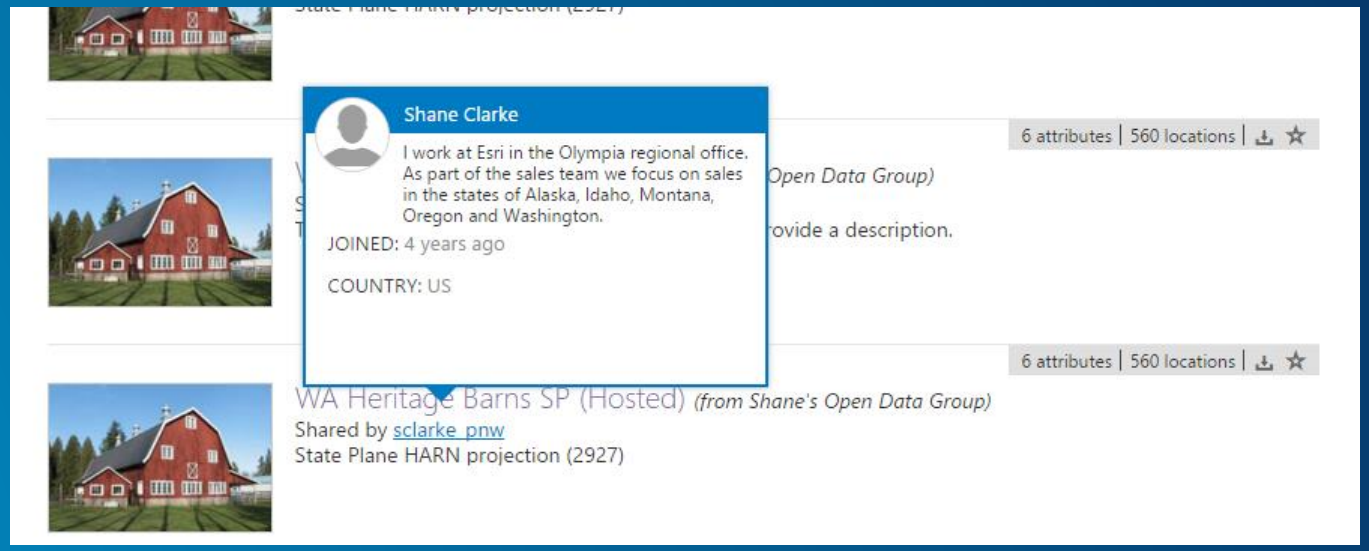
Source http://services.arcgis.com/FjJI5xHF2dUPVrg
Metadata Controlled Hunts - Antelope (2015-2016)
Licensing This dataset is intended for public-use for

TAGS

Idaho | IDFG | Idaho Fish and Game | controlled hunts | antelope | hunting | wildlife | wildlife management

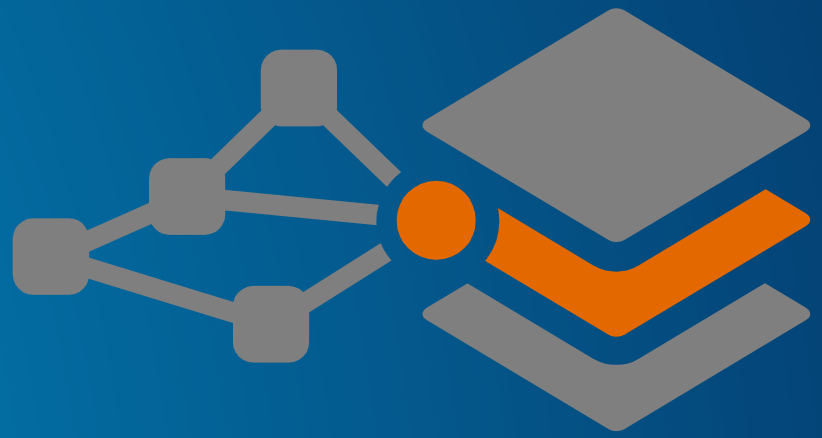
Use an Authoritative ArcGIS Online Profile

- Profile name should convey authoritative source
- Profile description and photo needs to be
  - Professional
  - Informative
  - Authoritative
  - Include contact information



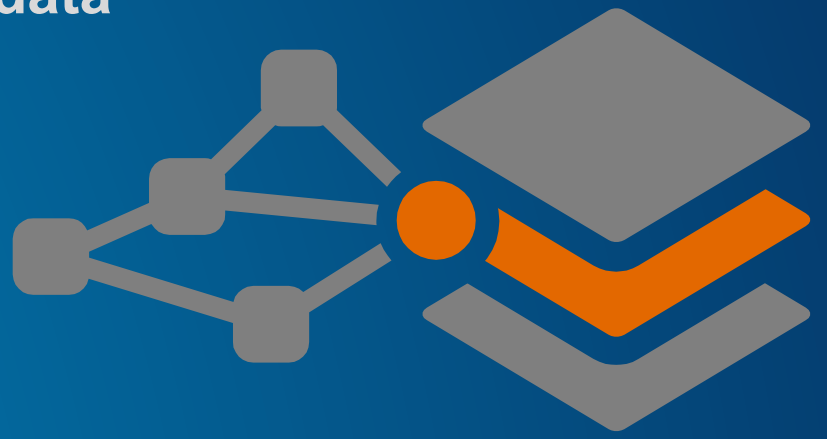
Add items to ArcGIS Online

- Leverage workflows you know
- Catalog all your data in ArcGIS Online
  - Upload local items from the web or ArcMap
  - Register from ArcGIS for Server
- Open Data supports different file types:
  - Map services
  - Feature services
  - Image services
  - CSVs
  - PDFs and Word docs
  - URLs (e.g. for web apps)
  - Web Maps



Registering services to ArcGIS Online

- Registering services with multiple layers
  - Quicker
  - Less control over search results and item's metadata
  - All layers will have same tag, thumbnail
- Registering individual layers
  - More time consuming
  - Better search results and item's metadata
  - Recommended method
  - Sample python script to register service layers individually
    - https://github.com/sirws/OpenData-MapServiceLayerRegistrar



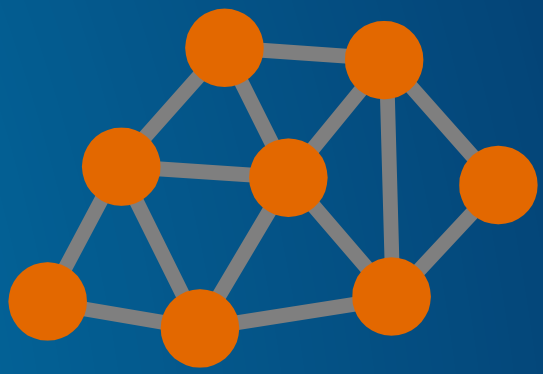
Create effective metadata

- Metadata helps make your data more authoritative and provides context
  - Titles
  - Description
  - Licensing
  - Tags
  - Icons
- Add official metadata files to ArcGIS Online item

https://doc.arcgis.com/en/arcgis-online/share-maps/metadata.htm

Persistent linkages

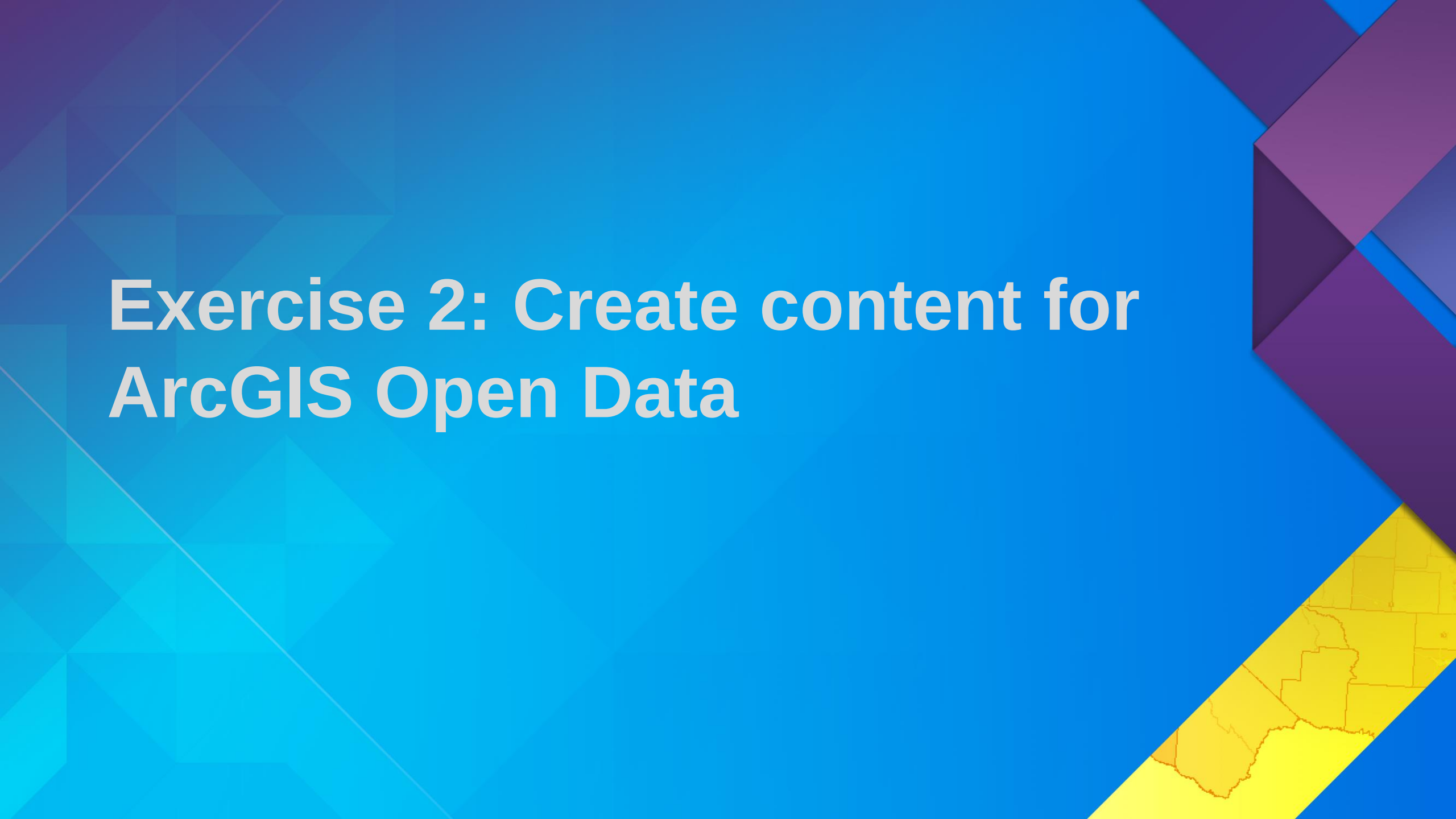
- Update your data in one place
- Automatic updates across all sites
- Users get authoritative and timely data



