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# OpenAIRE

## The Open Scholarly Communication & Scientific Information Infrastructure for Europe

SciencePad PID Workshop @ Geneva, January 30, 2013





# Outline

- **Project basics**
- **Overview of the system**
- **Services & OpenAIRE in practice**
- **OpenAIRE & PIDs**



# OpenAIRE

- **Characteristics**
  - A policy driven project
  - Horizontal infrastructure
- **OpenAIRE 2009 – 2012**
  - Implementing the FP7 OA pilot (links to EC funding)
- **OpenAIREplus 2011 – 2014**
  - Supporting OA in all Europe (links to all European funding)
  - Providing links to data
- **Expanding to Scientific Information Infrastructure**



# Who we are

## Multifaceted consortium

- **Scholarly communication institutions**
  - Gottingen, Ghent, Minho, e-IFL, DTU, SURF – OA policies, digital library services
- **Technological institutions**
  - CNR-ISTI, UoA, ICM – data infrastructures
  - Bielefeld Library IT, CERN Digital Library Services – library IT & digital library
- **Scientific communities**
  - EBI (life sciences), DANS (social sciences) BADC (climate)
- **National Open Access Desks**



**Human**  
**PARTICIPATORY**  
**DESIGN**  
**Technical**

# Human infrastructure

Research is globalizing, policy implementation is at the local level



All member states

**Challenge - Aggregate at a global level this local information, taking into account socio-cultural & regional differences of the communities involved**

- **32 National Open Access Desks**
  - Diverse national research environments
- **OA advocacy through targeted activities**
  - Reach out to researchers, organizations, infras
    - Helpdesk, workshops, training
- **European network of people sharing experiences & best practices**

# Technical Infrastructure

Multifaceted endeavour

**24x7  
OPERATIONAL  
SYSTEM SINCE  
2010**

*Number of unscheduled  
downtimes = 0*

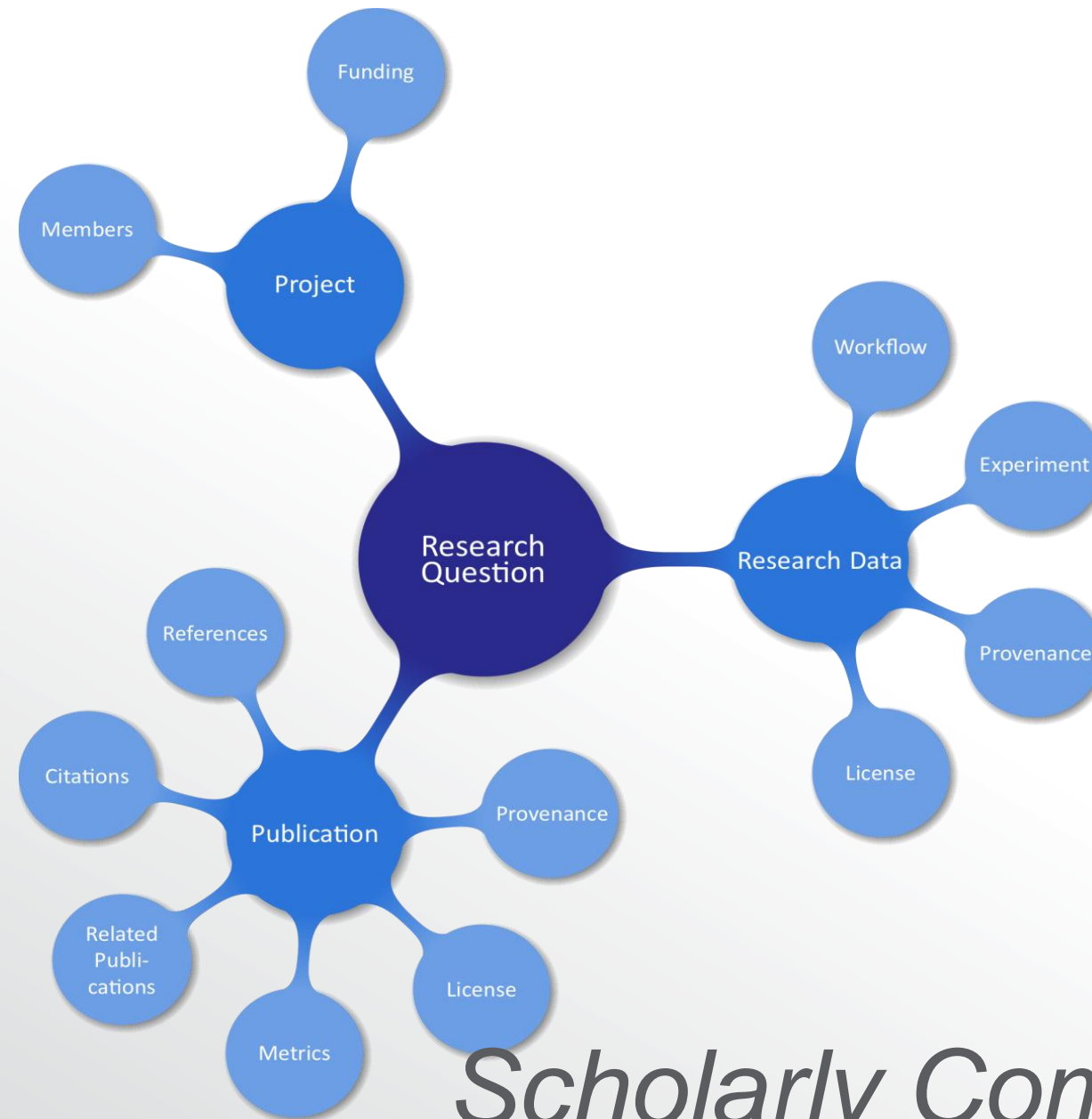
Building on **existing efforts** in the  
scholarly communication and OA  
domain

- Publication and research data repositories/data infrastructures
- Open Access Journals
- Funders' systems
- Authoritative registries
- Usage data from repositories
- 3<sup>rd</sup> party services

