

Current State of Repository Interoperability

Eloy Rodrigues, Friedrich Summann, Jochen
Schirrwagen, Daniel Beucke, Kathleen Shearer



Agenda

1. Introduction and Overview – Eloy Rodrigues
2. COAR Interoperability Roadmap - Friedrich Summann
 - OAR-CRIS interoperability
3. Controlled Vocabularies Interest Group - Jochen Schirrwagen
4. Usage Data and Beyond Interest Group - Daniel Beucke, Katharina Müller



Our vision

A global knowledge infrastructure, built upon a network of open access digital repositories



...will enhance the provision, visibility and use of research outputs



New modes of research and scholarly communication



Standards, policies, infrastructure, strategy, interoperability, support, awareness, integration...



Inspired by Tim Berners Lee

COAR aims to facilitate the vision by bringing together research repositories as part of a **global infrastructure**; to link across continents and around the world, enabling new forms of research and supporting new models of scholarly communication.

Research libraries have a central role to play.



Factsheet



- COAR e.V., a registered not-for-profit association of repository initiatives according to German law, Office seat: Göttingen, DE, Host: Göttingen State and University Library
- Founded in Ghent, Belgium, October 21, 2009 (28 members), evolved out of the European DRIVER Project (EC, FP7)
- One Annual Meeting of all members with General Assembly
Members & Partners (May 2014): more than 120 member institutions (out of over 36 countries in Africa, Asia, Europe, Northern and Latin-America); 6 partner organizations
- Elected Executive Board:
 - Chairperson: Norbert Lossau, Göttingen University, DE
 - Vice Chairperson: Carmen-Gloria Labbé, Cooperación Latinoamericana de Redes Avanzadas (CLARA), Uruguay
 - Treasurer: Márta Virágos, University and National Library of Debrecen, Hungary



Activities

Working Group 1: Repository Content

Related Task Forces and Interest Groups

Open Access Agreements and Licenses Task Force

Impact and Visibility Interest Group

Working Group 2: Repository Interoperability

Related Task Forces and Interest Groups

Usage Statistics Interest Group

Task Force: Controlled Vocabulary for Repository Assets

Working Group 3: Repository and Repository Networks Support and Training

Related Task Forces and Interest Groups

Joint Task Force on Librarians' Competencies in support of e-Research and Scholarly Communication

Repository Interoperability



- *Objective:* Facilitate the discussion on interoperability among OA repositories and as part of a wider e-Infrastructure
- Multiple activities from 2011 onwards through The Interoperability Project



The Interoperability Project



- **The Case for Interoperability for Open Access Repositories (2011)**

Briefing paper available in English & Spanish

- **COAR Current State of Open Access Repository Interoperability (October 2012)**
- **COAR Interoperability Roadmap (ongoing)**



Communiqué: Major repository infrastructure initiatives agree to align their networks



In a meeting in Rome on March 20-21, 2014 representatives from several major regional repository networks sat down to develop a strategy to better align their activities. The meeting brought together delegates from Australia, Canada, China, Europe, Latin America and the United States.

As research becomes increasingly global, it is critical to create infrastructure that can

connect across geographic boundaries. Recently there have been significant efforts around the world to develop repository networks. These networks represent an important content layer within the research infrastructure system: They provide access to the products of research such as articles, data, and other content to researchers and to the world. They are also becoming an important source of information for governments, funding agencies and institutions about the impact of the research they support.

Other Activities

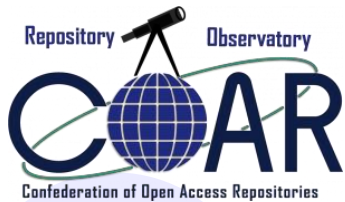


Aligning Repository Networks

- Host an international meeting to discuss the alignment of open access repository networks across regions.

Repository Observatory

- To help open access repositories to anticipate and respond the constant state of rapid evolution.
- Identify trends and future scenarios in the context of the use of repositories in research and education



RDA Long Tail of Research Data Interest Group

- Develop a set of good practices for managing research data archived in the university context.



Research Data Sharing
without barriers



If you are engaged in the development of repositories and their networks, we would be delighted to welcome you as a new member of COAR!



Participants of the COAR Annual Meeting in Athens, Greece, 2014



How to join COAR?

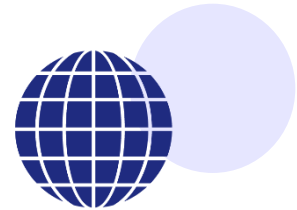
An organization may become a member at any time

○ as a **single institution**

○ organizations with lots of members may consider to establish a **Group Consortium** – with discount on membership fee.

○ as a **Special Member** (“fee waiver option” for institutions from least developed countries)

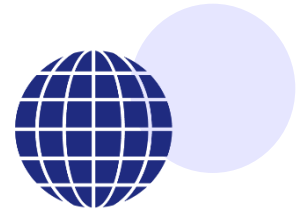
...or become a **Partner**



Where can you get more information about COAR?



- COAR Portal
<http://www.coar-repositories.org/>
- Contact the COAR office to register your interest in becoming a member of COAR
office@coar-repositories.org
- Follow us on Twitter: [#COAR_eV](https://twitter.com/COAR_eV)
- Find us on Facebook:
<https://www.facebook.com/COAReV>



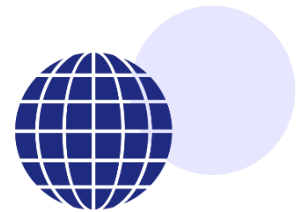
The COAR Interoperability Roadmap

Friedrich Summann

June 12, 2014

Open Repositories 2014,

Helsinki, Finland



Concerned COAR Discussion Groups

- Experts Advisory Panel
- Roadmap Editorial Group
- COAR WG2 Interoperability



The preparation activities

- Experts Feedback and Comments
- Internal Discussions
- Identifying the Interoperability Issues
- Extracting a Questionnaire
- Processing the Results
- The result: The Roadmap document



Questionnaire

- Issues
- Immediate relevance (1-3 years)
- Future relevance (3-5 years)
- Complexity of implementing (low, medium, high)
- Comments





