Understanding and Using Metadata in ArcGIS

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SEE
WHAT
OTHERS
CAN'T

Understanding and Using Metadata in ArcGIS

- Introduction - Adam
- Metadata across ArcGIS - Marten
- What's Next? - Aleta

Introduction

Adam Martin

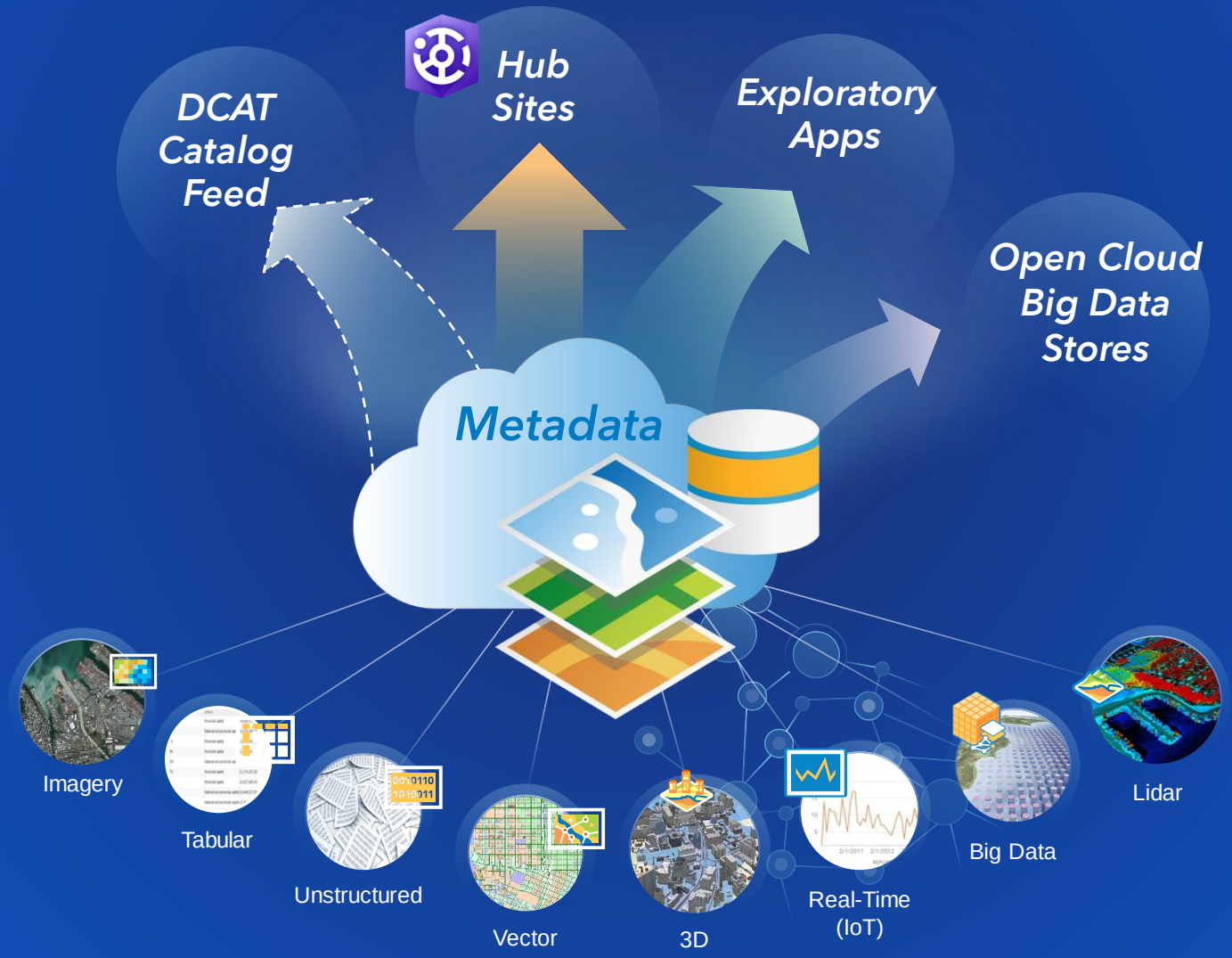
Why Metadata Matters?

Discoverability

Accountability

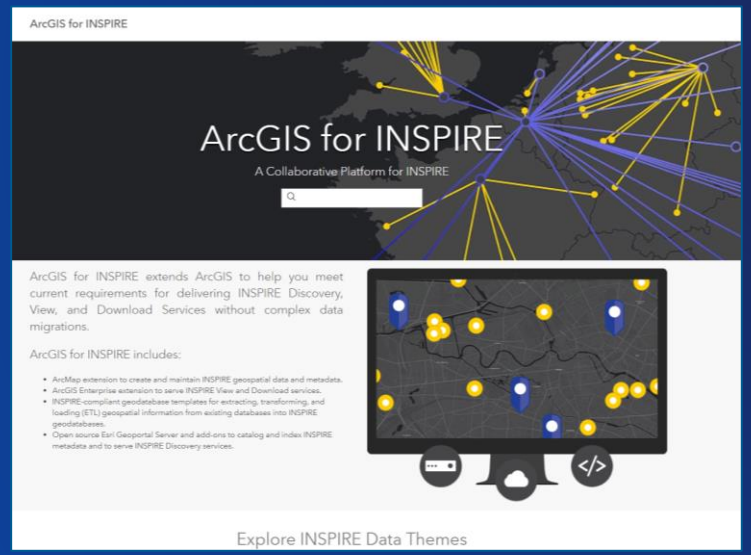
Metadata Enables Documentation and Discovery