# ARCHITECTURE



# The “new” publication

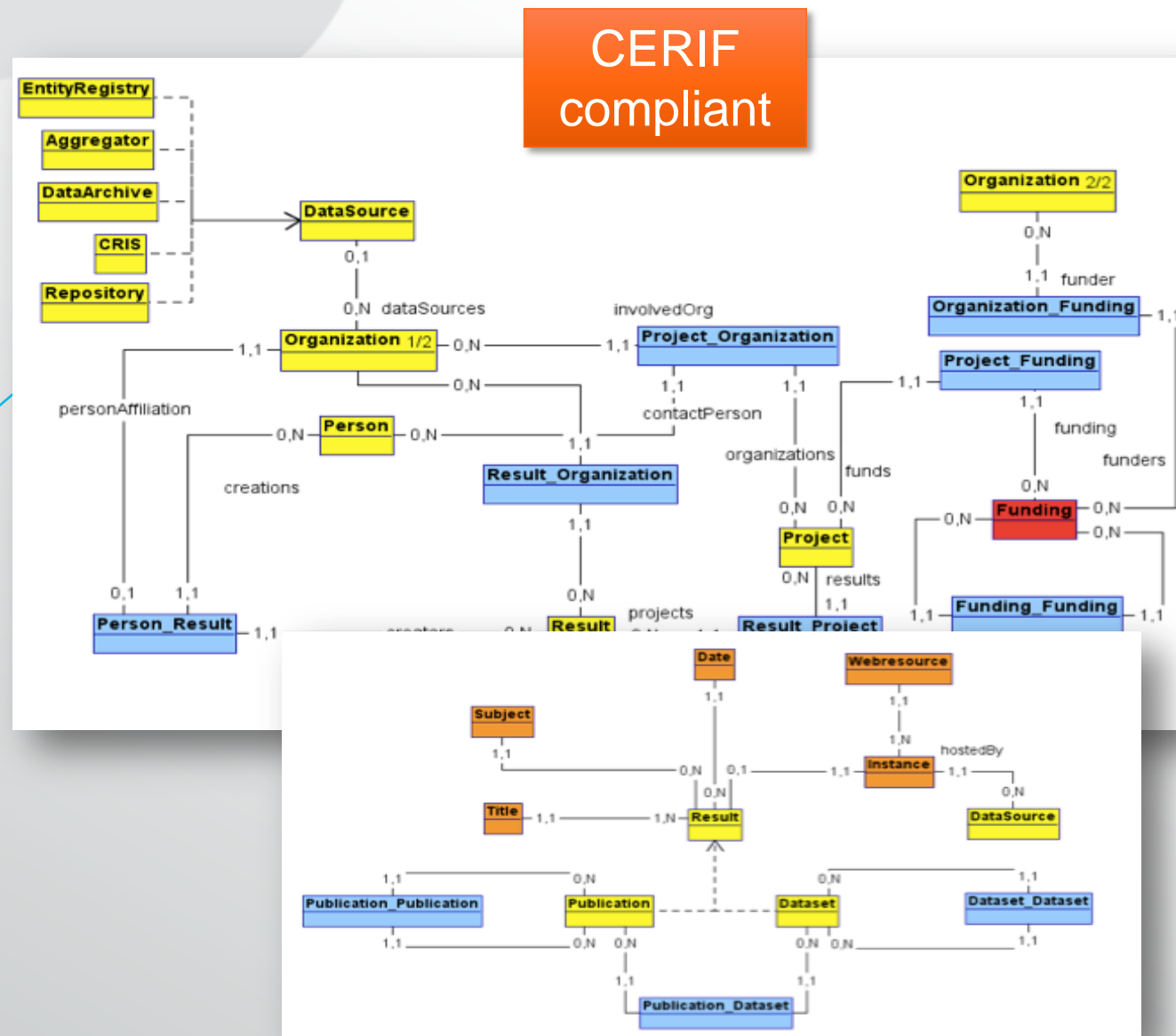


*Scholarly Communication Model in transition  
Information in Context*

# The OpenAIRE data model



## Main entities and relationships



- Research results & licences
  - Publications
  - Research data (datasets & databases)
  - ....
- People
  - Authors, PIs
- Research organizations
- Funders and funding schemes
- Data Sources
  - Repositories, aggregators, registries, CRIS



Get support (NOADs)



Deposit Publications & data



Visualize - Manage Enhanced Publications



Search & Browse



Curate & collaborate

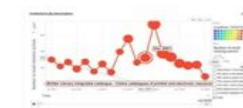


Linked Content Statistics

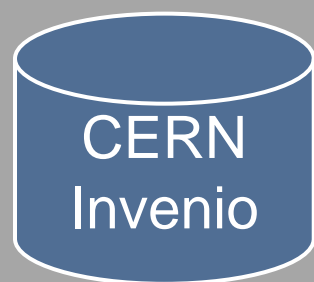


Research impact Citations, usage statistics

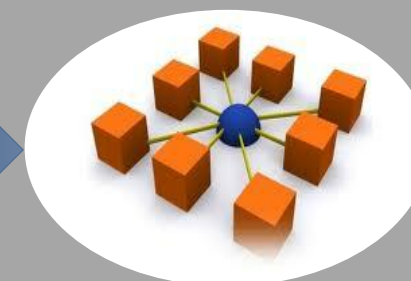
+++



OpenAIRE HUB



APIs



Metadata on publications Usage data

6,500,000 OA publications  
345 validated repositories

Guidelines for Publications



Publication repositories  
Institutional & Thematic  
Open Access Journals

Guidelines for Funding Info

CRIS Systems

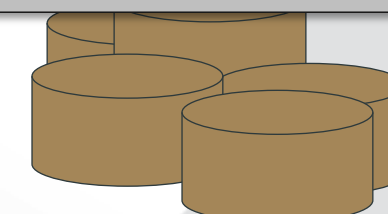


ResearchID (ORCID, ..)  
OpenDOAR  
...