COAR Roadmap

for Future Directions for Repositories Interoperability

May 2014

The Introduction Chapter

- Repositories – the starting situation
- Current situation and strategic challenges
- Vision, Goal and Objectives
- Users needs and corresponding services
- The Repository Landscape - participating systems and stakeholders



35 Issues grouped in

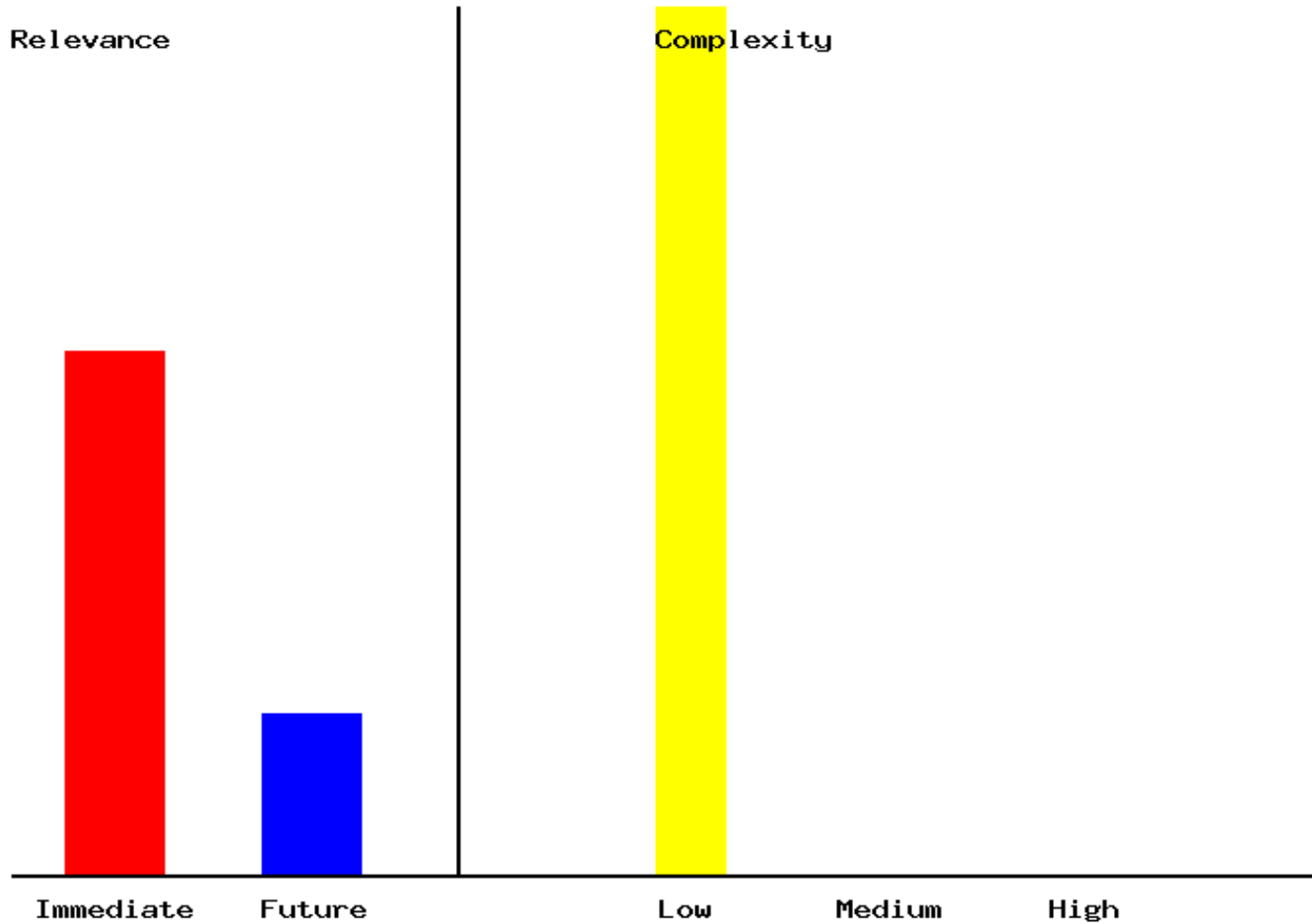
- Key Aspect: Impact and Visibility
- Key Aspect: Data Issues
- Key Aspect: Validation and Aggregation
- Key Aspect: Usability
- Key Aspect: Sustainability
- Key Aspect: Technical Issues



Supporting Visibility in Repository Registries

Relevance

Complexity



✓ - Low Complexity

↔ - Medium Complexity

✘ - High Complexity

Immediate

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Exposing Citation Formats - ✓

