

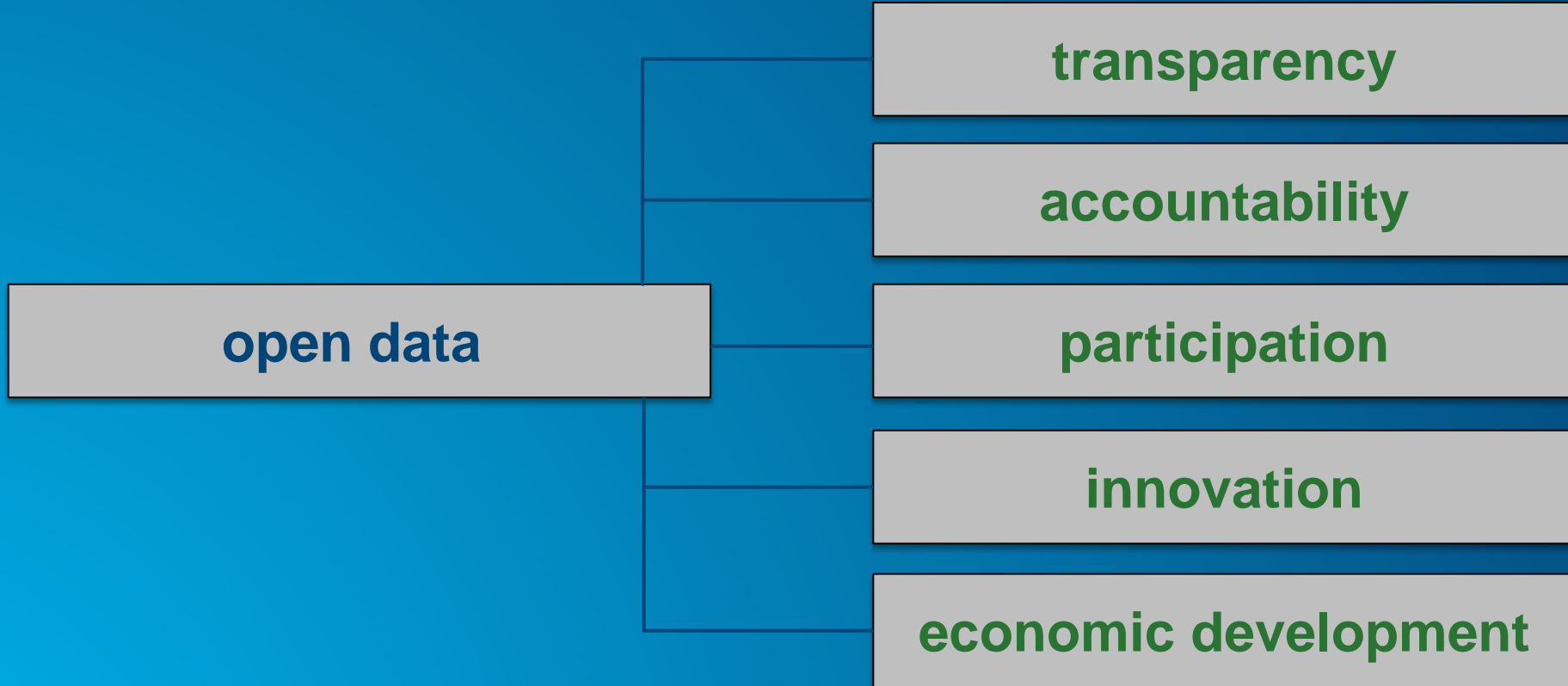


# Bridging Communities and Data with ArcGIS Open Data

Courtney Claessens, Product Engineer

Daniel Fenton, Product Engineer

# Why does open data matter?

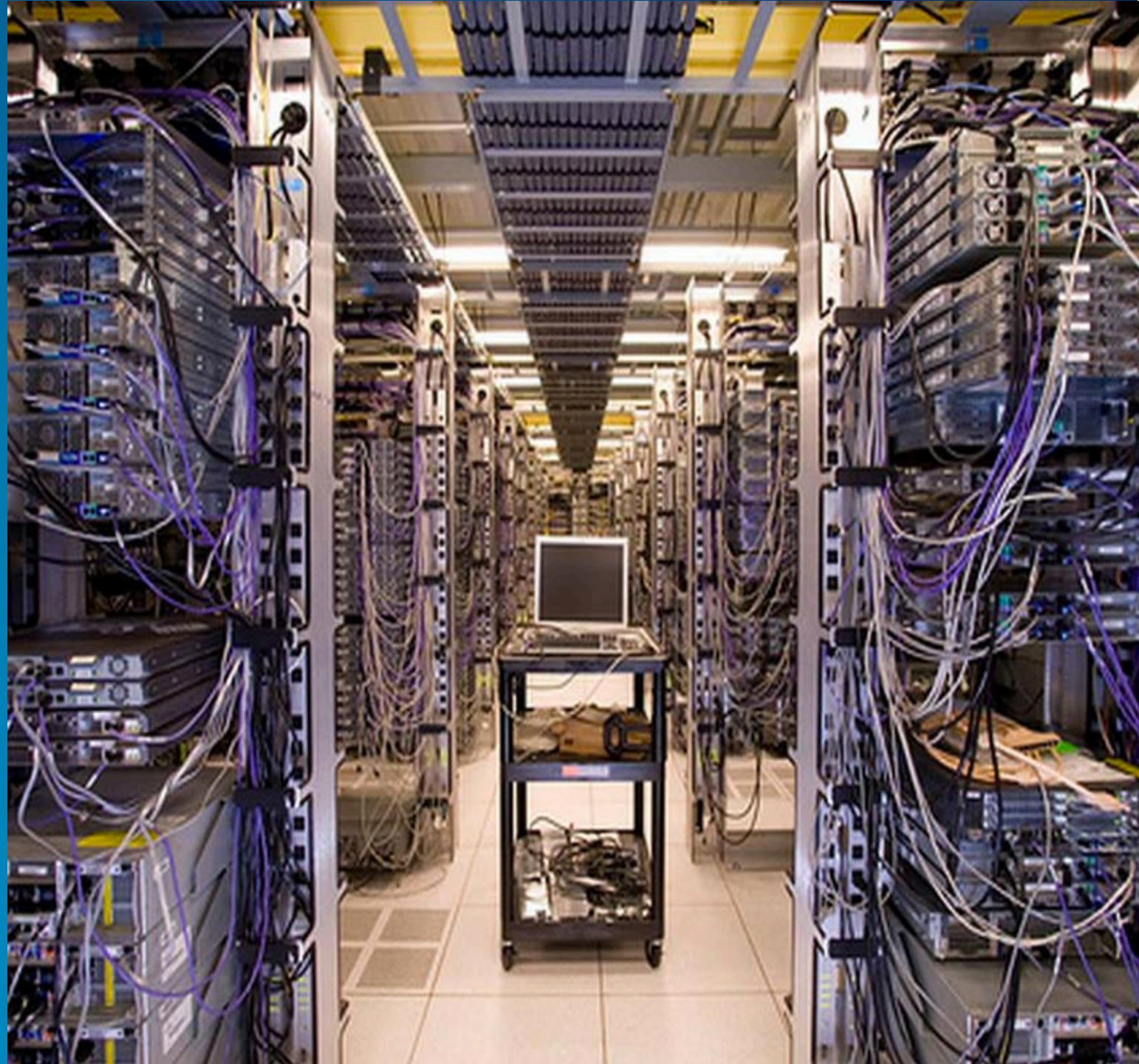


**“Web-oriented architectures have a much greater potential effect on the ability to transform government than anything else in the Web 2.0 world.”**

*- Gartner, 2007*



**but is it  
accessible?**







United States Department of the Interior

U.S. GEOLOGICAL SURVEY  
Reston, VA 20192



In Reply Refer To:  
Mail Stop 807

June 29, 2006

Mr. Jared Benedict  
[REDACTED]

Dear Mr. Benedict:

This is in response to your Freedom of Information Act (FOIA) request, dated June 5, 2006, and received by the U.S. Geological Survey (USGS) on June 9, 2006. You have requested copies of USGS 7.5 Minute Series Digital Raster Graphic (DRG) topographic maps for the state of Rhode Island.

Under 43 C.F.R. § 2.7(a) of Department of the Interior's FOIA regulations, FOIA requests may be made for records that are not "routinely available." See 43 C.F.R. § 2.4, 2.7(a). The topographic DRG maps you have requested are routinely available from the USGS. To further assist you, we are enclosing a page from our web site (<http://topomaps.usgs.gov/drg/>) that explains how to order DRG's. If you have any questions regarding the ordering process, please call 1-888-ASK-USGS.