Metadata on data

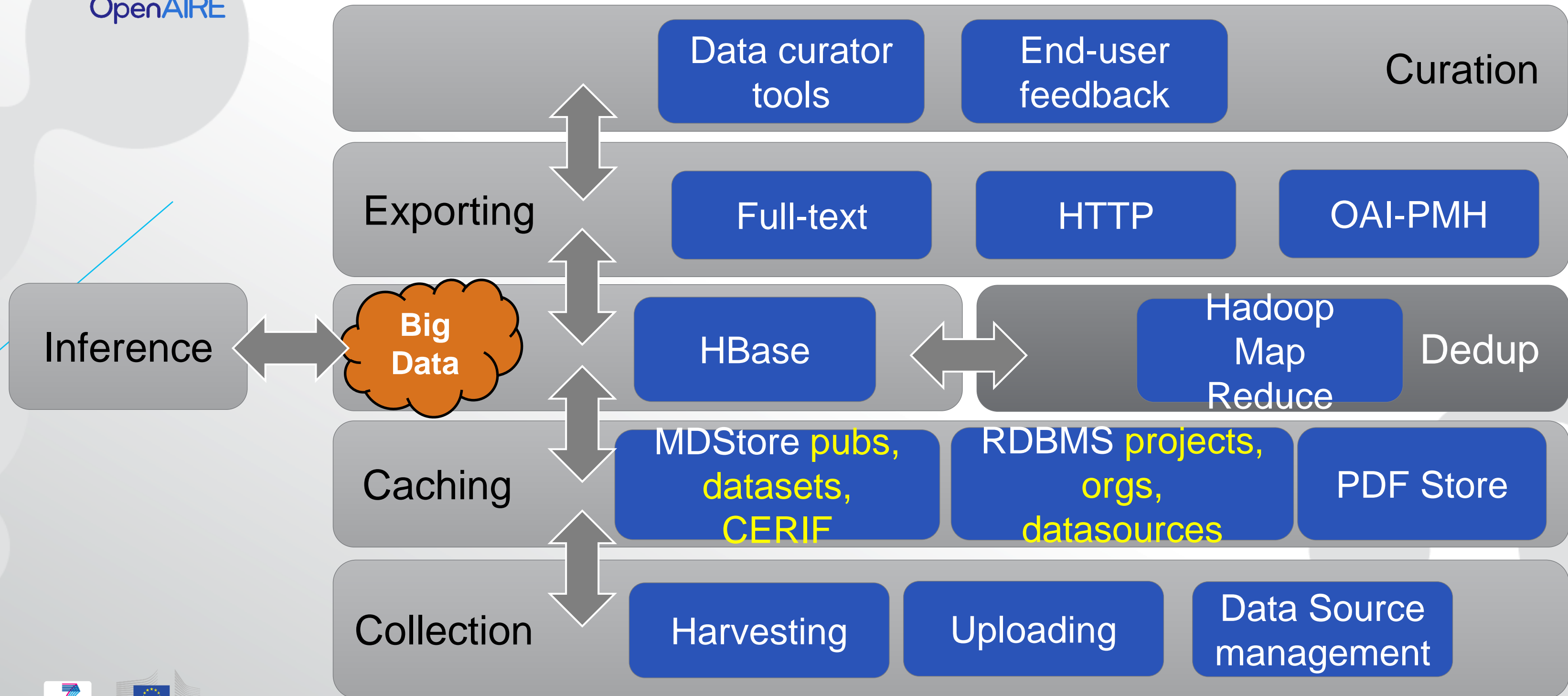


Guidelines for Data Providers



Data repositories  
Data Journals

# Data Management Services



# Some numbers

... to appear in the next months

- **Publications**
  - ~ 6,600,000 OA + non-OA if related to a project
- **Persons**
  - ~ 60,000,000
- **Projects**
  - around 26,000 from FP7 and WT
  - + member states...
- **Organizations**
  - ~50,000 from OpenDOAR and CORDA

# SERVICES

# Researchers

...except for the usual benefits of Open Access

Are you a  
**Researcher?**

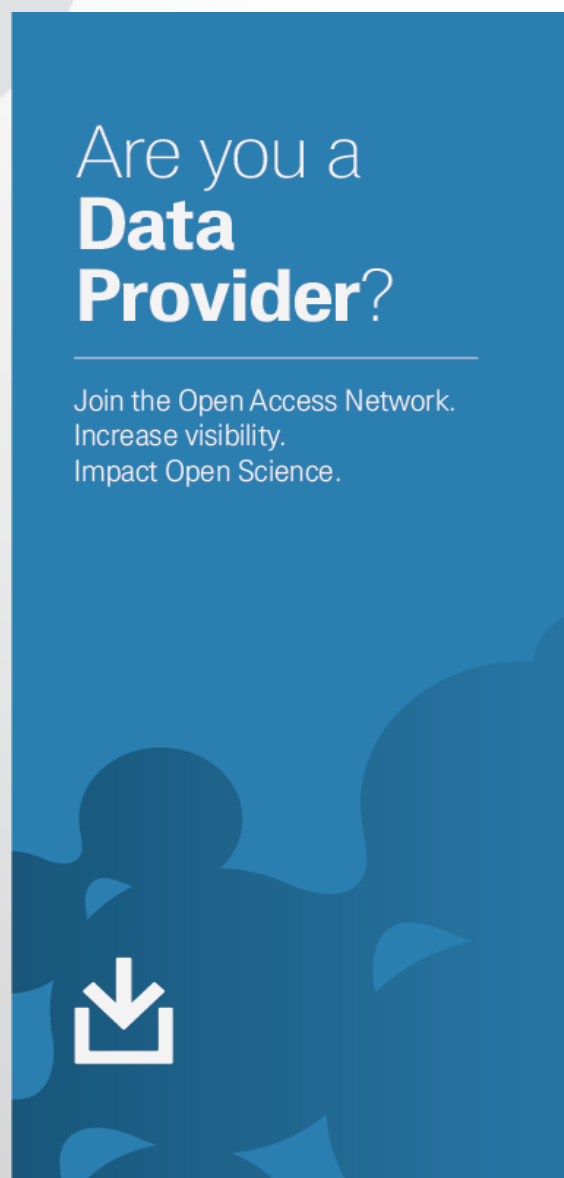
Deposit Open Access.  
Share results.  
Reuse research output.



- One stop-shop for deposition – **publications & data**
  - Identify local or thematic repository
  - Deposit in CERN repository for “homeless” researchers - ZENODO
- Mechanisms to link publications to **projects & data**
  - Harvesting and aggregation
  - Manual - through the portal
  - Automated - through crawling and text mining (repositories, ArXiv, UKPMC, Lib DBs, ...)
- Alerts and Notifications
- Online curation

# Data Providers

... interoperation through internationally accepted guidelines



Are you a  
**Data  
Provider?**

Join the Open Access Network.  
Increase visibility.  
Impact Open Science.



- **Different levels of compatibility**
  - Publication, funding, research data
  - Usage statistics (impact)
- **Get back enriched information**
  - Links to funding and research data
  - Aggregated statistics
- **Enrich content through notifications about publications in other repositories**



# Research Managers

tools to measure impact; Aggregated statistics for research

Are you a  
**Research  
Coordinator  
or Project  
Manager?**

Report open access publications.  
Monitor, disseminate research  
results.



- **National funders/infras**
  - What is the output/impact of your country
- **Institutional research admins**
  - Link to CRIS systems
  - Output and impact of institution
- **Open Access evaluation**
- **Statistics on projects/scientific areas/countries/institutions**
- **Advanced tools for science trends**

# OPENAIRE IN PRACTICE

# A publication view

## Developing Camille, a text editor for Rodin

Bendisposto, Jens, Fritz, Fabian, Jastram, Michael, Leuschel, Michael, Weigelt, Ingo, (2001)  
JOHN WILEY & SONS LTD

English

Computer Science, Software Engineering

user tag1 , user tag2

DOI, PubMedID, OtherID

Initially, the Rodin platform for Event-B did away with a textual representation for models. In this paper, we explain why a textual representation was required after all and we present the semantic-aware text editor Camille for Rodin. We explain the design choices of Camille, such as splitting the syntax into two-levels for machine and formula syntax. We also describe the challenges, such as synchronizing the textual representation with the Rodin database, and how they were overcome using an EMF abstraction layer. Copyright (C) 2011 John Wiley & Sons, Ltd.

Related Data

Related Publications

Metrics

### Related Data

No related data. Stay tuned!