Effectively and freely sharing your derivative work with any machine or person

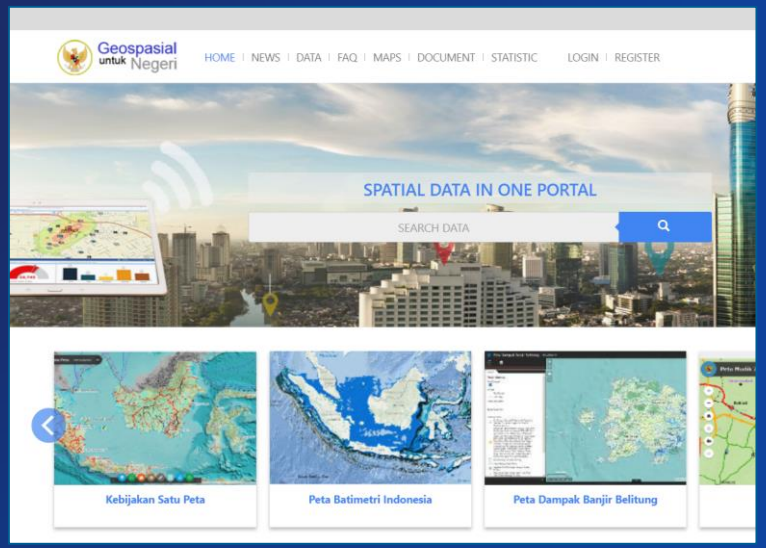


Esri Supports Building Open Data Catalogs

ArcGIS Hub

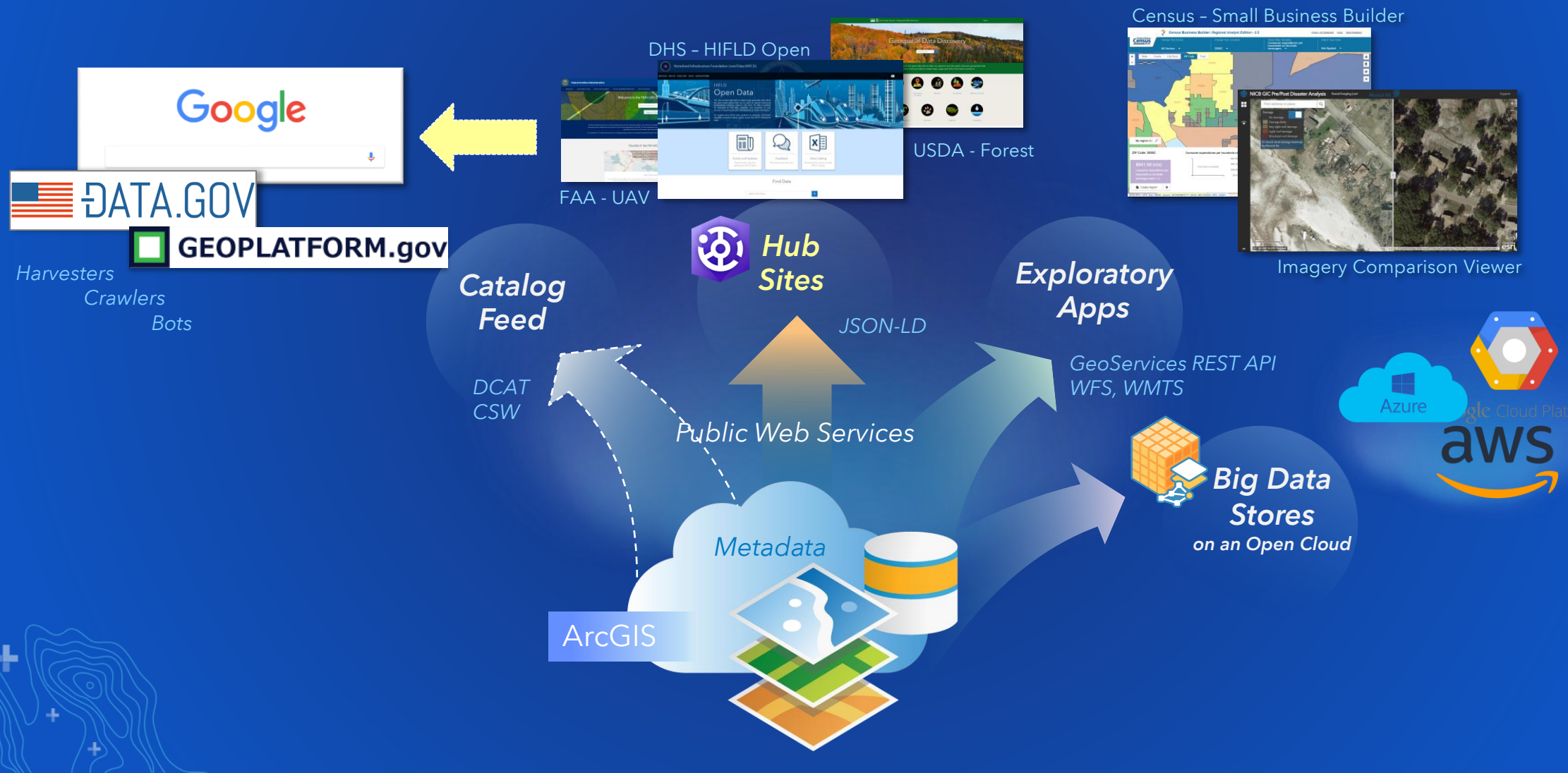


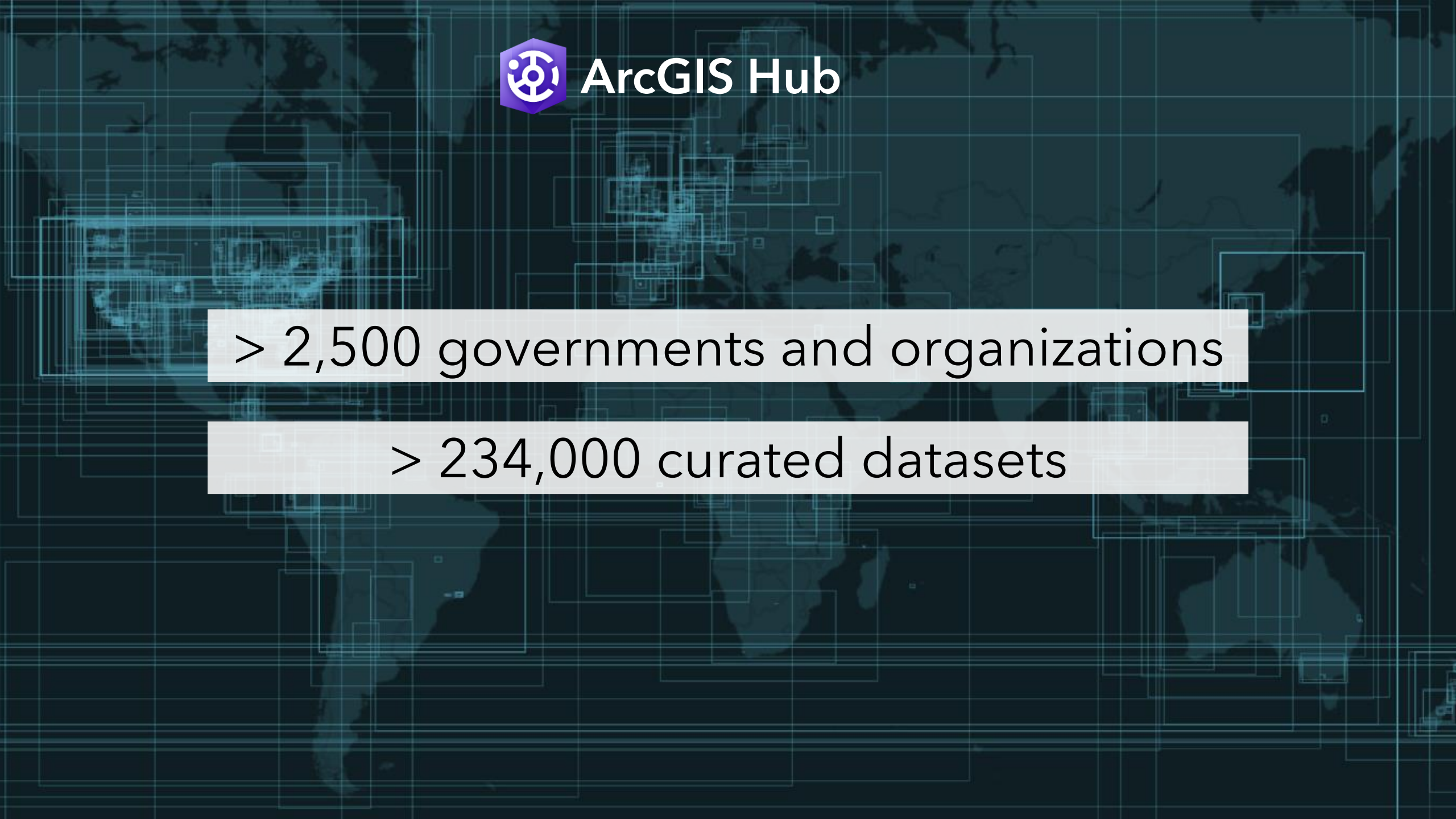
Geoportal Server
(Open Source)



Enabling Search, Discovery and Use

Powering Search




ArcGIS Hub
> 2,500 governments and organizations
> 234,000 curated datasets

Homeland Infrastructure Foundation-Level Data (HIFLD)

DHS.GOV DHS GII FGDC.GOV HIFLD GEOPLATFORM

HIFLD
Open Data