You should also be aware that the USGS has been provided with statutory authority to establish fees for the maps you are seeking. Section 42 of Title 43 of the United States Code provides in pertinent part:

The Director of the [United States] Geological Survey be,  
and is hereby, authorized and directed, on the approval of  
the Secretary of the Interior, to dispose of the topographic  
and geologic maps and atlases of the United States, made

FOIA requests

# FTP websites

data.whitehorse.ca

### Transportation

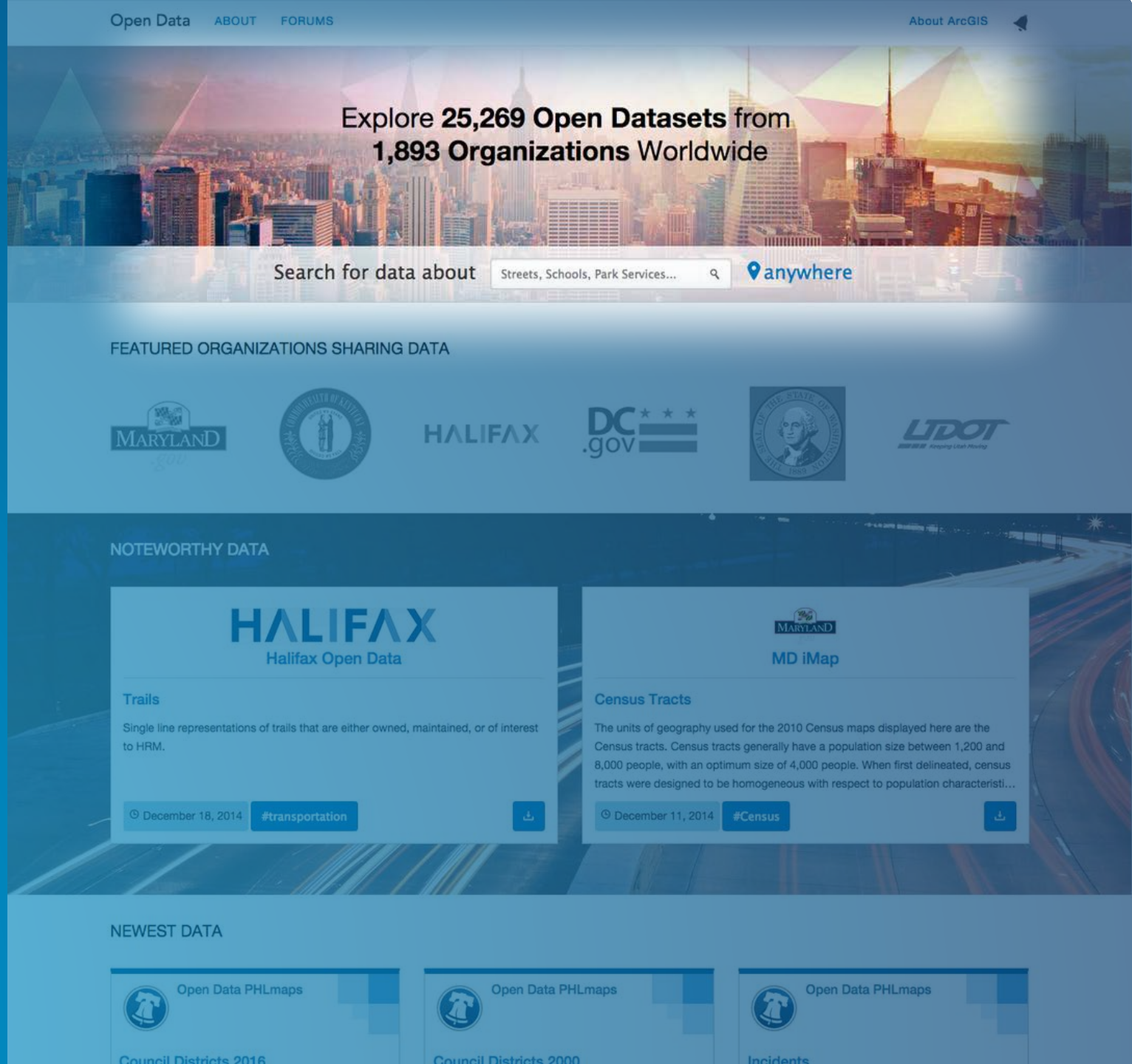
Description	Date of Data	SHP (zipped)	DWG	KML
Snowmobile Bylaw Trails	10 May 2012	<a href="#">SHP</a>	<a href="#">DWG</a>	<a href="#">KML</a>
Trails - NonMotorized	2005	<a href="#">SHP</a>	<a href="#">DWG</a>	<a href="#">KML</a>
Trails - Ski	2003	<a href="#">SHP</a>	<a href="#">DWG</a>	<a href="#">KML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

