Authoritative Data

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Different Understandings

Term Authoritativeness is a social construct

- An idea or concept created and accepted by people in a society.
- Exists because people collectively agree that it does.
- E.g.: concepts like gender, race, and class.

Different domains have different Authoritative Data constructs

Lines Blurred

Growing number of producers and providers of geospatial data are entering the market

Products and services come form public, private, and NGOs (nongovernmental organizations)

Each serve different purposes and to address a variety of needs.

Follows a global trend in governance – The separation of public and non-public sectors is increasingly blurred

Collection and oversight of geospatial information is no longer restricted to public authorities with a special mandate.

Geospatial Domains

Traditional

- National mapping, cadastral and land registration authorities (NMCAs)
- Recognized as official sources of legal and administrative geospatial information
- Have well-established legal traditions and robust frameworks governing authoritative data

Non-Traditional

- Concept of authoritativeness has been adopted in many other geospatial domains and contexts
- Concept has been interpreted differently by different expert groups
- Designation of authoritative data lacks the same rich legal tradition
- Less entrenched in law

Maintain Traditions

Recognizing that there are a range of interpretations of authoritativeness

We should continue to define the concept of authoritativeness according to accepted traditions and expert-informed understandings.

Don’t unseat conceptions of authoritative data that are well established, unambiguous, or legally entrenched

Geospatial domains seeking clarity can rely on the Fit For Purpose Framework - More on that later

Types of Authoritative Data

Designated: A law or policy designates a dataset as authoritative.

e.g.: Hydrography, Nautical Charts, Geodesy, Cadastre

Official: Data collected by the state but not authoritative

e.g.:	Nationally Aggregated Datasets	vs.	State Published Data
	National Bridge Inventory	vs	NY's Bridge Clearance Feed

Recognized: A community agrees to a dataset's value.

- Data may not be verified but is good enough for the intended purpose

e.g.: Disaster Response, Big data where verification is impossible

How does data become Authoritative

Process

Designating data as authoritative through regulation or policy.

Giving a geospatial organization an ‘authoritative’ mandate

Establishing an ‘authoritative’ process or methodology

How does data become Authoritative

Characteristics may determine data authoritativeness

Some characteristics may be more important than others

Domain and Context Dependent – Community Recognized

May include:

Quality	Accessibility	Accuracy	Timeliness
Traceability	User-centric	Standardized	

How does data become Authoritative

Principles may determine data authoritativeness

Domain and Context Dependent – Community Recognized

May include:

- Continuity and Trust
- Adherence to the FAIR Principles

  Findable, Accessible, Interoperable, Resuable
- Adherence to CARE Principles

  Collective Benefit, Authority to Control, Responsibility, Ethics

Levels of Authoritativeness

Does Authoritativeness have to be binary?

What are the benefits of establishing a tier-based label of authoritativeness

E.g. A scale from 0 to 5 where 0 = Raw data and 5 = Certified Authoritative Data

Scale based on compliance to authoritative characteristics and principles

A tier-based system could differentiate between authoritative data forms, including singular data units, simple datasets, and integrated datasets