This site provides National foundation-level geospatial data within the open public domain that can be useful to support community preparedness, resiliency, research, and more. The data is available for download as CSV, KML, Shapefile, and accessible via web services to support application development and data visualization.

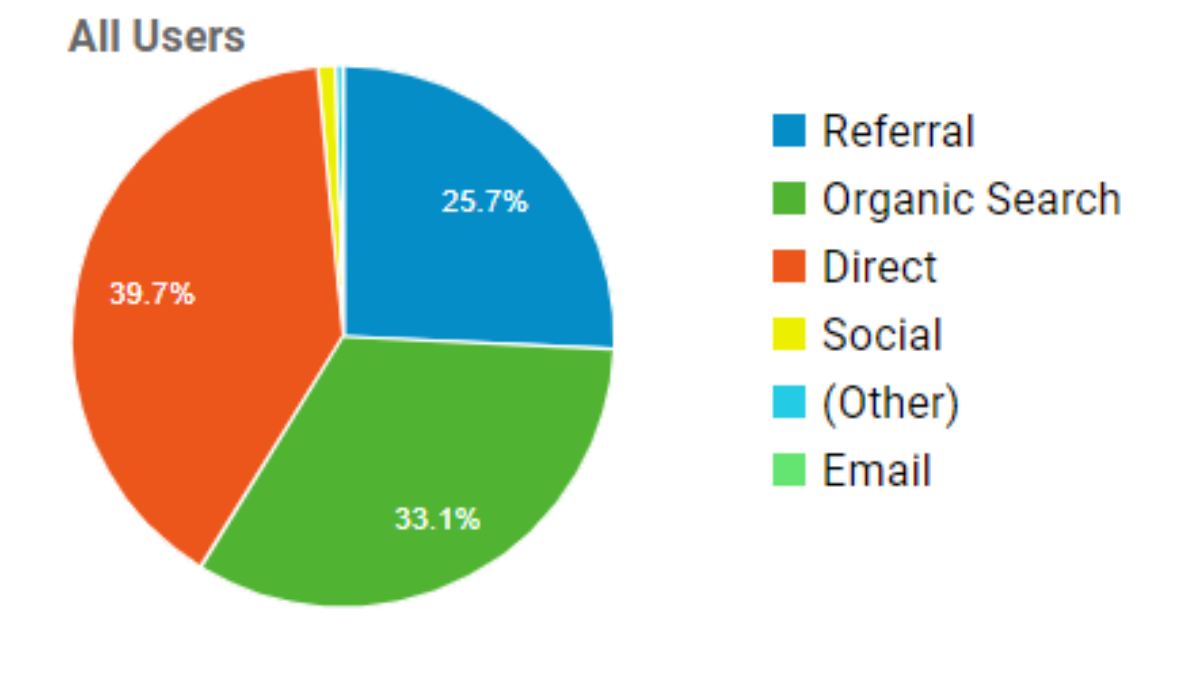
For updates about HIFLD data, guidance on metadata, and known shapefile conversion issues, please access the HIFLD notifications page located here.

Find Data

Search HIFLD Open

Explore All Data

How users find your data in your Hub Sites?



