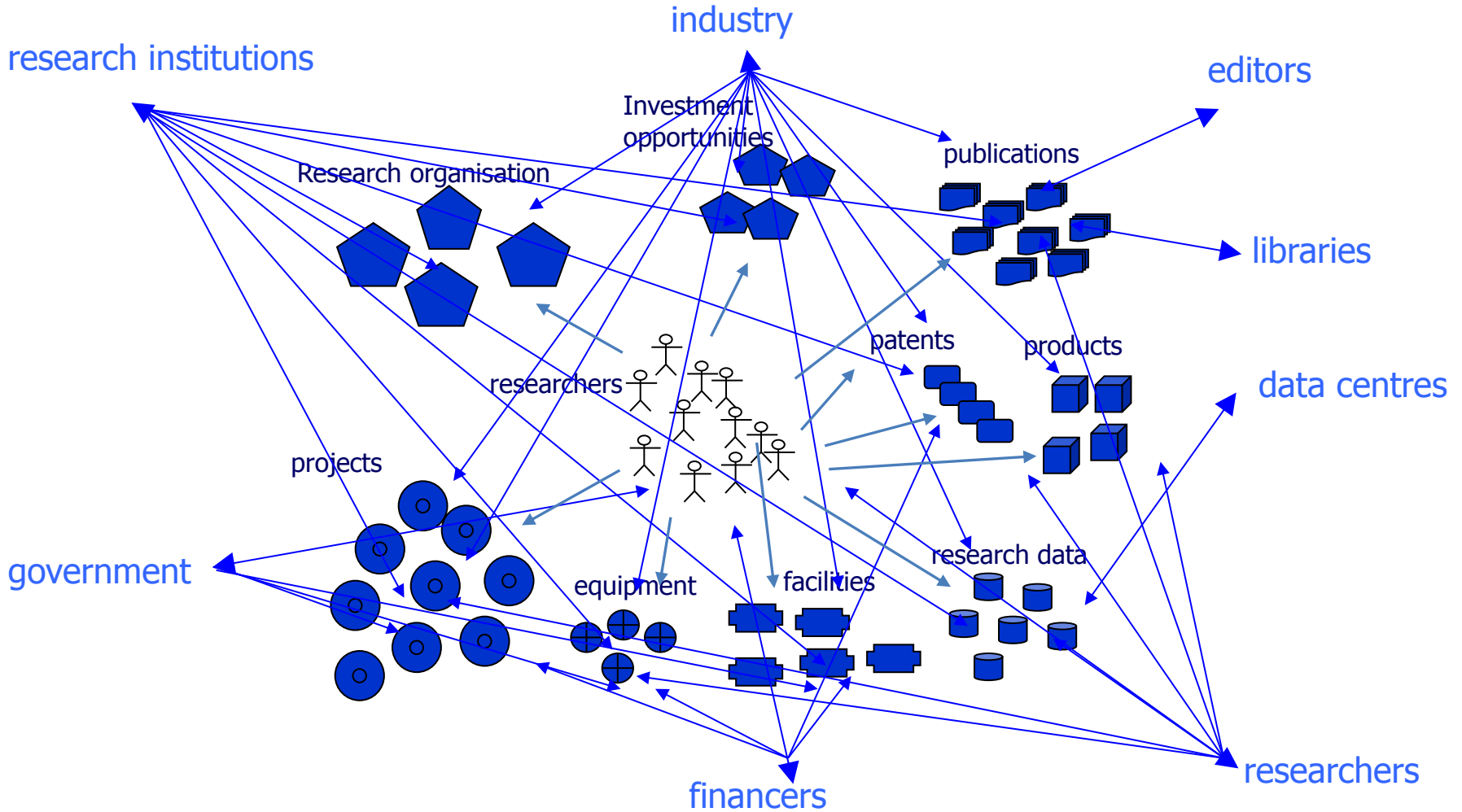


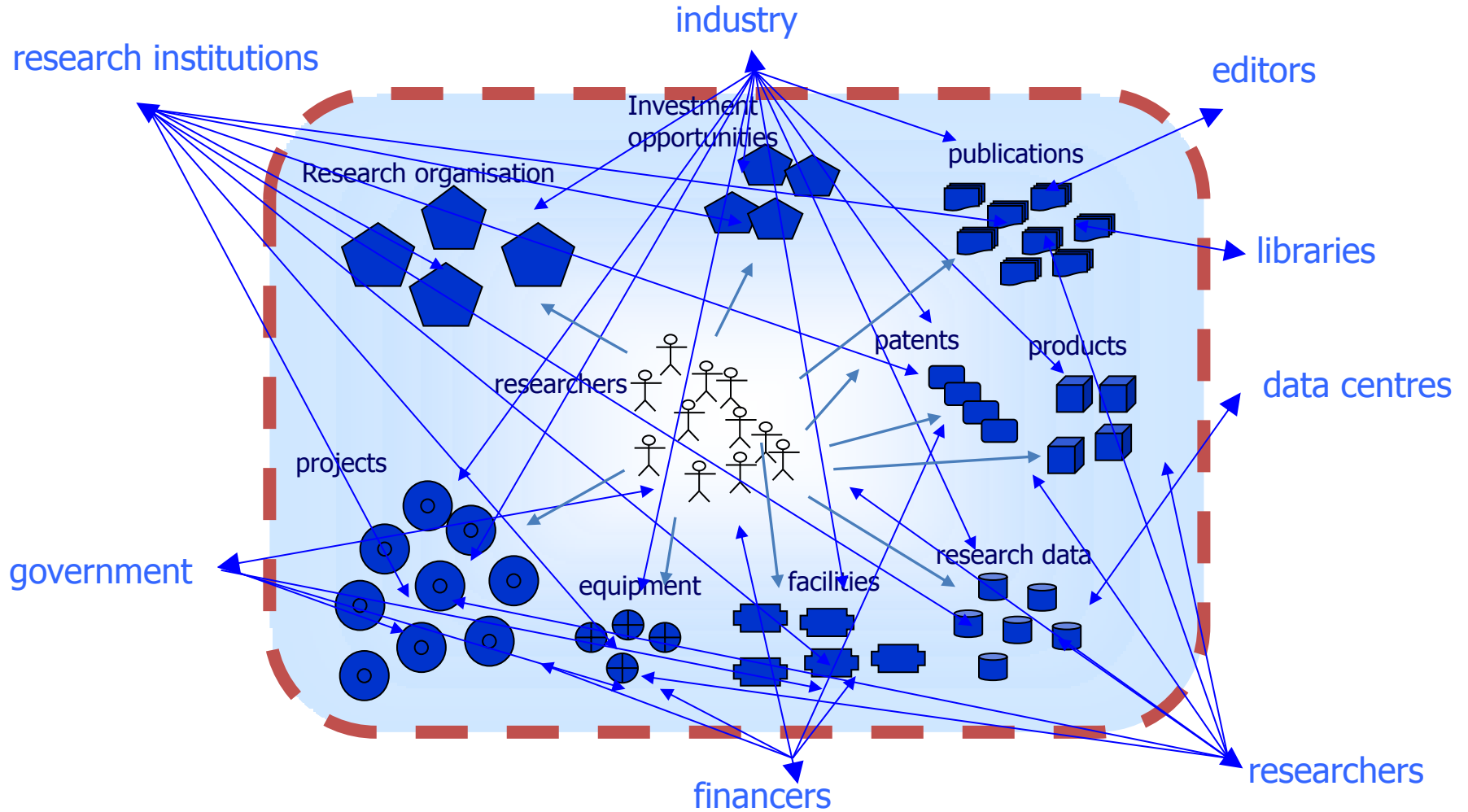


# Semantic interoperability of research information systems – data and classification governance

# Research Information



# Flanders Research Information Space (FRIS)



# FRIS needs & drivers

Better Research Information:  
correct, actual , complete

Open FRIS data for services  
and application development

Flemish government  
