

FIVE PRINCIPLES OF

Global Statistical and Geospatial Framework

REGIONAL WEBINAR SERIES

PRINCIPLE

1

**“Use of fundamental geospatial
infrastructure and geocoding”**

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REGIONAL COMMITTEE OF UNITED NATIONS
ON GLOBAL GEOSPATIAL INFORMATION
MANAGEMENT FOR THE AMERICAS

Where is it?



Everything happens somewhere.



But where is “somewhere?”



How do we find it?
And how do we **define** it?





The Power of Location

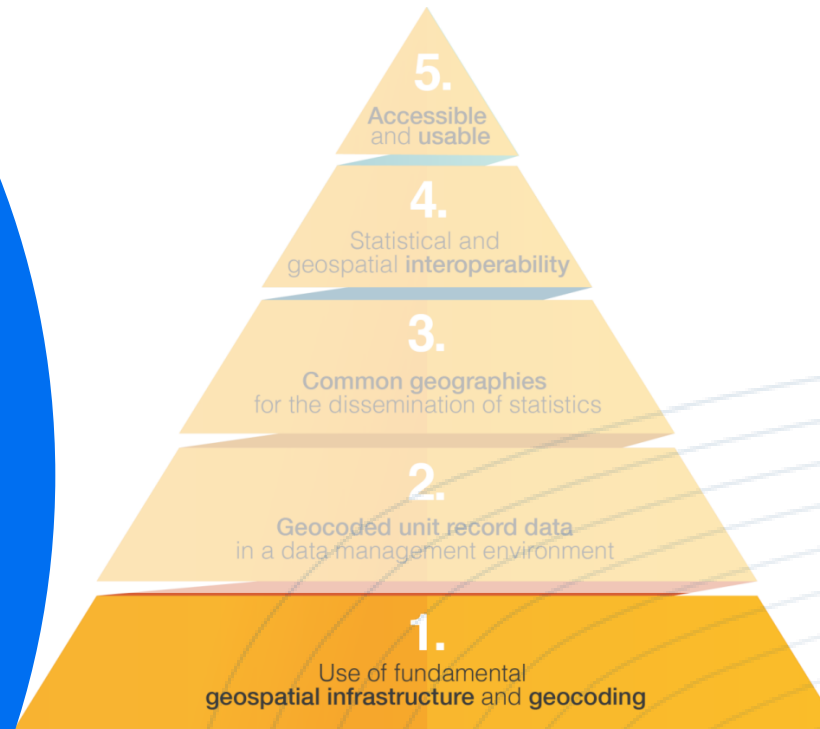
Integration of data and location

The GSGF moves our data from “the clouds” and onto the map. Enabled by the structure of Principle 1.



Fundamental Geospatial Data Themes: Building the Reference

Geospatial Infrastructure and Geocoding



Creating infrastructure that enables the implementation and socialisation of the GSGF.

Creation of high-quality, standardised location references such as a physical address, property or building identifiers, or other location description, and ensures the accurate assignment of coordinates and standard grid references





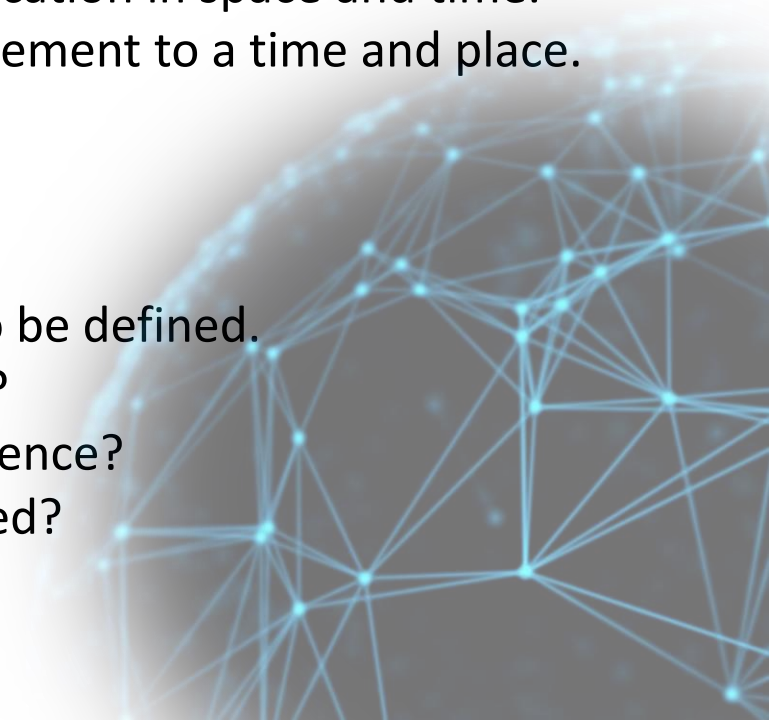
The Power of Location

Relationships

Geography is the study of relationships.
We discriminate between locations, places, space, and time.
Every event happens at a location in space and time.
We tie that event or data element to a time and place.