### Download from repositories

- ArXiv
- Bielefeld University Repository

### Funded by projects

- DEPLOY (FP7/ Cooperation / Information and Communication Technologies)
- DRIVER (Wellcome Trust/Medicine & Histoty)

### Cite this article

ACS - American Chemical Society

### Share - Bookmark



# Going beyond FP7 and EC

1 Select one or more projects    2 Identify & select Publications    3 Set copyright information    Finish

Start typing the **project title, acronym or grant agreement number**

EC/FP7  
 EC/H2020  
 Wellcome Trust  
 DFG

**Projects**

- EC/FP7/Elisa (347469)
- EC/FP7/Chess (598764)
- WT/Phys Med/Mitic (93687)

**Browse**

|                          |                      |                       |
|--------------------------|----------------------|-----------------------|
| <b>Document Language</b> | <b>Project</b>       | <b>Funder</b>         |
| English (507823)         | UNKNOWN (4072)       | FP7 (43154)           |
| Undetermined (372027)    | HADRONPHYSICS2 (538) | Wellcome Trust (4012) |
| French (106177)          | ELISA (435)          |                       |
| Spanish (62690)          | UNILHC (416)         |                       |
| Italian (41170)          | MASSTEV (302)        |                       |

# Support multiple types of data sources



Filter by

**Repository type**

- Institutional Repositories
- Thematic Repositories
- Data Archives
- Other

**Country** [select all | none]  
All 30 countries selected

**Subject** [select all | none]  
All 12 subjects selected

**DSpace @ Cambridge**  
University of Cambridge  
Subject: Multidisciplinary  
Content: Journal articles  
URL: <http://www.dspace.cam.ac.uk/>

Date: Dec 17, 2012

Filter By

Pub Repositories     OA Journals     Aggregators     Data Archives

Start typing to filter results

| Name                      | Country     | Institution          | Documents |
|---------------------------|-------------|----------------------|-----------|
| Zenodo                    | Switzerland | CERN                 | 120       |
| Bielefeld Academic Server | Germany     | Bielefeld University | 1257      |

# Working with PIDs

## Step 2: Identify & Select Publications

Projects:

CHES

Publications:

No selected publications. Use the form

### Identify Publication

Enter ORCID (eg. 0000-0002-5914-6747)

Source:

- Open Access Publications (Searching)
- DOI (Resolved via [crossref.org](http://crossref.org))
- ORCID (Resolved via [ORCID](http://ORCID))

Proceed

A deep validation process for open document repositories

Manola, Natalia (2008)

Select

A functionality perspective on digital library interoperability

Manola, Natalia (2010)

Select

A survey of context-aware cross-digital library personalization

Manola, Natalia (2011)

Select

An infrastructure for managing EC funded research output: The OpenAIRE project

Manola, Natalia (2010)

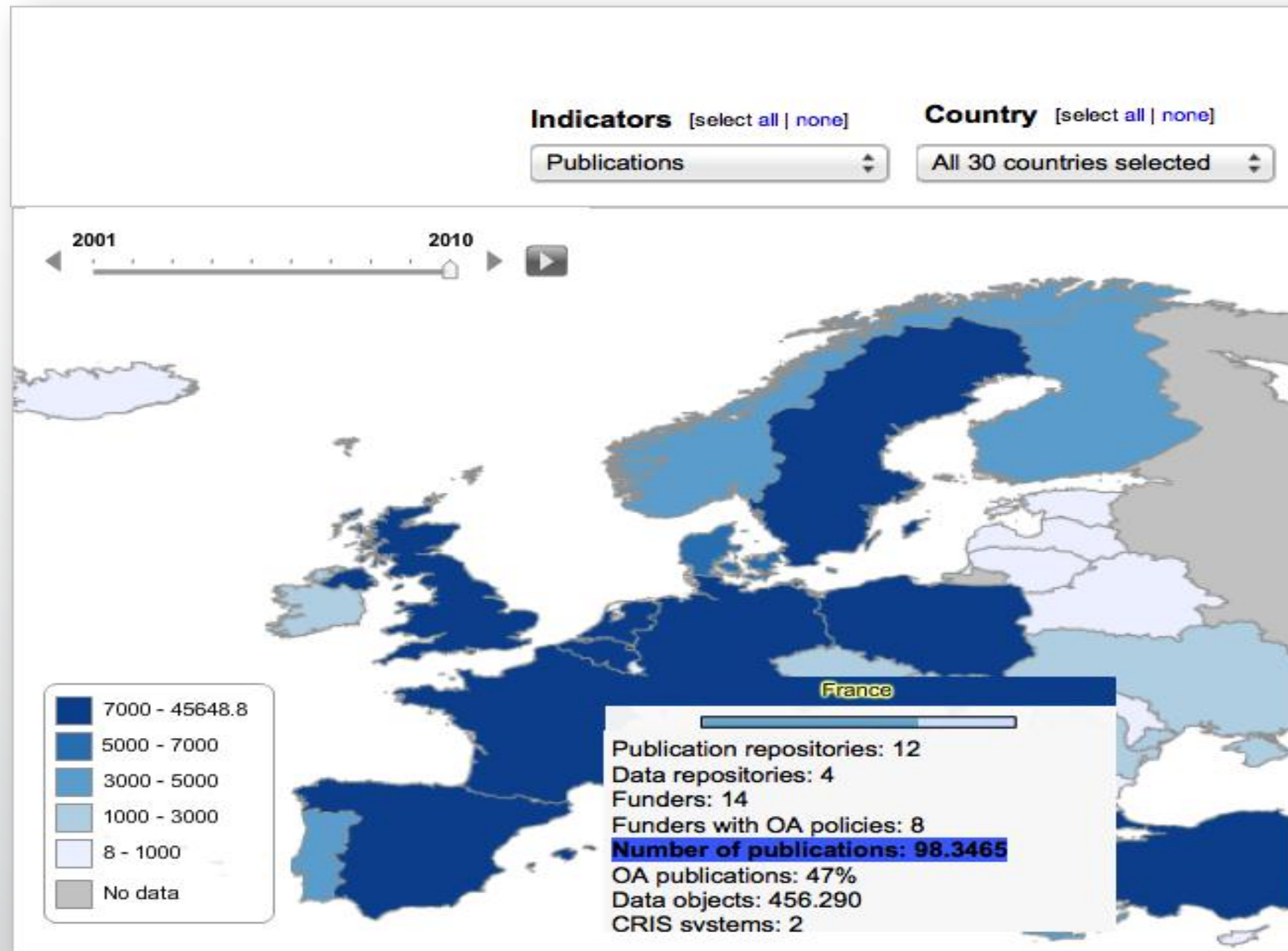
Select

Architecture for a Collaborative Research Environment Based on Reading List Sharing

