

Why Use Metadata?

Goals of the Class

- **Why use metadata?**
- **Explain geospatial data distribution**
- **Explain the geospatial data management role of metadata**
- **Explain the geospatial project role of metadata**

Why use Metadata?

**Metadata
is valuable**

Why use Metadata?

- **To help you organize and maintain your organization's internal investment in spatial data**

Why use Metadata?

- **To provide information about your organization's data holdings, data catalogues, clearinghouses, and brokerages**

Why use Metadata?

- **To provide information to process and interpret data received from an external source**

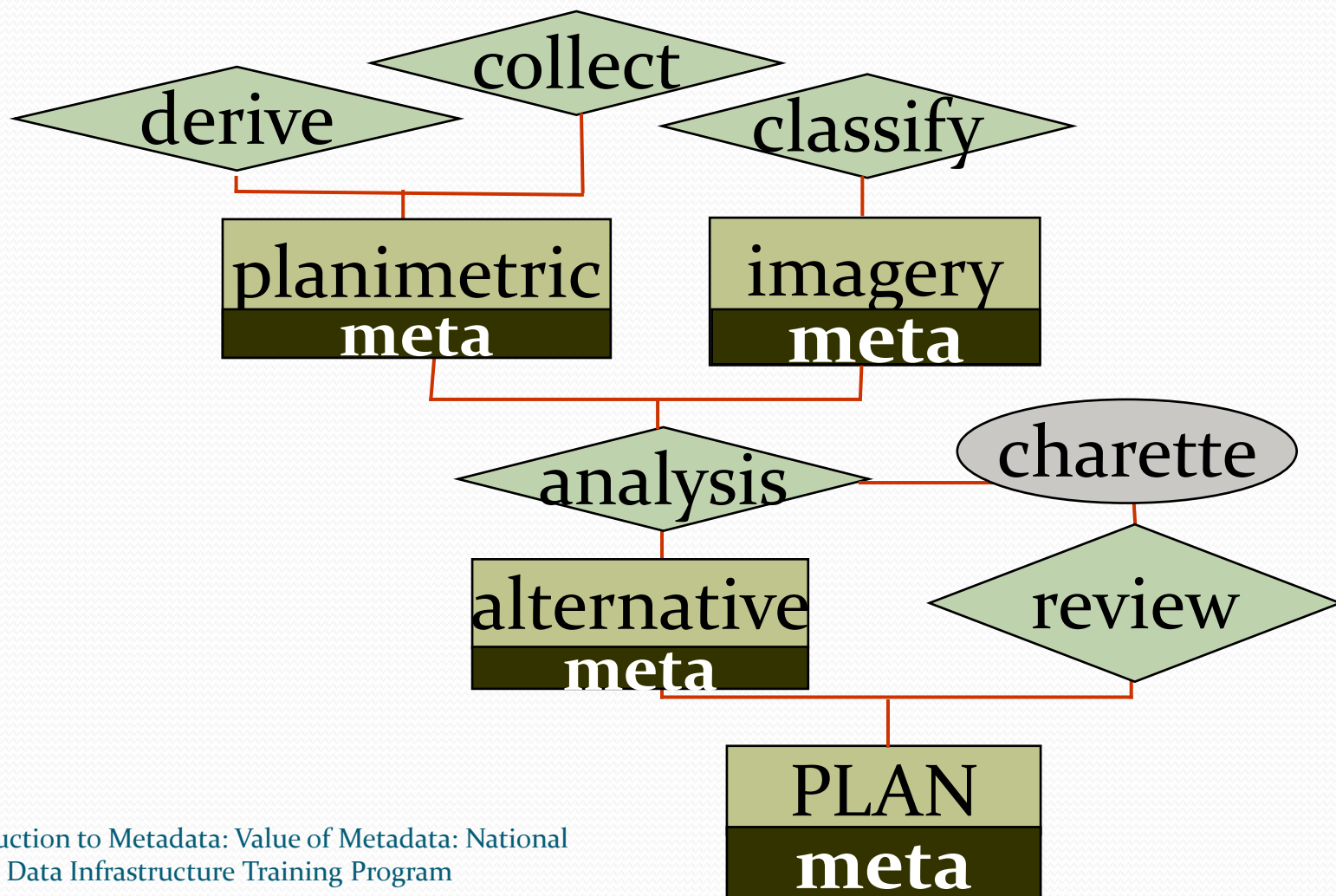
Why use Metadata?

