

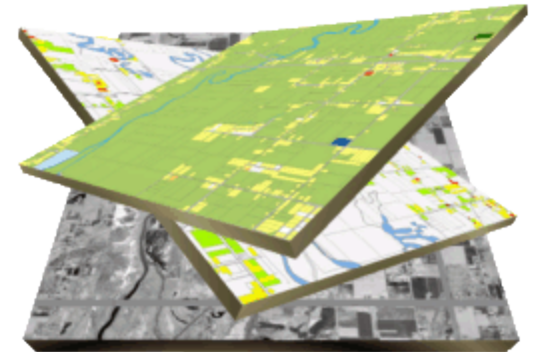


Managers Overview of Metadata: A Corporate Resource

DC Metro Metadata Dissemination Seminars
Westat

What is Geospatial Metadata?

Data about Data



Why Bother with Metadata?

- **Metadata helps people who use geospatial data find the data they need and determine how best to use it**



Why Bother with Metadata?

- **Metadata supports producers in locating and using their own data resources**



Why Bother with Metadata?

- **Metadata supports data consumers in locating and using data resources produced by others**



What Goes into Metadata

- **Who created the data?**
- **What is the content of the data?**
- **When was the data created?**

What Goes into Metadata

- **Where is the data geographically?**
- **How was the data developed?**
- **Why was the data developed?**

Who Should Create Metadata?

- **All levels of government**
- **The private and non-profit sectors**
- **Academia**



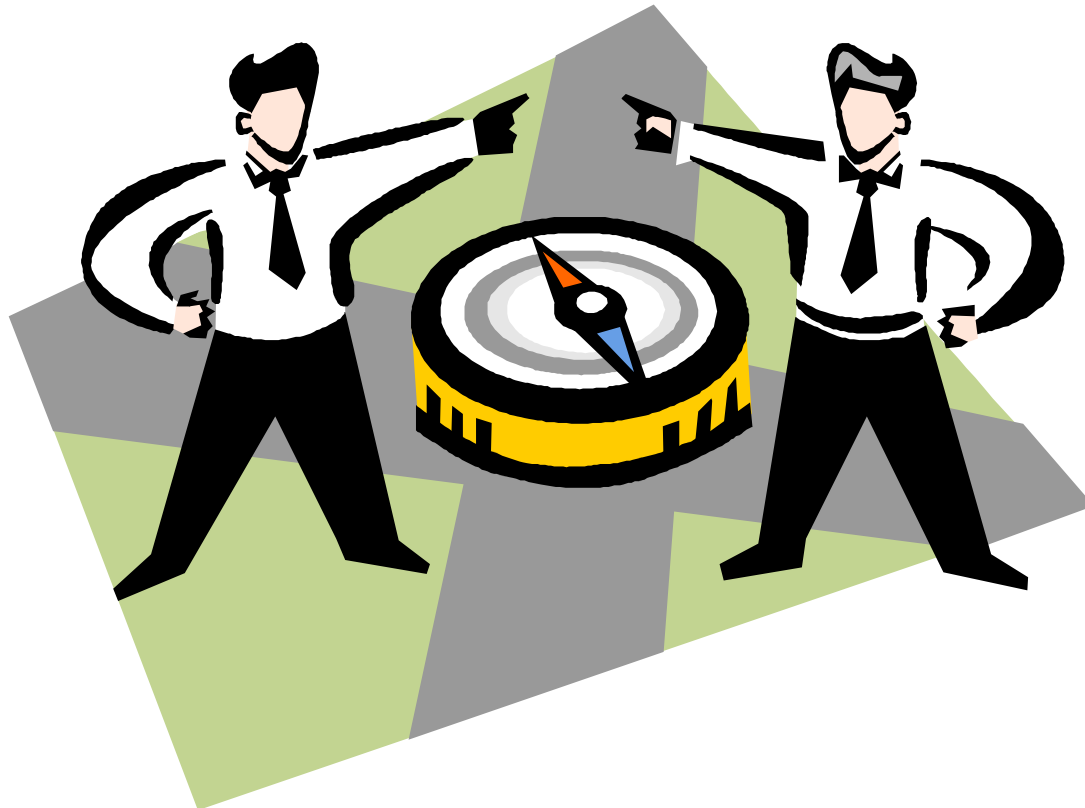
Who is Using Metadata?