Demonstration

Preparing and organizing data for ArcGIS Open Data

Exercise 2: Create content for ArcGIS Open Data



Exercise 2: Create content for ArcGIS Open Data

- If possible, use your own ArcGIS Online org. credentials
- If not possible, use http://pnw.maps.arcgis.com
- Find interesting data or ArcGIS Server services
- Publish hosted feature layers (services)
  - Use ArcMap or ArcGIS Online
  - http://doc.arcgis.com/en/arcgis-online/share-maps/publish-features.htm
- Reference ArcGIS Server services
  - Find ArcGIS Server REST endpoint (URL)
  - Add items from the web http://doc.arcgis.com/en/arcgis-online/share-maps/add-items.htm
- Share items to “MAGIP 2016 Open Data” group

Creating an Open Data site

Creating an Open Data Site

- Enable the Online Organization
- Designate Groups for Open Data
- Create authoritative content
- Prepare spatial and non-spatial data
- Create custom role
- Enable staff in other departments
- Create an Open Data Site

Turn on Open Data

- Enable Open Data for your ArcGIS Organization
  - In your ArcGIS Online organization settings
- Set user roles as desired
- Does not mean all data is publicly accessible
- Optionally, enable metadata for the organization
  - In your ArcGIS Online organization settings

Enable Open Data for Organization

SAVE CANCEL

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

Open Data

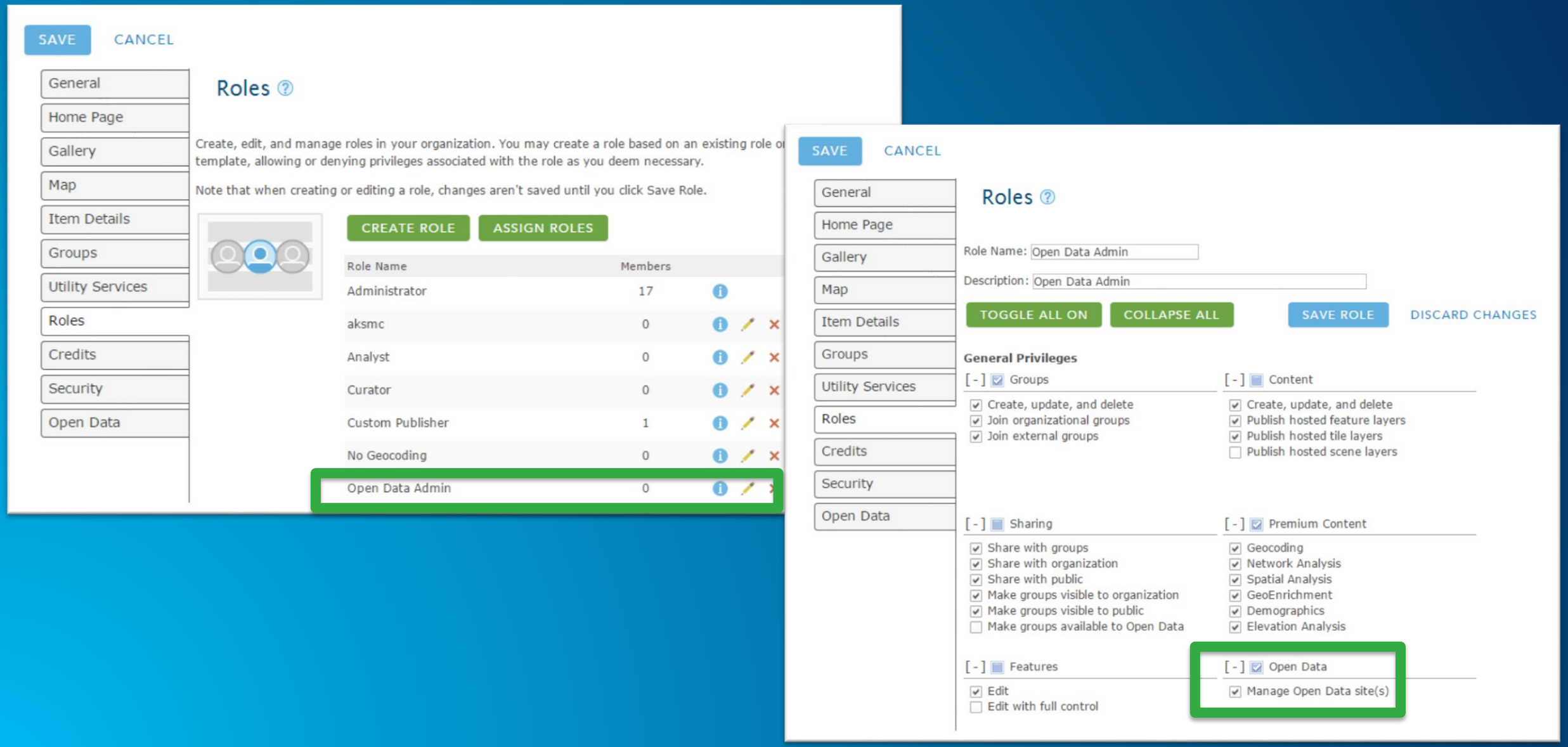
You can enable Open Data capabilities for your organization in order to configure an Open Data web site that makes the data of designated groups in your organization, as well as the items in designated groups of other organizations, freely available to everyone to use and republish as they wish without restrictions from copyright, patents or other mechanisms of control.

Note that you can disable Open Data capabilities associated with your organization at any time.

Learn more about enabling Open Data for your organization.

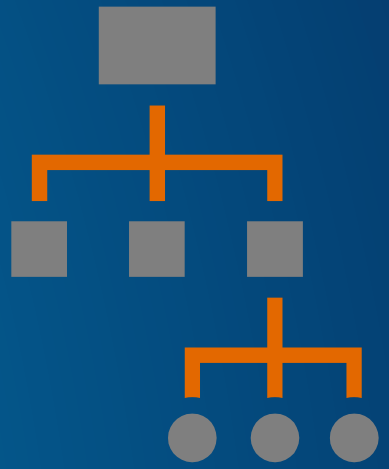
ENABLE OPEN DATA

Create Custom Role(s)