Supporting Data Export functions - ✓

Exposing Bibliometric Information - ✘

Supporting Author Identification Systems - ✓

Supporting Search Engine Optimization (SEO) - ✓

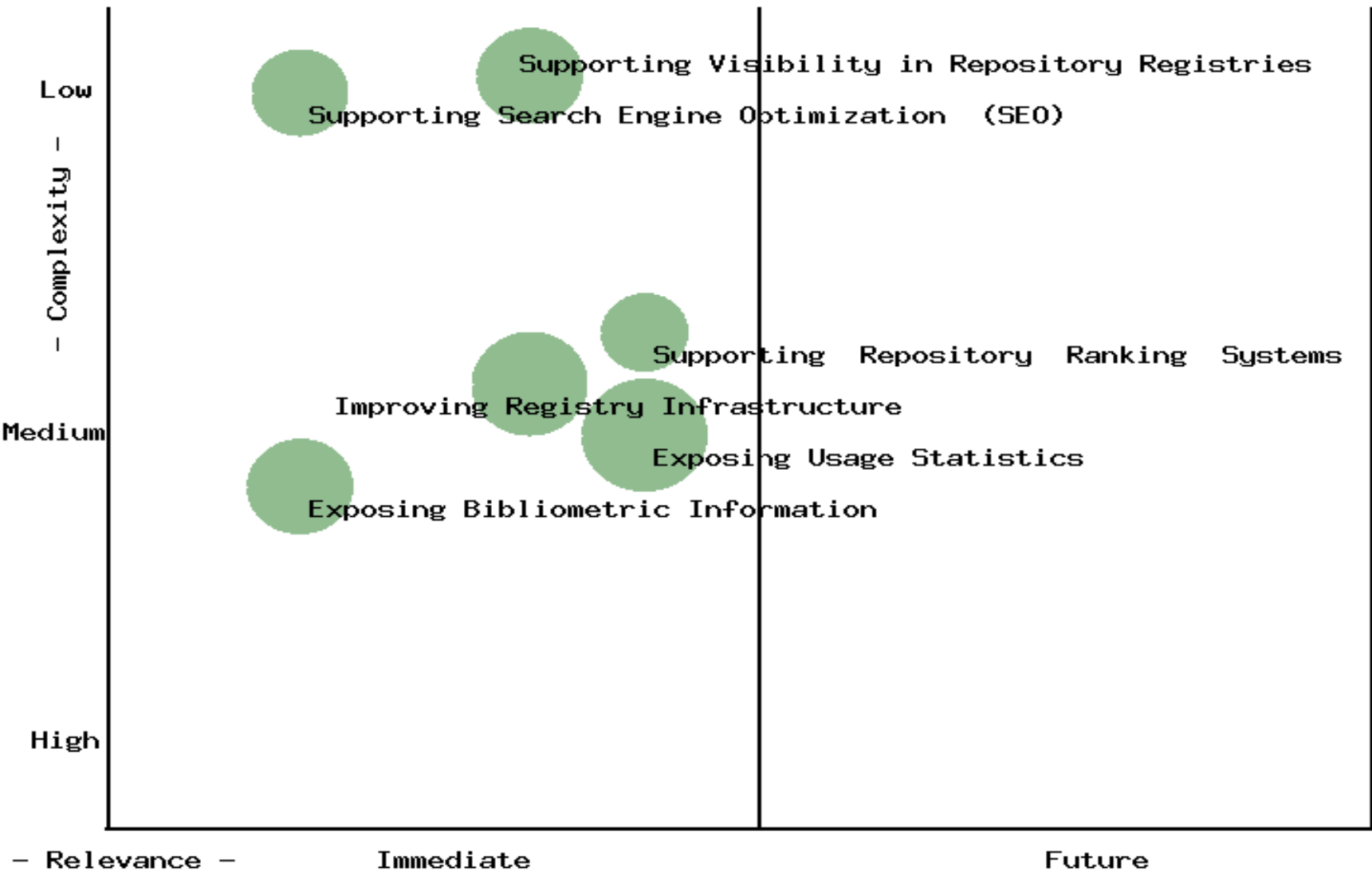
Exposing Publication Lists - ✓

Integrating different Persistent Identifiers - ✓

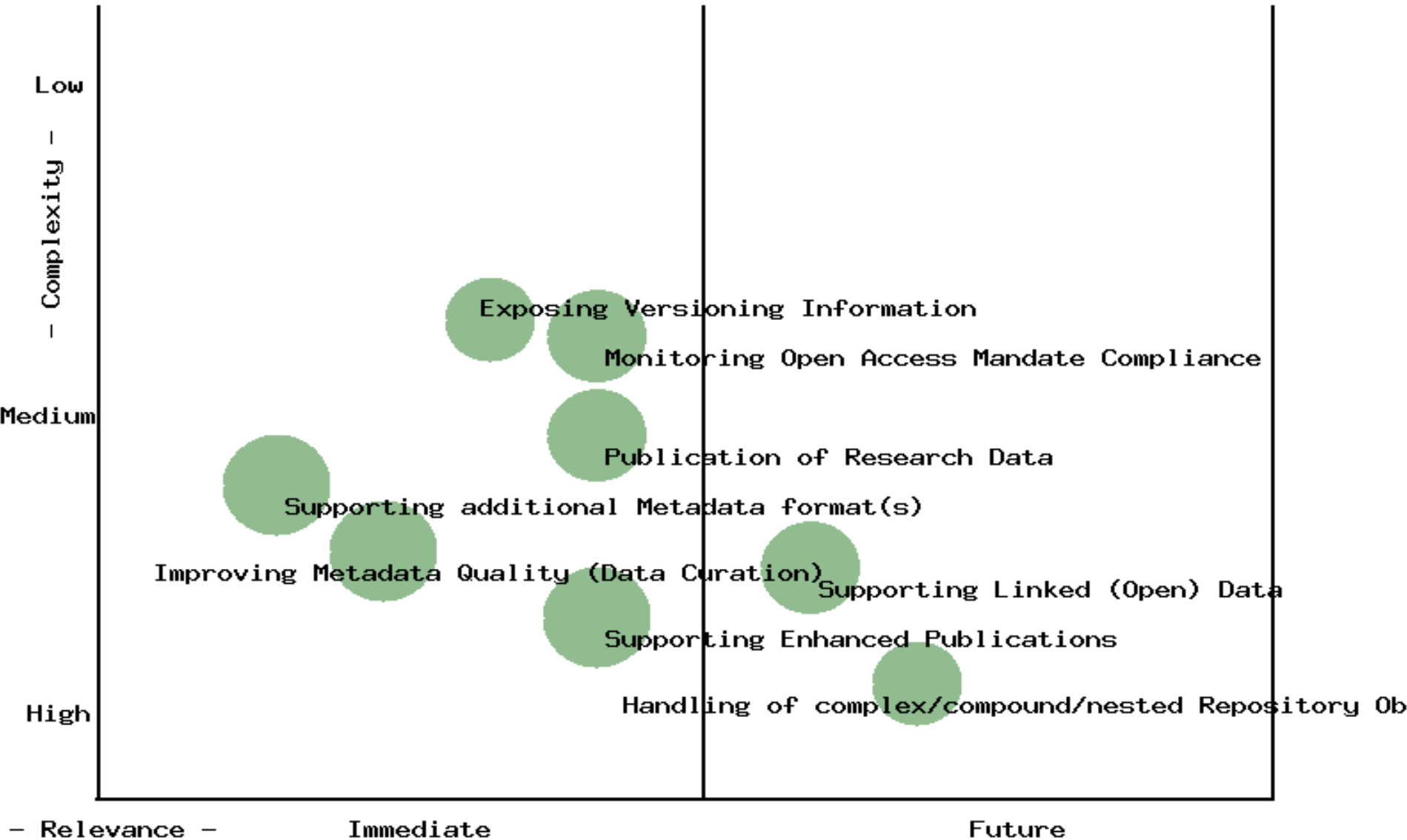
Supporting additional Metadata format(s) - ✘