### Environment

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

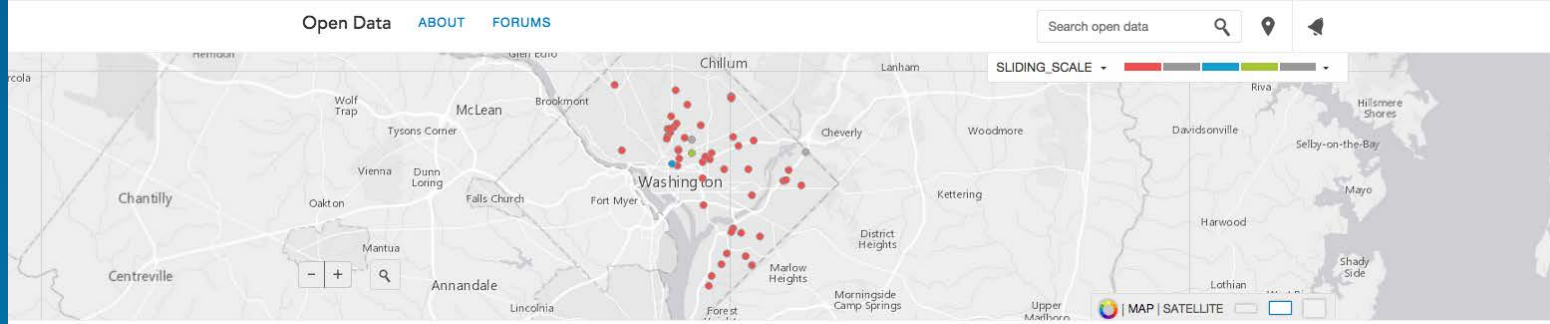
# ArcGIS Open Data

simple  
integrated  
open





- Data-centric view
- Open formats
- Hosted and configurable
- Included with ArcGIS subscriptions



## Primary Care Facilities

[OPEN IN ARCGIS](#)
[SHARE](#)
[SUBSCRIBE](#)
[Download Dataset](#)

[Details](#)
[Table](#)
[Charts](#)

### DESCRIPTION

The dataset contains locations and attributes of Primary Care Centers, created as part of the DC Geographic Information System (DC GIS) for the D.C. Office of the Chief Technology Officer (OCTO) and participating D.C. government agencies from a database provided by the DC Department of Health (DOH). [<Metadata>](#)

### DATASET ATTRIBUTES

ADDRESS Text	1160 VARNUM STREET NE (4), 1500 GALEN STREET SE (1), 2041 MARTIN LUTHER KING JR AVENUE SE (1) ... (47 more)
ADDRID Number	min: 2,520 max: 310,407 avg: 243,209.77 count: 53
ADMINISTRA Text	(50) ... (1 more)
CHARGENURS Text	(50) ... (1 more)
CITY Text	WASHINGTON (53)
CT_HPSA Text	(50) ... (1 more)
FACILITY_SETTING Text	Community Health Center-FQHC (23), (16), FQHC (2), Community Health Center-FQHC (2), Other (1) ... (4 more)
FACILITY_TYPE Text	Private Non-Profit (47), Non-Profit (2), Community Health Center (1), (1), Other Non-Profit (1) ... (1 more)
FAX Text	(50) ... (1 more)
GIS_ID Text	PC_25 (1), PC_53 (1), PC_12 (1), PC_43 (1), PC_13 (1), PC_16 (1), PC_01 (1), PC_22 (1), PC_23 (1), PC_24 (1) ... (43 more)
+ 2 more attributes	

### ABOUT



DCGIS Open Data: Health and Human Services  
By DCGISopendata on February 27, 2015

Updated: a month ago  
Source [http://maps2.dcgis.dc.gov/dcgis/rest/service/Metadata/Primary Care Facilities](http://maps2.dcgis.dc.gov/dcgis/rest/service/Metadata/Primary%20Care%20Facilities)  
Licensing <http://dc.gov/page/terms-and-conditions>

### TAGS

Open Data | Washington DC | DC GIS | District of Columbia | Health

### DATASET FOUND IN

- [the DC GIS Open Data Site - Legacy](#)
- [the DC GIS Open Data Site](#)

