

Eurogeographics and EuroSDR  
Geodata Discoverability Workshop 2024

# Why Do (Geo)Data Products Fail?



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# From discoverability to reuse

Meeting today and tomorrow's need ...*still falls short*

“...the current use of geospatial information under the SDI structure **often falls short** of the project’s original intention.”

Tim Trainor, 2023 ArcNews

consultant to the United Nations (UN) and former chief geospatial scientist for the US Census Bureau

<https://www.esri.com/about/newsroom/arcnews/getting-geospatial-data-to-meet-the-needs-of-today-and-tomorrow>

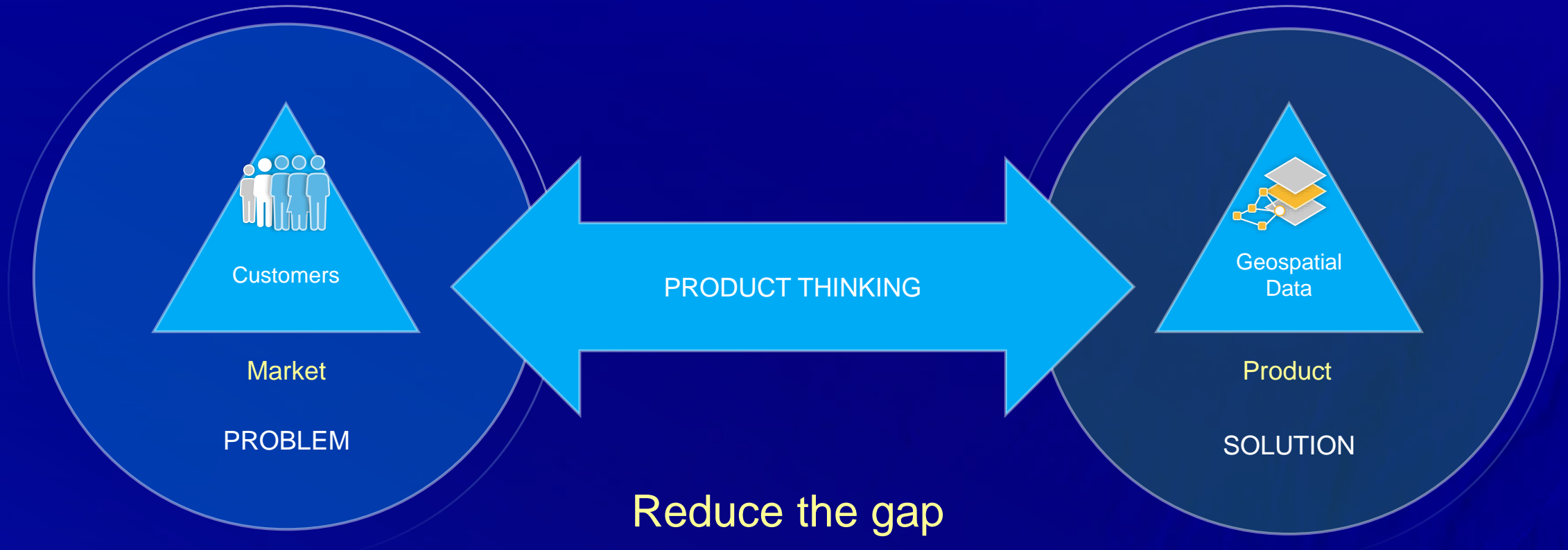
The background is a solid blue color with a faint, light blue grid pattern, resembling a map or a technical drawing. A prominent, glowing green ribbon-like shape curves across the right side of the image, starting from the top right and looping downwards. The ribbon has a gradient from light green to a darker green, giving it a three-dimensional, ethereal appearance. The overall aesthetic is clean, modern, and tech-oriented.

# Geospatial product thinking

Relentlessly focused on user-centric design

# What is Product Thinking?

The **journey** from the problem space of the users to the solution space of your business.