- **Dept. of Agriculture**
- **Dept. of Commerce**
- **Dept. of Defense**
- **Dept. of Energy**
- **Dept. of Health and Human Resources**
- **Dept. of Housing and Urban Development**
- **Dept. of Interior**
- **Dept. of Justice**
- **Dept. of State**
- **Dept. of Transportation**
- **Environmental Protection Agency**
- **Homeland Security**
- **General Services Agency**
- **Library of Congress**
- **National Archives and Rerecords Administration**
- **National Aeronautic and Space Administration**
- **Office of Management and Budget**
- **Tennessee Valley Authority**

Metadata Supports

**Data
Management**

**Project
Management**



DATA MANAGEMENT

Data Management Requirements

- **Metadata is used to preserve the data history so that it can be re-used or adapted**

Data Management Requirements

- **Metadata assesses the age and character of data holdings to determine which data should be maintained, updated, or deleted**

Data Management Requirements

- **Metadata instills data accountability by requiring you to state what you know about the data**

Data Management Requirements

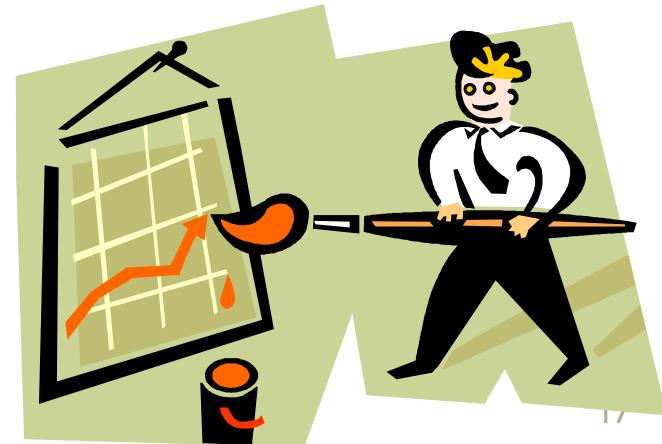
- **Metadata limits data liability by explicitly designating the effective and administrative limits of use of the data**

Data Management via Metadata



Data Management: Maintenance

- **Are the data valid?**
 - **Prior to most current source data?**
 - **Proper or most current methodology?**

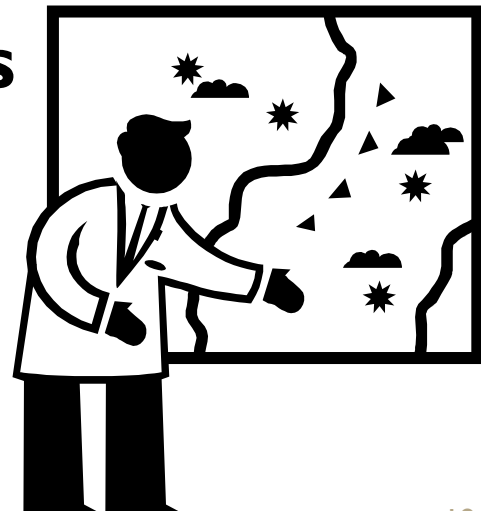


Data Management: Maintenance

- **Data Maintenance**
 - **Are the data current?**
 - **Older than 10 years?**
 - **Data Update Process**
 - **Becomes standard operating procedure**

Data Management: Maintenance

- **Are the data current?**
 - **Administrative events**
 - Redistricting or annexations
 - **Geophysical events**
 - Earthquakes and storms



Data Management: Update

- **Data Update**
 - **Contact information**
 - **Distribution policies**
 - **Distribution availability**
 - **Distribution pricing**
 - **Distribution of URLs**
 - **New derivations of the dataset**

Data Management:

Data Discovery and Reuse

- **Themes**
- **Attributes**
- **Geographic location**
- **Temporal character**
- **Analytical methods used**
- **Sources & contributions**
- **Data quality**

Data Management:

Data Accountability

- **Metadata is an exercise in data accountability**
 - **It requires you to assess:**
 - **What you know about the dataset**
 - **What you don't know about the dataset**
 - **What you should know about the dataset**