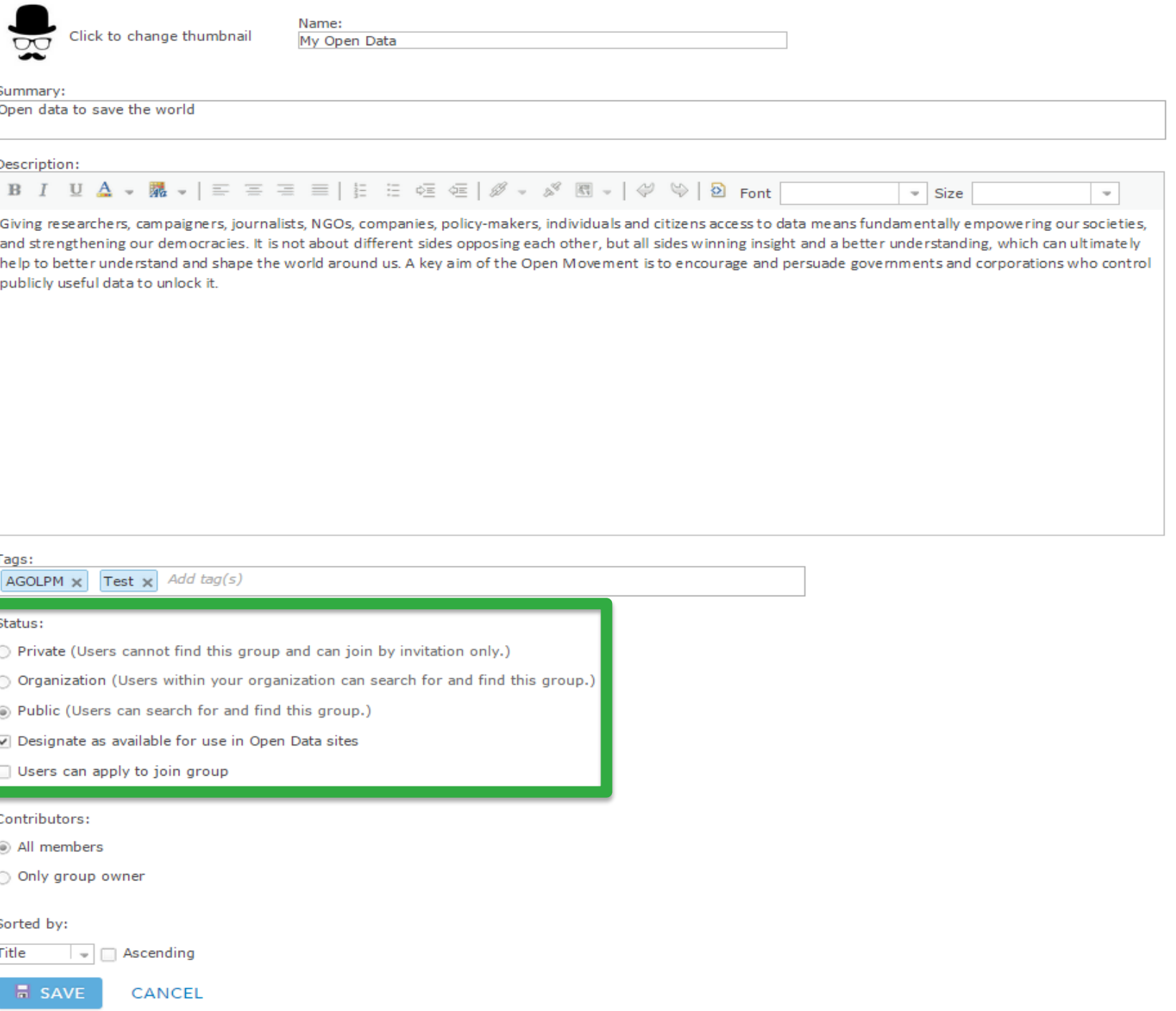


Specify Open Data groups

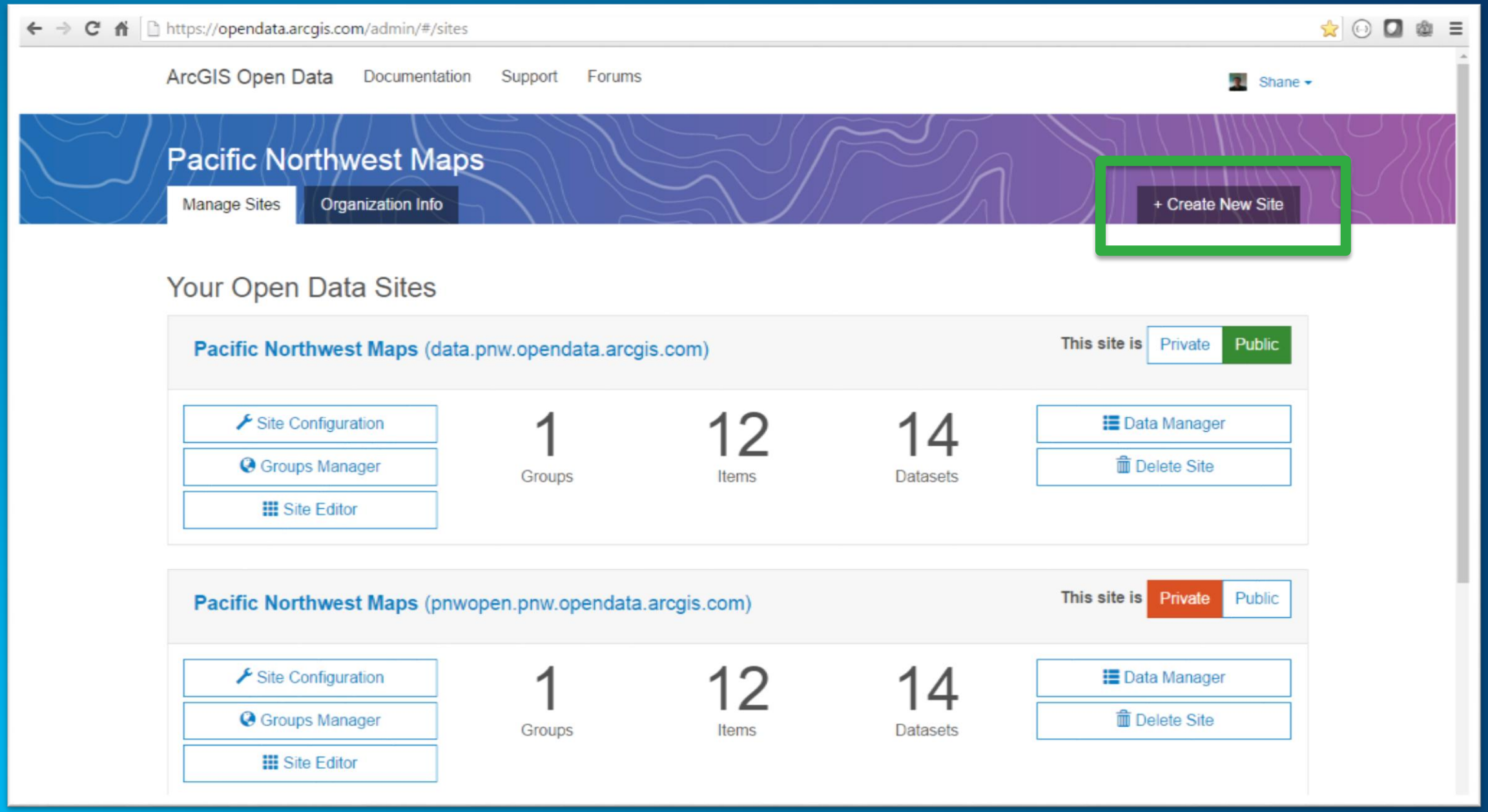
- Control what content appears on your Open Data site
- Create or edit groups to organize Open Data content
  - One large Open Data group
  - Smaller thematic Open Data groups
    - Enables thematic group search
    - e.g. https://hifld-dhs-gii.opendata.arcgis.com/
- Set groups to public and designate as Open Data
- Share items to your Open Data groups
- Can add open data groups from other orgs (federation)