# Why is product thinking important?

*“the only thing that matters for a new startup is getting to a product-market fit” – Marc Andreessen*



Achieve a good  
**Product-Market fit**

*The goal of geospatial product thinking is to deliver  
geospatial products that address market needs*



# Who is the data customer? And what are their requirements?

Understanding the market

# Trend / Expanding customer base



Machines



Humans

- AI Assistants / ML
- Digital Twins / Smart Cities
- Sensors
- Systems / Data Spaces / Ecosystems
- Data Intermediaries / Open Data / SDIs
- Developers
- GIS Analysts
- Professionals (e.g., AEC)
- Cartographers
- Decision-Makers
- Engaged Public



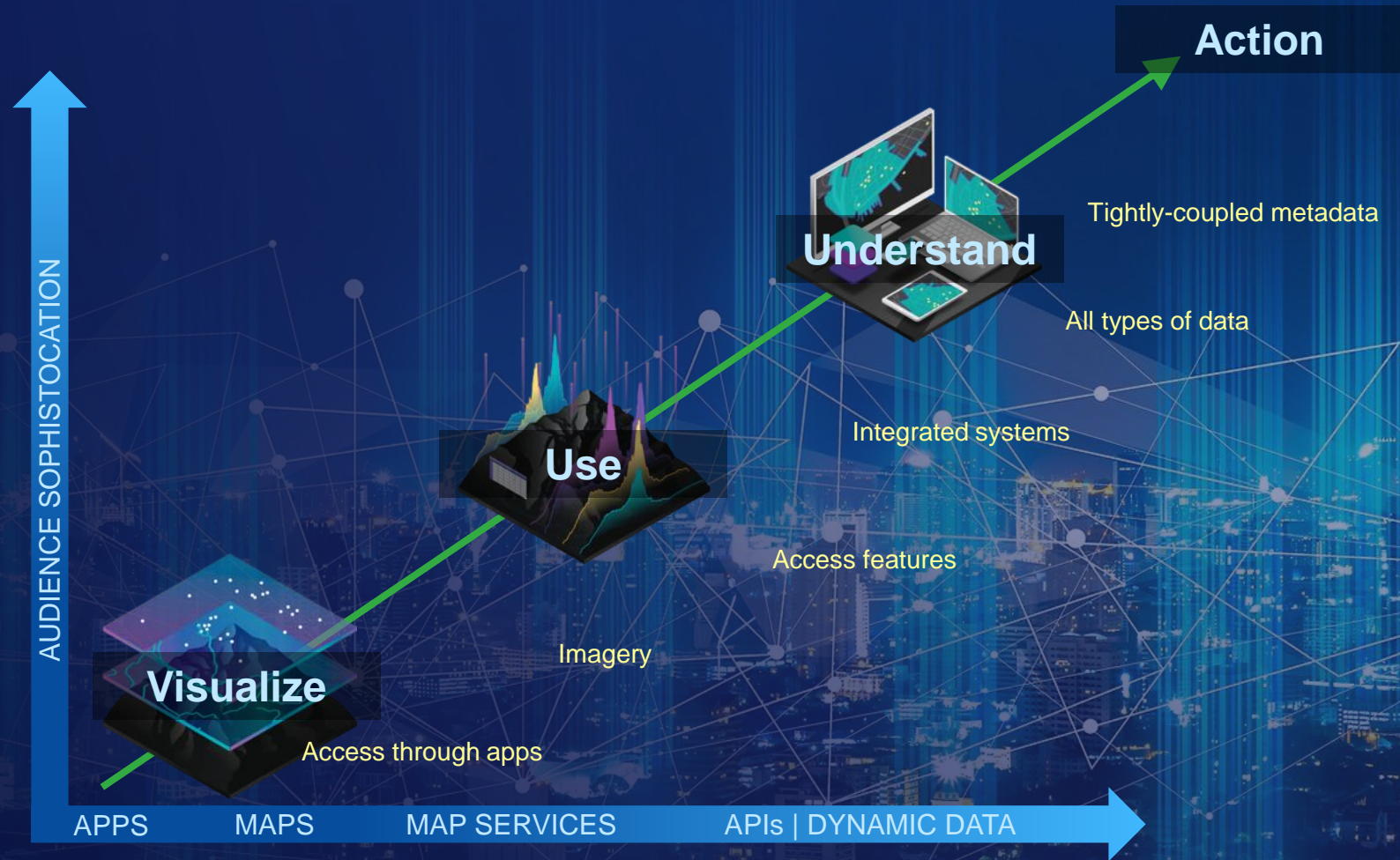
# Trend | Expanding requirements



Machines



Humans



# How do you treat data as a product?

Two simple techniques of user-centric design

## Capture requirements

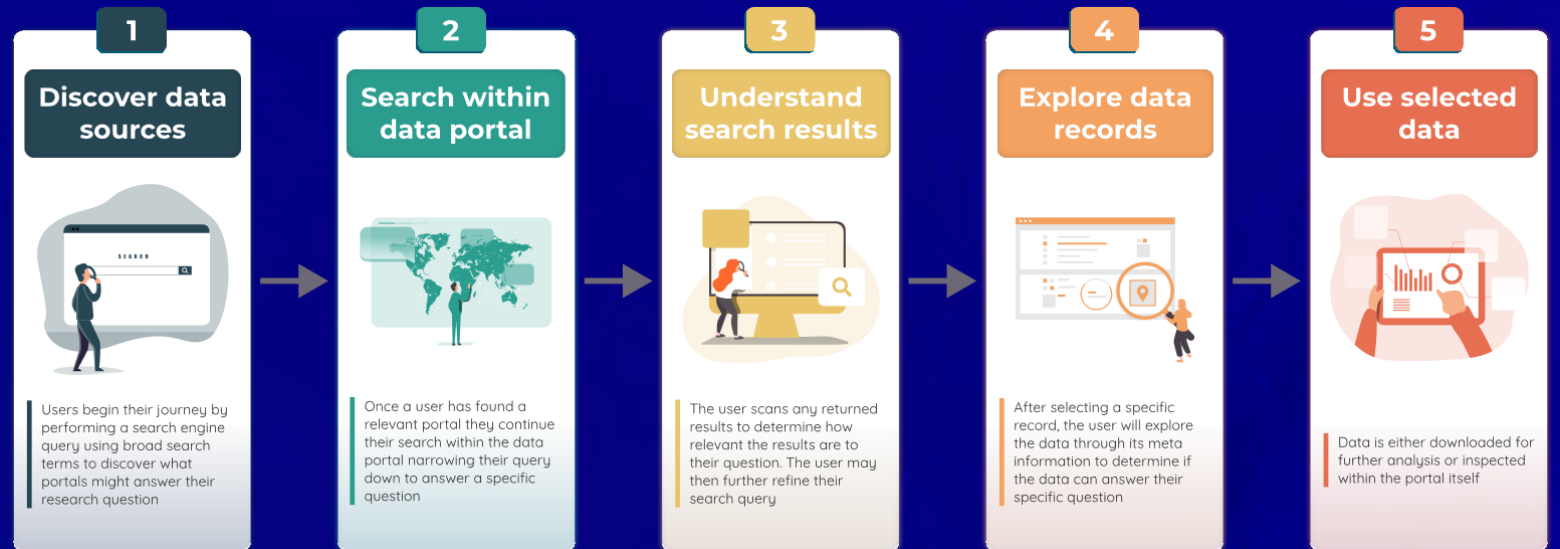


**AS AN:** AEC Professional

**I NEED TO:** Find current mobility data for my study area and it to my CAD drawing.

**SO I CAN:** Provide context for our work.

## User journey



UK Geospatial Commission, 2020. Data Discoverability Project  
<https://www.gov.uk/government/publications/finding-geospatial-data/finding-geospatial-data>