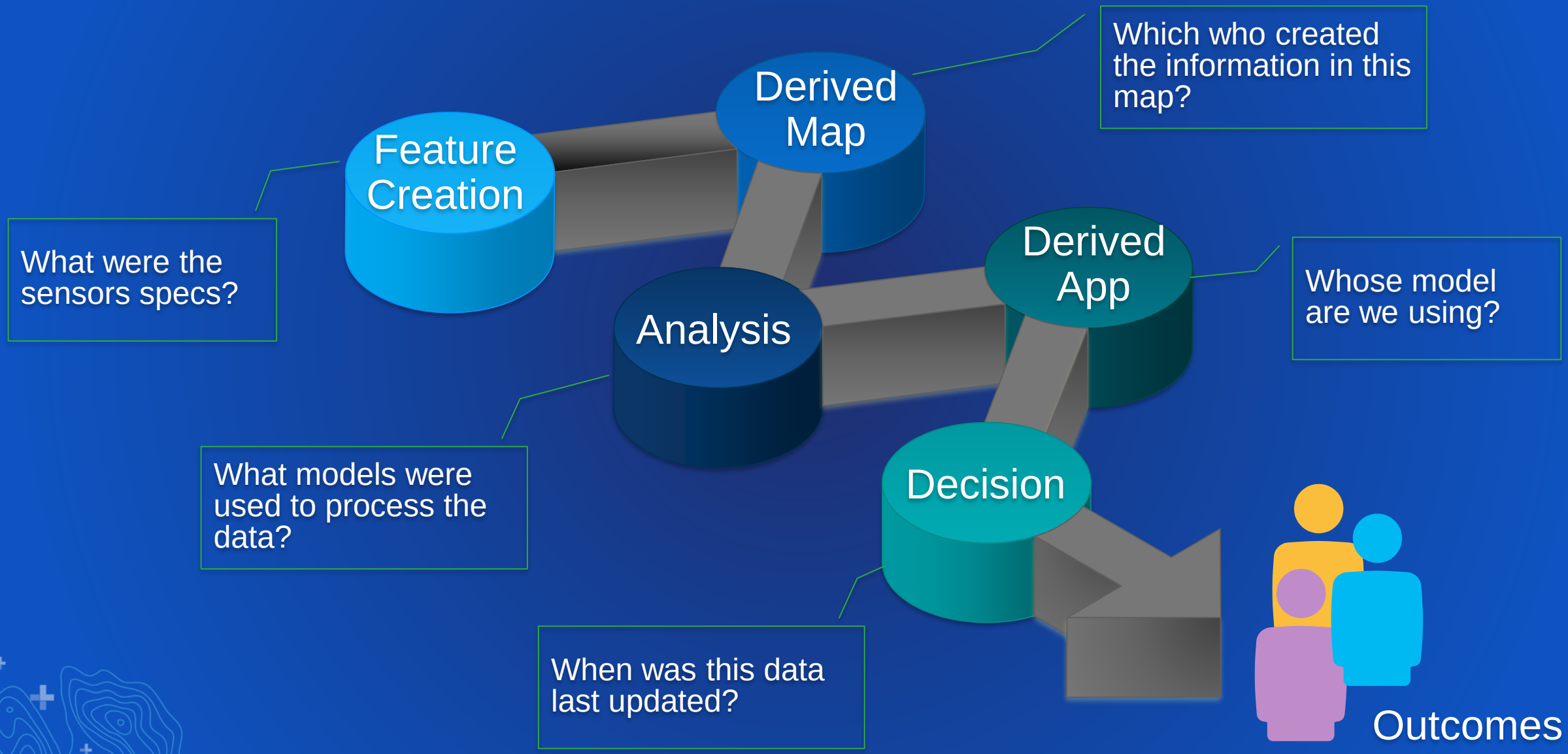
Source: Hub Google Analytics, Jan-Jun 2019

- **33% Search Google**
  - Click on a trustworthy looking source
  - 33% of search-based users land on the home page; the rest on an actual dataset!
- **25% Referrals from a trusted source**
  - From an already trusted .gov website

How Hub Sites Help SEO your Data

Links	More links	to your dataset pages
Architecture	Mobile Design	all new features go through mobile-specific designs, e.g. increasing text size within a search box.
	Enforce HTTPS	to automatically redirect any requests over HTTP to HTTPS
	A Sitemap	that shows web crawlers the way through your site
HTML	Dataset page html inserts	that web crawlers love to read <tags>
Content	Optimized Media Content	improved image and multimedia embed capabilities and improved accessibility