Designate Open Data Groups



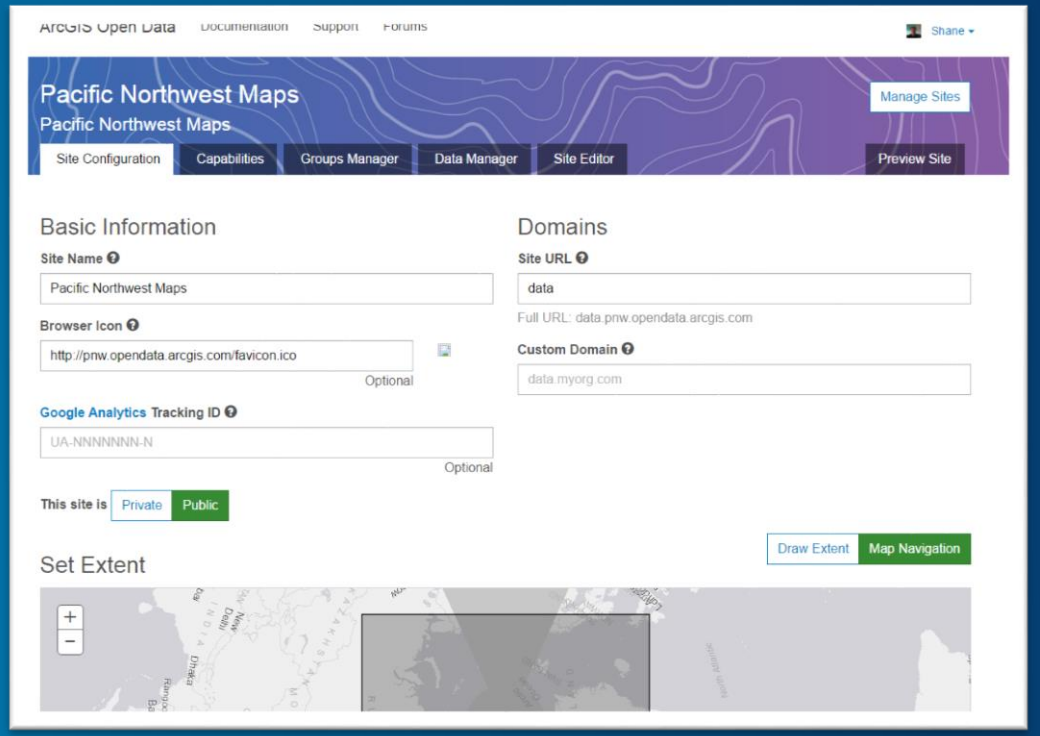
Create new Open Data site



Configuring your Open Data site

Setting basic information

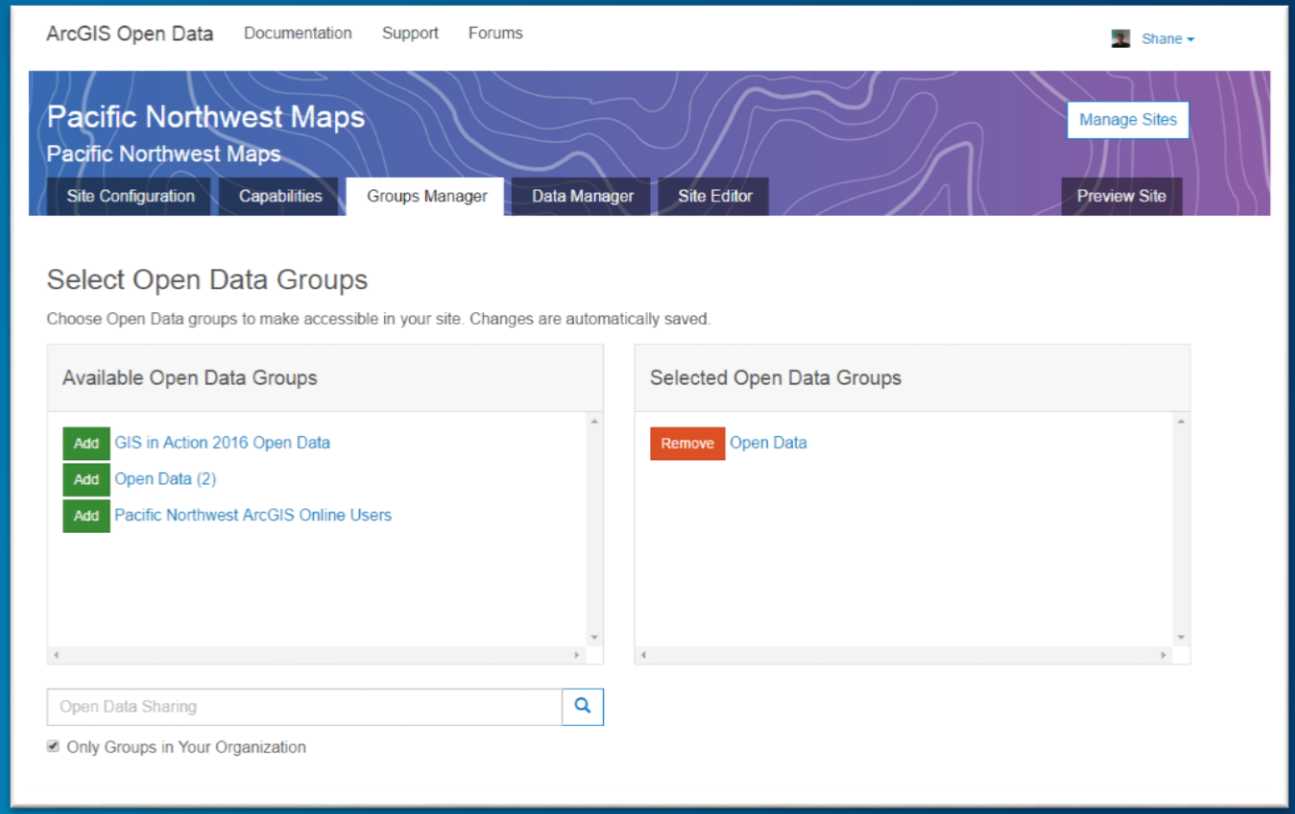
- Set title
- Site URL
  - [name].[yourorg].opendata.arcgis.com
  - Custom URL
- Map extent
- Public or private



Adding your data

Manage data and review status

- Search Open Data groups
- Add groups from your org
- Add groups from other orgs
- Review harvesting status

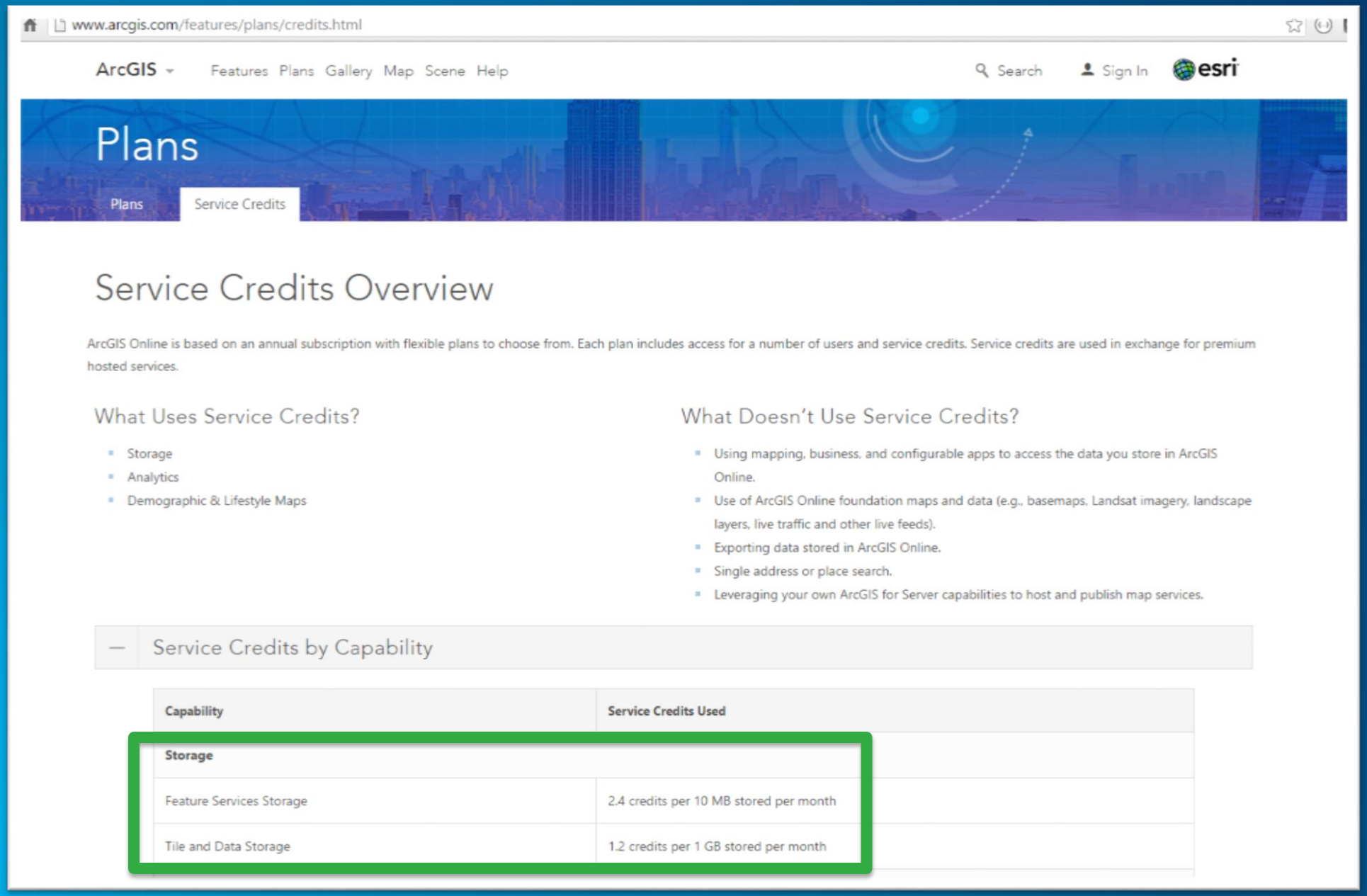


Designing your site layout

Design layout

- Use the wizard
  - Different widgets
    - Text
    - Image
    - RSS feed
    - Data listings
- Use custom HTML/CSS
  - Have more control over your site's design
- Use both
  - Use some custom CSS in the header to change theme colors
  - Use widgets in the main body

