GOSC Data Interoperability WG Case study template

Natasha Simons, Australian Research Data Commons

Natalie Meyers, Lucy Family Institute for Data & Society at University of Notre Dame

Simon Hodson, CODATA,

Pascal Heus, Metadata Technology North America, Canada

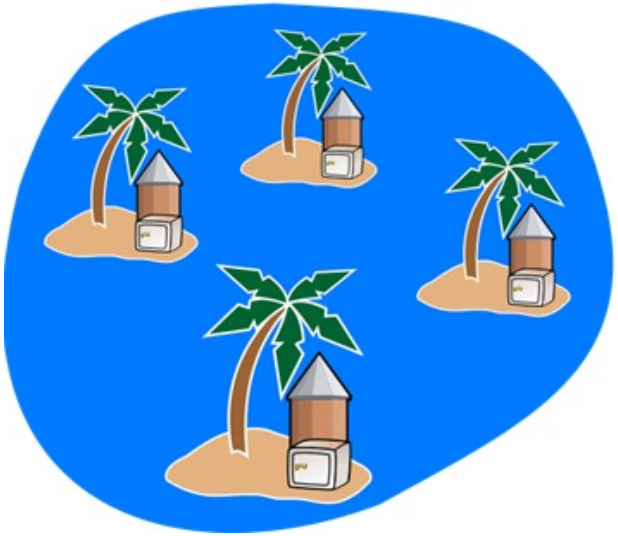
Lianglin HU, CNIC

Milan Ojsteršek, University of Maribor, Slovenia

10. 5. 2022

Data

Source:
https://www.bitmat.it/blog/news/83536/sviluppare-applicazioni-iot-riducendo-costi-e-risorse

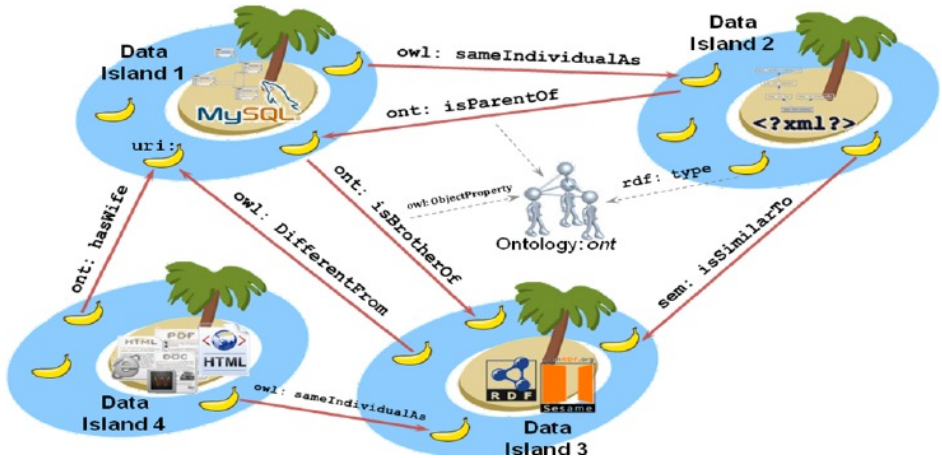


Source:
https://commons.wikimedia.org/wiki/File:Islands_Of_Data.svg

How to achieve interoperability between data islands?

Meta)data Interoperability principles:

