GACS

In the context of a shared data infrastructure

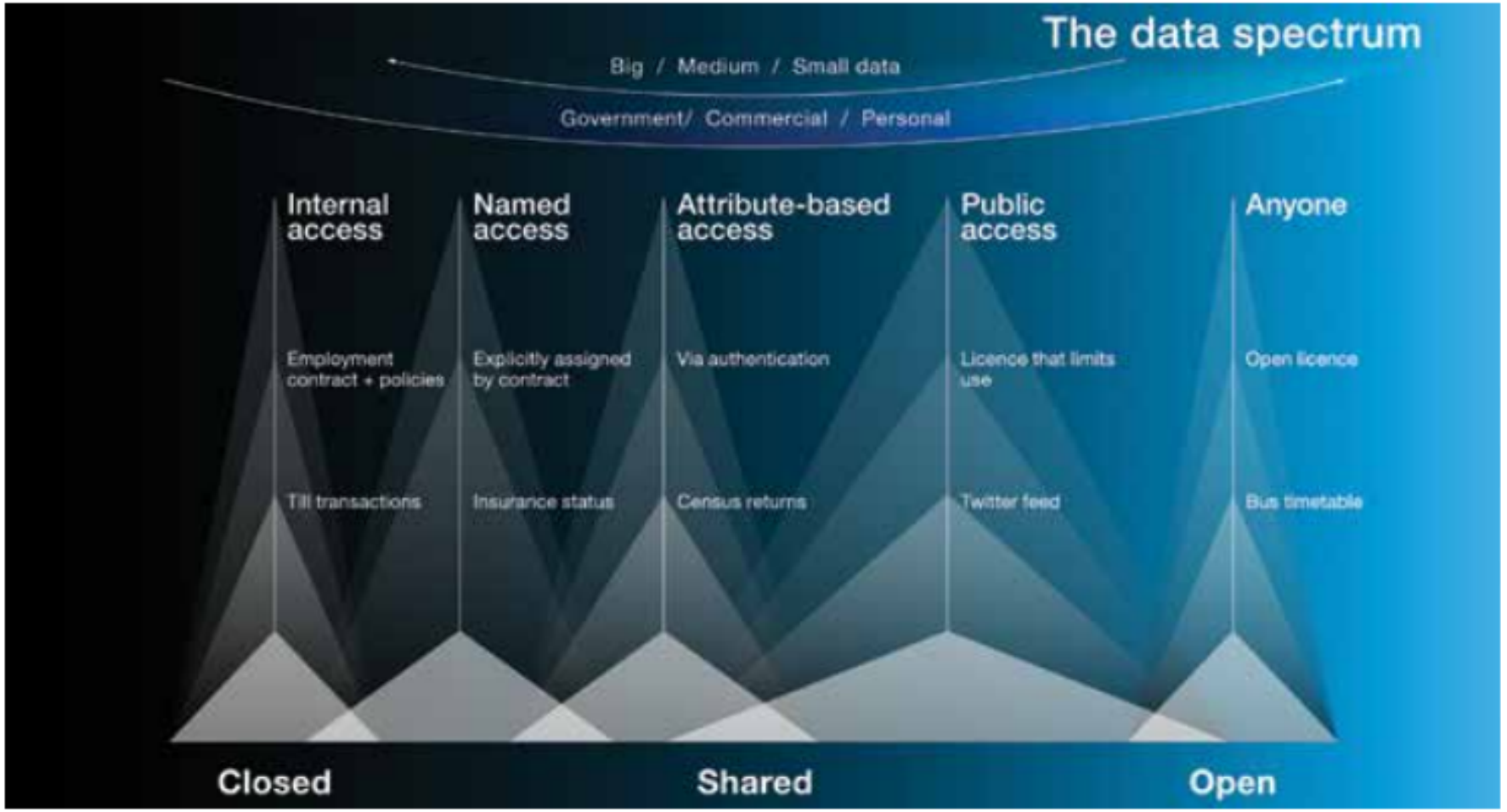


Figure 1: The Data Spectrum

Infrastructure elements for FAIR data

Semantics

Dataset Registries

Data processing

Data Storage

Data Services

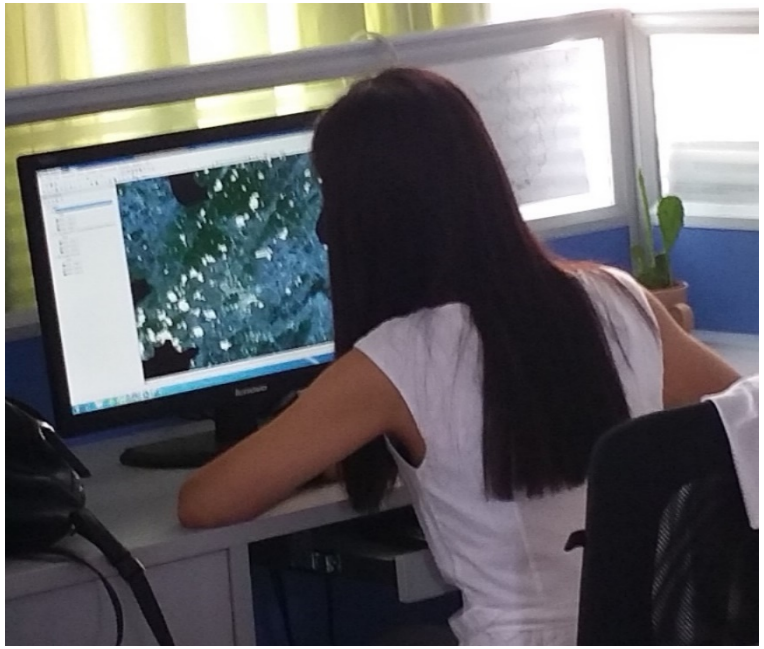
Webservices + APIs to triple stores

LOD Generator

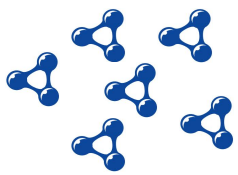
triplifier, concept and entity identifier

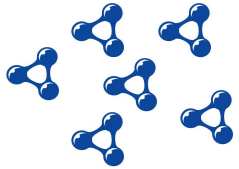
Semantics serves many purposes

- indexing texts and information retrieval
  - Concept schemes, thesauri
- the organization of information
  - taxonomies
- the interoperability of datasets
  - Entity lists, code lists, concept schemes
- Knowledge driven applications
  - Ontologies
- text and datamining
  - Ontologies, Entity lists, code lists, concept schemes
- .....

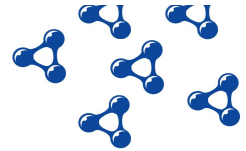


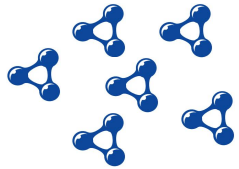
Isolated Semantics does not resolve the problem of interoperability