### RELATED DATASETS

  
 Ambulatory Surgical Centers

  
 Nursing Homes

  
 Hospitals

  
 Dialysis Clinics



# User interface and experience

# Using ArcGIS Open Data: open data principles



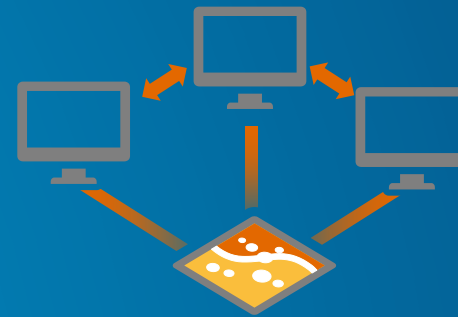
Accessible



Discoverable



Explorable



Collaborative

# 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





# Open Data is discoverable

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



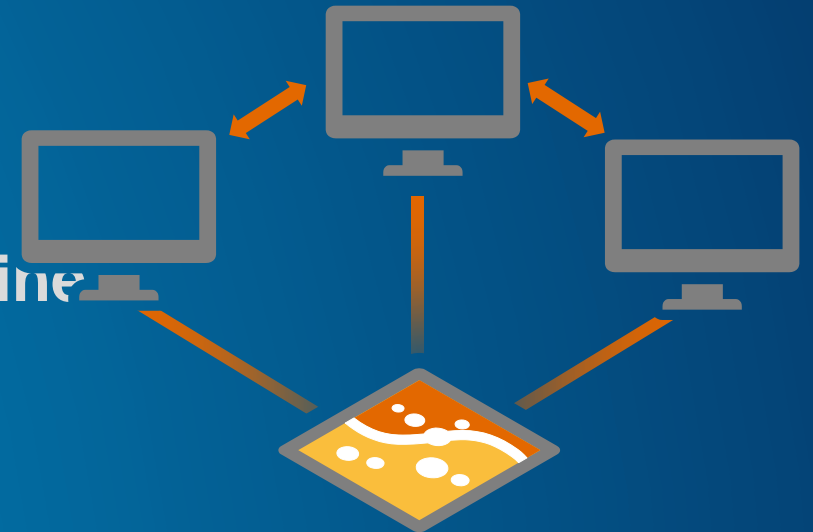
# Open Data is explorable

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



# Open Data is collaborative

- Users can download data in multiple open formats
  - Spreadsheet (CSV)
  - KML
  - Shapefile
  - APIs: GeoJSON, GeoService, OGC
- 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 an ArcGIS Open Data Site