Definitions

These relationships need to be defined.
What is the temporal scale?
What is the positional reference?
How much detail do we need?



Fundamental Geospatial Data Themes:

Building the Reference



Global Geodetic
Reference Frame

Point

The Global Geodetic Reference Frame is the framework which allows users to define geographic coordinate systems to express precise locations.



Addresses

Line

An Address is a structured label, usually containing a property number, a **street name** and a locality name. Addresses are used to create a georeference along a road, sidewalk, path, or other linear feature, ideally creating a coordinate indicating the relative position. This linear feature network is the basic reference frame.



Land Parcels

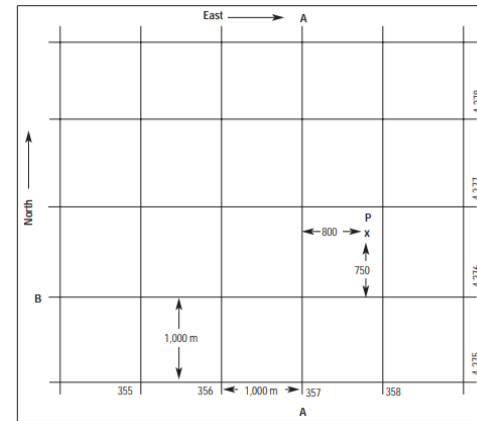
Area

Land Parcels are polygons or areas of land. This can include individual lands and cadastral parcels, but conceptually for our purposes, these could be enumeration areas, tabulation areas, or other small polygons used for data organization.

Fundamental Geospatial Data Themes: Building the Reference



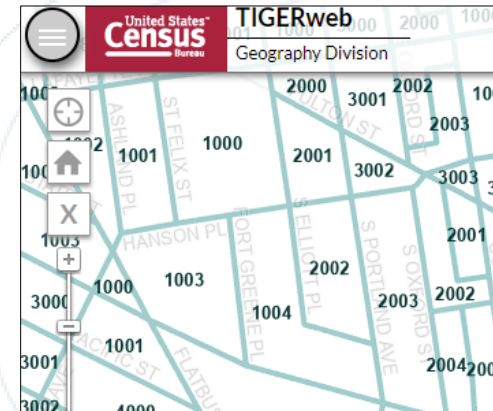
Point



Line



Area



Principle 1 Goals

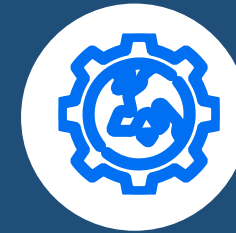


Create

Standardized location data.

Consistent references:

- Accurate coordinates.
- Physical addresses.
- Property/building identifiers.
- Compact geographic units.



Establish

Goals.

Standards.

Acceptable parameters.

Evaluation methods.

Plot, Plan, and Build



Evaluate

Available options.
Needs.
Accuracy.
Gather use cases.



Plan

The entire frame of reference.
Identify gaps.
Build QA/QC into every phase.
For the future.



Build

To support your plan.
For the future.
Redundancy.
Temporal data.
A process not a product.



Stakeholders

Communication



Internal

Understand internal requirements.
Listen to user data needs.
Understand your data.
Publish your metadata!



External

Inquire about use cases.
Discuss gaps and limitations openly.
Communicate regularly with users.
Establish standard methods of communication.
Publish your metadata!

Roles and Responsibilities



● Identify fundamental data producers

● Organize data pipelines

● Establish communication cadence





The Inevitability of Change

Boundaries change, landscape features change, change is a constant in our world.

Capturing and modeling temporal positionality (location in time).

Does your reference frame plan need to change?

Where is “somewhere” now?



Updates and Quality Control



Leverage new data sources

Critical Earth Observation Data.
Administrative records.
New uses for existing data.
Communicate needs and capabilities.



Assess and improve

Plan regular maintenance and updates.
Data acquisition.
Communicate with data producers and users.
Identify and communicate gaps.



**Build in
Redundancy**

**Prepare for
Change**

Continuously Evaluate

Current data – are we using it correctly?

Current methodologies

QA/QC assessments

Continuously Explore

New update methods

New data sources

Continuously Communicate

Maintain partnerships

Meet with data creators and data users

Understand the fundamental data creation process



Thank you

Obrigado

Gracias

Merci