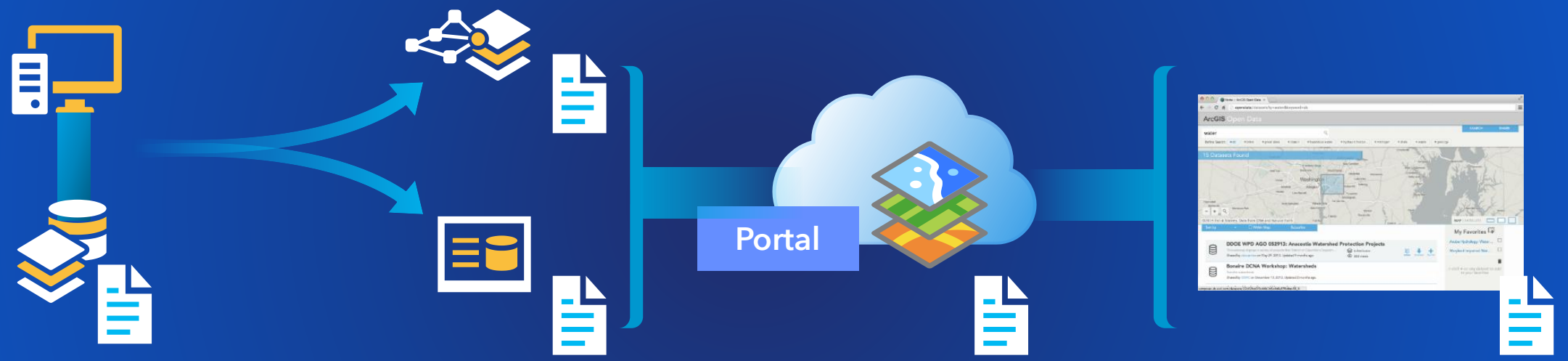
Metadata Matters at Each Step



Metadata Across ArcGIS

Marten Hogeweg

Metadata is the Fuel for Open Data Sharing



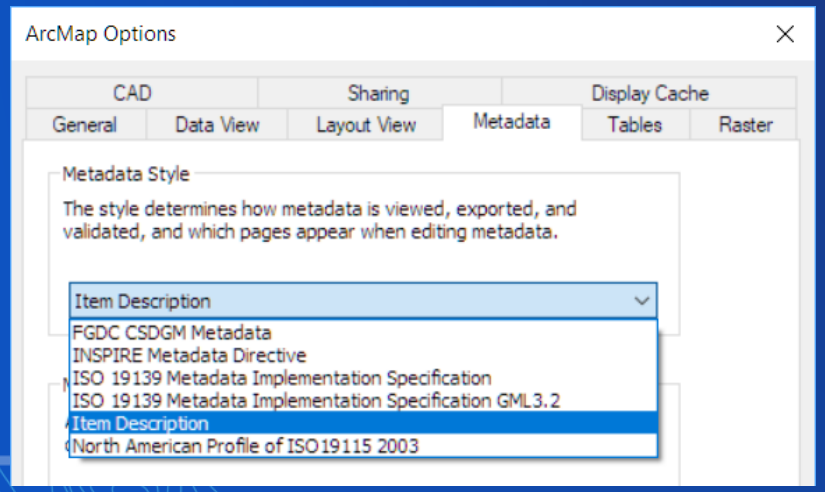
Metadata Fundamentals

- **Metadata documents geospatial content**
  - for search, discovery, evaluation, archiving
- **ArcGIS platform should facilitate these efforts**
- **Goal: improve the experience**

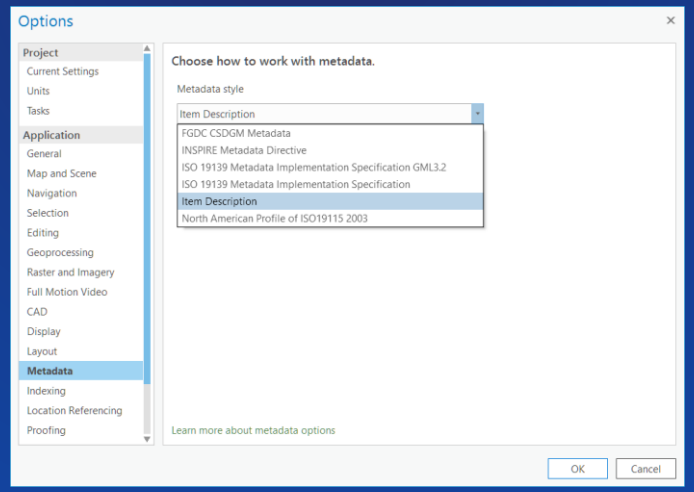
Metadata Lifecycle in ArcGIS

- All items have metadata
- Metadata in ArcGIS is stored in ArcGIS XML
- Metadata styles determine how you display, edit, validate, export metadata