- **To provide information to process and interpret data within your organization**

Utility of Metadata

- **Metadata facilitates:**
 - **Data distribution**
 - **Data management**
 - **Project management**

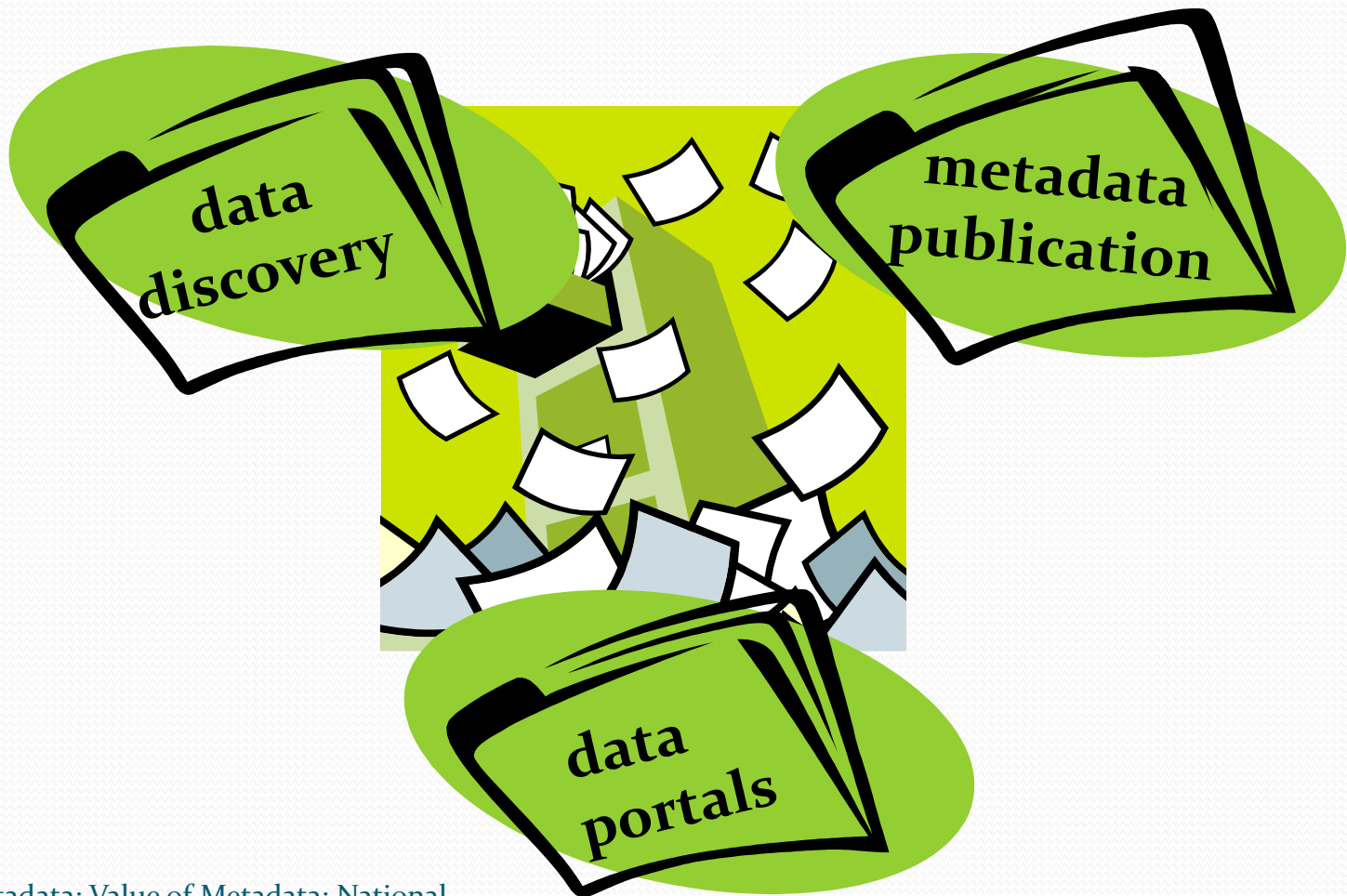
Utility of Metadata



Utility of Metadata

- **Metadata can support spatial data:**
 - **Considered a component of the data**
 - **Created during data development**
 - **Populated with rich content**

