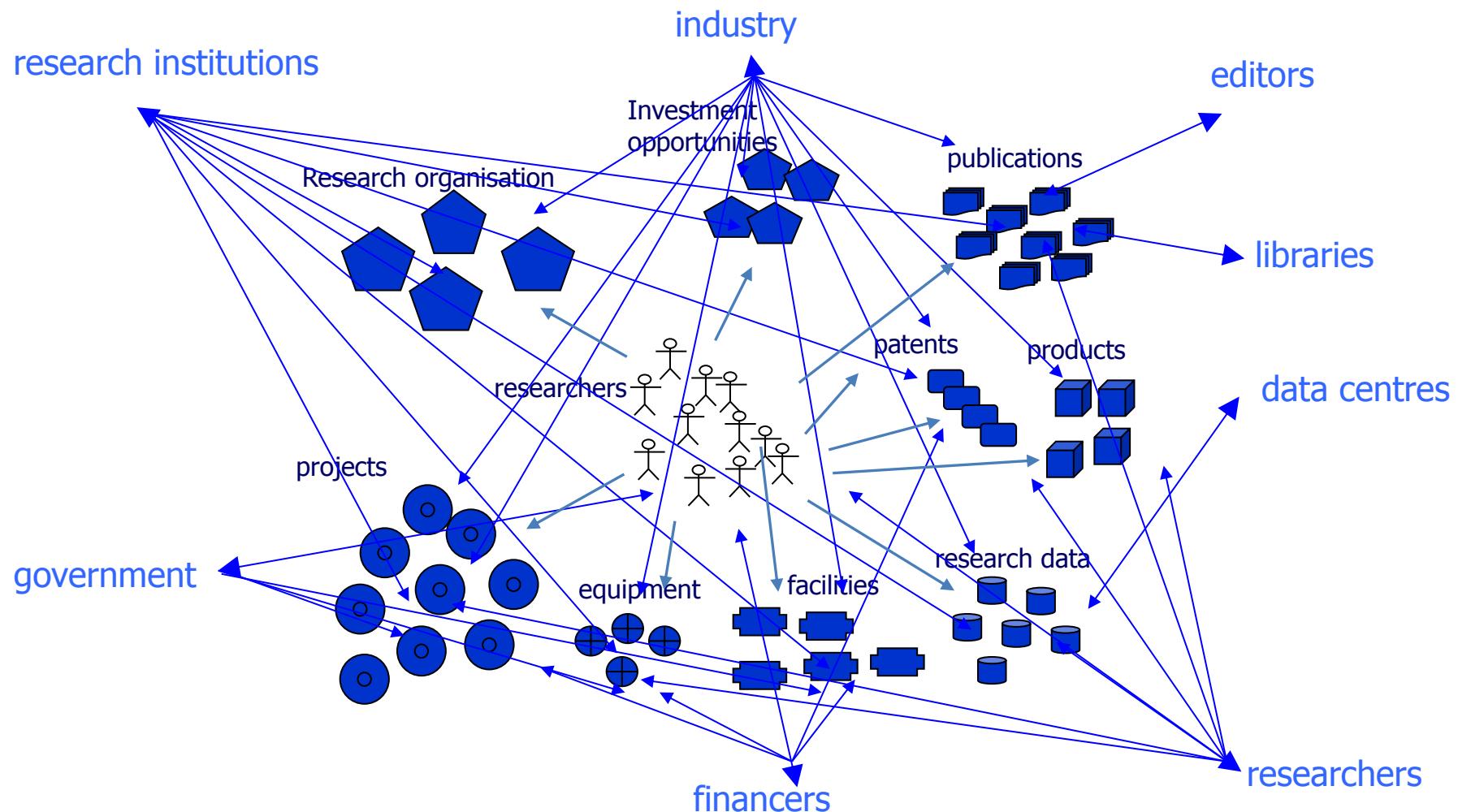


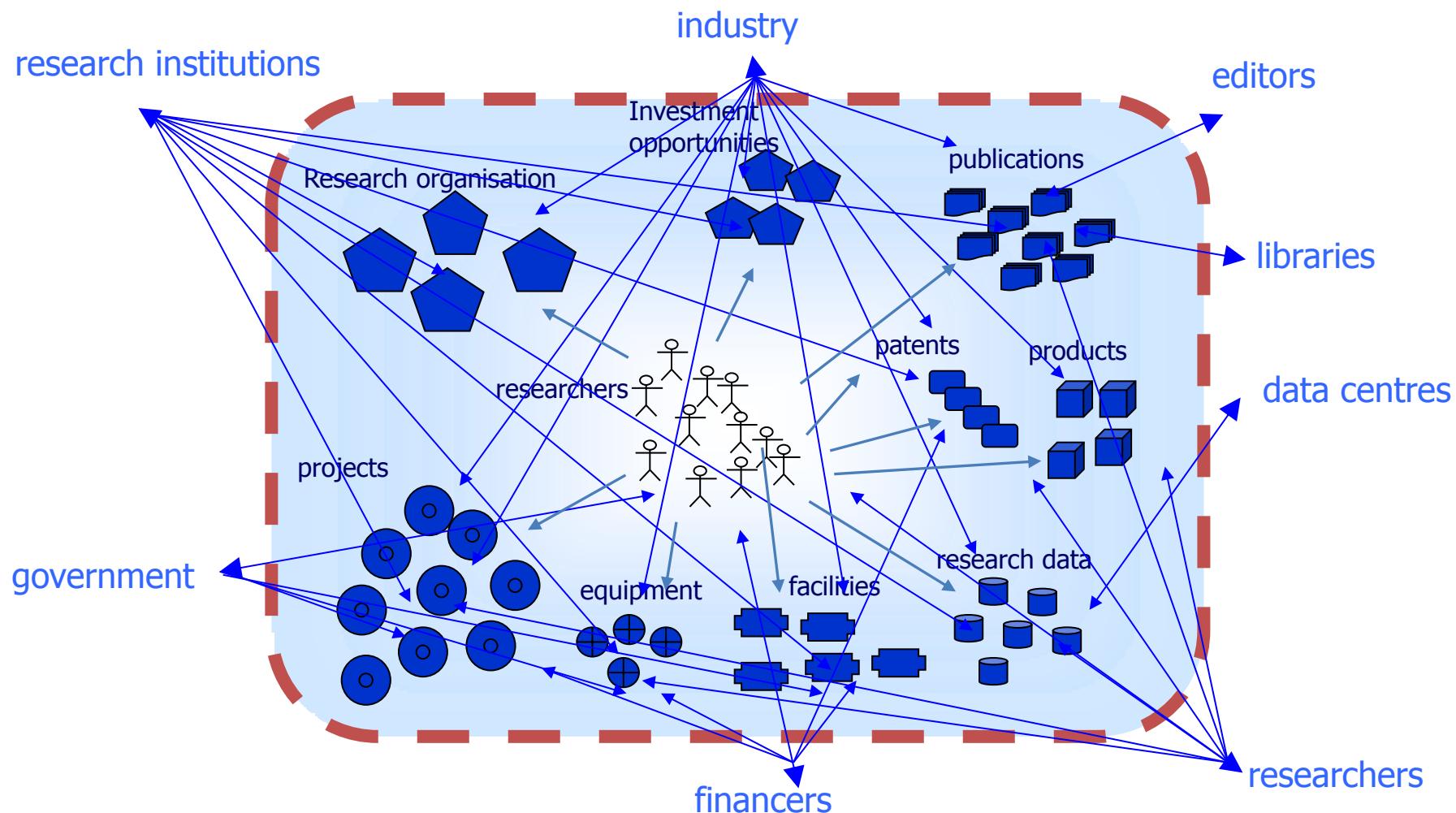
Semantic interoperability of research information systems – data and classification governance

Research Information



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Flanders Research Information Space (FRIS)