Open Data policy

Increase strategic  
intelligence

Policy monitoring:  
efficient & effective

More information services

Reduce system costs

Maximum reuse of  
components and data

Administrative reduction  
of research reporting

Connect data silo's



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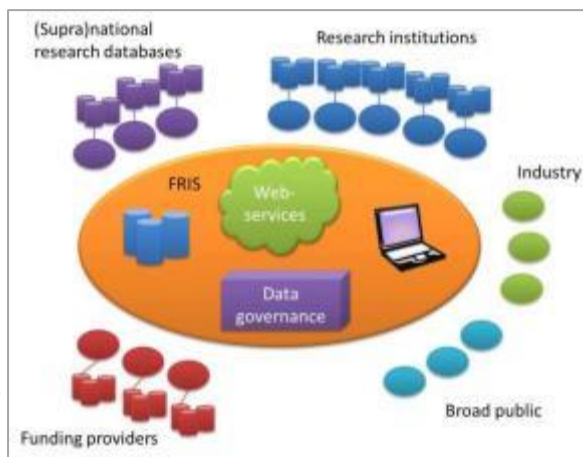
More information services

Reduce system costs

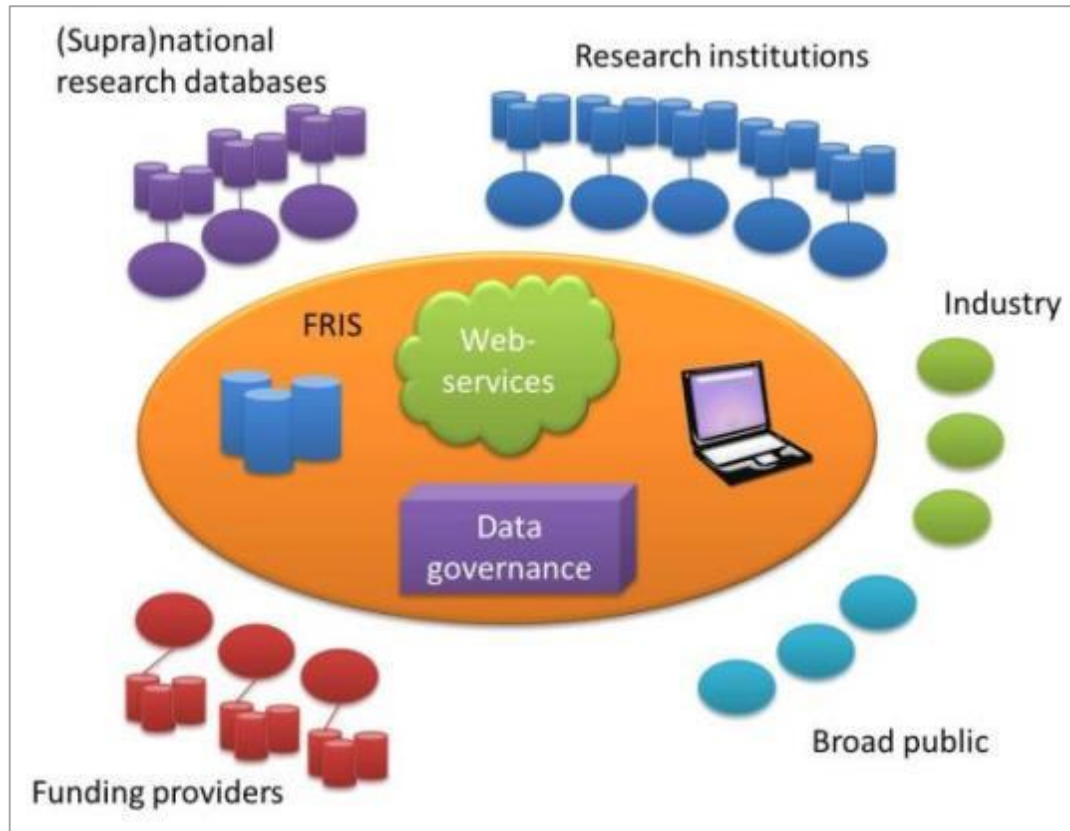
Connect data silo's

Maximum reuse of  
components and data

Administrative reduction  
of research reporting



# Semantic interoperable FRIS



➤ Data and classification governance

➤ FRIS Webservices infrastructure

- Reporting obligations
- Content providing
  - FRIS Research Portal
  - FRIS linked open data store
- Integration with FRIS master data services
  - Organization, Person, Journal, Project,...