# 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

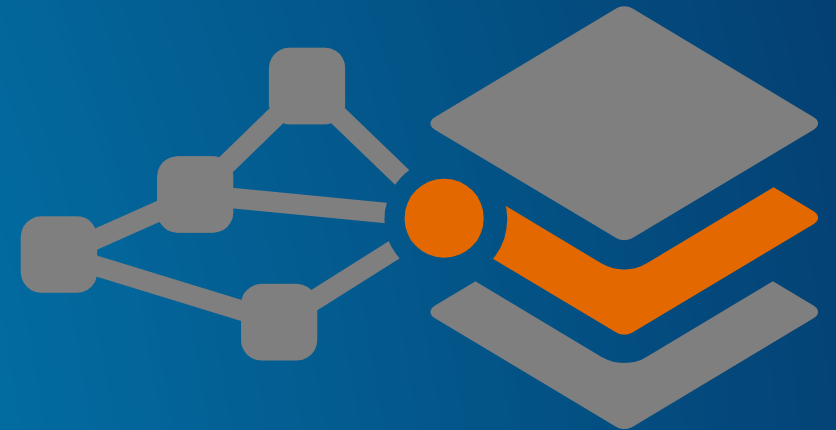




# Add items to ArcGIS Online

## Leverage workflows you know

- **Keep 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



# Create effective metadata

**Metadata helps make your data more authoritative and provides context**

- **Titles**
- **Description**
- **Licensing**
- **Tags**
- **Icons**



# 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**

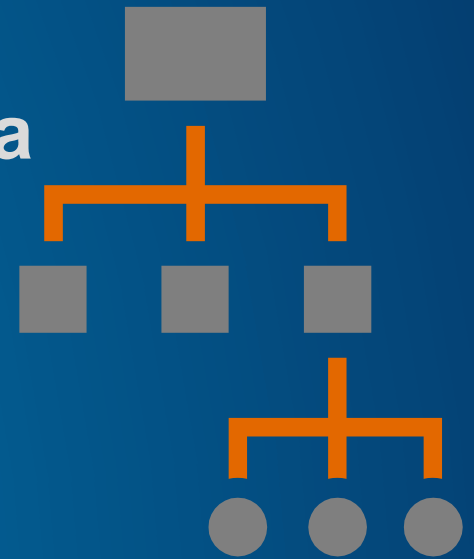




# Specify Open Data groups

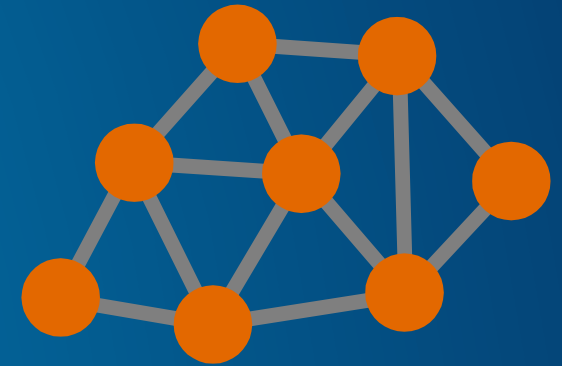
Control what content appears on your Open Data site

- Create or edit groups to organize Open Data content
  - one large Open Data groups
  - smaller thematic Open Data groups
- Set groups to public and designate as Open Data
- Share items to your Open Data groups



# 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

# Site administration and configuration





# Configuring your Open Data site

## Setting basic information

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

The screenshot shows the configuration page for an ArcGIS Open Data site. The page title is 'Esri R&D Center, Washington DC' and the user is 'Courtney'. The page is divided into two main sections: 'Basic Information' and 'Domains'. In the 'Basic Information' section, the 'Site Name' is 'Esri R&D Center, Washington DC' and the 'Browser Icon' is 'http://dcdev.opendata.arcgis.com/favicon.ico'. In the 'Domains' section, the 'Site URL' is 'data2' and the 'Full URL' is 'data2.dcdev.opendata.arcgis.com'. There is also a 'Custom Domain' field with the value 'data.myorg.com'. Below these sections, there are two buttons: 'PRIVATE' (selected) and 'PUBLIC'. At the bottom, there is a 'Set Extent' section with a map showing the Washington DC area and a 'DRAW EXTENT' button.

# 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

The screenshot displays the ArcGIS Open Data management interface. At the top, the navigation bar includes 'ArcGIS Open Data', 'DOCUMENTATION', 'SUPPORT', and a user profile for 'Courtney'. Below this, the site name 'Esri R&D Center, Washington DC' is shown with a 'MANAGE SITES' button. The main header identifies the user as 'Courtney's Super Site' with a 'PREVIEW SITE' button. A secondary navigation bar contains 'Configure Site', 'Manage Data', 'Data Report', and 'Design Layout'. The main content area is titled 'Select Open Data Groups' and includes the instruction: 'Choose Open Data groups to make accessible in your site. Changes are automatically saved.' The interface is divided into two columns: 'Available Open Data Groups' and 'Selected Open Data Groups'. The 'Available' column lists several data groups, each with an 'ADD TO SITE' button. The 'Selected' column shows 'Open Data Carousel' and 'Open Data Site Gallery', each with a 'REMOVE' button. At the bottom, there is a search bar for 'Open Data Sharing' and a checked checkbox for 'Only Groups in your Organization'.

ArcGIS Open Data DOCUMENTATION SUPPORT Courtney

Esri R&D Center, Washington DC MANAGE SITES

Courtney's Super Site PREVIEW SITE

Configure Site Manage Data Data Report Design Layout

### Select Open Data Groups

Choose Open Data groups to make accessible in your site. Changes are automatically saved.

**Available Open Data Groups**

- Charlotte Open Data ADD TO SITE
- Chattanooga Demo Data ADD TO SITE
- City of Philadelphia Test Open Data ADD TO SITE
- Colorado Data ADD TO SITE
- Colorado Fracking (Open Data Test) ADD TO SITE
- Composer Testing ADD TO SITE

**Selected Open Data Groups**

- Open Data Carousel REMOVE
- Open Data Site Gallery REMOVE

Open Data Sharing

Only Groups in your Organization

# 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 colours
  - Use widgets in the main body



The background features a vibrant blue gradient. On the left side, there are several overlapping geometric shapes in shades of purple and yellow. A small, semi-transparent map fragment is visible within one of the yellow shapes. The text is positioned on the right side of the slide.

# Demonstration

Administering and configuring an ArcGIS Open Data site



# Engaging your community

## Make your open data count

- **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, datapaloozas
  - Contests
- **Showcase how people are using your data**



# Resources

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



Understanding our world.