Used with the permission of G. Van Grootel, EWI

FRIS needs & drivers

Better Research Information:
correct, actual , complete

Flemish government
Open Data policy

Increase strategic
intelligence

Policy monitoring:
efficient & effective

More information services

Open FRIS data for services
and application development

Maximum reuse of
components and data

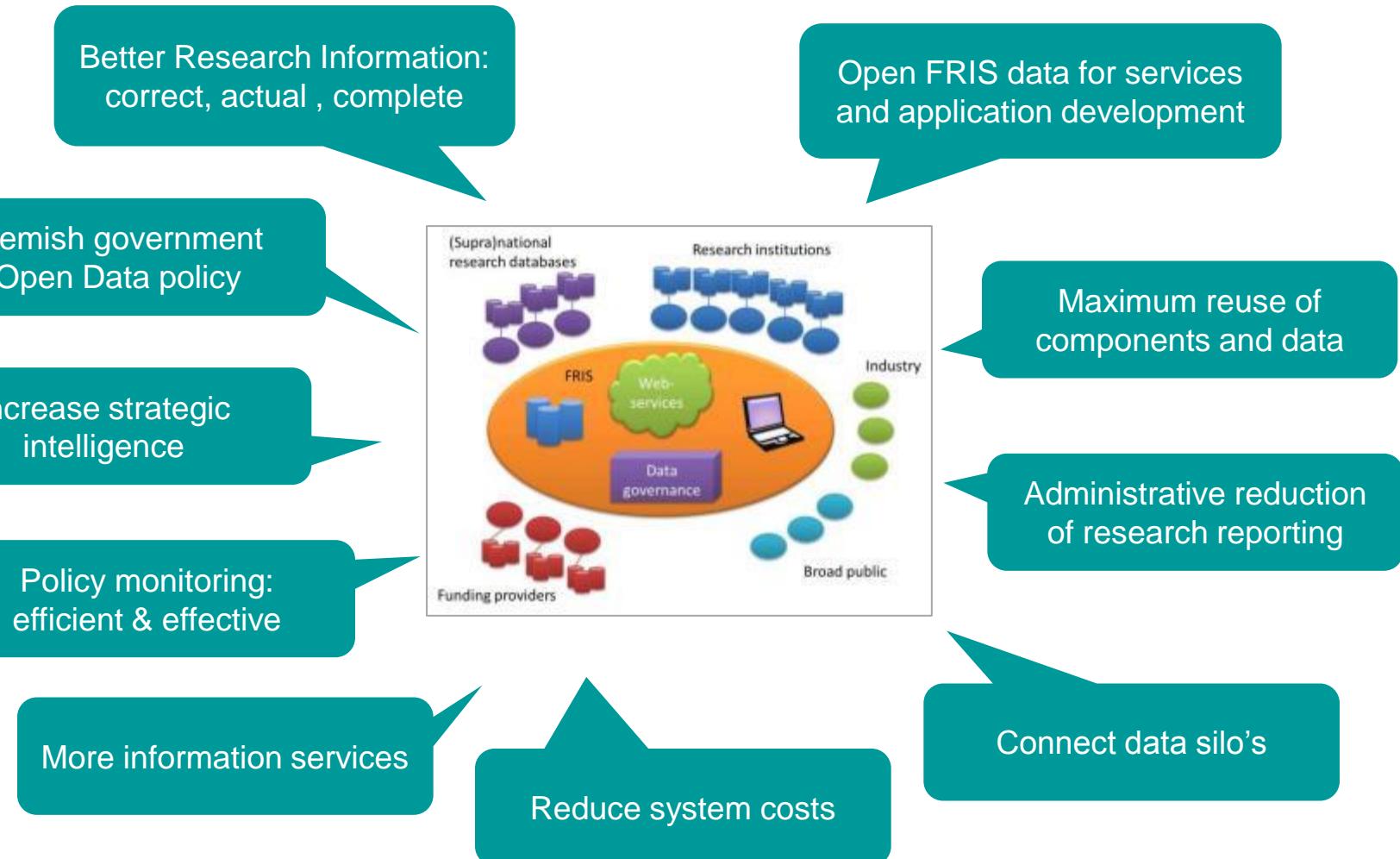
Administrative reduction
of research reporting