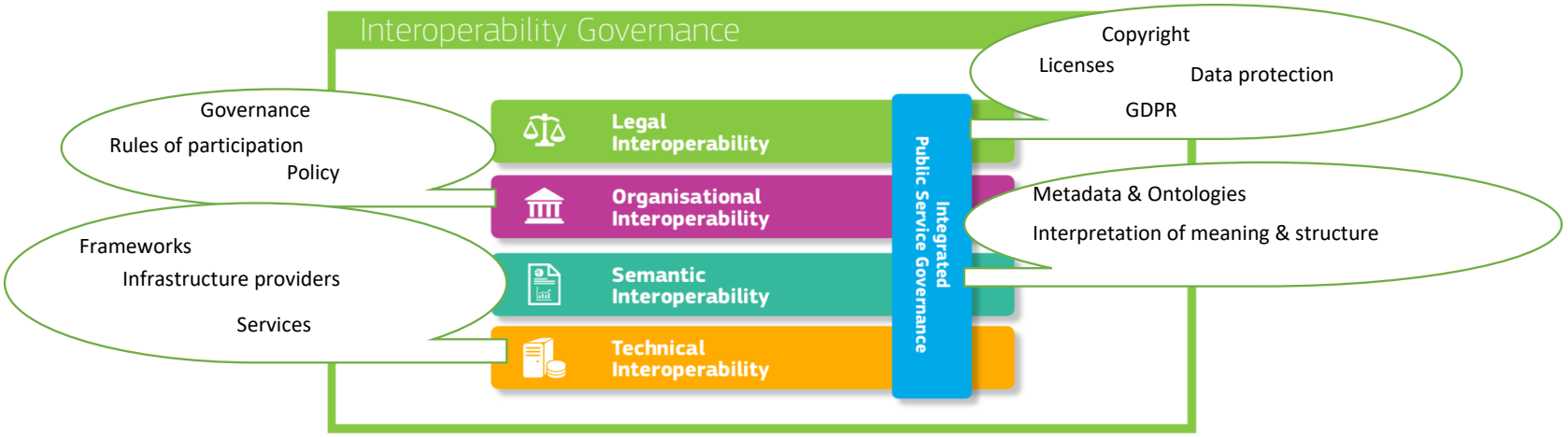
- (Meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.
- (Meta)data use vocabularies that follow FAIR principles.
- (Meta)data include qualified references to other (meta)data.



Source: Wilkinson, M. D. et al. The FAIR Guiding Principles for scientific data management and stewardship. Sci. Data 3:160018 doi:10.1038/sdata.2016.18 (2016)

Source: https://www.researchgate.net/publication/267692879_Towards_Executable_Reality_Business_Intelligence_on_Top_of_Linked_Data/figures?lo=1

Levels of interoperability



Source: The European Interoperability Framework four levels of interoperability

Case study template

- Basic information about the community, project, service or dataset
- Drivers for interoperability and combining data
- Challenges, solutions and interoperability successes
- Metadata
- Vocabularies
- Data
- Identifiers
- Additional comments

Drivers for interoperability and combining data

In your work, what is the purpose of combining data/metadata and services from different sources? I.e. what does it allow you to do?

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Challenges, solutions and interoperability successes

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- What are the main barriers / challenges you face when using or integrating data/metadata and services from different sources?
- How do you tackle these interoperability challenges?
- What do you think is working well for your community when using or integrating data/metadata and services from different sources ?
- Do you have any policies or procedures in place to guide and encourage your community to work together and exchange information, particularly in relation to applying the FAIR principles?

Metadata

- What are the most significant metadata standards/specifications used by your community?

- Which mechanisms do you use for exchanging metadata?

Vocabularies

- What are the most significant vocabularies (including terminologies, taxonomies and ontologies) used by your community?

- How are these vocabularies managed and accessed by your community? In your judgment do they comply with the 10 Simple Rules for Making a Vocabulary FAIR?

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Data

- What are the data formats or encoding used by your community?
- What are the data structures used by your community?
- What are the mechanisms that you use for exchanging data?
- What is the method for describing or referencing variables of interest?
- What is the method for describing or referencing units of measurement?

Identifiers

- Which are the most significant identifiers (e.g. DOI, ORCID, InChI) being used by your community?

Additional comments

- Is there anything else you would like to discuss related to these issues?

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Thank you for your attention

Milan Ojsteršek,
University of Maribor
milan.ojstersek@um.si

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