***Impulse financing program for universities***

# Landscape of data providers (33)

## Universities



## University Colleges



## Strategic Research Centers



## Research Institutes



## Funders



## Others



# Challenges – Data providers

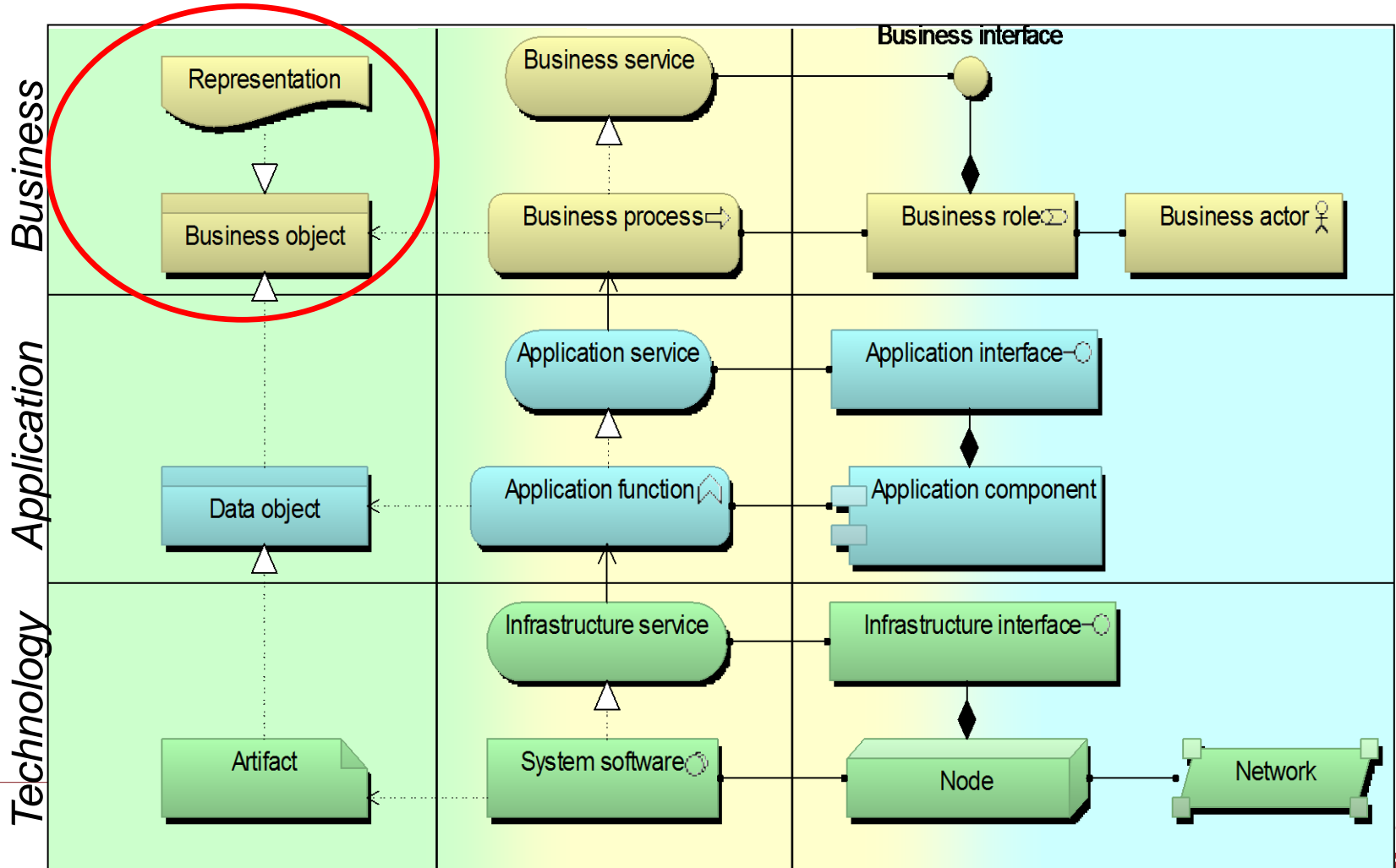
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- Multitude of data providers with different environments
  - Self-designed / commercial
  - CRIS system / (integrated) system of databases, repositories
- Implementation of data governance, and creation of a business layer
  - Recording of business concepts, semantics and representations in institutions
    - Semantics (not) (yet) in place
  - Achieve alignment of business concepts, semantics & representations between organizations and FRIS, linked via formal relations
    - Definition of required business concepts
    - Collaborative manner