Connect data silo's

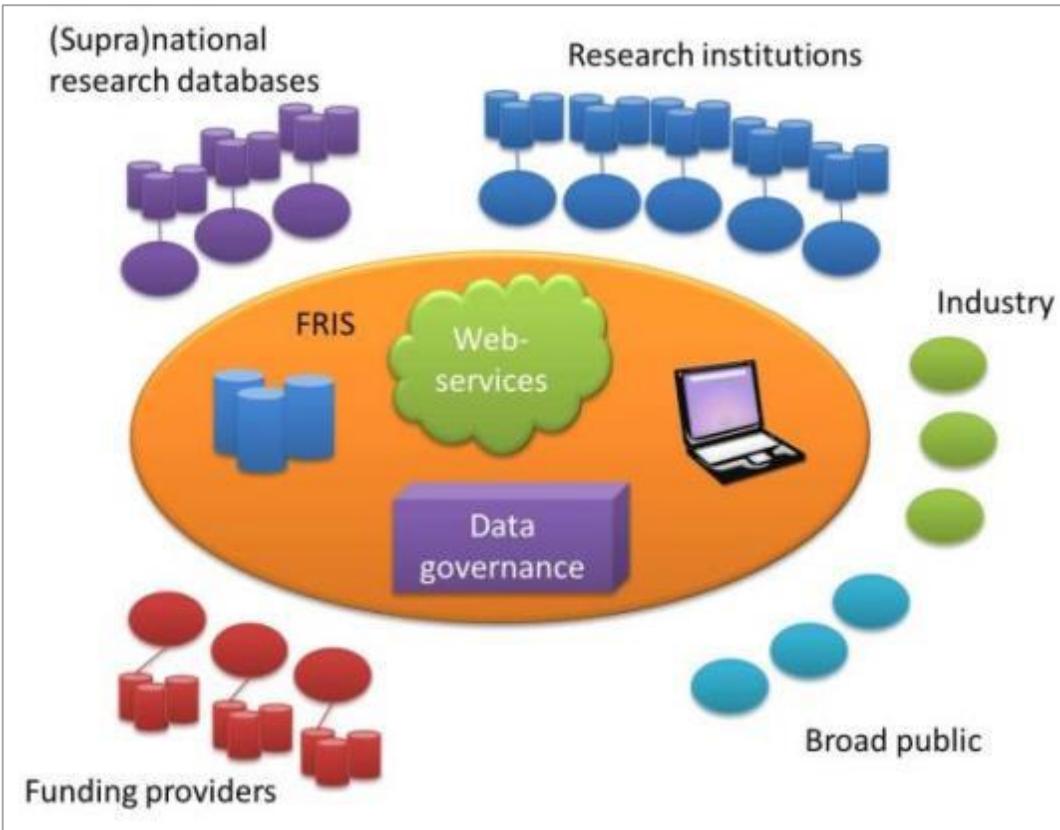
Reduce system costs



FRIS needs & drivers