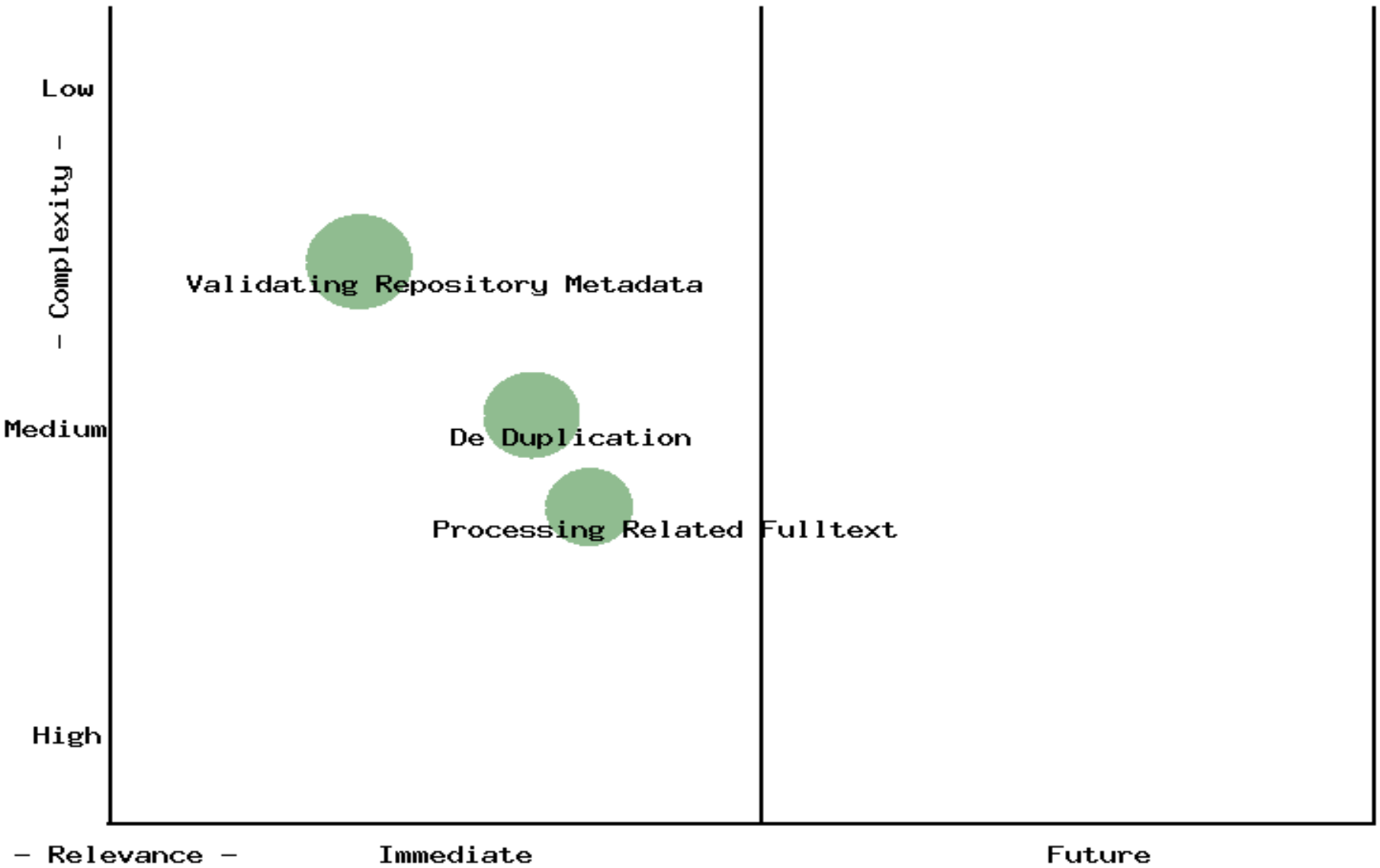
Impact and Visibility



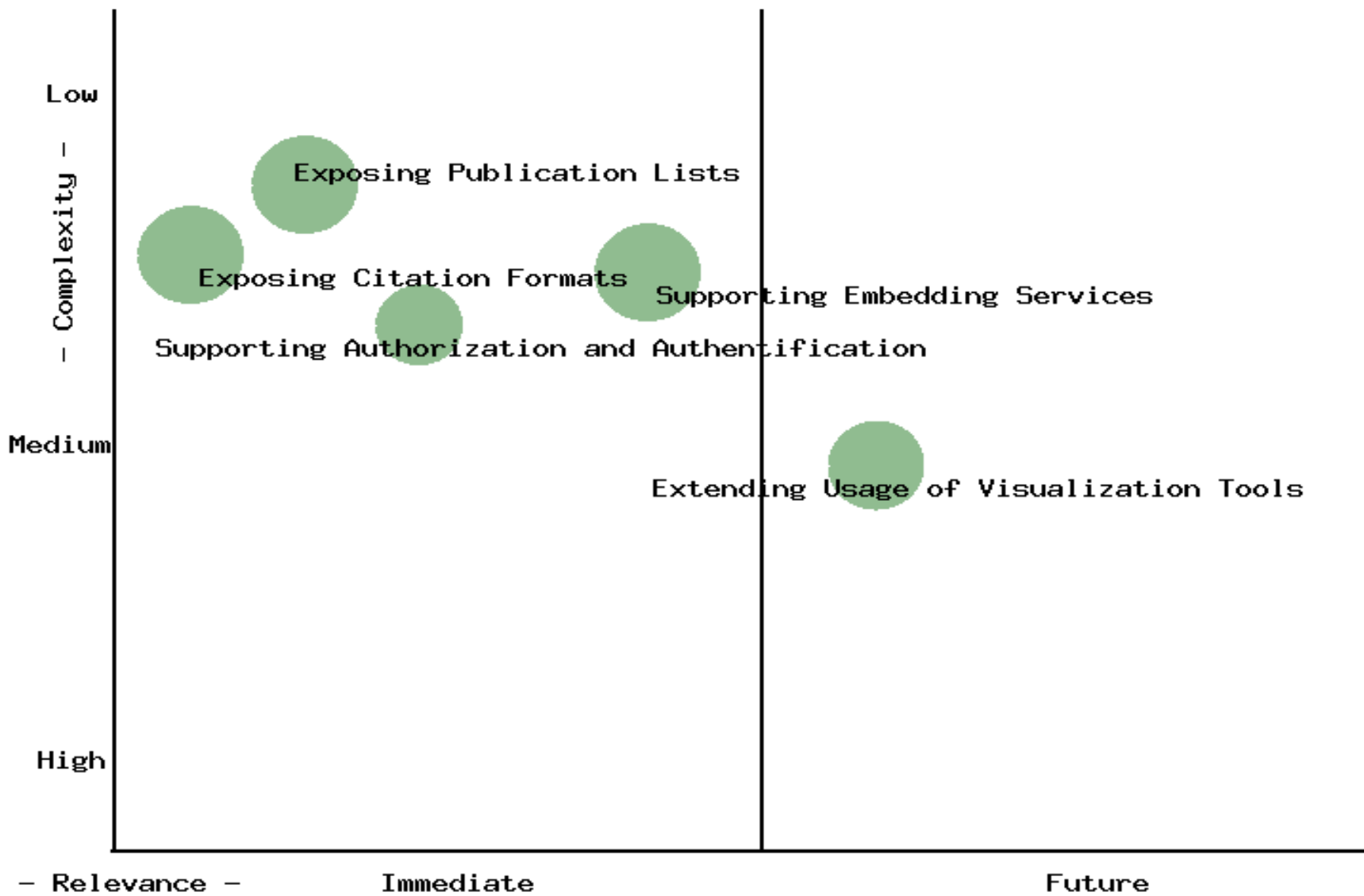
Data Issues



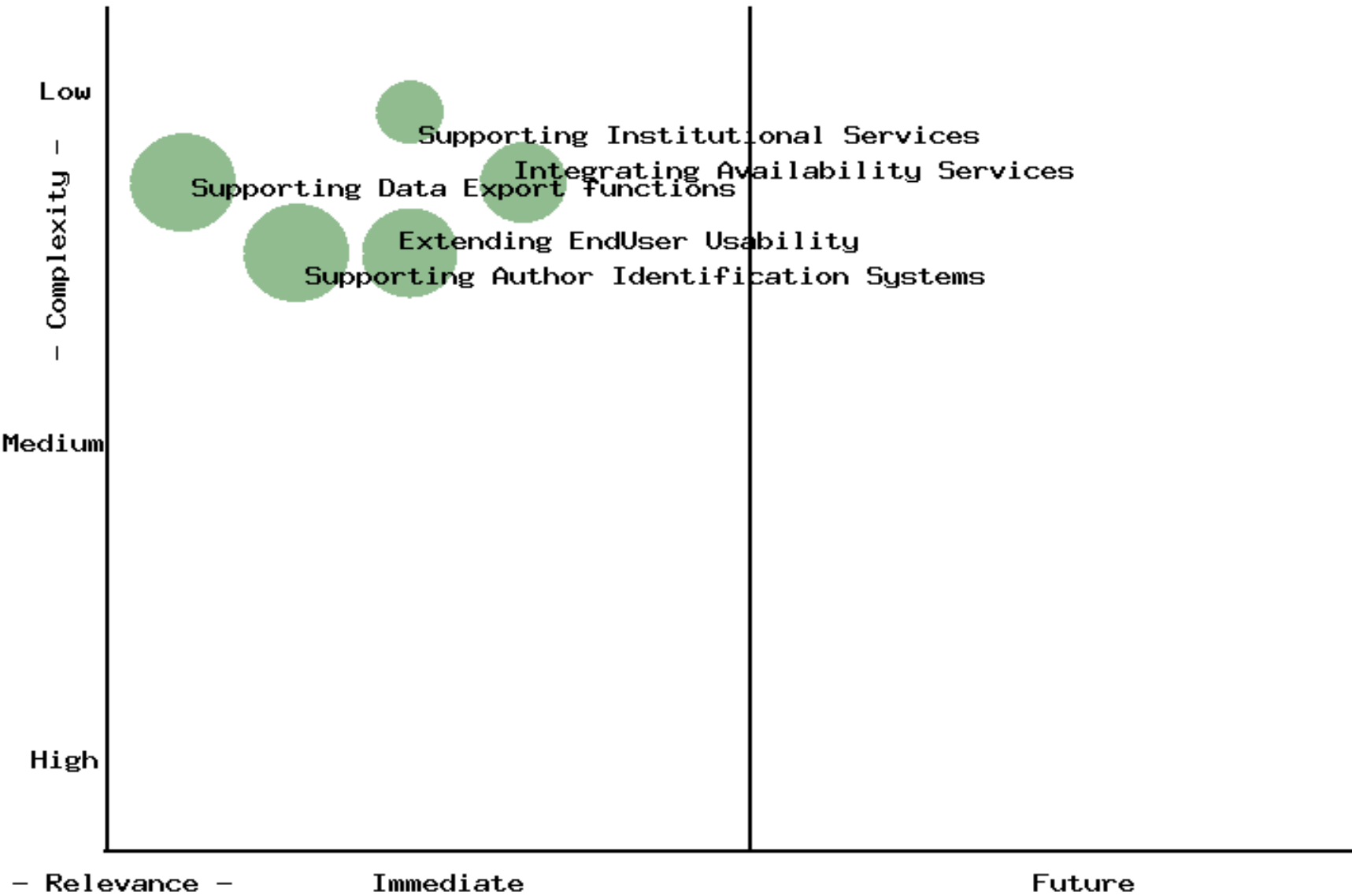
Validation and Aggregation



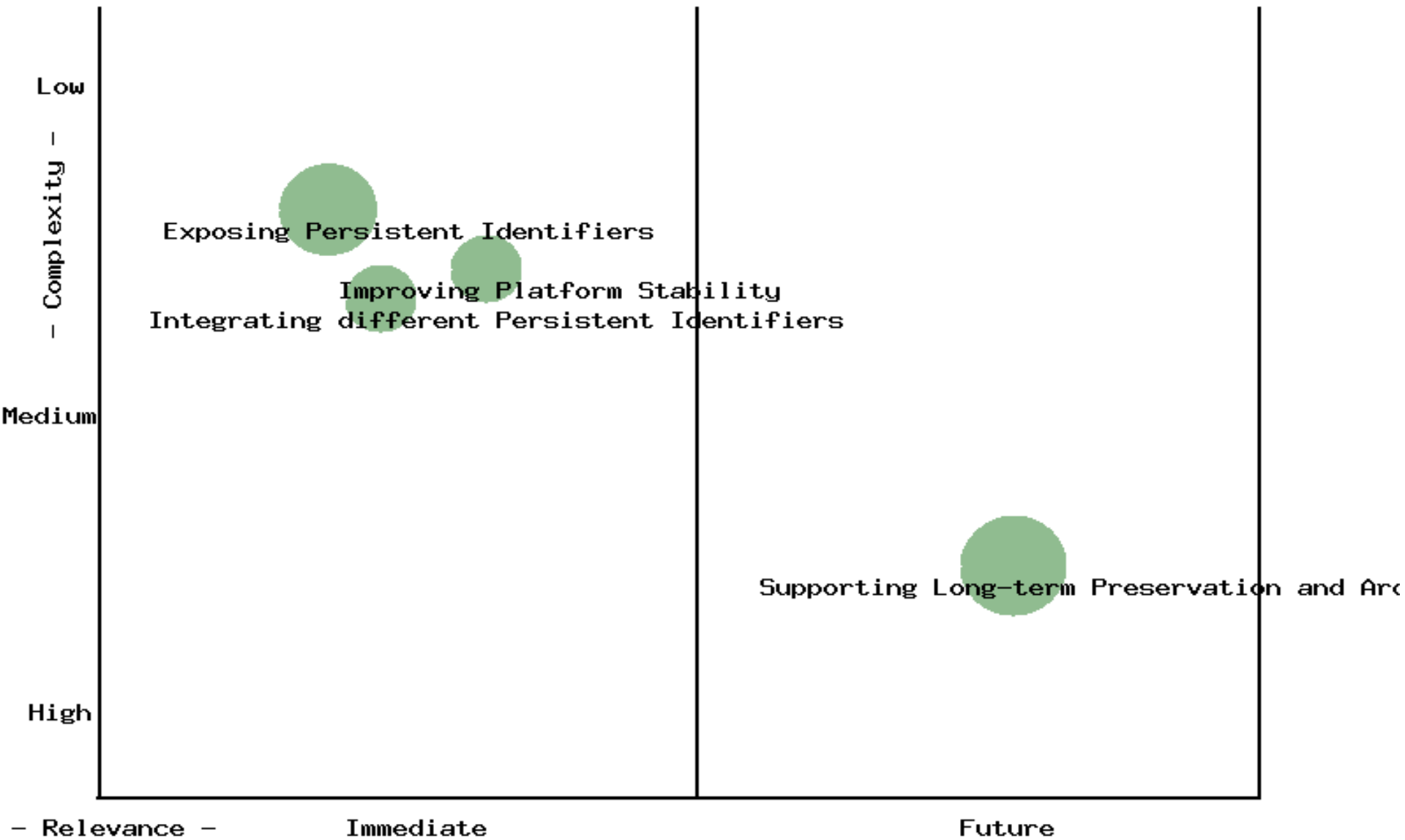
Usability 1



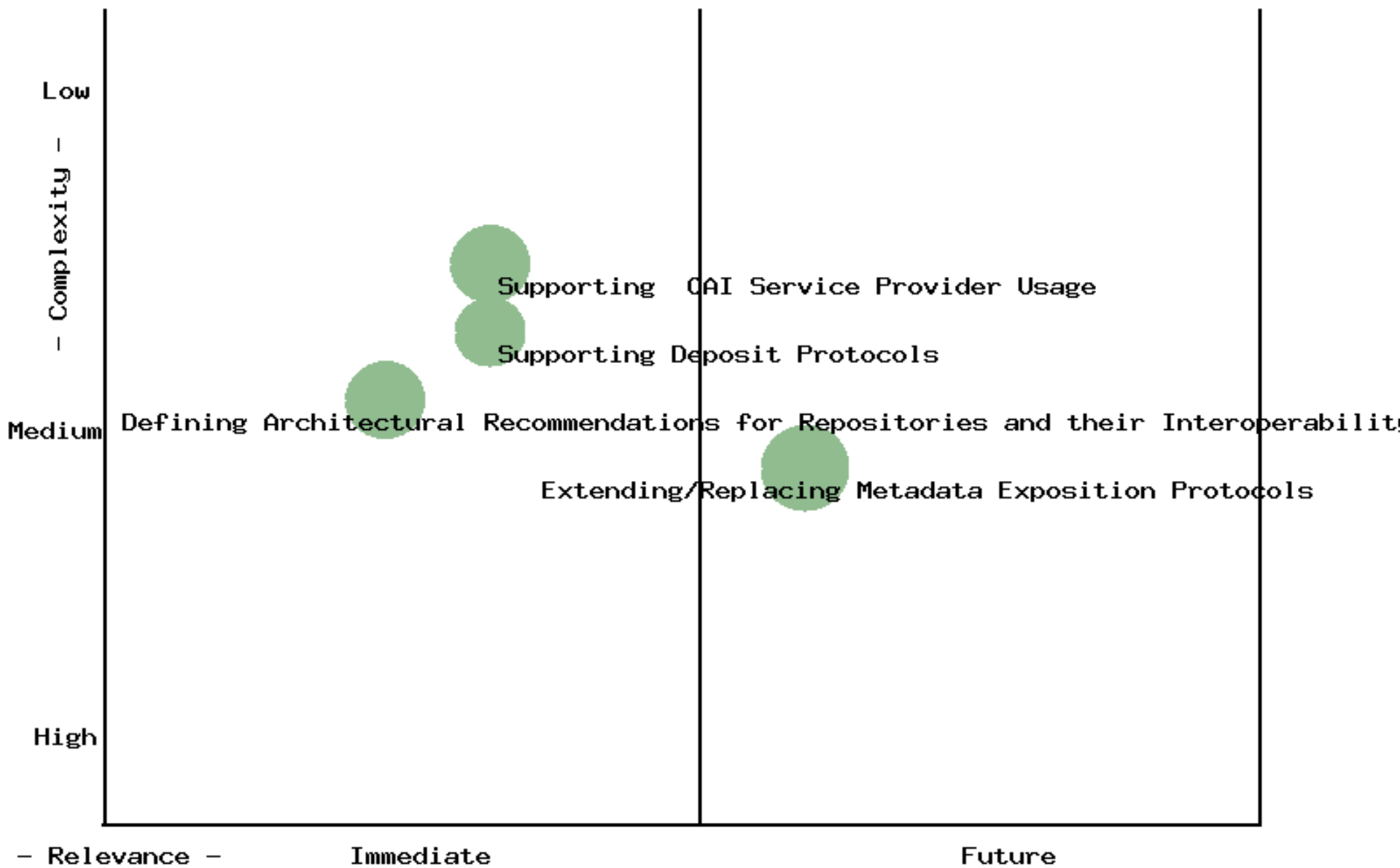
Usability 2



Sustainability



Technical Issues



IR Interoperability

- The special case: CRIS-IR interoperability
- The common intersection: Publications
- The challenges:
 - The format question (CERIF – DC/MODS/MARC)
