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Introduction to Metadata
What is Metadata?

March 2016

Learning Objectives

After completing this lesson the participant can:

- ❖ explain the concept of metadata through the use of analogies
- ❖ describe metadata as the contextual component of the data set
- ❖ explain the role of metadata in the National Spatial Data Infrastructure

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Data About Data

Metadata is the data, or information, about the data.
It is the:

How?
Who?
When?
Why?
What?
Where?

of your data

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A metadata record documents key information about your data

Data Reporting

Who	• created the data? • manages the data?
Where	• is the study area? • can I access the data?
What	• is the data content? • source data was used?
How	• was the data created? • is the data distributed?
When	• is the time period of the content? • was the data created?
Why	• was the data created? • are there missing values?

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Metadata provides answers to questions you may have about your own or another's data.

A Label For Your Data

title — time period

abstract — supplemental information

(file) size

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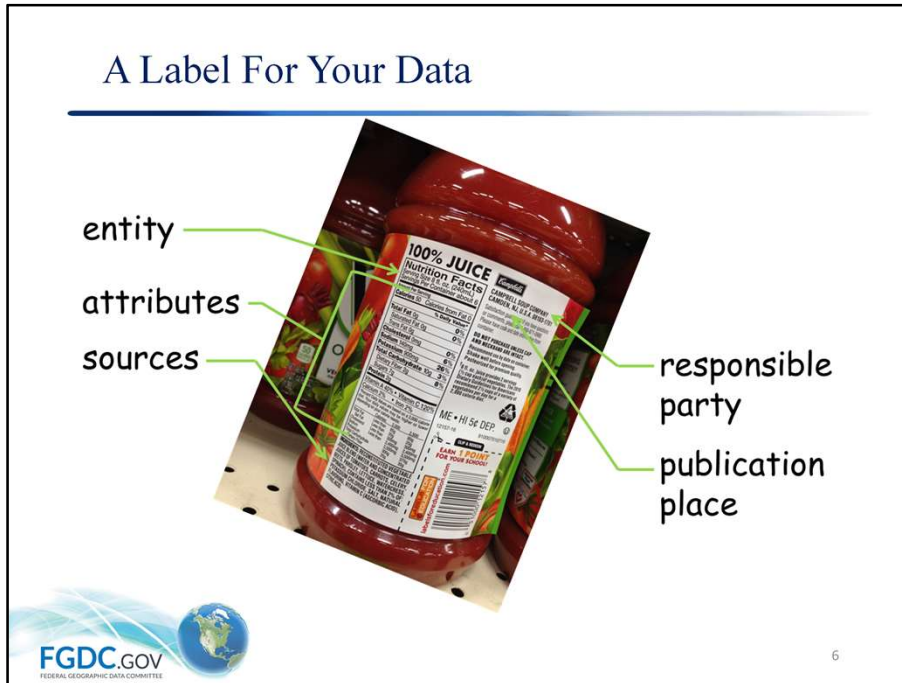FEDERAL GEOGRAPHIC DATA COMMITTEE
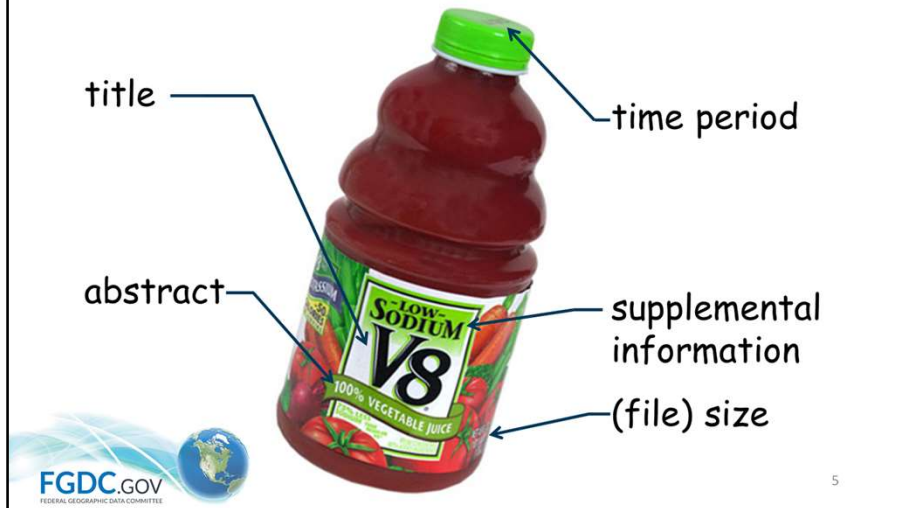
Consider metadata an information label for your data.
In this example the:
Front label indicates: the title (Vzz), a short abstract (100% juice) about the content, the size (64 oz.) of the resource, and some supplemental information (sodium content) that consumers may consider valuable. The timestamp on the cap indicates the time period or freshness of the resource.