# Data as a product.

Getting a good product-market fit



# Ready-to-use data

For discovery and reuse

- **Easy to use**, self-describing, interoperable, and licensed for reuse.
- **Easy to find**, search engine optimized, and discoverable in a self-service global ecosystem.
- **Easy to understand**, symbolized, and configured for quick visualization.
- **Relevant**, analysis-ready data, enabling access to quality features with well-documented attributes and key fields for joining with other data.
- **Reliable**, persistent, and optimized for scalability and performance.
- **Accessible** in various forms that serve broad audience requirements, including humans and machines, via APIs, downloads, and user-friendly applications for non-technical users to explore.

# Implementation Resources

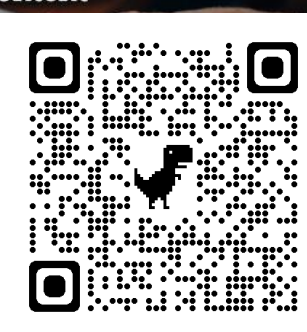
## Best Practice Guides

Best Practices for Authoritative Data Providers

# Best Practices for Authoritative Data Providers

Maximize the deliciousness of your shared geospatial content

15 November 2023



esri Products Industries Support & Services Stories About

Documentation Topics Tutorials

## Essential Guides for 'OneMap' Administrators

Good practices and implementation resources for implementing integrated geospatial infrastructure/modern SDI with ArcGIS.