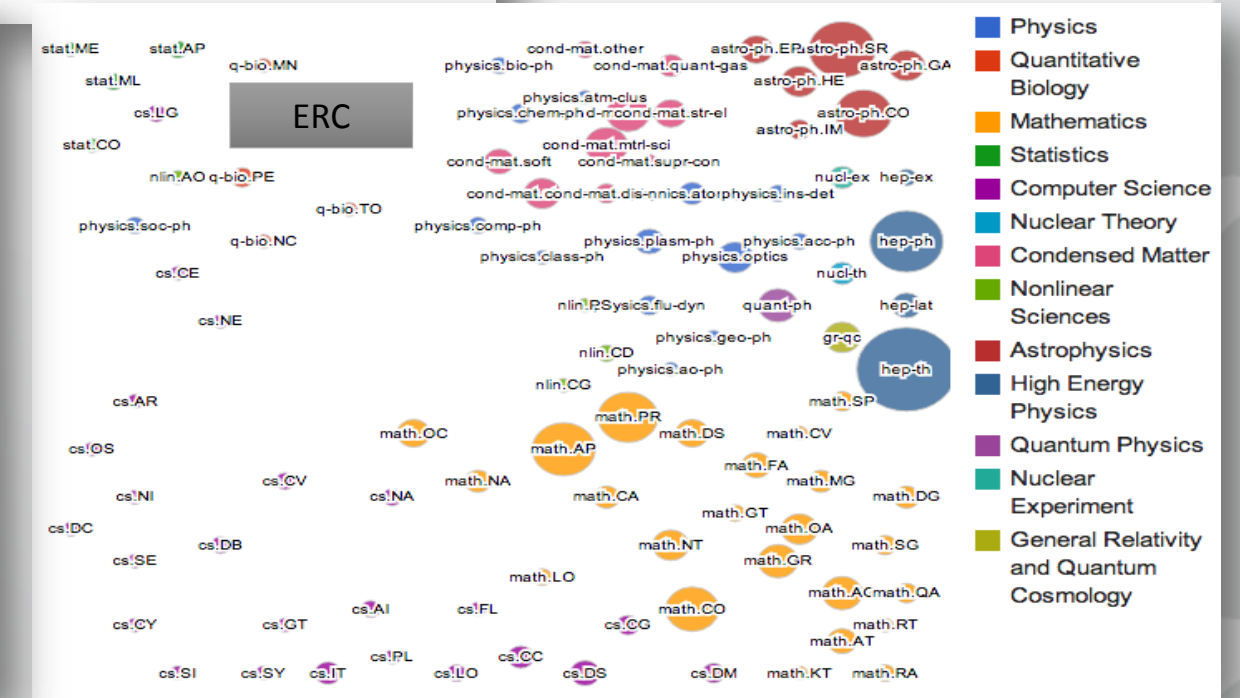
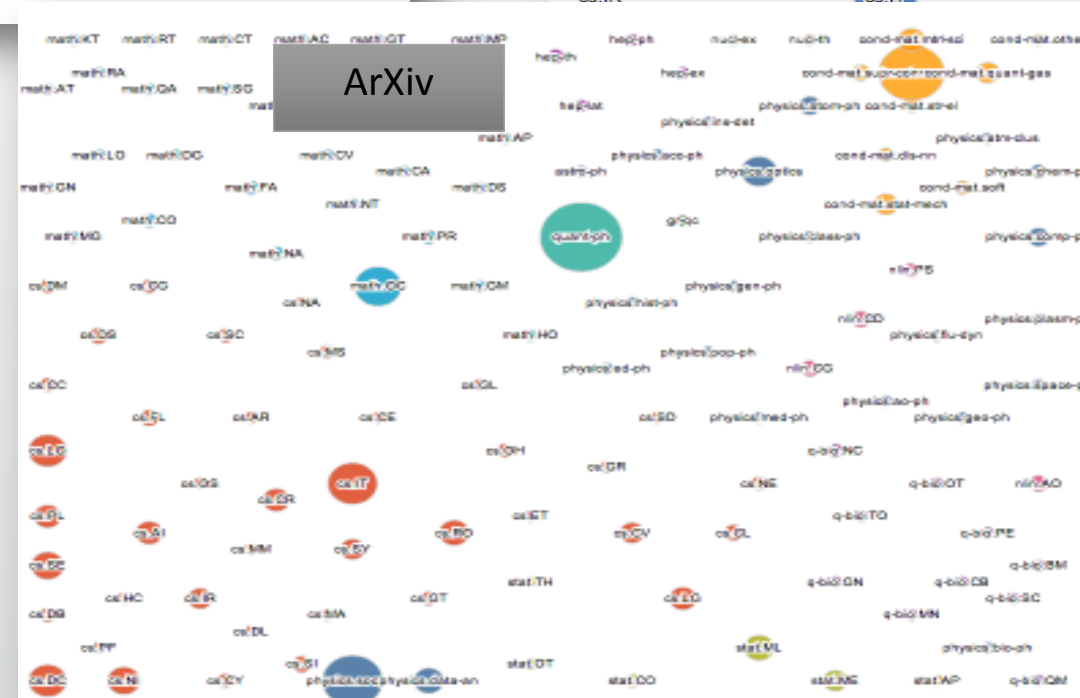