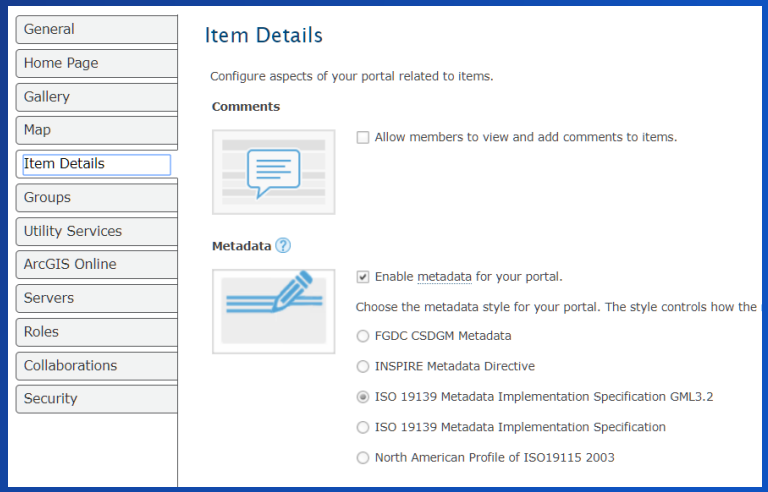
ArcMap



ArcGIS Pro



Portal for ArcGIS / ArcGIS Online



ArcGIS Platform

Metadata Styles

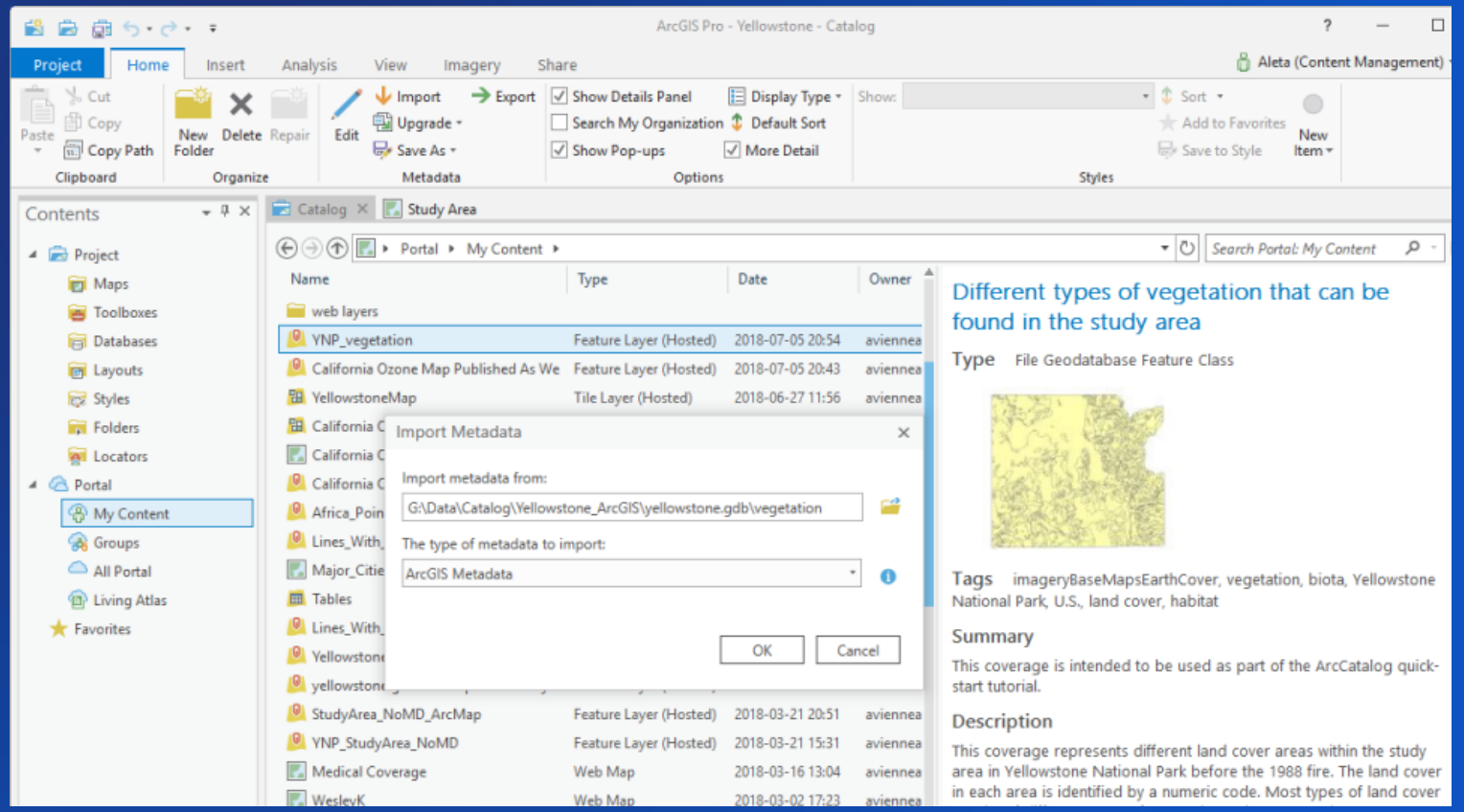
- FGDC CSDGM Metadata
  - Content Standard for Digital Geospatial Metadata (CSDGM)
- ISO 19139 Metadata Implementation Specification
  - ISO 19115:2003 / ISO 19139:2007
  - ISO 19119:2005 / OGC CSW 2008
  - ISO 19110:2005 / ISO 19110:2005 Amd.1 2011 Annex E
- North American Profile of ISO 19115:2003 (NAP)
- INSPIRE Metadata Directive

Metadata Support in ArcGIS for Desktop

	ArcMap 10.x	PRO 2.2	PRO 2.3	PRO 2.4	Portal/ Online	Hub
Metadata styles for geospatial metadata standards	✓	✓	✓	✓	✓	-
Display and edit full metadata	✓	✓	✓	✓	✓	-
Map layers have metadata	-	✓	✓	✓	✓	-
Import and export metadata	✓	✓	✓	✓	No[1]	No/Yes[2]
Manage metadata programmatically	✓	✓	✓	✓	✓	✓
Manage metadata with geoprocessing tools	✓	-	-	-	-	-
Publish map with full metadata	✓	✓	✓	✓	✓	N/A
Customize the metadata editor	✓	✓[5]	✓	✓	??? [3]	N/A
ISO 19115-1/-2/-3	-	-	-	-	??? [4]	???[4]