Data Distribution via Metadata



Distribution: Data Discovery

IDENTIFY

- keywords
- geographic location
- time period
- attributes

ASSESS

- use constraints
- access constraints
- data quality
- availability/pricing

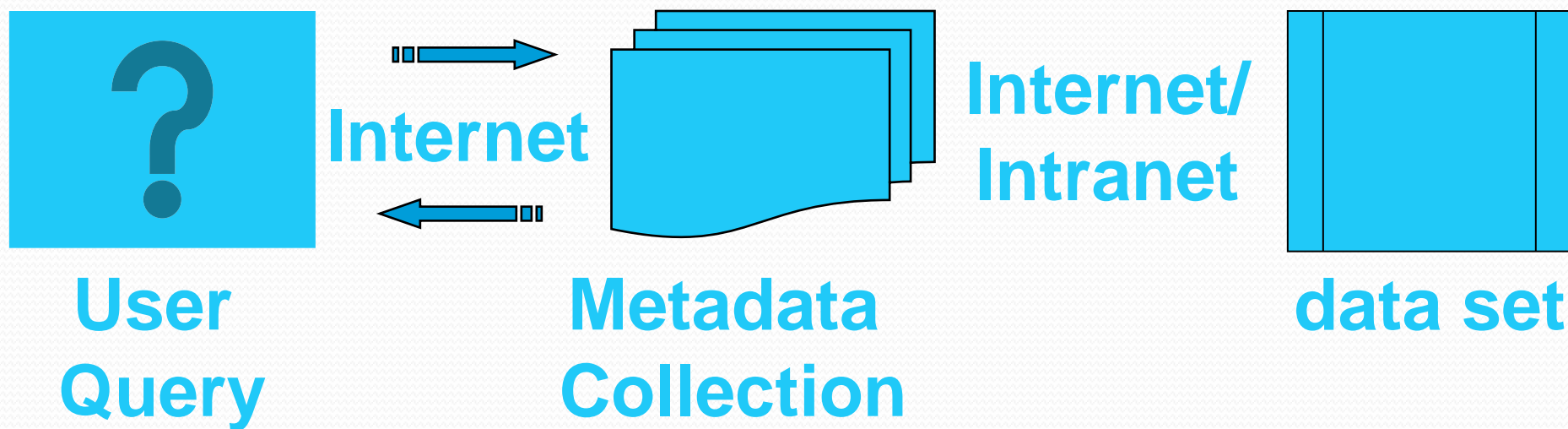
ACCESS

- online access
- order process
- contacts

Distribution: Metadata Publication

- A metadata collection can be published to the Internet via:
 - web accessible folder (waf)
 - website catalog
 - Z39.50 standard clearinghouse
 - metadata service
 - geospatial data portal

Distribution: Metadata Publication



Distribution:

National Geospatial Data Portals

- **Geospatial One-Stop (GOS)**

Federal e-gov geospatial data portal

www.geodata.gov



The screenshot shows the geodata.gov website. The header features the logo "geodata.gov U.S. MAPS & DATA" and a banner with the Statue of Liberty and the Golden Gate Bridge. Below the banner is a navigation bar with links: Home, Search, Maps, Marketplace, Communities, Statistics, and Help Center. The main content area has a left sidebar with "Communities" and "Special Interest" links (Fire Mapping, Geographic Names, Historical Collections). The right side contains a search form with "What:" and "Where:" input fields, a "Search" button, and a link to "Show Advanced Search Options".