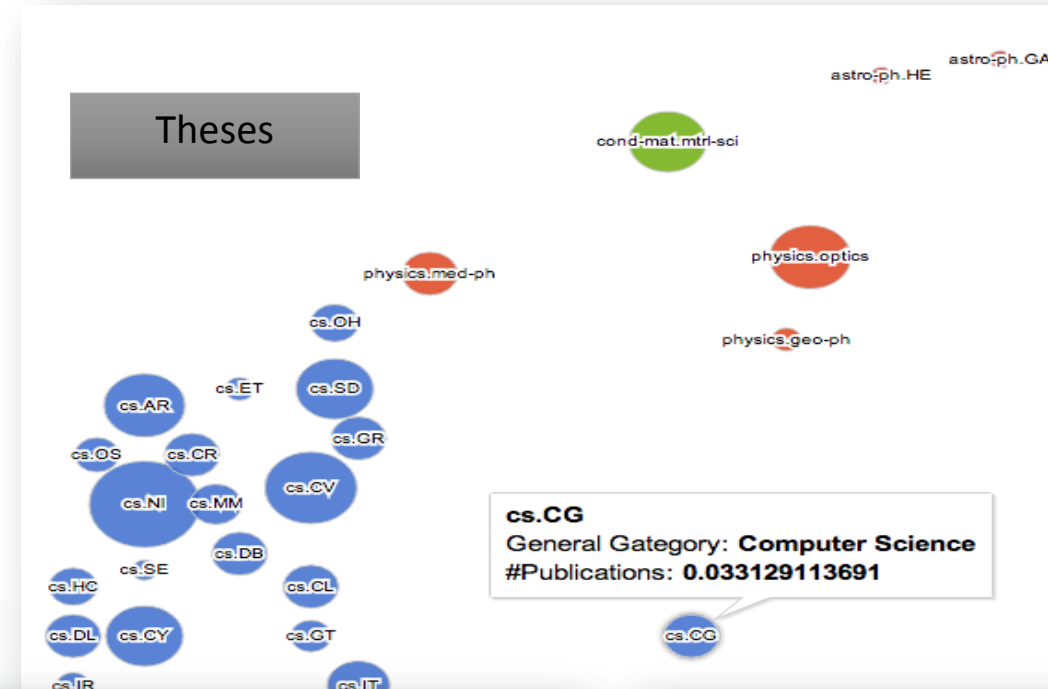
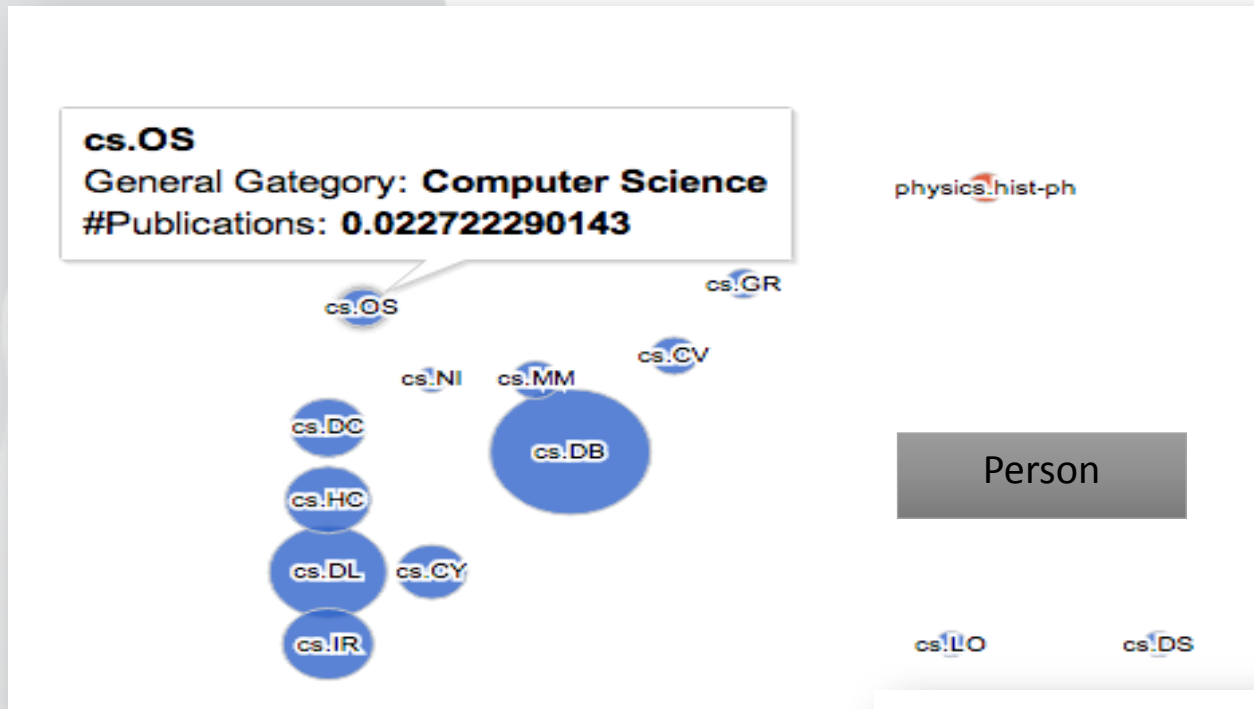
Manola, Natalia (2010)