A Label For Your Data

entity

attributes

sources

responsible party

publication place

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Consider metadata an information label for your data.
In this example the:
Back label indicates: the entity that is being described (a serving size), the attributes (nutrition) for the entity, the sources (ingredients) used to develop the resource, the party responsible for the data (Campbell Soup Company), and the place were the data was published (produced)

 a short abstract about the content, the size of the data, and some supplemental information about the sodium content that consumers may consider valuable
The timestamp on the cap indicates the time period or freshness of the data

Metadata Is Part of the Data

Metadata gives context to data content
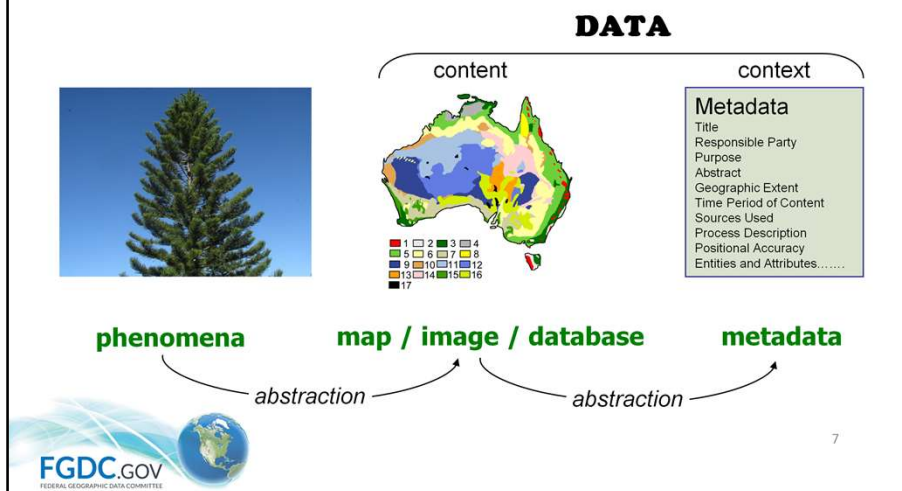
Geospatial data selects and represents (abstracts) the character of the phenomena that is of interest
  in this case, the location of specific tree types
  a different abstraction may instead capture the color, height, and/or near-infrared reflectance (NIR) of the trees

The metadata selects and represents (abstracts) specific information about the data that is needed assess, apply or manage the data
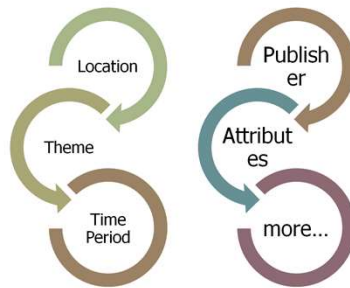
Metadata is a powerful tool for data discovery. It enables users to query the data based on their use criteria.