- Connecting Communities with ArcGIS**  
Integrated Geospatial Infrastructure Patterns in Practice  
45 min  
Story
- Configure ArcGIS Online: 'OneMap' Good Practices**  
Special Considerations for Organization Administrators  
1 hr  
Story
- Configure ArcGIS Hub: 'OneMap' Good Practices**  
Special Considerations for Organization Administrators  
45 min  
Story
- Good Practices for Authoritative Data Providers**  
Maximize the deliciousness of your shared geospatial content  
45 min  
Story
- Share & Collaborate: 'OneMap' Good Practices**  
Special Considerations for Organization Administrators  
45 min  
Story
- 'OneMap' Hub Template: How-To Guide**  
Your Guide to taking action with this initiative

# Continuous improvement

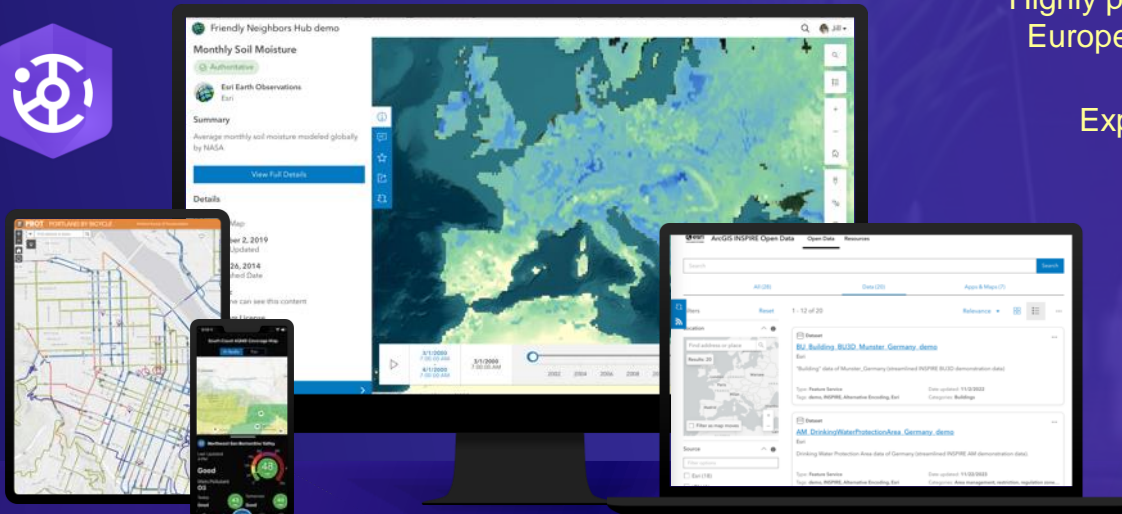
User-centric design to address the whole user experience

# Maximizing discoverability and reuse

## Supporting success with the Open Data

- Sharing, collaboration, and engagement system
- Providing dynamic data and downloadable data
- Applying open standards and best practices for the web

ArcGIS  
Hub



Dynamic data and APIs

Highly performant and scalable data –  
European region hosting

Explore, filter, and download multiple formats

FAIR+ quality, ready-to-use data layers

Metadata – ISO, INSPIRE ...

Federate open data catalog standards

Search Engine Optimization (SEO)

*“How we access, process, and reuse data significantly influences technological development **and improves our daily lives**. The Open Data Directive empowers European users to find solutions and enact data-driven policy to address challenges, from local to global.”*