Select

# Aggregated, visual statistics



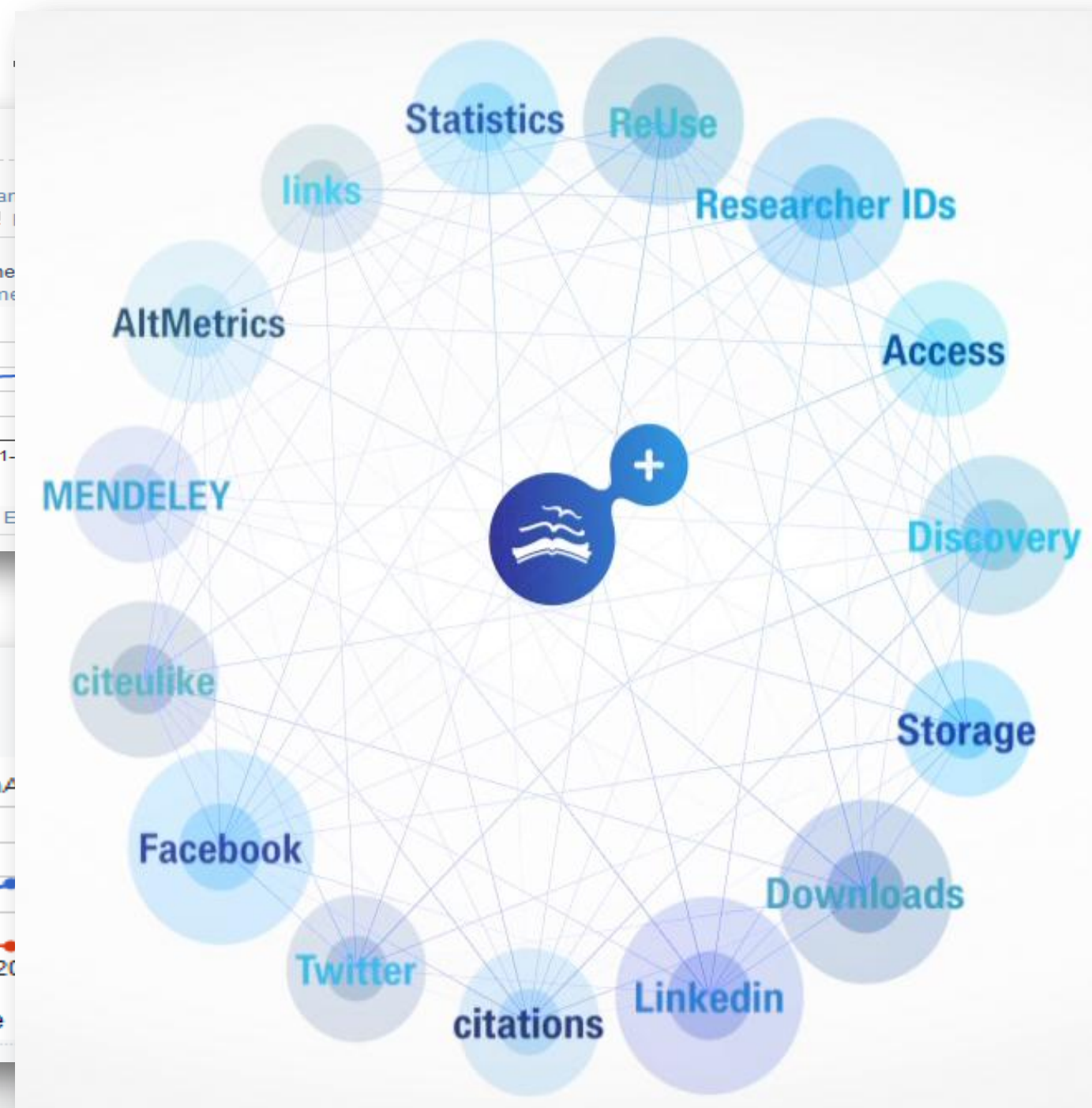
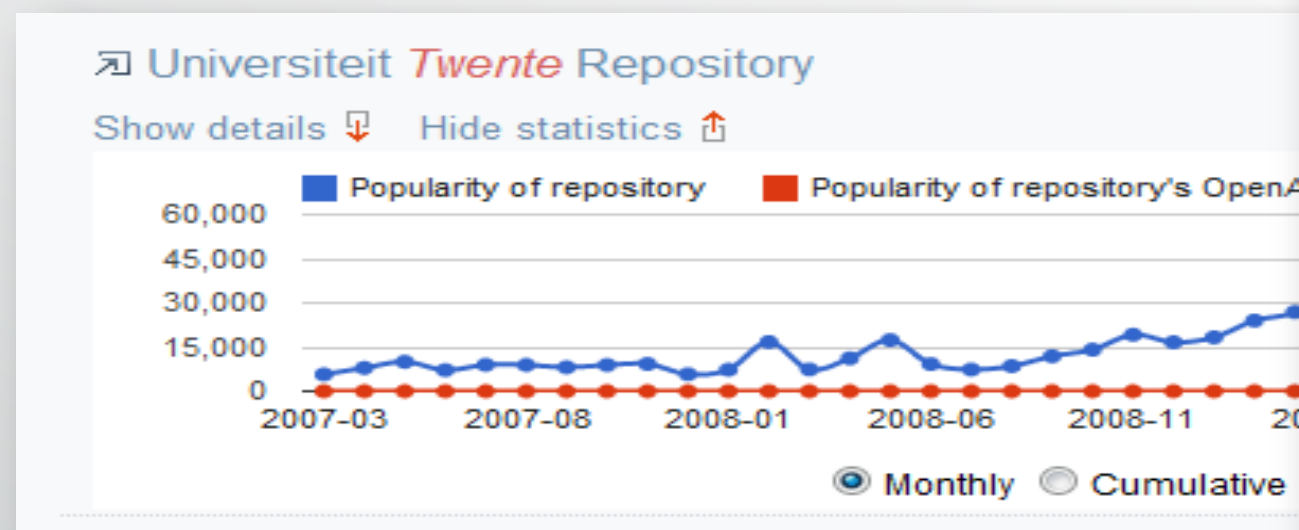
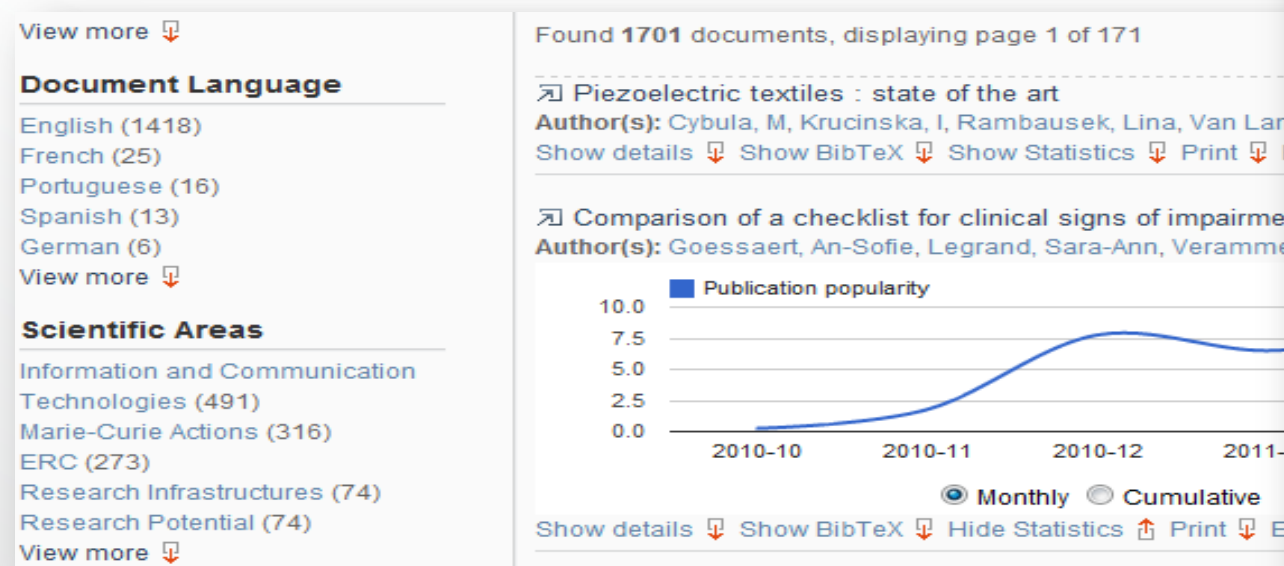
# Statistics based on advanced classification