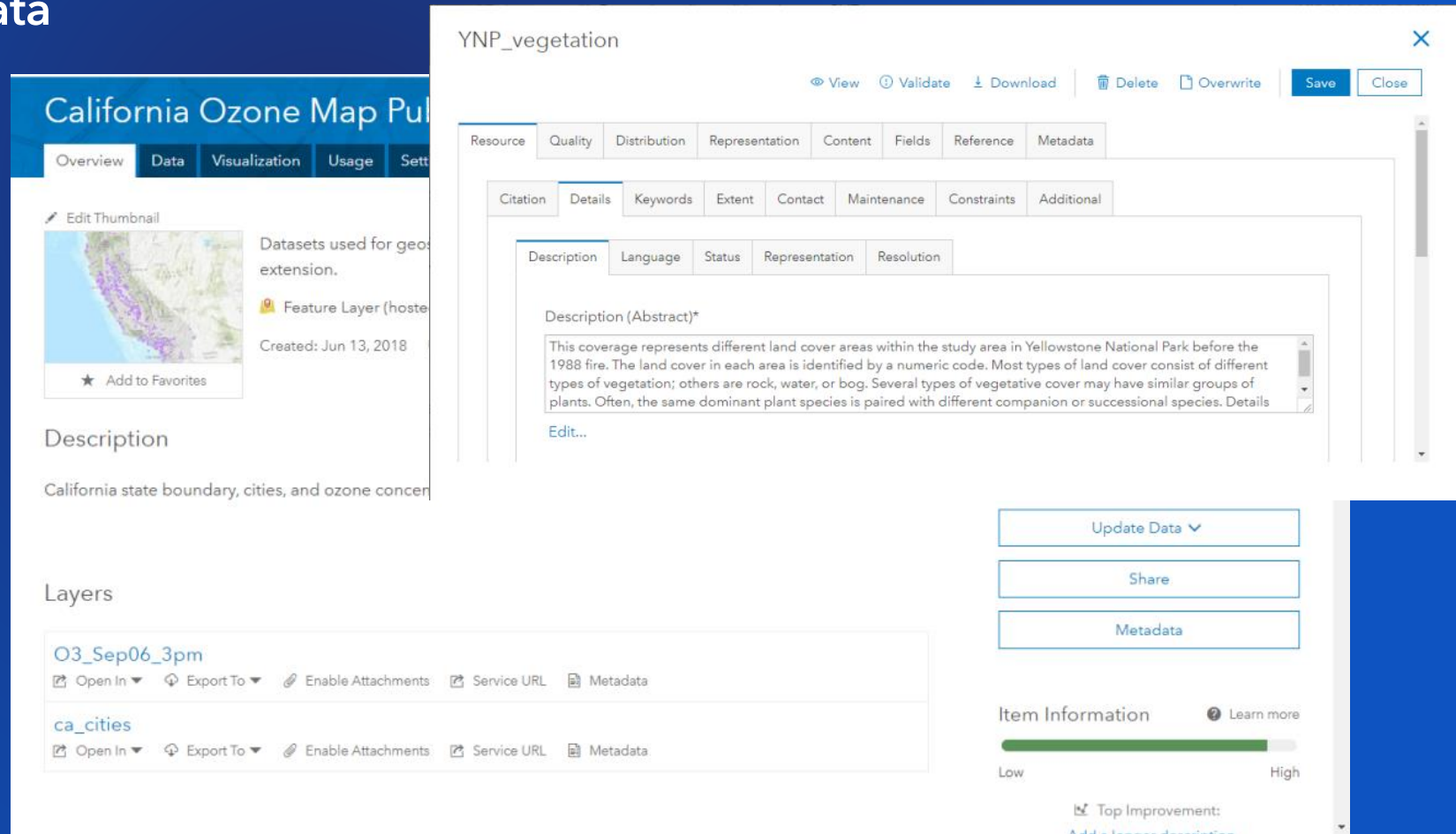
Metadata Support in ArcGIS Pro

- Metadata styles for geospatial metadata standards
- Display and edit full metadata
- Metadata for map layers
- Import and export metadata
- Save and filter content to files
- Copy ArcGIS metadata
- Upgrade CSDGM metadata
- Integration via Pro SDK



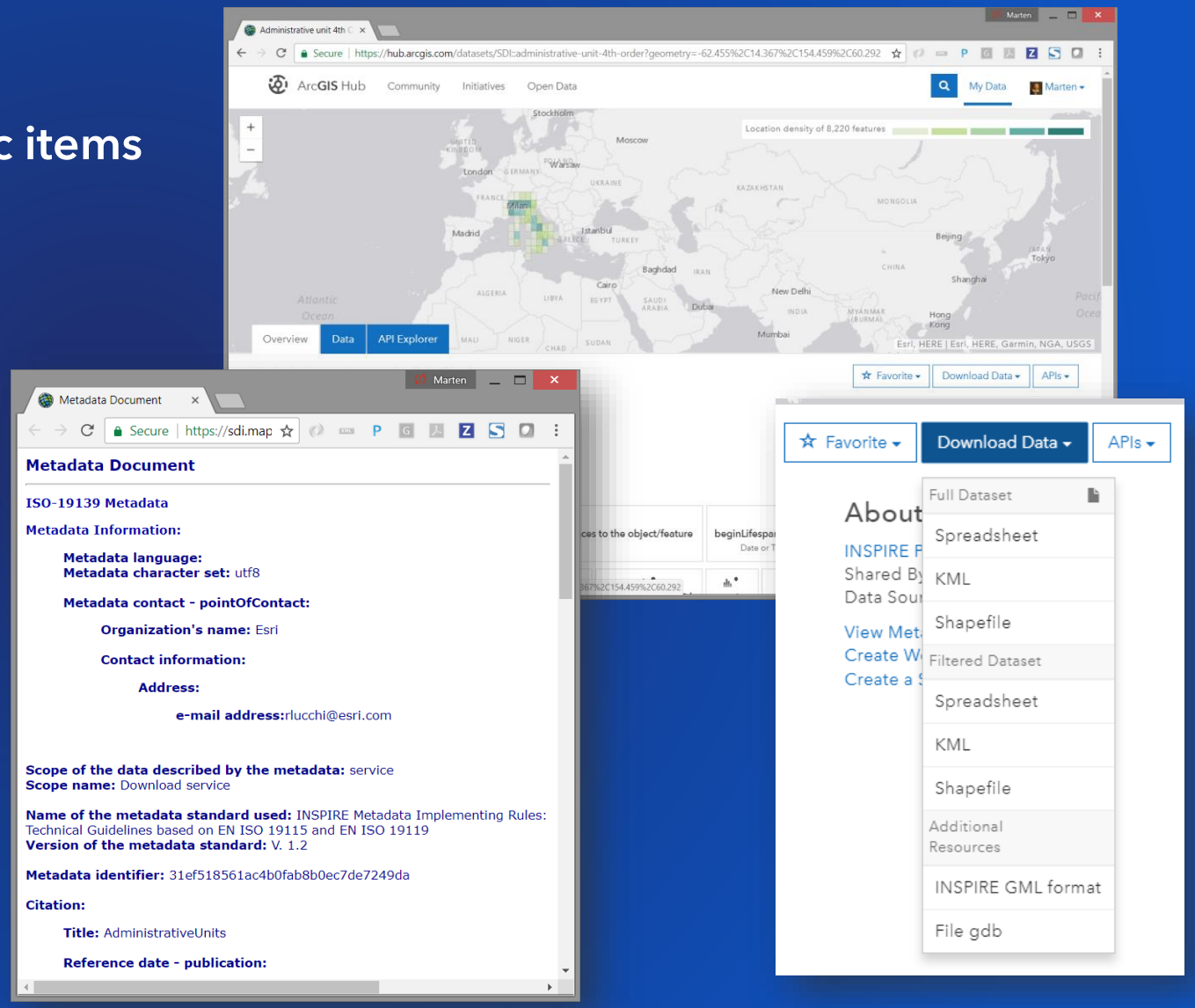
Metadata Support in ArcGIS Online and ArcGIS Enterprise

- Metadata styles for geospatial metadata standards
- Display and edit full metadata
- Scores quality of content
- Metadata for item layers
- Export metadata
- Copy ArcGIS metadata
- Save content to file



Metadata Support in ArcGIS for Open Data

- Leverage existing metadata for public items
- Display and edit full metadata
- Scores quality of metadata content
- Search metadata
- Export metadata
- Leverage metadata for additional access options



What's Next?