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



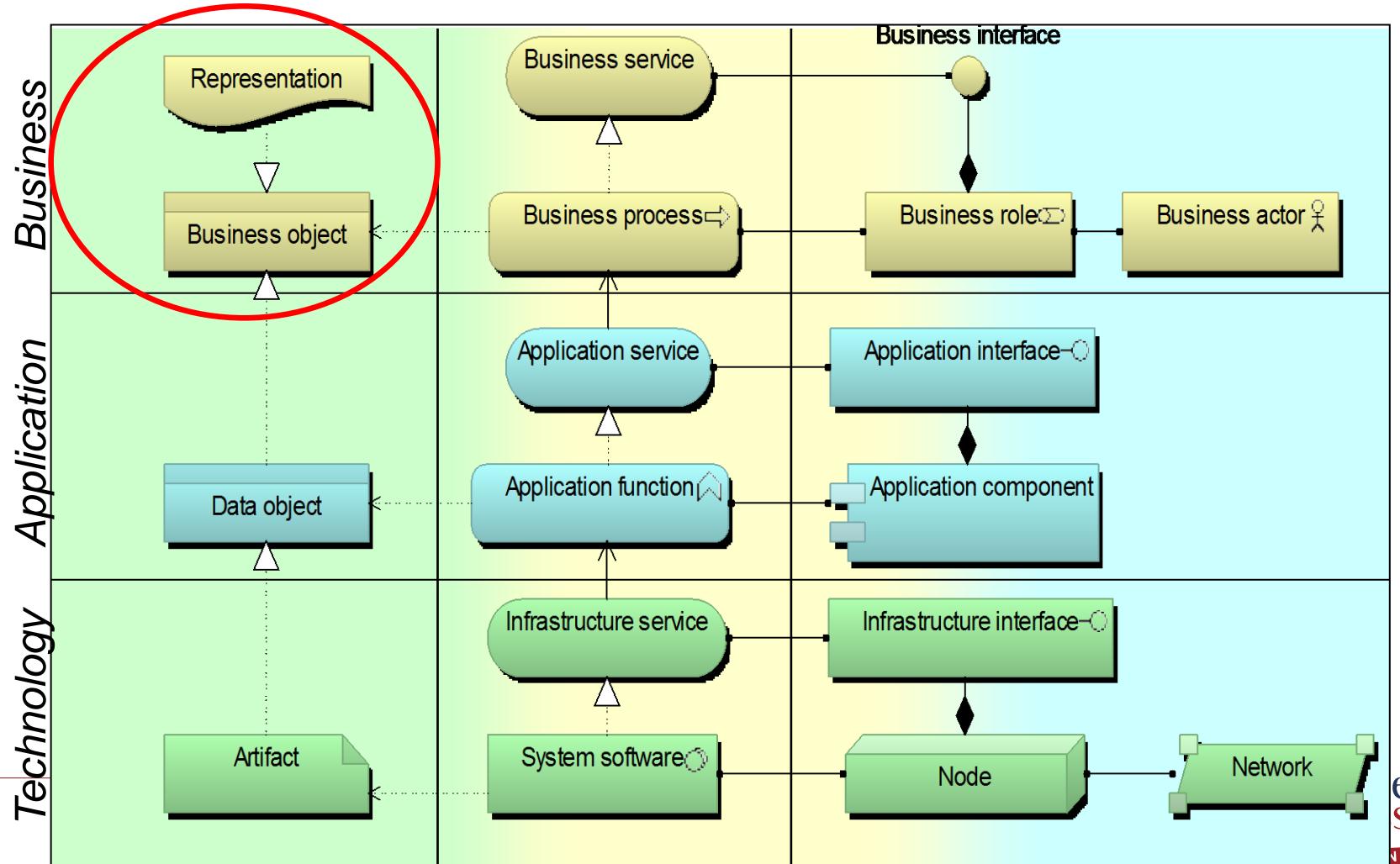
Used with the permission of G. Van Grootel, EWI