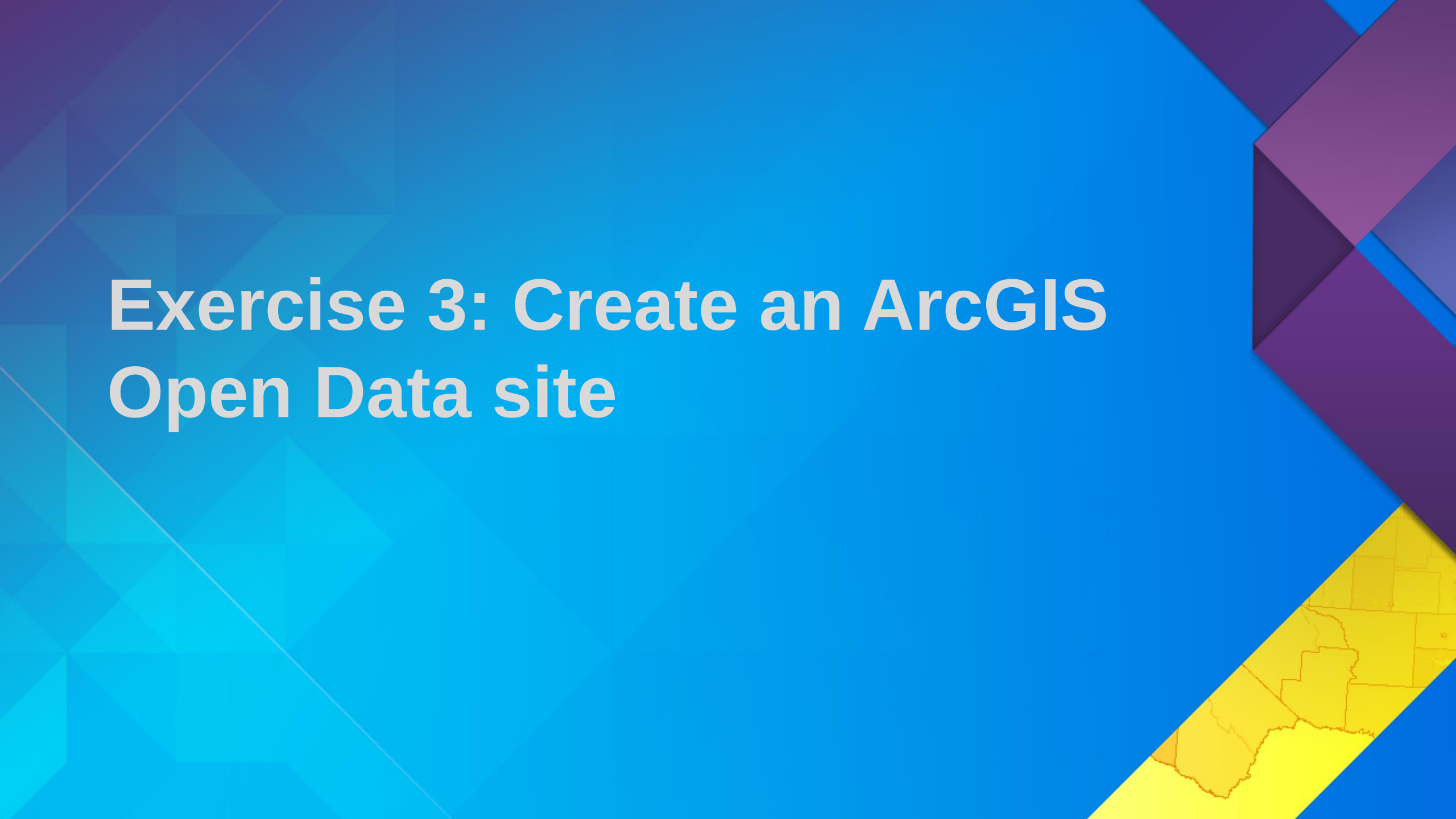
ArcGIS Online Service Credits



Demonstration

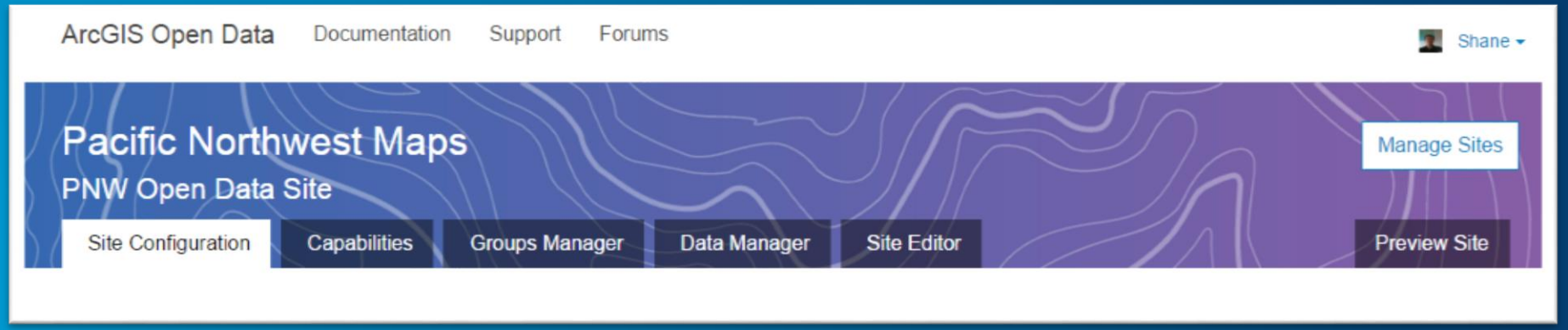
Creating an ArcGIS Open Data Site

Exercise 3: Create an ArcGIS Open Data site



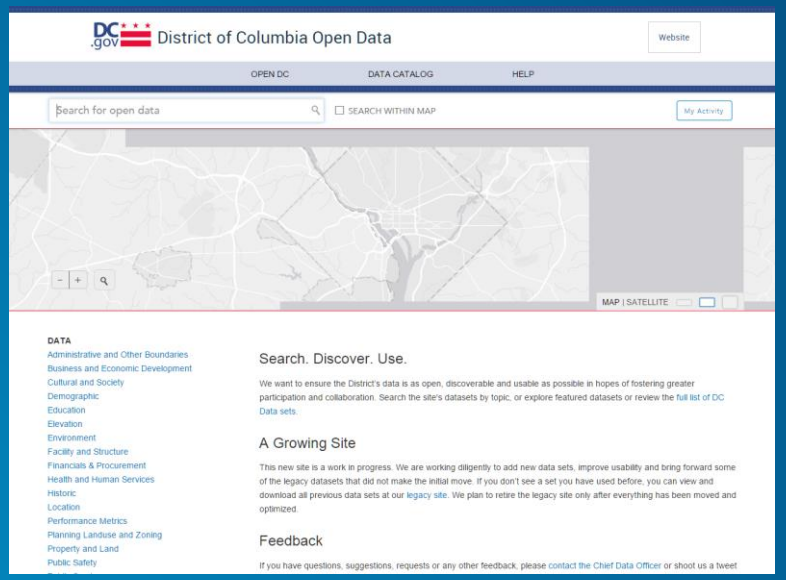
Exercise 3: Create an ArcGIS Open Data site

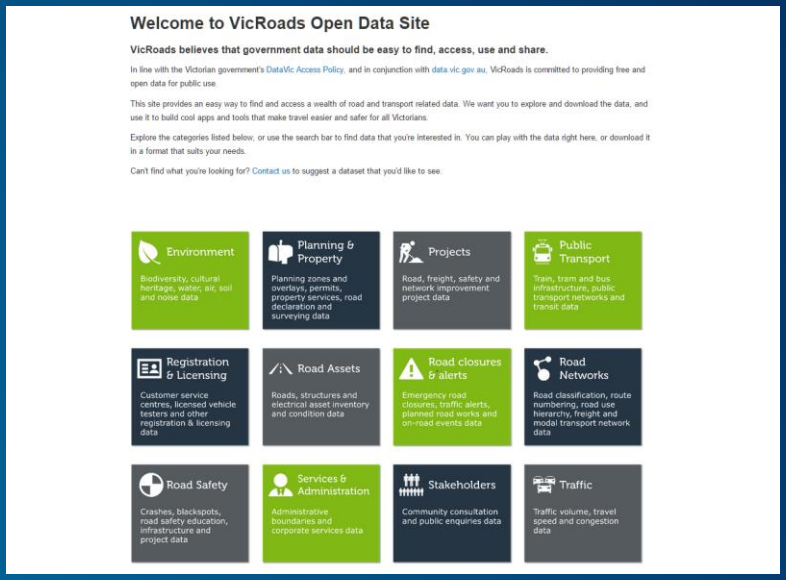
- If possible, use your own ArcGIS Online org. credentials
- If not possible, use http://pnw.opendata.arcgis.com/sites
- Create and configure an Open Data Site
  - http://doc.arcgis.com/en/open-data/provider/create-an-open-data-site.htm
- Manage Site Capabilities
- Explore
  - Groups Manager
  - Data Manager
  - Site Editor