Metadata can be used to find your own data.
It can also be used to discover data produced by others if the metadata is published and made available for search.
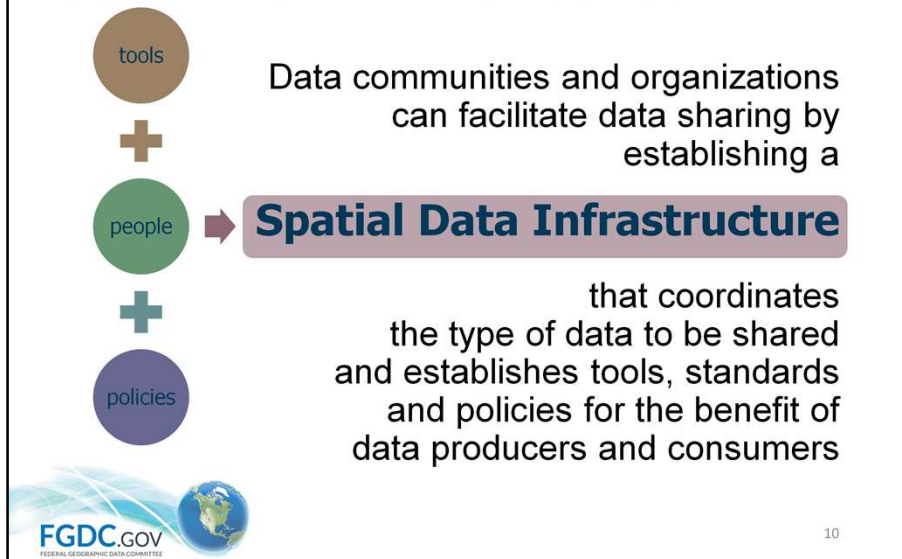
A Spatial Data Infrastructure (SDI) can be developed by a community or organization to facilitate data sharing.
A SDI is composed of an agreed upon set of:
- Tools (online catalogs, webmapping applications, etc.)
- Standards (metadata, web publication, etc.) and
- Policies (content, access, use, etc.)

The US NSDI is intended as *a base or structure of practices and relationships among data producers and users*

The NSDI and Geospatial Platform

The Geospatial Platform (GeoPlatform.gov) is the implementation component of the NSDI for the delivery of data, services, and applications that support informed decision-making about national and regional issues

Geospatial Platform

...provides shared and trusted geospatial data, services, and applications for use by the public and by government agencies and partners to meet their mission needs

data services applications

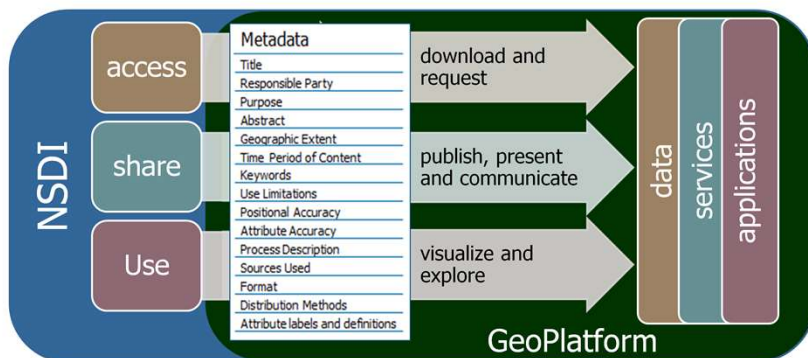FGDC.GOV
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The GeoPlatform is the online implementation of the NSDI. It provides direct access to the tools, policies, standards, and communities that comprise the NSDI.

The NSDI is a concept for data access, sharing, and use.

The GeoPlatform provides the real-world data, services, and applications to realize the NSDI concept.

Metadata provides the information needed by the GeoPlatform to connect users with available data, services, and applications.

Discussion

What metadata elements do you need to access, share, and use your data?

What are the benefits of having a 'label' for your data?

What other organizations would you include in your Spatial Data Infrastructure?

Are there data resources of interest to your organization in the GeoPlatform.gov Data Catalog?

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