Aleta Vienneau

Flow of Metadata Publishing to ArcGIS Online

- Create metadata for data
- Add data to an ArcGIS Pro map
  - Layer reference's data's metadata
- Publish map to ArcGIS Online as a hosted feature layer
  - Data with metadata is copied
- Individual layers in the feature layer reference the copied data's metadata
- Update metadata locally, overwrite item to make updates available online

Flow of Metadata Publishing to ArcGIS Enterprise

- Create metadata for data in *registered enterprise geodatabase*
- Add data to an ArcGIS Pro map
  - Layer reference's data's metadata
- Publish map to *ArcGIS Enterprise as a feature layer*
  - Data with metadata is *referenced*
- Individual layers in the feature layer reference *the data's metadata*
- Update metadata *in the enterprise geodatabase, immediately available online*

Road Ahead – Near Term

- Support importing and exporting ISO 19115-1/-3 formatted metadata content
- Metadata equivalency between ArcMap and ArcGIS Pro
- Import standard metadata in ArcGIS Online and ArcGIS Enterprise
- Hold another Esri Metadata Summit?

Road Ahead – Mid Term

- Update the ArcGIS metadata editor to support ISO 19115-1/-3 content
- Metadata editor usability improvements
- Leverage organizational metadata settings
- Develop a plan for supporting ISO 19115-2 content

Road Ahead – Long Term

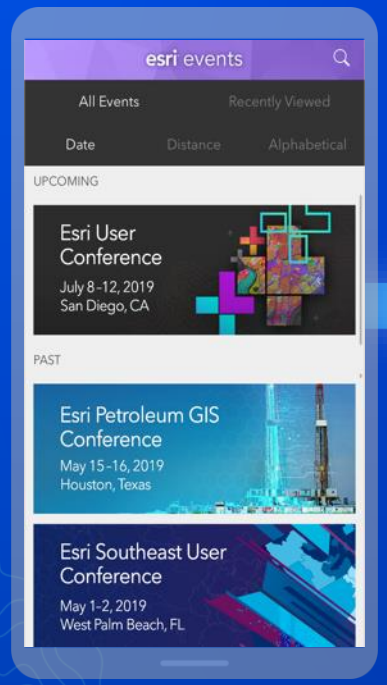
- **Common metadata editing experience for the ArcGIS platform**
- **Controlled vocabularies**

Metadata in the ArcGIS Platform

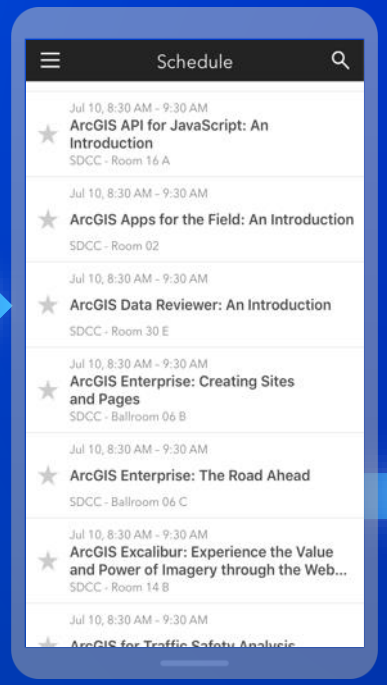
- Improve metadata support throughout the platform
- Create metadata that complies with standards
- Goals
  - Improve flow of metadata through the platform
  - Make it easier to produce high quality metadata content

Please Share Your Feedback in the App

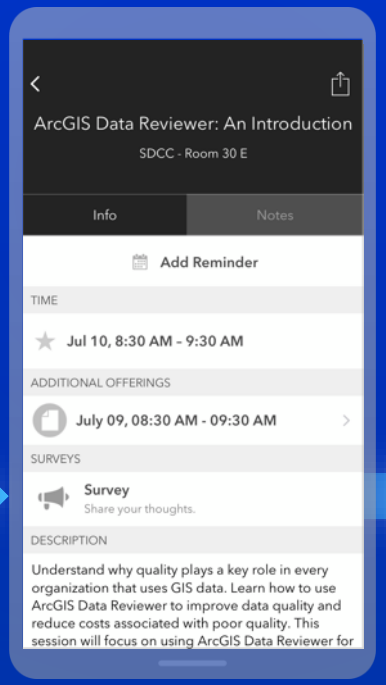
Download the Esri Events app and find your event



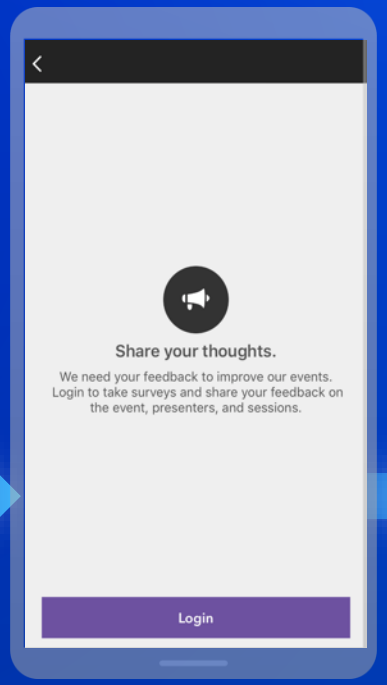
Select the session you attended



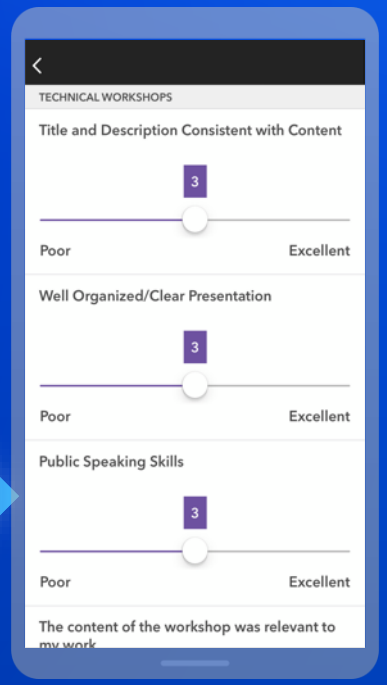
Scroll down to "Survey"



Log in to access the survey



Complete the survey and select "Submit"

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