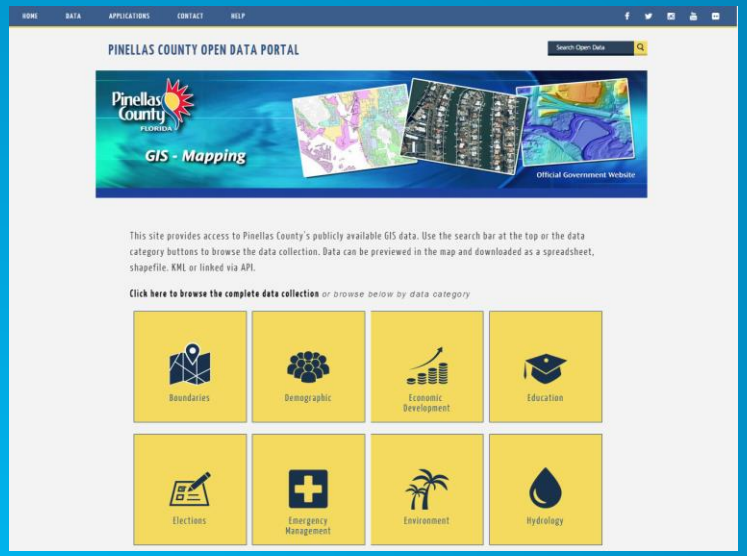


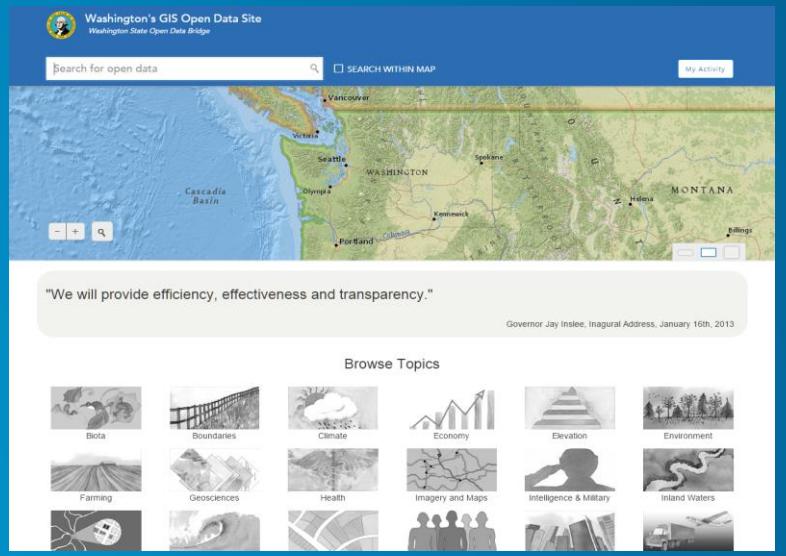
Customizing the Open Data site

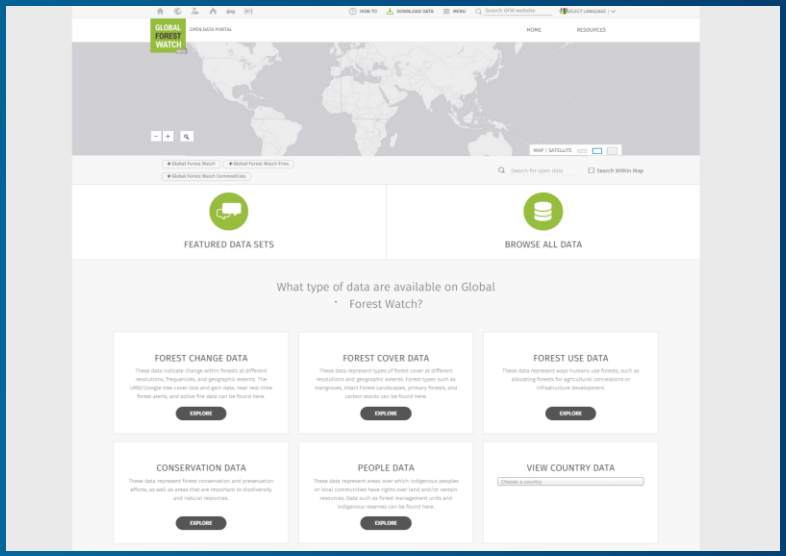

Welcome to Brookline OpenData
BrookONLINE
Search for open data
SEARCH WITHIN MAP
My Activity
Data Categories
Checkbook
Education
Permits & Licenses
Parks & Open Space
Administrative and Regulatory Info
Real Estate Parcels
BrookOnline Citizen Requests
Demographics


DC.gov District of Columbia Open Data
Website
OPEN DC
DATA CATALOG
HELP
Search for open data
SEARCH WITHIN MAP
My Activity
DATA
Administrative and Other Boundaries
Business and Economic Development
Cultural and Society
Demographic
Education
Elevation
Environment
Facility and Structure
Financials & Procurement
Health and Human Services
Historic
Location
Performance Metrics
Planning Landuse and Zoning
Property and Land
Public Safety
Search. Discover. Use.
A Growing Site
Feedback


Welcome to VicRoads Open Data Site
VicRoads believes that government data should be easy to find, access, use and share.
Environment
Planning & Property
Projects
Public Transport
Registration & Licensing
Road Assets
Road closures & alerts
Road Networks
Road Safety
Services & Administration
Stakeholders
Traffic

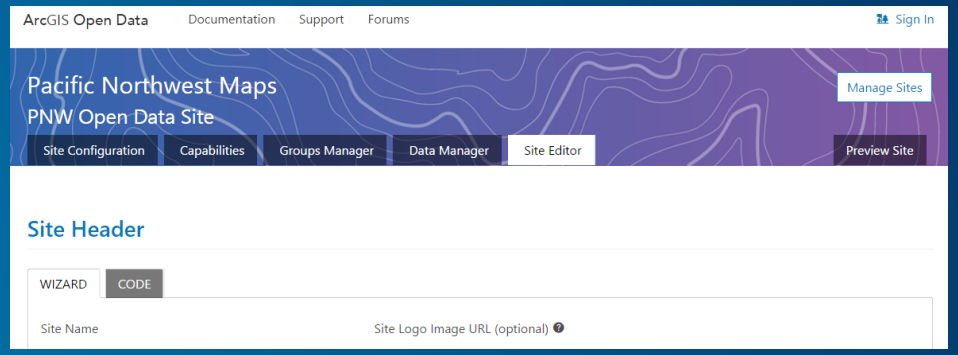

PINELLAS COUNTY OPEN DATA PORTAL
Search Open Data
Pinellas County FLORIDA
GIS - Mapping
Official Government Website
This site provides access to Pinellas County's publicly available GIS data. Use the search bar at the top or the data category buttons to browse the data collection. Data can be previewed in the map and downloaded as a spreadsheet, shapefile, KML or linked via API.
Click here to browse the complete data collection or browse below by data category
Boundaries
Demographic
Economic Development
Education
Elections
Emergency Management
Environment
Hydrology


Washington's GIS Open Data Site
Washington State Open Data Bridge
Search for open data
SEARCH WITHIN MAP
My Activity
"We will provide efficiency, effectiveness and transparency."
Governor Jay Inslee, Inagural Address, January 16th, 2013
Browse Topics
Biota
Boundaries
Climate
Economy
Elevation
Environment
Farming
Geosciences
Health
Imagery and Maps
Intelligence & Military
Inland Waters


GLOBAL FOREST WATCH
FEATURED DATA SETS
BROWSE ALL DATA
What type of data are available on Global Forest Watch?
FOREST CHANGE DATA
FOREST COVER DATA
FOREST USE DATA
CONSERVATION DATA
PEOPLE DATA
VIEW COUNTRY DATA
EXPLORE

Customizing the Site Layout

- Site Editor tab
- Use provided editor or custom HTML and CSS to configure
  - Site Header – HTML and CSS
  - Body Content – Layout HTML
  - Site Footer – HTML
- Widgets
  - Add or remove
  - Configure with Widget Editor and Markdown
  - Widget types: text, image, RSS feed, data listing



http://doc.arcgis.com/en/open-data/provider/design-the-layout-of-your-open-data-site.htm

Using Markdown

- Markdown is used in the Widget Editor
- Markdown Basics
  - http://daringfireball.net/projects/markdown/basics

Attribute	Syntax	Result
Header	# Text here for a header 1 ## Text here for a header 2 ####### Text here for a header 6	Text here for a header 1 Text here for a header 2 Text here for a header 6
Italics	*Text here* or _Text here_	*Text here*
Bold	**Text here** or __Text here__	**Text here**
Combining Italics and Bold	*Combine italics **and** bold*	*Combine italics **and** bold*
Links with link address shown	http://www.esri.com	http://www.esri.com
Links without link address	[esri] (http://www.esri.com)	esri
Bullets	* This * That * The other	• This • That • The other
Ordered list	1. This 1. That 1. The other	1. This 2. That 3. The other
Insert Images	<img src=”image source”> ("image source" should be the URL to the image)	Image from “image source” will be visible
Insert Image with hyperlink	<a href="link"><img src=”image source”> (“link is the url you want to hyperlink to and "image source" should be the URL to the image)	Image from “image source” will be visible and will link to the url provided