Distribution:

State Geospatial Data Portals

- Delaware DataMIL

<http://datamil.delaware.gov/>

- DC Atlas

<http://octo.dc.gov>

- NC OneMap

<http://www.nconemap.gov>

Distribution:

Thematic Geospatial Data Portals

- National Biological Information Infrastructure
www.nbii.gov/portal/server.pt
- Ocean Biogeographic Information System
www.iobis.org
- Geospatial Data Gateway
<http://datagateway.nrcs.usda.gov>

Data Management via Metadata



Management: Maintenance

- **Data Maintenance**
 - **Are the data current?**
 - **Older than 10 years?**
 - **Prior to any disasters?**

Management: Maintenance

- **Data Update Process**
 - **Becomes standard operating procedure**

Management: Maintenance

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

Management: Update

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



Management:

Data Discovery and Re-use

Metadata marketing in the past:

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



Management:

Data Discovery and Reuse

New metadata marketing message:

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

Management:

Data Discovery and Reuse

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

Management: Data Accountability

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

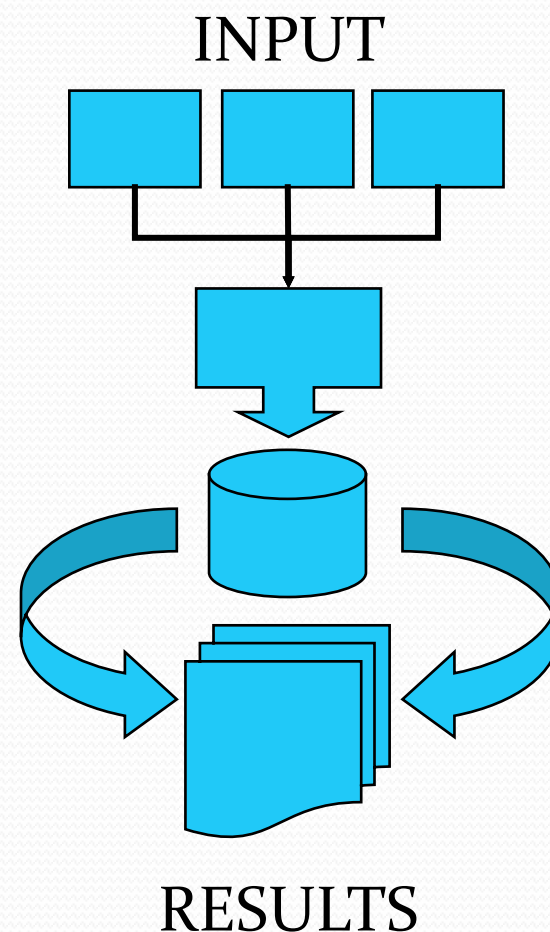
Metadata: Data Accountability

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

Metadata: Data Accountability

Repeatable Process

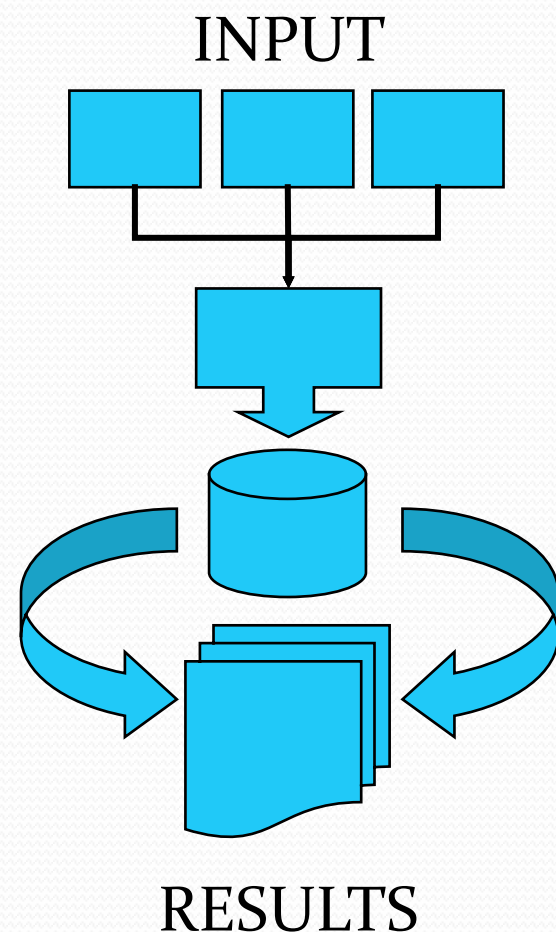
- Methods
- Variables
- Analytical parameters