 - Related Services



CRIS	IR
Internal	Externally-orientated
Research Office	Library
Research Information Mgt.	Open Access
Metadata	Fulltext
Automatic Harvesting	Self/Archive/Mediate Deposit
CERIF	DC METS MODS
Proprietary Software	Open Source

www.eurocris.org/Uploads/Web pages/CERIF-1.6/documentation/MImage.html

knowledge exchange

ER Diagram

Model Info ER Diagram Entities Attributes Keys Relationships Domains

cfDCRelation

cfDCTitle

cfDCId Char(32 BYTE) NN (PFK)

cfDCId

cfDCId

cfDCType Char(30 BYTE)

cfDCValue NClob

cfDCValue

cfDCId Char(32 BYTE) NN (PFK)

cfDCScheme Char(32 BYTE) NN (PFK)

cfDCLangTag Char(5 BYTE) NN (PK)

cfDCType

cfDCValue

Page Discussion

OpenAIRE Guidelines: For CRIS

Contents [hide]

The “atomic structure” of the CERIF-XML set of schemas has been criticised by the OAR community as being too much a technically inspired structural copy of the CERIF database structure

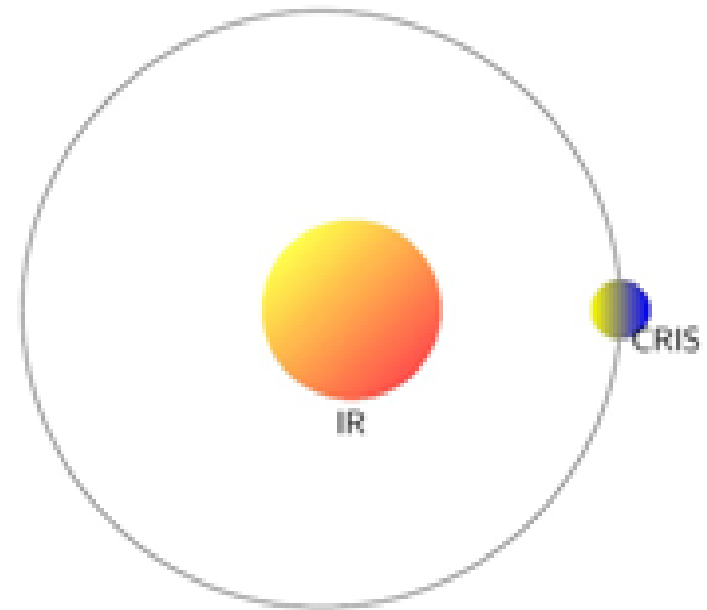
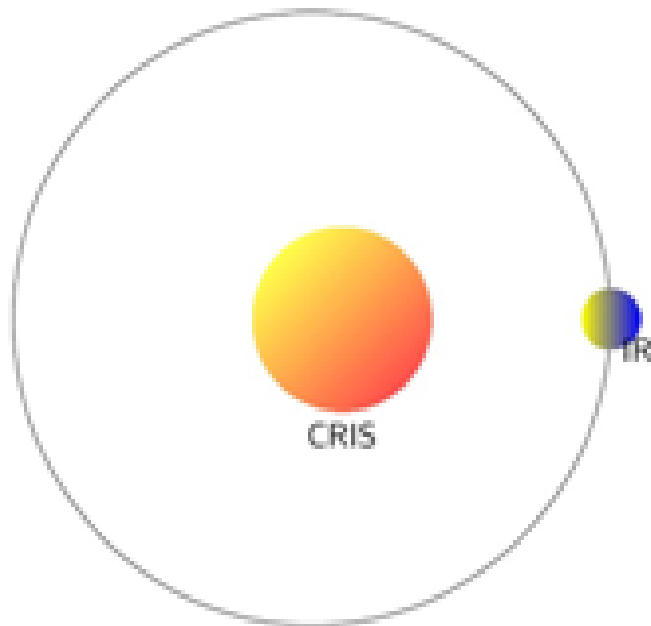


Summary

- Not quite a dichotomy – interoperability is the key feature
- Communication is the key strategy



“Not quite a dichotomy –
interoperability the key feature”



“Not quite a dichotomy –
interoperability the key feature”



COAR presentations in the CRIS community



- euroCRIS Meeting Brussels, Sept. 2013
- CRIS2014, Rome, May 2014
- German Library Conference, Bremen, June 2014

De Castro, Pablo; Shearer, Kathleen; Summann, Friedrich: The gradual merging of repository and CRIS solutions to meet institutional research information management requirements.