Challenges – Data providers

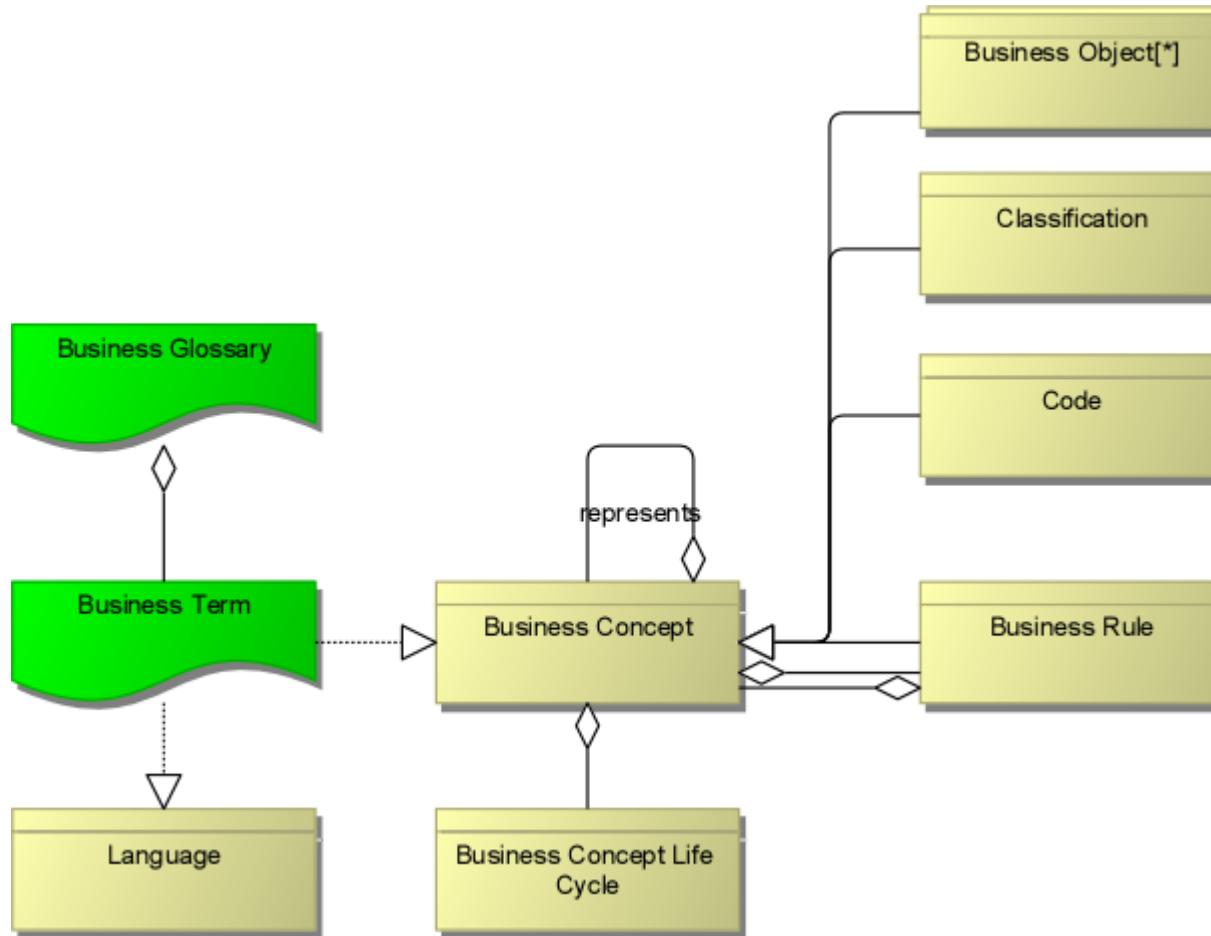
- Multitude of data providers with different environments
 - Self-designed / commercial
 - CRIS system / (integrated) system of databases, repositories
- Implementation of data governance, and creation of a business layer
 - Recording of business concepts, semantics and representations in institutions
 - 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



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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



UH Book

Type: FRIS Business Object Status: Candidate



Collibra

[Edit](#) [Move](#) [Delete](#)[Simple Approval](#) [Vote](#) [Edit Business Term](#) [Funding Program Onboarding Process](#)[Discover](#)

Overview

[+ Add](#)

Hierarchy

Fact Types

Responsibilities

Traceability

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...	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...	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