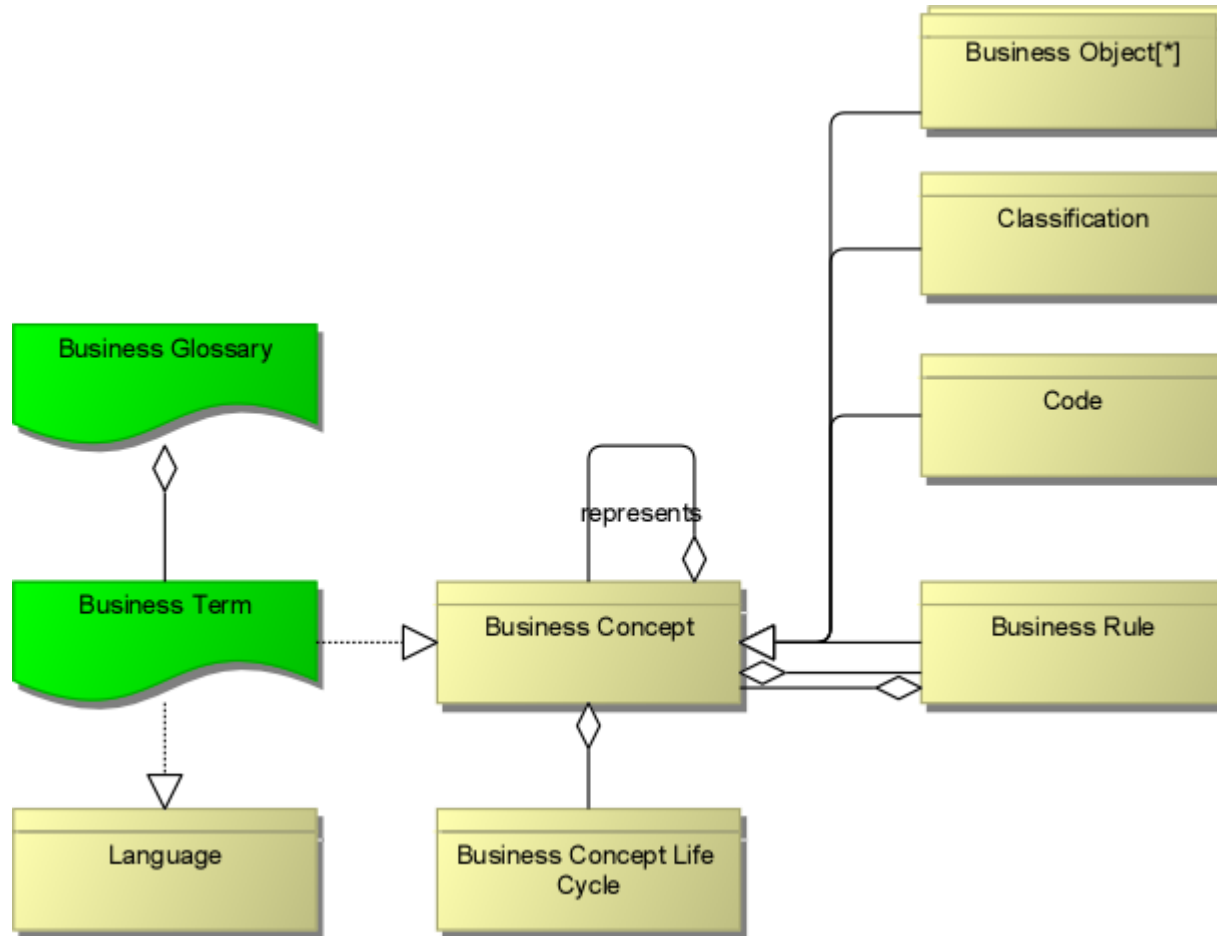


# Challenges – Data providers

- Connection of the business layer with the database layer within and between organizations
  - Collaborative manner



# Metamodel & institution-specific models





Browser

Flanders Research Information Space > In



Q Filter on community or domain...

- > Data Governance Council
- > ECOOM
- ▼ Flanders Research Information Space
  - > FRIS Application Community
  - > FRIS Model Community
  - > FRIS Working Group on Business Rules
- ▼ Information Providers Community
  - > HoGent Research Information Community
  - > KU Leuven Research Information Community
  - > UAntwerpen Research Information Community
  - > UGent Research Information Community
  - ▼ UHasselt Research Information Community
    - ▼ UHasselt Business Object Community
      - ☐ UH Funding
      - ☐ UH Identifier
      - ☐ UH Life Cycle
      - ☐ UH Location
      - ☐ UH Party
      - ☐ UH Project
      - ☑ UH Research Output
    - > UHasselt Publication Data Assets Community
      - ☐ Hasselt Research Information Glossary
  - > VUB Research Information Community
  - > Reference Models and Standards Community

Collaborative manner

Machine readable manner



- Edit
- Move
- Delete
- Simple Approval
- Vote
- Edit Business Term
- Funding Program Onboarding Process
- Discover

### Overview

+ Add

### Hierarchy

### Fact Types

### Responsibilities

### Traceability

### Comments

+ Add

### Activity

### Attachments

### Definition

A book is a set of written, printed, illustrated, or blank sheets, made of ink, paper, parchment, or other materials, usually fastened together to hinge at one

### Descriptive Example

No value has been given yet. Double click or use the edit button.