Consider community feedback – Yelp reviews to Geodata

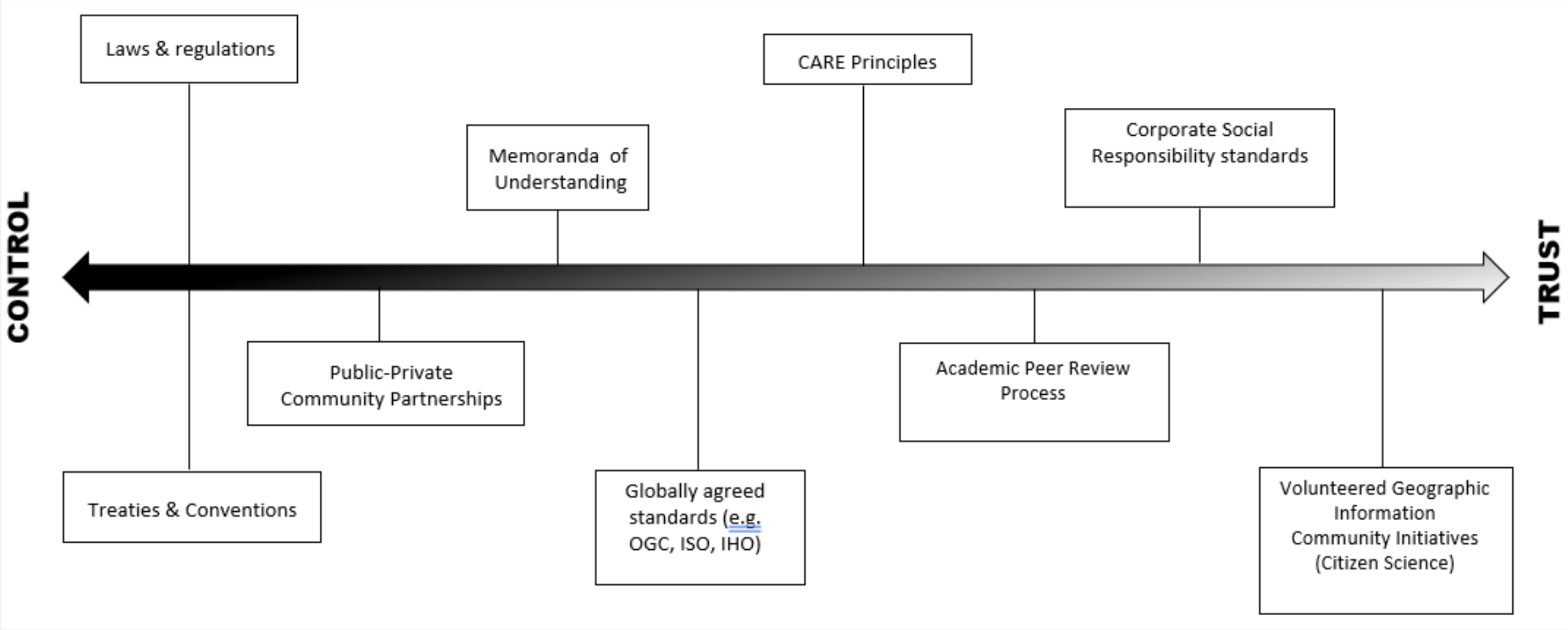
Fit For Purpose

Authoritativeness is always tied to specific geospatial domain in a specific context - Hence the difficulty in defining authoritativeness

They all share an underlying principle: For any data asset, process, or organization to be considered authoritative –

Data assets, processes, or organizations must be fit for the intended purpose(s)

“Control / Trust” Continuum



Effective Authoritative Data Governance Model

Determine Policy Objective and Purpose

Establish what kinds of data are needed according to jurisdictional priorities.

Identify the data's intended purpose, including the user needs.

Begin to define data's fitness for purpose.

Developing an Authoritative Governance Model

Clarify Data Sources

Determine whether the data in question is derived from a single source or from multiple sources.

Consider how the number of sources or the sources themselves affect decisions downstream (e.g., data principles, access, risk tolerance, branding and access).

Developing an Authoritative Governance Model

Data Characteristics

Identify data characteristics that correspond with data's intended purpose(s):

Consider:

- Quality
- Accessibility
- Accuracy
- Timeliness
- Traceability
- User-centricity
- Standardization

Developing an Authoritative Governance Model

Data Principles

Identify principles necessary to guide governance to ensure the data is fit for its intended purpose(s).

Data principles may include:

- Continuity
- Adherence to the FAIR Principles
- Adherence to the CARE Principles
- Trust
- Uniqueness

Developing an Authoritative Governance Model

Legal Regulation

Determine what needs to be legally regulated and how should it be regulated.

Identify policy and legal gaps in authoritative data governance.

Evaluate the implications of existing legislation: Licensing, Intellectual Property (IP) rights, liability, privacy, confidentiality etc.

Consider the challenges that may arise (e.g., how the practical collection and management of authoritative data can be restricted due to these considerations).

Identify tools that may be used to address these considerations.

Refer to the UN-GGIM Policy and Legal Resource Kit and UN-GGIM White Paper on Legal Aspects of Availability of Geospatial Information for further guidance.

Developing an Authoritative Governance Model

Assess Available Resources

Take stock of available resources, cost recovery, pricing, and resource funding implications

What are the costs associated with collecting, storing, maintaining, and distributing authoritative data.

Developing an Authoritative Governance Model

Assess Role of Non-State Actors

Consider existing and potential future roles of the public sector, private industry, Academia, and NGOs

Consider data production, ownership, provision or distribution, certification, custodianship, stewardship, and regulation.

Developing an Authoritative Governance Model

Identifying Standards

Identify standards to adopt to improve data interoperability, consistency, efficiency, and quality, including metadata standards

Determine Risk Tolerance

Assess the risk tolerance of the organization(s) or user(s) relating to the authoritative data activity(ies) in question.

Branding And Access

Consider how authoritative data assets, processes and organizations can be more easily found and identified.

Developing an Authoritative Governance Model

Open Data

Consider the implications of sharing your data openly.

Economic, Social, Scientific and Environmental Benefits

Identify economic, social, scientific, and environmental benefits of using authoritative data.

Develop best practices for communicating these benefits to non-expert decision makers.

Questions?

Congratulations!