Grouping Data

- Thematic tags to direct users to specific datasets
- Add search options to the site URL
  - Full Search: http://talgov.tlcgis.opendata.arcgis.com/datasets?*q=business*
  - Tag Search: http://opendata.dc.gov/datasets?*keyword=education*
  - Group Search: https://hifld-dhs-gii.opendata.arcgis.com/datasets?*group_id=c9584c01b4564b188b98d3ef9cf3e57c*
- Attach link to text, (text widget) using markdown
  - [Education](http://opendata.dc.gov/datasets?keyword=education)
    - e.g. http://opendata.dc.gov
- Attach link to image, (image widget) using markdown
  - Specify Image Source URL and Image Link
    - e.g. http://vicroadsopendata.vicroadsmaps.opendata.arcgis.com/

Sample HTML / CSS code

Brookline (http://data.brooklinema.gov/)

- Header Button: http://esriurl.com/BrooklineButton
- Grid: http://esriurl.com/BrooklineGrid

Charlotte (http://clt.charlotte.opendata.arcgis.com/)

- CSS: http://esriurl.com/CharlotteCSS

California Dept. of Public Health

- CSS: http://esriurl.com/CDPHcss
- Body: http://esriurl.com/CDPHbody
- Footer: http://esriurl.com/CDPHfooter

Detroit (https://data.detroitmi.gov/)

- Footer/Header/CSS: http://esriurl.com/Detroitcode

Sample HTML / CSS code

Police Foundation

- **Body Layout: http://esriurl.com/PoliceBody**
- **Extra CSS: http://esriurl.com/PoliceCSS**

San Francisco

- **http://esriurl.com/SFcode**

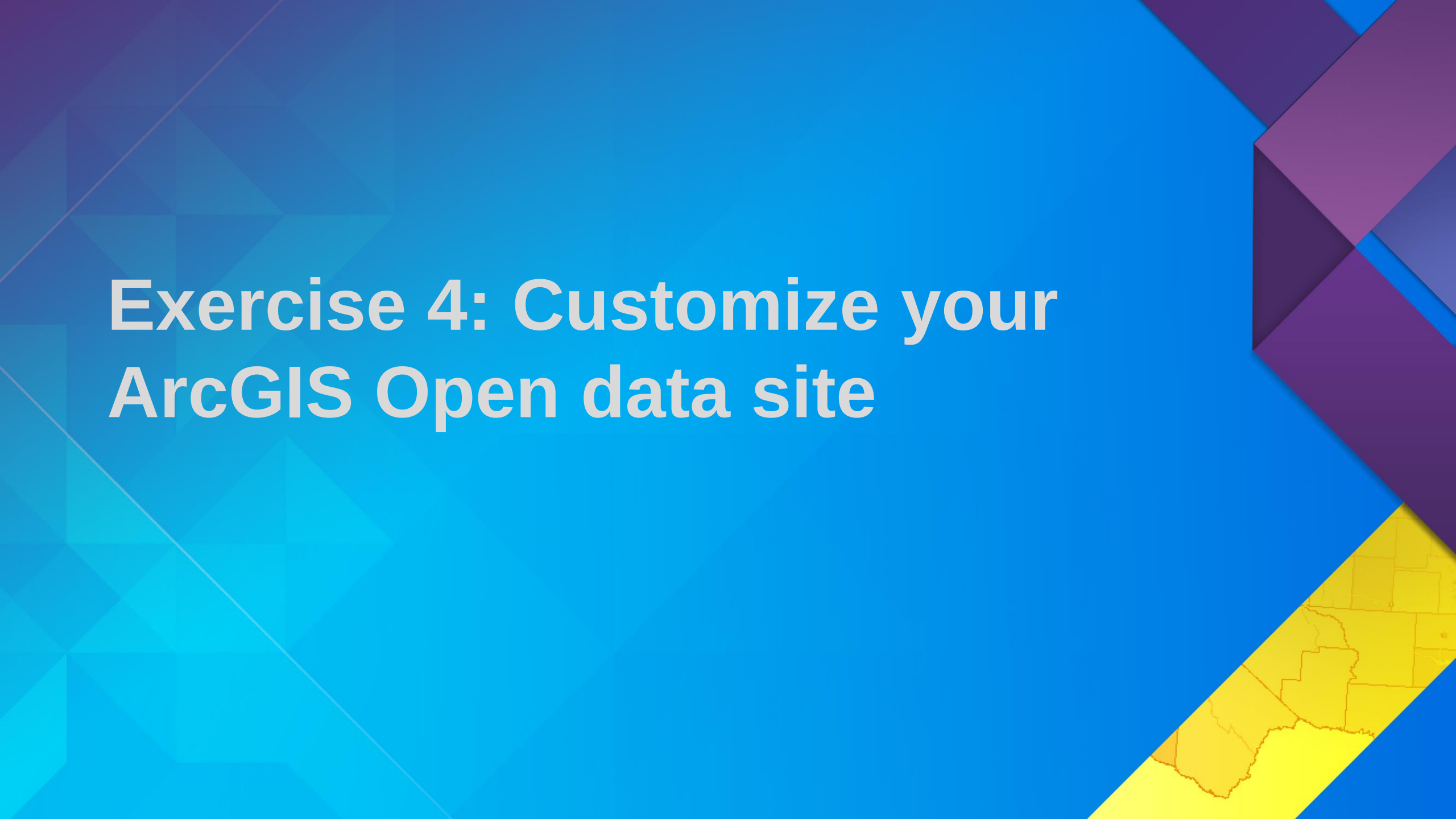
Extra - changing placeholder text in Webkit browsers:

- **http://esriurl.com/WebKitPlaceholder**

Demonstration

Customizing the ArcGIS Open Data Site

Exercise 4: Customize your ArcGIS Open data site



Exercise 4: Customize your ArcGIS Open data site

- If possible, use your own ArcGIS Online org. credentials
- If not possible, use http://pnw.opendata.arcgis.com/sites
- Open Site Editor tab
- Design the layout of your Open Data site
  - http://doc.arcgis.com/en/open-data/provider/design-the-layout-of-your-open-data-site.htm
- Add widgets to Site Header, Body Content, and Site Footer
- Add widget to group your data
- Try sample HTML / CSS code

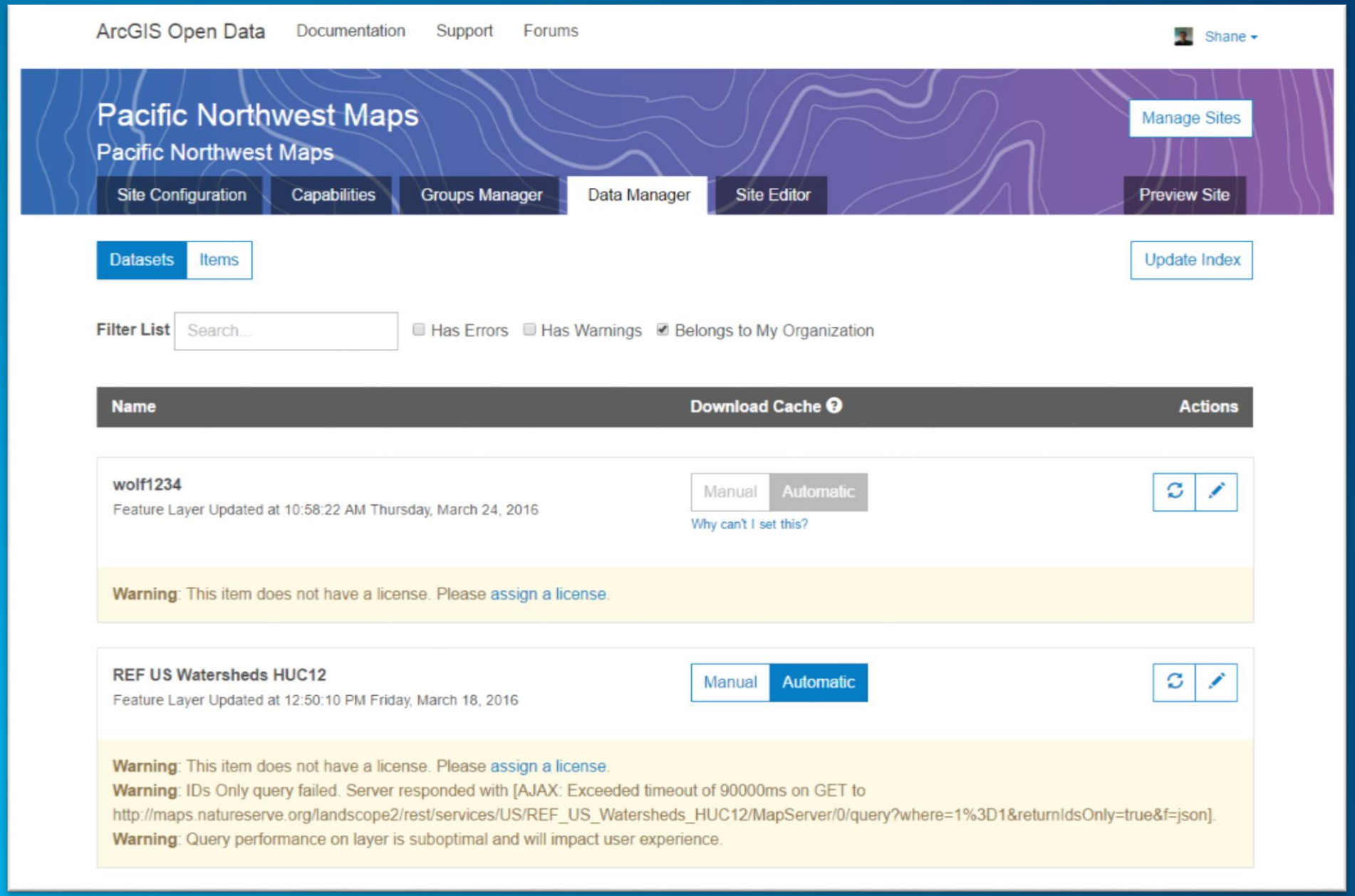
Promoting your Open Data site

Engaging your community

- Make your Open Data site public
- Keep your Open Data site fresh (new datasets, highlighted datasets, design)
- Use a custom URL
- Link to open data from apps
- Start a two-way conversation
  - Set up a twitter account or blog
  - Speak at local seminars or conferences
- Connect to the local data community
  - Civic hacking groups
- Host events
  - Hackathons
  - Contests
- Showcase how people are using your data