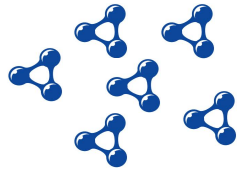


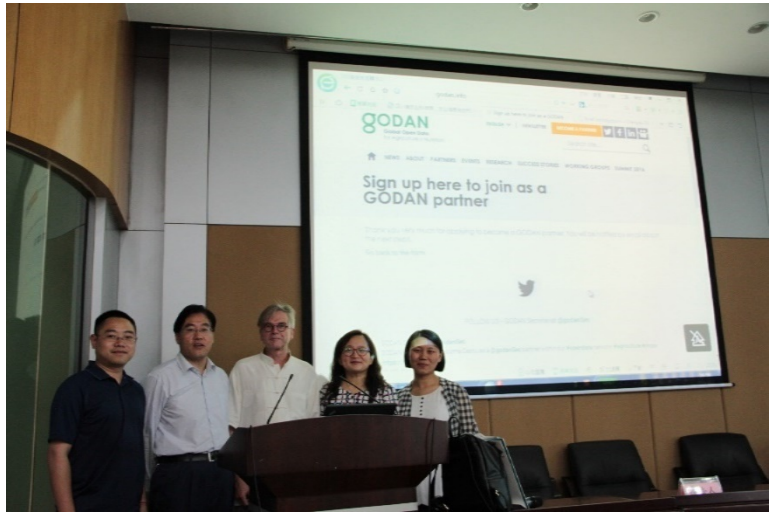


RDF Silos are not Linked Data







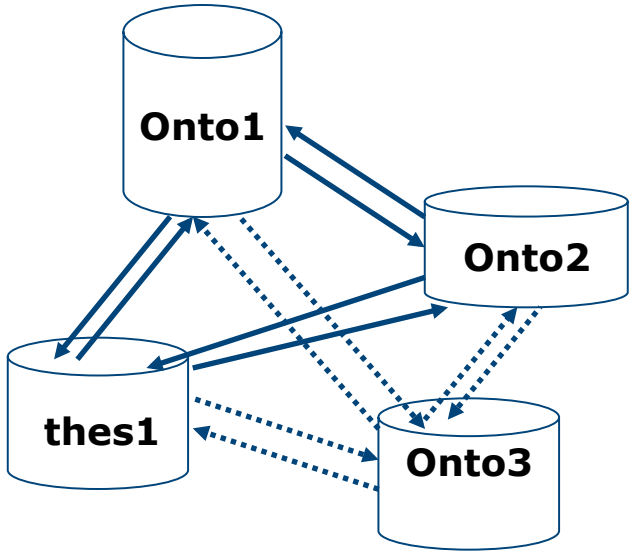


Ferdinando Villa

Citation from the Chania workshop

«WE NEED A GLOBAL AUTHORITY FILE FOR CONCEPTS THAT ARE USED FOR ONTOLOGY BUILDING»

A naïve view of the problem?

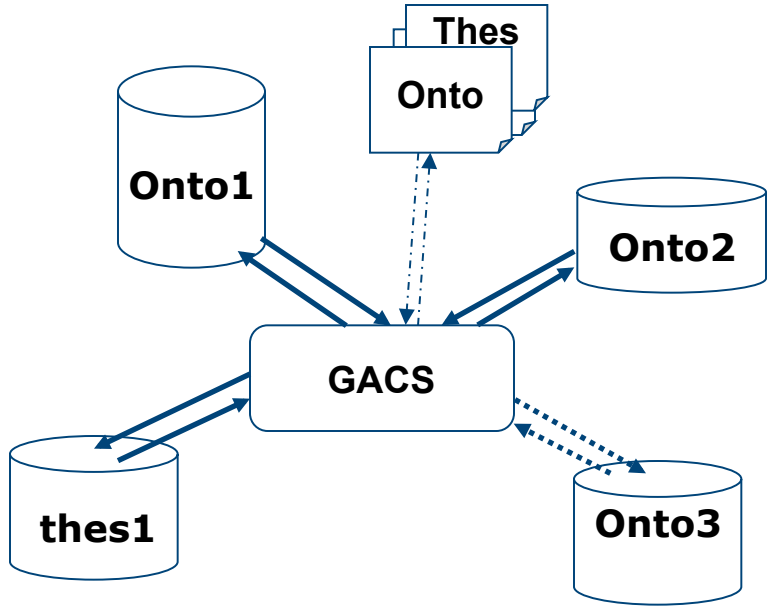


In the above Figure, the addition of a 'new database' means six new mappings (shown using the dotted lines) will have to be created for everyone to share information with each other. Imagine now, if we had one more! Each new addition of database results in other new mappings. This is calculated with the following formula.

$$n\_P\_2 = \frac{n!}{(n-2)!}$$

Where n = number of databases that want to share information with each other.

Additionally, if there would be a change in any one of the formats, all the other databases that are sharing information would also have to change their own mappings.



Odile Hologne

what is the vision for GACS :

- "1:THE CORE OF THE INTEROPERABILITY OF THE AGRI DATA ECOSYSTEM" OR "2:THE CORE THESAURUS OF THE BIBLIOGRAPHIC DATABASES OF THE "AGRICULTURAL KNOWLEDGE INFORMATION SYSTEM", "3:....."

GACS: a common basis for all KOS?