Jack Dangermond, Esri founder and president



# Supporting HVDs

From INSPIRE to the Green Deal Data Space

- **Sharing Open Data**

- API Access
- Downloadable data

- **High-Value Datasets (HVD)**

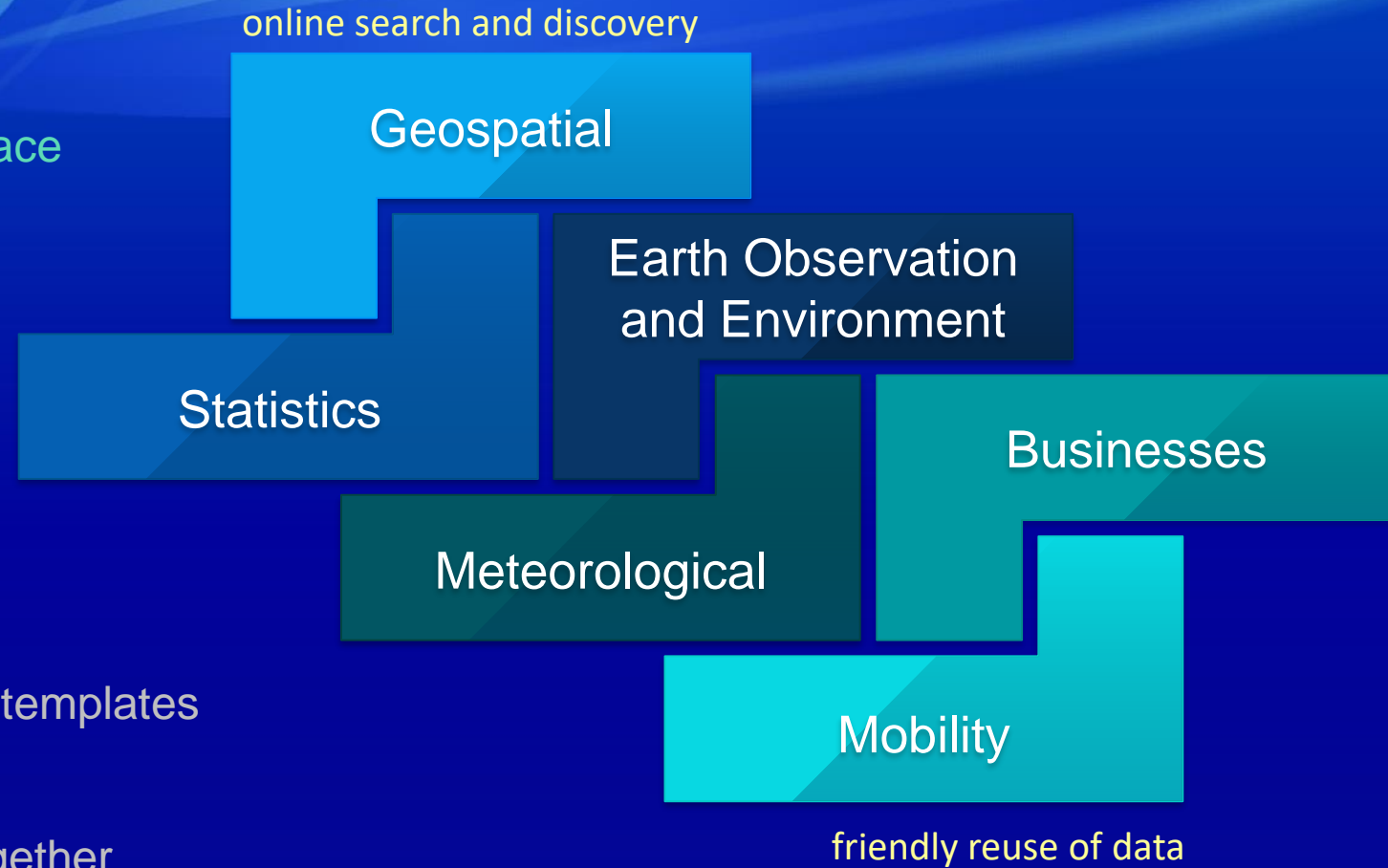
- INSPIRE streamlined and default data templates

- **INSPIRE Metadata**

- Closely coupled data and metadata together

- **Federate with open data registries**

- DCAT-AP catalogue feeds
- Automatic transformation of INSPIRE Metadata



# Making it easier to create high-quality Metadata

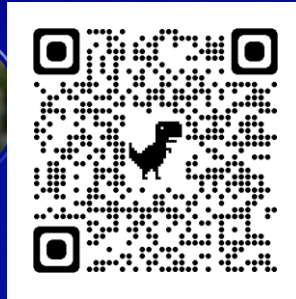
Supporting next-generation search and discovery

- Unified experience across ArcGIS
- Editing **Essential metadata** for required and suggested elements
- Editing **All metadata** for robust documentation
- Low-touch experience
- Enhanced workflows
- Search elements and values

The screenshot displays the 'Metadata Editor' window with a dark blue header. The main content area is titled 'Essential metadata' and includes a progress indicator showing 'Low' completion. Below this, there are sections for 'Errors: 3', 'Profile requirements', and 'Recommended info'. The 'Profile requirements' section lists three items: 'Title is required', 'Description (Abstract) is required', and 'Use Limitation is required', each with a warning icon. The 'Recommended info' section shows 'Completed: 0' and 'Remaining: 2'. The main editing area is titled 'Item Description' and contains three text input fields: 'Title\*', 'Summary (Purpose)\*', and 'Description (Abstract)\*'. The 'Title\*' field is currently empty and has a red border. The 'Description (Abstract)\*' field has a rich text editor toolbar with options for bold, italic, underline, and list creation. The 'Tags\*' field is also visible at the bottom.

ArcGIS unified metadata editor

# Thank you!



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Esri Community

**Metadata, Catalogs and Search**

<https://community.esri.com/t5/metadata-catalogs-and-search/ct-p/metadata-catalogs-and-search>



Esri Community

**Spatial Data Infrastructure**

<https://community.esri.com/t5/spatial-data-infrastructure/ct-p/spatial-data-infrastructure>



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