Metadata: Data Accountability

Defensible Process

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



Metadata: Data Accountability

- **Return On Investment (ROI)**
- **Conduct a catalog assessment**
 - **In-house**
 - **Number of times data occurs as a source**



Metadata: Data Accountability

- ROI
- Conduct a catalog assessment
 - External
 - Number of times data occurs as a source



Metadata: Data Accountability

- ROI
- Conduct a catalog assessment
 - Use standardized titling schemes



Metadata: Data Accountability

- ROI
- Conduct a catalog assessment
 - Check the quality of the source and their creation methods



Metadata: Data Accountability

- ROI
- Facility assessment
 - Use the preferred data set citation
 - Understand the Use Constraint Statement

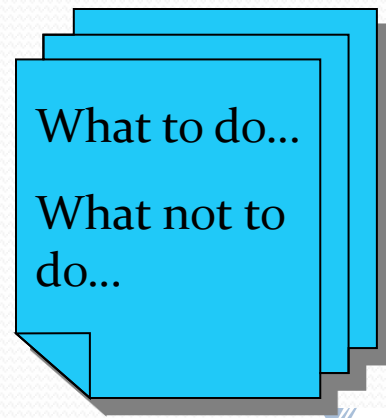


Management: Data Liability

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

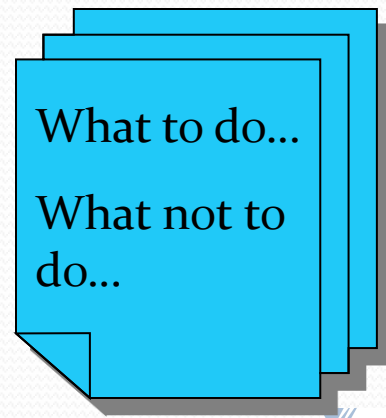
Management: Data Liability

- **Purpose**
 - **The originator's intended application of the data**



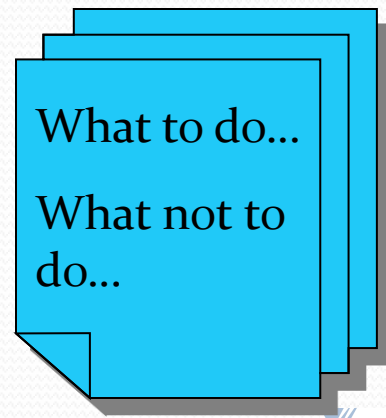
Management: Data Liability

- **Use Constraints**
 - **Inappropriate applications of the data**



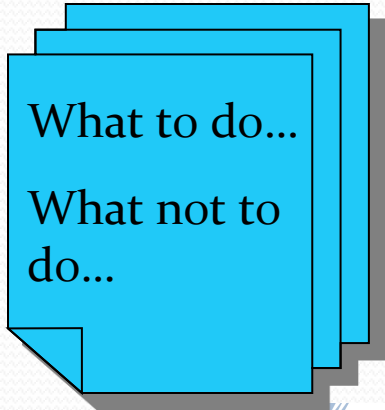
Management: Data Liability

- **Completeness**
 - **Features or geographies excluded from the data**



Management: Data Liability

- **Distribution Liability**
 - **Explicit liability of the data producer and assumed liability of the consumer**



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

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**
 - **Expectation and clearly outlined**
 - **Metadata is integrated into the process**
 - **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 data set deliverable**
- **Provide clear guidance and preferably a sample record**

Project Management: Contract Deliverables

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

Conclusion

Creation of robust metadata is in your OWN best interest and will be most valuable to you!



Reference

FGDC

www.fgdc.gov/metadata

Discussion:

**Questions
or
Comments**