Advanced Topics

Open Data Site Administration

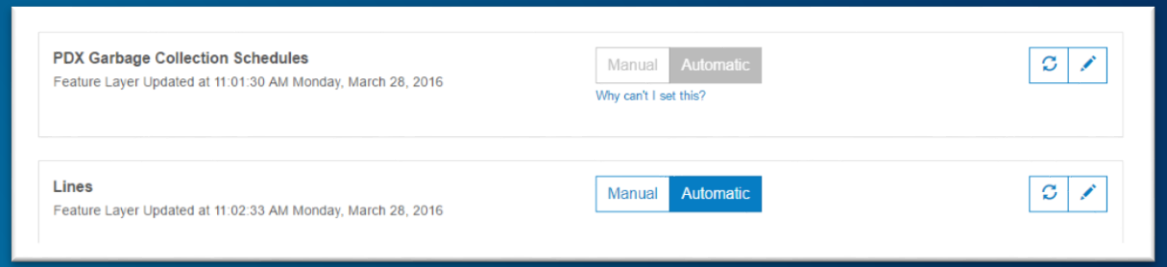


Data Manager

- Identify issues, manage caching, resync data
- Warnings
  - Successfully indexed, but with issues
  - Missing license - “Access and Use Constraints” in the item details is empty
    - Solution – fix item detail, or register individual service layers
- Errors
  - Failed to index
    - ArcGIS Open Data cannot access dataset (firewall, server down, item not supported)
    - Solution – remove item from Open Data group
- Manual reset
  - Refreshes the download cache

http://doc.arcgis.com/en/open-data/provider/data-manager.htm

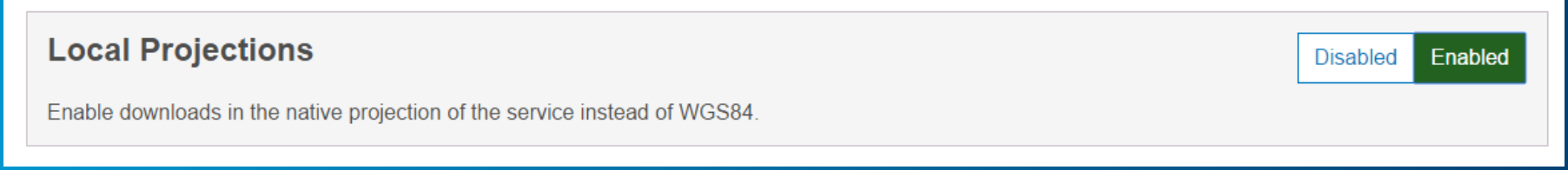
Caching



- Set in Data Manager
- Caching
  - Dynamic copy of the data in the cloud
  - Improves download times, takes load off local servers
  - PDFs, docs, URLS, and web maps not cached
- Manual or Automatic cache updates
- Automatic cache updates
  - Setting for all hosted services
  - Cache dropped every 24 hours and regenerated with next download request
  - Recommended for data sets with frequent updates (e.g. crime)
- Manual cache update
  - Only updated when administrator manually resets data
  - Recommended for large data sets with infrequent updates (e.g. parcels)

Projections

- By default, all services will download in WGS84
- Option to Enable Local Projections (in Site Capabilities)
  - All services in ArcGIS for Server downloaded in original projection
  - All feature services hosted in ArcGIS Online downloaded in original projection
- Creating services from shapefiles and CSV files
  - Hosted services created in ArcGIS Online created in WGS84 projection
  - Use ArcGIS for Desktop to created hosted service in non-WGS84 projection



Server Configuration Details – Service Properties

- ArcGIS Open Data supports services on ArcGIS Server 10.0 or higher
- Max record count
  - Max record count is the maximum number of records per single request
  - Should be less than 5,000
  - Default is 1,000 for optimal performance
  - Only increase max record count if between 2,000 and 4,000 records in dataset
  - Services with max record count > 5,000 will receive warning in Data Manager
  - Services with max record count > 10,000 will not be indexed, error reported
  - Max record count does not impact downloads – all records downloaded
- OCG links (in API section) come from ArcGIS Server, if enabled
- Feature access not necessary (best to not enable)
- Scale dependencies do not matter

http://doc.arcgis.com/en/open-data/provider/server-configuration-details.htm

Server Configuration Details – Organizing Services

- Large services will time out
  - Organize data in multiple services, with less 20 layers per service
- Services need to be publicly accessible
- Extend your infrastructure to the cloud / ArcGIS Online
  - Reduces load on local servers
  - 99.9% uptime for ArcGIS Online
- Enable persistent layer ordering in service (ArcGIS Server 10.3 or higher)
  - Desktop Data Frame Properties > General > Allow assignment of unique IDs for map service publishing
- Raster data is supported as Image Services
  - Download in supported formats: JPEG, PNG, georeferenced TIFF
- Use SSL for services, if possible

http://doc.arcgis.com/en/open-data/provider/server-configuration-details.htm

Server Configuration Details – Managing the data

- Change field names with aliases
- Turn off unimportant fields
- Geodatabase behaviors are not supported
  - Topologies, relationships, related tables – not supported
- Coded value domains are supported
- Data must support statistics
  - Requires ArcGIS Server 10.03 or higher
  - ArcGIS Open Data only builds statistics for first 20 columns in a dataset
- CSV files under 5MB are dynamic
  - Use Publish as a Service for CSV files larger than 5MB
- Enable editor tracking for accurate last updated date

http://doc.arcgis.com/en/open-data/provider/server-configuration-details.htm

Server Configuration Details – Item configuration

- ArcGIS Online Item title is the dataset name
- Access and Use Constraints is the data license
  - The license is important for data consumers
  - License can be a URL for existing data policies
  - License can be HTML code from Creative Commons License Picker
    - https://creativecommons.org/choose/
- Search for data is based on the ArcGIS Online item extent (can be changed)

http://doc.arcgis.com/en/open-data/provider/server-configuration-details.htm

Integrating ArcGIS Open Data with other Open Data Platforms

- Provide ArcGIS Open Data catalog to other Open Data platforms
  - DCAT format (JSON)
  - Append /data.json to Open Data site home page URL
- One URL = hundreds of datasets
- Used by http://www.data.gov/

Federating with CKAN

- CKAN – open source data portal platform
- Configure CKAN
  - Install the CKAN Harvesting extension
  - Install the CKAN DCAT extension
  - The Harvester Gather_Consumer and Fetch_Consumer services must be running as background services
- Harvest the ArcGIS Open Data catalog
  - Add your DCAT (http://yourOpenDataSite/data.json) as a harvest source

http://doc.arcgis.com/en/open-data/provider/federating-with-ckan.htm

How to get metadata from ArcGIS for Desktop into ArcGIS Online

- Not all metadata is included when publishing items – need to add metadata
- The ArcGIS Online web-based metadata editor uses the ArcGIS metadata format
- Fields available for editing determined by style configured for the organization
- Use the ArcGIS for Desktop geoprocessing XSLT Transformation tool to convert other metadata formats to the ArcGIS metadata format.
- Use the ArcGIS for Desktop geoprocessing Upgrade Metadata tool to convert to the ArcGIS metadata format (e.g. FGDC_TO_ARCGIS)

https://doc.arcgis.com/en/arcgis-online/share-maps/metadata.htm
http://desktop.arcgis.com/en/arcmap/latest/tools/conversion-toolbox/xslt-transformation.htm

Resources

- ArcGIS Open Data website and help documentation
  - opendata.arcgis.com
- ArcGIS Open Data showcase
  - dc.esri.com/showcase
- Live Training Seminar: bit.ly/OpenDataLTS
- ArcGIS Blog
- GeoNet
  - Share ideas, questions, experiences with the community

Understanding our world.