Data Management: Data Accountability

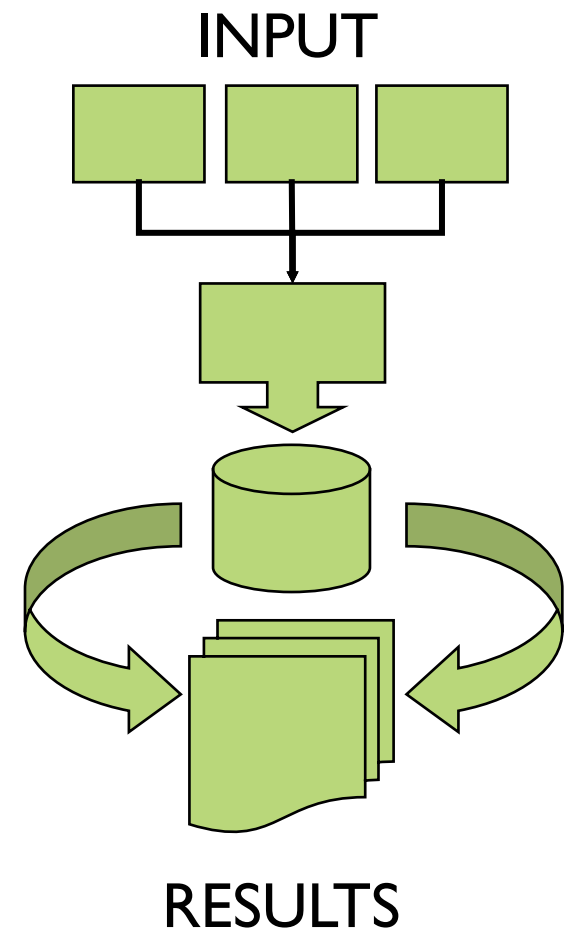
**Are you willing to associate
yourself with the metadata
records?**



Data Management: Data Accountability

Repeatable Process

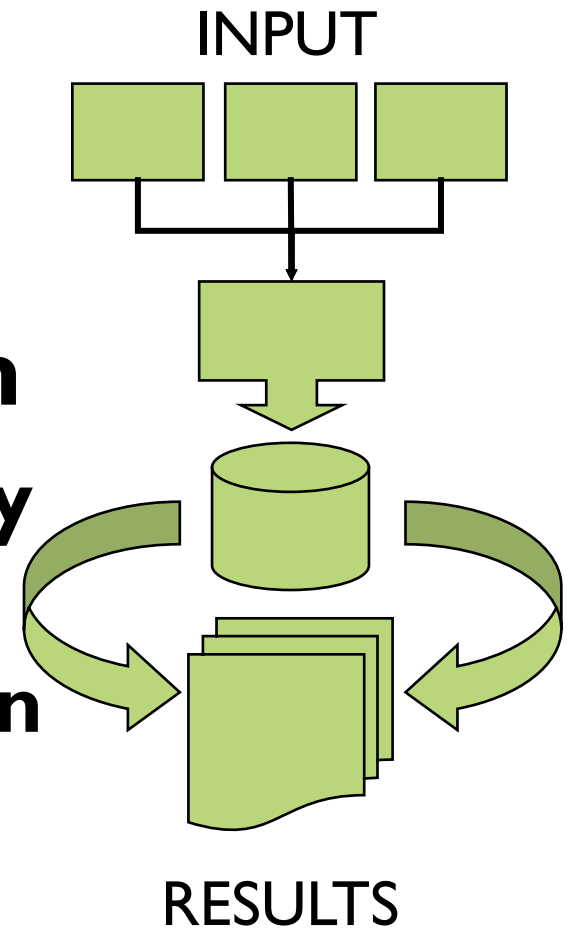
- **Methods**
- **Variables**
- **Analytical parameters**



Data Management: Data Accountability

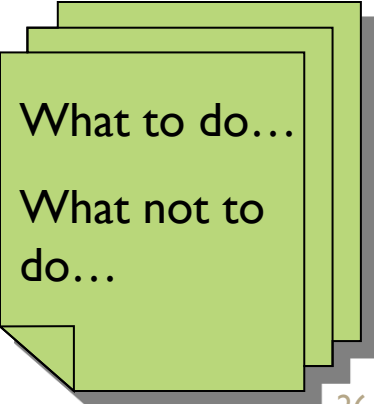
Defensible Process

- **Decision-making**
- **Public Participation**
 - **Increasingly GIS-savvy public requires consumer information**



Data Management: Data Liability

- **Metadata is a declaration of:**
 - **Purpose**
 - **Use constraints**
 - **Completeness**
 - **Distribution liability**



What to do...
What not to
do...