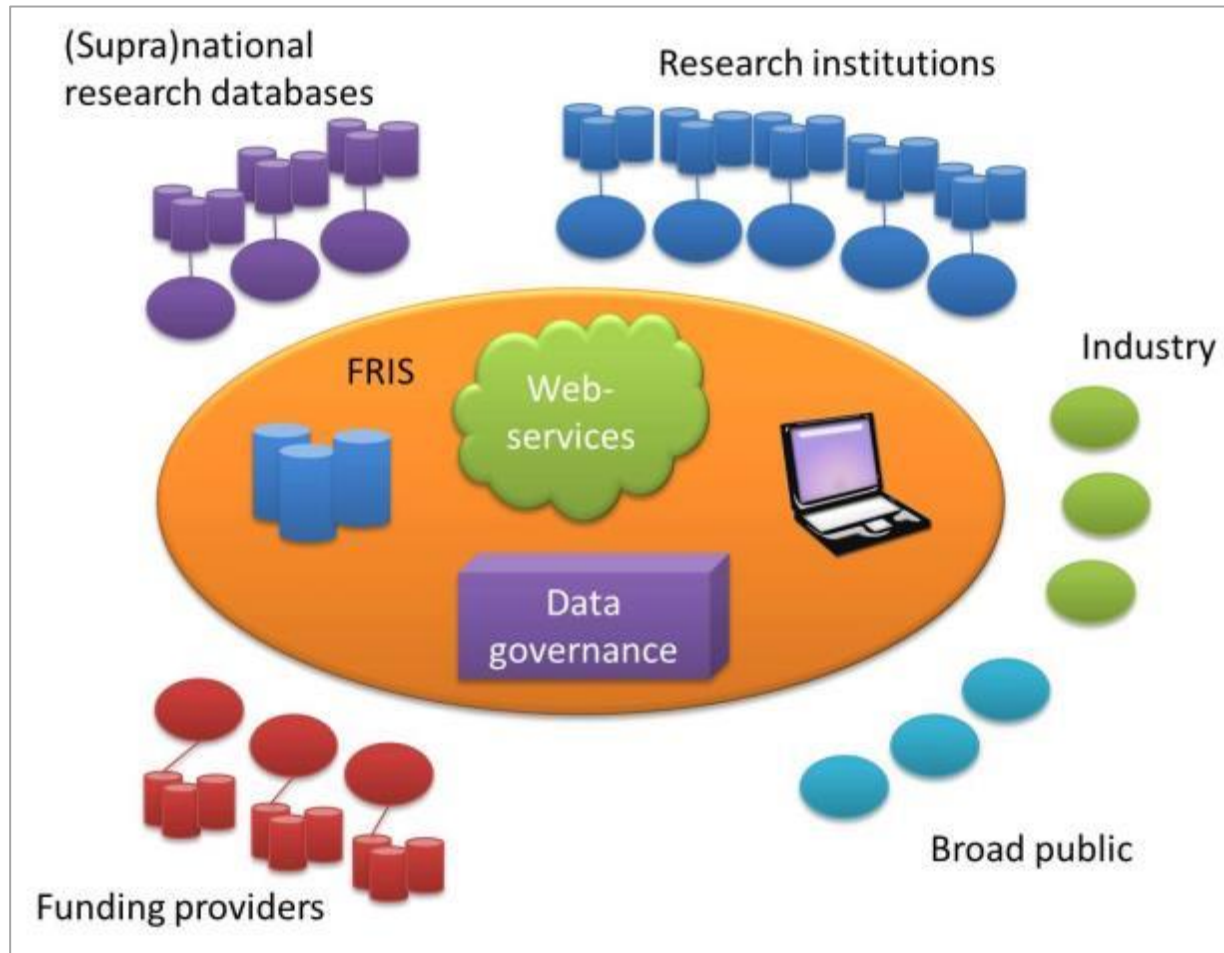
### identified by

Name	Definition	Description	Domain
DOI	DOI is an acronym for "digital o... The DOI Handbook: http://www.d		Identifier Glossary
ISBN	An ISBN is an International Stand...	An ISBN is essentially a product...	Identifier Glossary
UH Identifier	UHasselt handle, neemt de volg...		UH Identifier
VABB Identifier	The unique identifier of a re...		Identifier Glossary
WoS ID	The Identifier of Research Outp...	Synonyms found: ISI, ISI Identifi...	Identifier Glossary

### has property

Name	Definition	Descriptive Example	Domain
Abstract	a short resume		Research Output Glossary
Book Edition	a particular version of a book		Research Output Glossary
Book Series Name	A book series name is the nam...		Research Output Glossary
Book Volume	A volume forming part of a larg...		Research Output Glossary
ISSN	An International Standard Serial...		Identifier Glossary
Keywords	A keyword is a significant word...		Research Output Glossary
Language	The language expressed in a ce...		FRIS Glossary
Page Count	The total number of pages of a ...		Research Output Glossary

# Challenges – Classification governance



- Financial codes
- Science disciplines
- Technology domains
- Publications

# Funding case

---

- Research Funding:
  - Persons, Projects, Consortia,...
  - Obtained via many Funding Sources
    - Organisation
    - Program
    - Grant
- Funding Sources
  - Identified by Funding Codes
    - Functional Classifications - code generations
  - Classified in different ways
    - Mostly by Code Schemes
      - Accounting Codes
      - Money Stream Codes

# New Funding model and classification

## **Funding Classification**

- *No hierarchy, autonumbering*
- *More granular & more dimensions in line with international reporting requirements*
- *Concordance tables for existing international classifications*

## **Semantics**

The screenshot shows a web page for 'H2020 - Frontier Research (ERC)'. It includes a navigation bar, a search bar, and a main content area with a 'Definition' section and 'Descriptive Examples'. The 'Collibra' logo is visible in the bottom right corner.