CRIS2014: 12th International Conference on Current Research Information Systems (Rome, May 13-15, 2014)

<http://dspacecris.eurocris.org/jspui/handle/123456789/197>



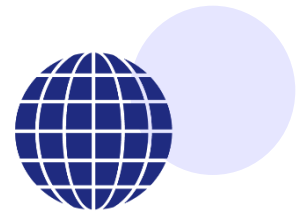
Interoperability by Controlled Vocabularies – A COAR Interest Group

Jochen Schirrwagen

June 12, 2014

Open Repositories 2014,

Helsinki, Finland



Scope & Objectives

- **Scope** Controlled vocabularies for OA scientific results – one of the corner stones for interoperability
- **Broader focus** aiming for *standardization* in scientific result descriptions and research information; *aligned with other initiatives*
- **Narrower focus** *authority* for „info:eu-repo“ vocabulary; knowledge space in COAR portal



About the Group



- Chair: Jochen Schirrwagen (Bielefeld Univ.)
- > 20 IG-members from COAR and other initiatives, like FAO-AIMS, CASRAI, EuroCRIS
 - Backed by infrastructures and guidelines, like OpenAIRE (EU), CORE (UK), SNRD (AR), V4OA (UK), RIOXX (UK), DINI-Certificate (DE)
- Authority group for “info:eu-repo”



“info:eu-repo” timeline

2008

- Introduced in DRIVER-II Guidelines

2009-2013

- NEEQ, SURF, OpenAIRE Guidelines
- Adopted by SNRD Guidelines (Argentina)
- Supported by repository software suppliers (plugins/add-ons)

2014

- COAR takes over and continues maintenance of info:eu-repo



A Use Case Scenario – Aggregation of EU Research Output



Dataprovider



OA / Funded Publ. &
Research Datasets

Aggregator/
Research Infrastructure



Consolidated Knowledge
Information Space

OpenAIRE

Authority Services

Repository-
Registry

Project-Information

OpenDOAR



CORDIS / ERC
CORDA



Terms to Describe Research Publication Properties

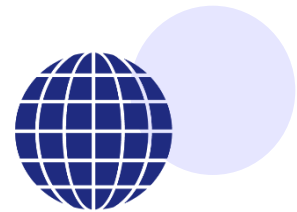
info:eu-repo/semantics/article

info:eu-repo/semantics/openAccess

info:eu-repo/grantAgreement/
EC/FP7/12345

info:eu-repo/date/publication

info:eu-repo/semantics/dataset/doi/
10.1234-567



Challenges and Next Steps

- Wrt. “info:eu-repo” vocabulary
 - Revision and clean-up; support multilingual labels
 - Provide manifestations: XML Schema, SKOS
 - Improving support by repo software suppliers
- Wrt. Knowledge exchange
 - Webinars: “research information”, “linked data”, “design of Controlled Vocabularies”
 - Contribute to OA-Indicator Vocabularies
(i.e. NISO-WG, V4OA)



More Information & Get Involved

- Contact
 - IG-Group Chair Jochen Schirrwagen,
jochen@schirrwagen.info
 - COAR-Office
office@coar-repositories.org
- Visit the COAR-IG website
 - <http://tinyurl.com/coarIGCV>



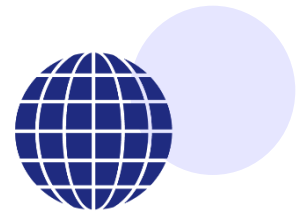
Activity Report Interest Group: Usage Data and Beyond

Daniel Beucke, Katharina Müller

June 12, 2014

Open Repositories 2014,

Helsinki, Finland



Background

Lack of international standardised usage data for repositories.

This group aims at collecting experiences from several projects in order to standardise the transfer protocol and data format.



The Group



Start in 2013

Lead: Daniel Beucke (University of Göttingen),
Paul Needham (Cranfield University)

+ 14 international members



- More than 60 Repositories (June 2014)
- Since July 2012: more than 16 million downloads of over 200,000 items from participating repositories
- Tracker Protocol for IR's using Eprints or Dspace, whether locally installed or hosted by 3rd party services such as Eprints Services or OpenRepository
- Soon: IRUS-UK tracker functionality for other repository software platforms



- First (test) implementations (6 partner)
- Currently, the infrastructure is rebuild
- Using a pull service in opposition to IRUS-UK
- The service will official start this summer

Paper: "Standardised Usage Statistics for Open Access Repositories and Publication Services"



COUNTER

Robots Working Group



Both services process usage data according to COUNTER rules, removing robots and double clicks.
BUT the current COUNTER rules don't eliminate all robots/bad usage!

→ COUNTER has formed a Robots Working Group (Publishers, Repository representatives, COUNTER auditors, member of COAR-IG)



Current Activities

Robot and other Unusual Usage

- Common used robot list
- Common processing rules

List of Initiatives and Projects

<https://www.coar-repositories.org/activities/repository-interoperability/usage-data-and-beyond/initiatives-and-projects-for-usage-data/>

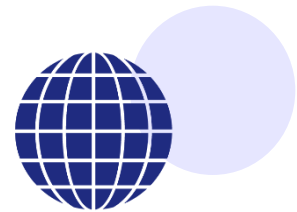


Planned Activities

Usage Statistics Guideline

Webinars

- Usage Data for Repositories
- Altmetrics for Repositories



More Information & Get Involved



Contact

- IG-Group Chair
 - Daniel Beucke beucke@sub.uni-goettingen.de
 - Paul Needham p.a.needham@cranfield.ac.uk
- Visit the COAR-IG website
<https://www.coar-repositories.org/activities/repository-interoperability/usage-data-and-beyond/>



Where can you get more information about COAR?



- COAR Portal
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- Contact the COAR office to register your interest in becoming a member of COAR
office@coar-repositories.org
- Follow us on Twitter: [#COAR_eV](https://twitter.com/COAR_eV)
- Find us on Facebook:
<https://www.facebook.com/COAReV>