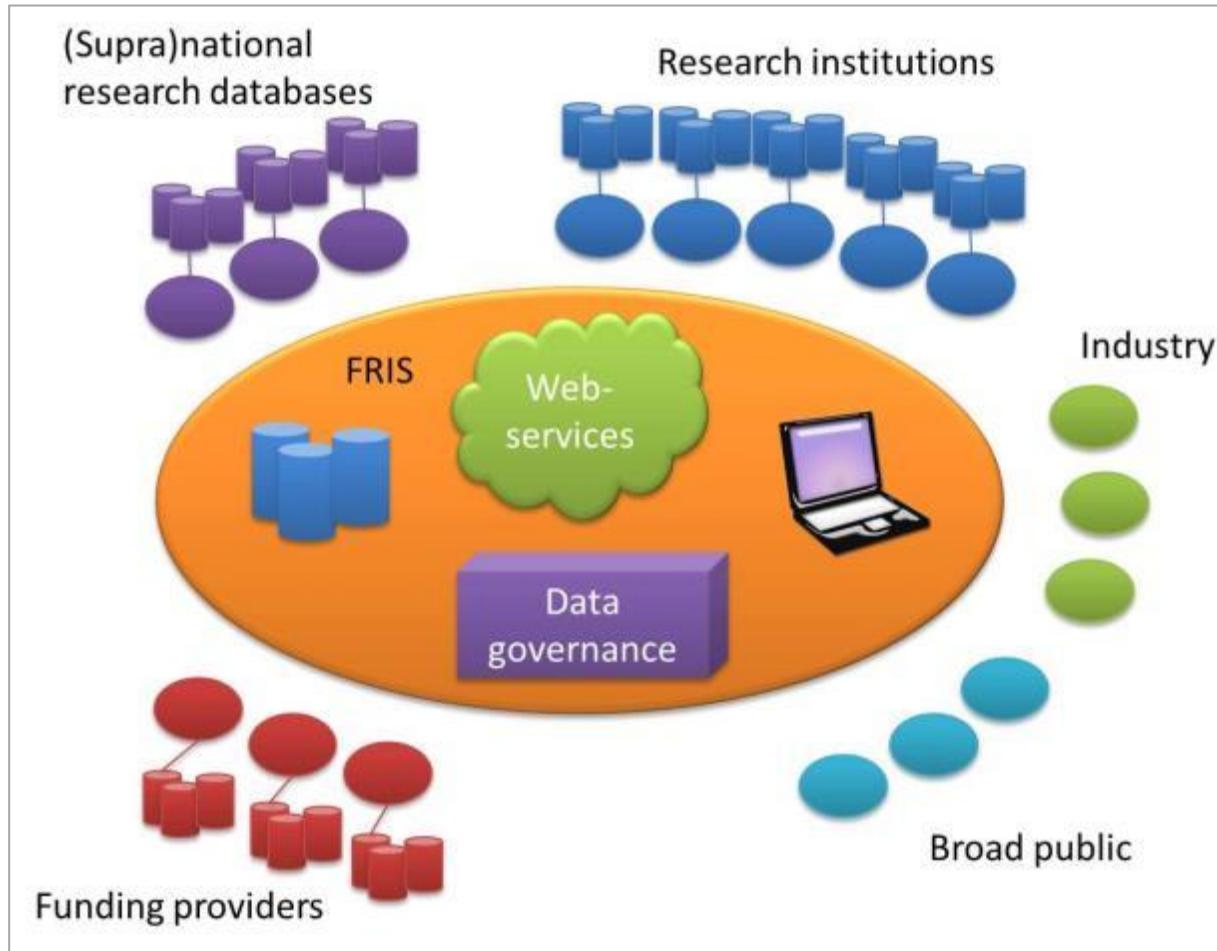
Comments

[+ Add](#)

Activity

Attachments

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

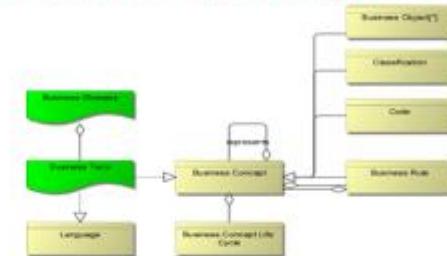
The screenshot shows a web-based application for managing grants. At the top, there's a navigation bar with links like 'Home', 'ECOOM', 'ECOOM Grant - Grants', 'Grants', 'Funding Code Classifications', 'Grant History', 'Create', and 'Logout'. Below the navigation is a search bar with placeholder text 'Search...'. Underneath the search bar, there are several filter buttons: 'Overview', 'ID', 'Hierarchy', 'Funding Type', 'Responsibilities', and 'Traceability'. A large text area titled 'Definition' contains the following text: 'The ECOOM Frontier Research grants operate on a bottom-up basis without predetermined priorities. Applications can be made in any field of research with particular emphasis on the frontier of science, scholarship and engineering. In particular, proposals of an interdisciplinary nature, which cross the boundaries between different fields of research, pioneering proposals addressing new and emerging fields of research or proposals introducing unconventional, innovative approaches and scientific inventions are encouraged.' At the bottom of this area, there are two buttons: 'Descriptive Example' and 'ERC-starting Grant, ERC-Coupling Grant'. On the right side of the interface, there's a 'Collibra' logo.