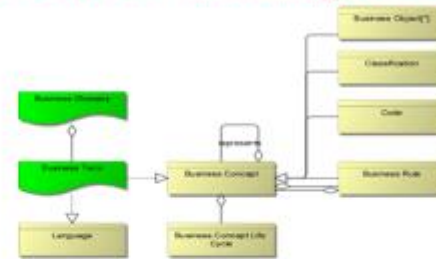
Collaborative manner

## **Classification & Data Governance**



**Reliable, accurate information**

## **Research Funding model**



## **Data Governance Tool**

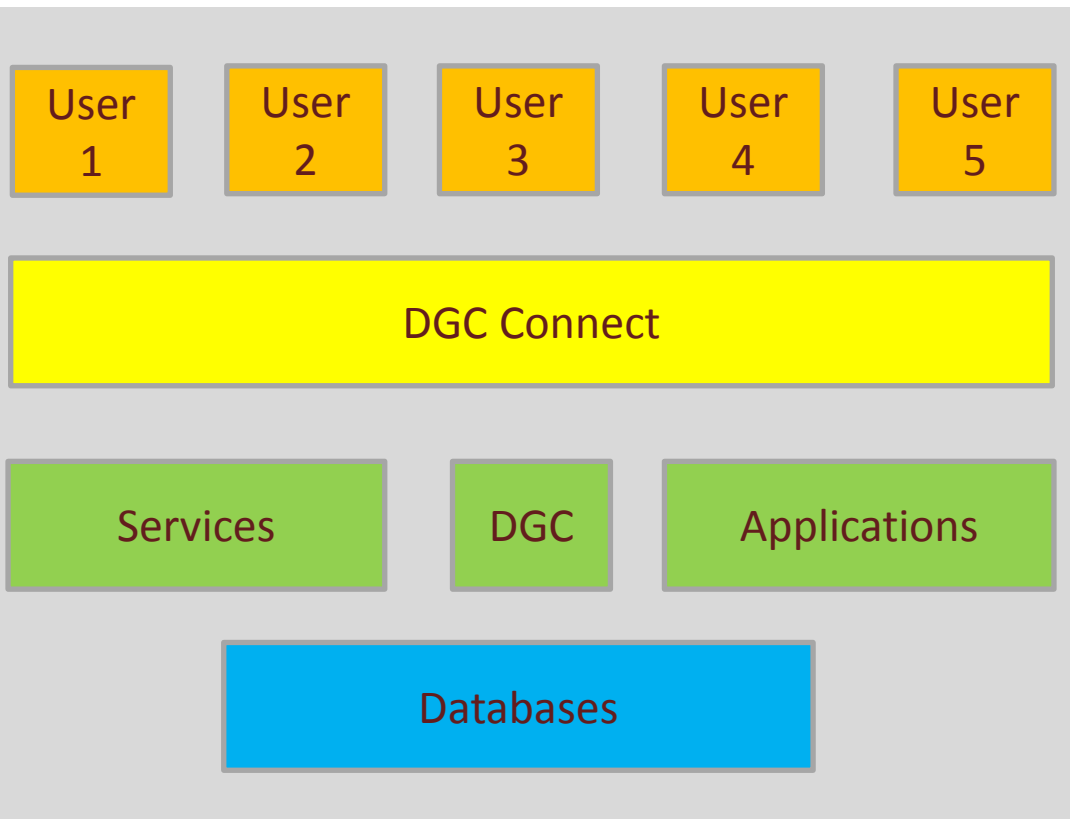
The screenshot shows a 'Data Governance Tool' interface. It features a 'Data Governance List' with columns for 'Data Governance List' and 'Responsibilities'. The 'Responsibilities' section includes a table with columns for 'Who plays which role within this community?' and 'Data Governance List'. The 'Collibra' logo is visible in the bottom right corner.

Machine readable

## **Concordance tables**

- *Mapping to existing (inter)national classifications*

# Semantic interoperable FRIS



## ➤ FRIS Webservice infrastructure

- Reporting obligations
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