Data Management:

Data Discovery and Re-use

If you create metadata, other people can discover your data.

If you create metadata, you can find your OWN data.

PROJECT MANAGEMENT

Project Management Requirements

- **Plan and document the data types and content needed to support the project**

Project Management Requirements

- **Monitor data development by regular review of the process steps completed and recorded within the metadata**

Project Management Requirements

- **Provide all project participants a common language of attributes and process methods and a place to record and share their progress**

Project Management Requirements

- **Access the lineage and content of outsourced data production by requiring robust metadata as a contract deliverable**

Project Management via Metadata



Project Management: Project Planning

- **Project Design document**
 - **Descriptions and intent**
 - **Geographic and temporal extent**
 - **Attributes requirements**

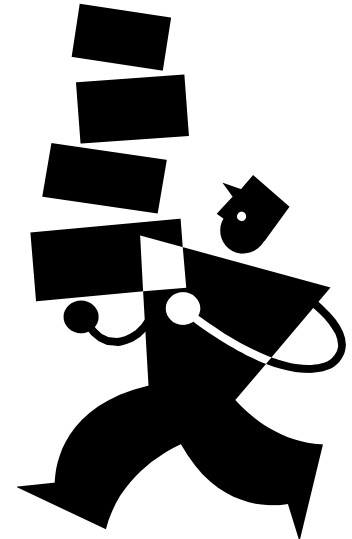
Project Management:

Project Planning

- **Project design document benefits**
 - **Expectations are clearly outlined**
 - **Metadata is integrated into the process**
 - **Gaps in requirements are identified**
 - **Provide medium to record progress**

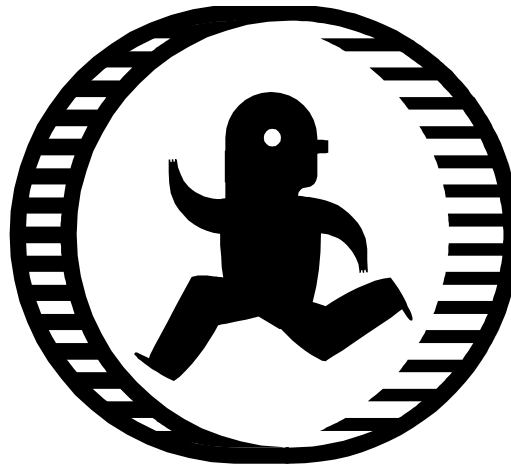
Project Management: Project Monitoring

- **Project Monitor**
 - **Data development status**
 - **QA/QC assessments**
 - **Needed changes**



Project Management: Project Monitoring

**Metadata must be actively
maintained and reviewed**



Project Management: Project Coordination

- **Metadata standardizes:**
 - **Descriptors and parameters**
 - **Keywords, vocabularies, thesauri**
 - **Contact information**
 - **Attributes**
 - **Distribution information**

Project Management: Project Monitoring

- **Conducting ongoing reviews of metadata leads to more opportunities for coordination**
 - **Source data**
 - **Analytical methods**
 - **New information**

Project Management: Contract Deliverables

- **Metadata should be a part of any dataset deliverable**
- **Provide clear guidance and preferably a sample record**

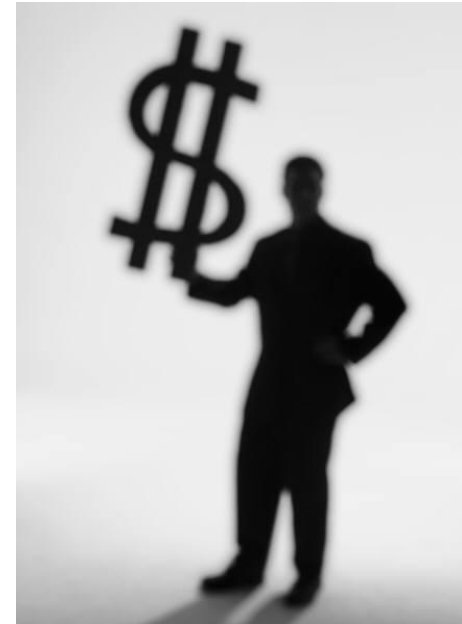
Project Management: Contract Deliverables