Classification & Data Governance



Reliable, accurate information

Research Funding model



Data Governance Tool

The screenshot shows a 'Data Governance Tool' interface. At the top, there's a header with 'Comments', 'Activity', and 'Attachments'. Below this, there's a list of items under 'Comments' and 'Activity'. One item is highlighted with a yellow background and has a 'Descriptive Example' section. The example text reads: 'ERC-funded Grants also exist here attachment. This could be added as an example. Note: This is added to the descriptive example section.' There are also 'Next Step' and 'Last Update' fields. To the right, there's a 'Responsibilities' section with a table showing roles like 'Data Governance Lead' and 'Data Steward'. At the bottom right, there's a 'Collibra' logo.

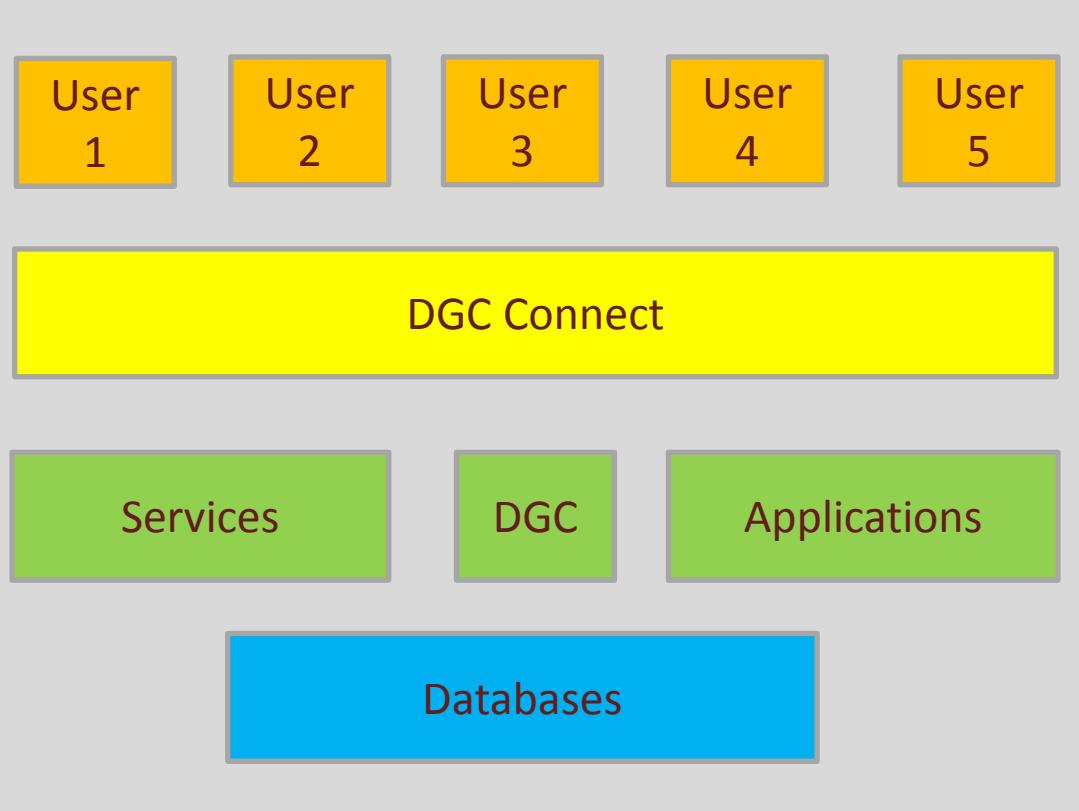
Concordance tables

- Mapping to existing (inter)national classifications

Collaborative manner

Machine readable

Semantic interoperable FRIS



➤ **FRIS Webservices infrastructure**

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



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