# Usage statistics

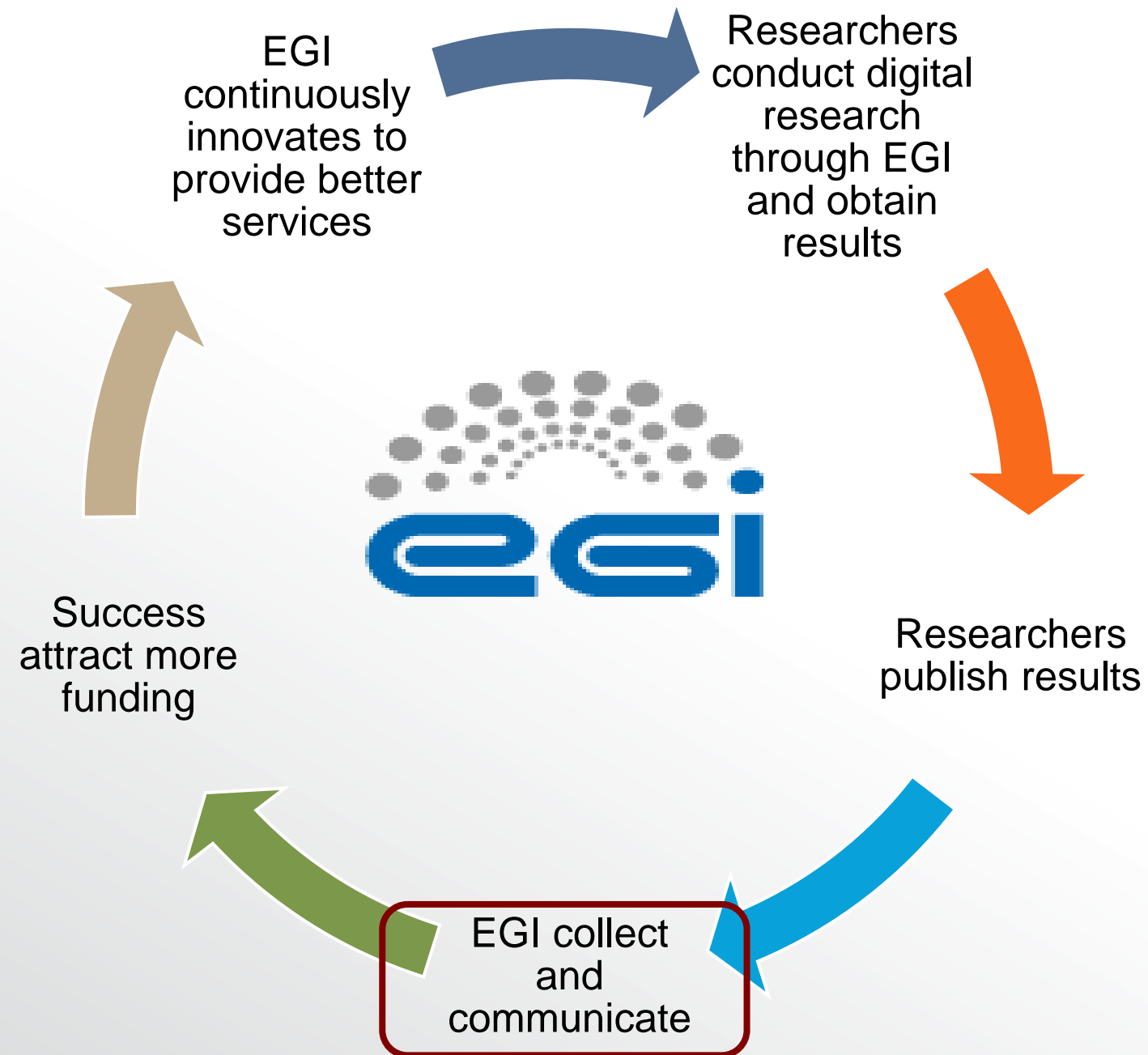
... alternative measures of impact



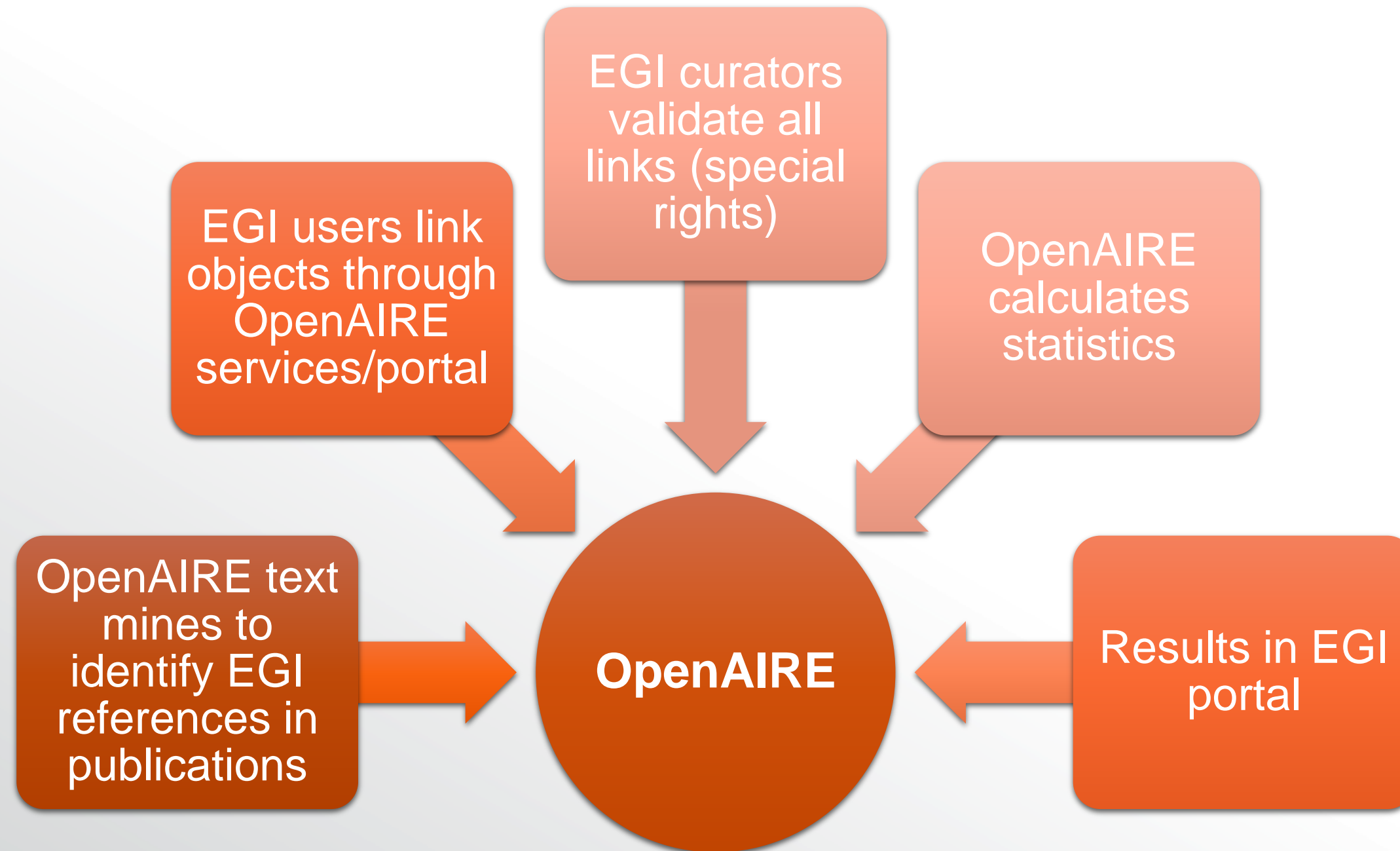
# ASSESSING COMMUNITY SCIENTIFIC IMPACT

# Assessing impact

OpenAIRE  
The EGI use case



# How it works





# OpenAIRE and PIDs

- **A PID in OpenAIRE is a reference**
  - URI/URL + description of releasing agency (DOI, EPIC, ORCID)
- **Maintain for persons & results**
  - Multiple PIDs per object (e.g., DOI, PMID)
- **OpenAIRE services to use PIDs**
  - Zenodo generates PIDs for submitted publications and data
  - Linking services use external PIDs to identify entities

# Thank you!

Our next meetings: Minho, Portugal in February 2013 – Interoperability workshop

Ghent Library in May 2013 – Publication – data integration models

 [www.openaire.eu](http://www.openaire.eu)

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 facebook.com/groups/openaire

 linkedin.com/groups/OpenAIRE-3893548

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