- **Quality datasets have in-depth:**
 - **Classification and validation**
 - **Metadata content template**
 - **Metadata specification**

RETURN ON INVESTMENT (ROI)

Return on Investment

- **Reduce duplication**
- **Quantify value**
- **Identify partners**



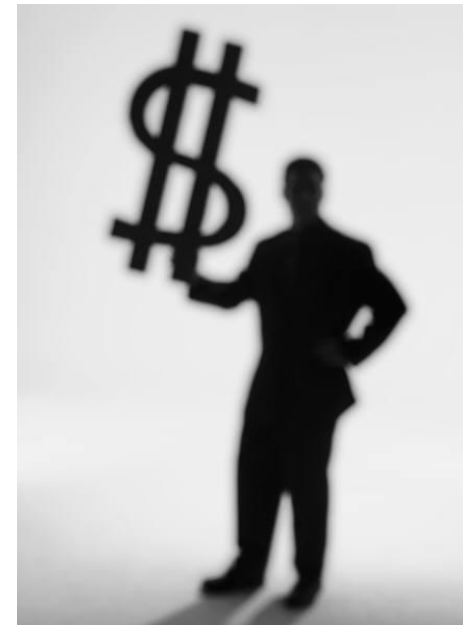
Return on Investment

- **Conduct a catalog assessment**
 - **In-house**
 - **Number of times data occurs as a source**
 - **External**
 - **Number of times data occurs as a source**



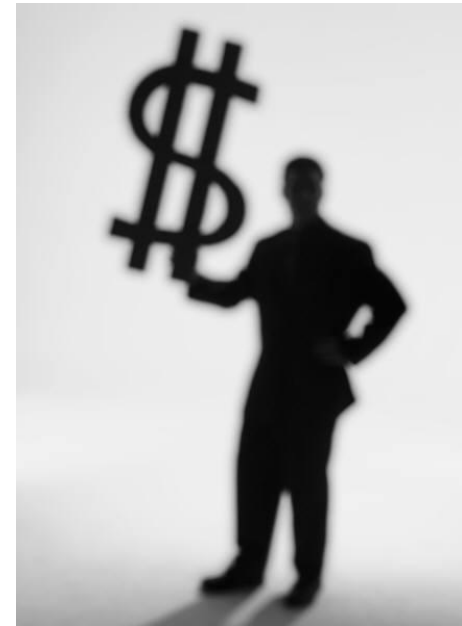
Return on Investment

- **Conduct a catalog assessment**
 - **Check the quality of the source and their creation methods**
 - **Focus resources on**
 - **High value**
 - **Oldest data**
 - **Least accurate data**



Return on Investment

- **Facility assessment**
 - **Use the preferred dataset citation**
 - **Understand the Use Constraint Statement**



Be Willing to Invest in Metadata

**Metadata are
fundamental data
elements**

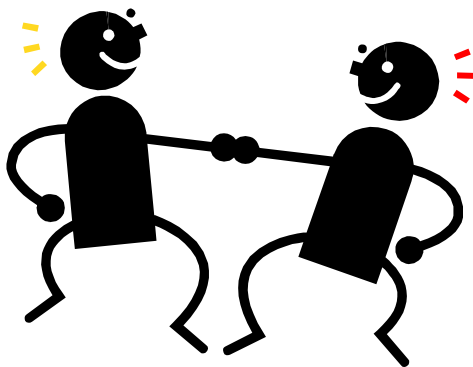


Be Willing to Invest in Metadata

- **Metadata are a means of:**
 - **Inventory**
 - **Tracking progress**
 - **Communicating**
 - **Locating, assessing, and accessing data resources**

Conclusion

**Robust metadata improves
data quality and management.
It is in your OWN best
interest and will be most
valuable to you!**



References

FGDC:

www.fgdc.gov/metadata

Discussion

**Questions
Or
Comments**



Thank You!

U.S. Geologic Survey

**CAP I Grant for
funding this training**