

Transition to OA through the Funding Agency Lens!

UNISA Open Scholarship Seminar

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OA developments

- June 2012 – ‘Finch’ report on expanding public access to taxpayer research published in UK
- July 2012 – Research Councils UK (RCUK) and Wellcome Trust (WT) announce OA policies
- July 2012 – European Commission endorses OA policy – announces all material funded under Horizon2020 must be OA
- Sept 2012 – UK Government pledges 10 million Pounds to 30 major research institutions to aid OA movement
- Sept 2012 – 1st Global Research Council (founding meeting)
- Jan 2013 – Australian Research Council announces Green OA policy
- Feb 2013 – US OSTP publish memo on expanding public access to federally funded research / FASTR act proposed in Congress
- April 2013 – RCUK mandate in effect
- May 2013 – 2nd Global Research Council Summit, Berlin – Action Plan towards Open Plan to Publications
- June 2013 – Wellcome Trust expand OA policy to include monographs



OA developments

- Oct/Dec 2013 - GRC global participatory process (5 regional meetings Africa, the Americas, Asia, Europe, Middle East/North Africa)
- Jan 2014 – launch of EU's Horizon 2020 (8th framework Programme for Research)
- May 2014 – 3rd Global Research Council Summit, Beijing – OA Action Plan and Review Template (country inputs)
- May 2014 – 3rd Global Research Council Summit, Beijing – Statement of Principles and Actions for shaping the future: supporting the next generation of researchers
- July 2014 – NRF membership of COAR (Coalition of Open Access Repositories)
- Sept 2014 – International Council for Science (ICSU) – OA to scientific data & literature and the assessment of research by metrics (statement)
- Oct 2014 – NRF Berlin Declaration signatory
- Oct 2014 – NRF OA mandate (BOARD ratification)

Why OA & DOI?



Why We Need OA: 3 Benefits

1

£

Researcher
Access

2



Public
Access

3



Re-use

Tit for Tat OA discussions!



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- Economics of traditional science journal publishing!
 - Move into new era: many dissemination mechanisms for outputs;
 - Universal access to these outputs is achievable

Tit for Tat OA discussions!



- Those in ***Administration of research*** rely on metrics designed to:
 - Assess importance & impact of research as an ***aid*** in such evaluation – with traditional scientific journals being major focus.

Tit for Tat OA discussions!



- These **Metrics** in turn affect the behaviour of researchers:
 - Choice of journals – as researchers seek to maximise their performance as measured by the metrics used;
 - Contribute to the maintenance of high journal prices;
 - Promote intense competition rather than openness and sharing, and
 - Fail to recognise research contributions such as the production of datasets, software, code, blogs, wikis and forums.

Tit for Tat OA discussions!



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- Value of librarians ***vetting deposits*** to repositories!
 - “Librarians get in the way and should leave it up to researchers”
 - “without libraries there would be no repositories”
 - “if librarians want to get actively involved in scholarship – spend less time talking with publishers/other librarians – ***more*** with and understanding Faculty members”
 - www.aoasg.org.au

Funder considerations



- Acknowledges that researchers consider a range of factors in deciding on the best publication outlets
 - Status and reputation of journal, book, publisher or conference;
 - Peer review process of evaluating their research outputs;
 - Access by other stakeholders to their work;
 - Likely impact of their work on users of research and
 - Further dissemination and production of knowledge.

Role of NRF as funder



- Develop open access policies
 - explains reasons to have research results made openly available.
 - Important guidance for all grantees.
- Address copyright
 - Funding guidelines modified in a manner that prevents researchers to transfer copyright exclusively to a publisher.
 - Provide legal basis for deposit of research articles in an OA repository.

Funder actions



- Cover publication fees
- Within a grant proposal, allow grantees to apply for an earmarked budget to cover publication fees etc.
- Contribute to central publication funds
- Publication fees not given to researchers directly but to university as contribution to a central OA publication fund.

Funder actions



- Reimburse publication costs after grant expiry
- Be clear on numbers and statistics
- Decision on whether to apply for reimbursement of OA publications charges after grant period is expired?
- A clear picture on how much budget is spent for OA publication fees.

Funder actions



- Define re-use rights
- Support open access journals run by academia
- As funding agency, agree on specific criteria that need to be fulfilled for the reimbursement of article fees!
 - re-use of OA articles as defined by CC-BY licenses.
- ONLY then researchers' will be able to exploit full potential of digital publications, including text and data mining.
- Consider options to support OA journals sustained by institutional/organisational funding

Funder actions



- Share costs with fellow agencies
- Much research is carried out in international teams whose work is funded by a variety of agencies. Consider “payment by corresponding author”
- Explore new ways of quality assurance
- Explore “open peer review” and develop alternative ways to measure the impact of scholarly communications – complement or replace Journal Impact Factor?

Research performers/Univ. Management & Libraries involvement



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- Define open access policies
- Nominate contact persons for OA
- Operate an OA repositories
- Enable universities to calculate
- Enable Univ. to build publication budgets
- Enable libraries to account
- Enable pooling of resources
- Enable using overheads
- Enable exchange of best practices
- Correlate subscription licenses with OA

Researchers, Scholarly Associations, Students involvement



- Raise awareness and support knowledge and acceptance of OA
- Define payment schemes for authors unable to pay
- Make authors think about costs and quality
- Educate students on scholarly publishing

Publisher involvement



- Be clear on conditions of self-archiving
- Define services – expected and want to buy
- Facilitate dealing with the practicalities of billing for OA
- Enable the transition
- Initiate earmarked funding programmes – i.e existing journal subscriptions are switched into OA journals
- Revisit the hybrid model

Government /Industry/Public involvement



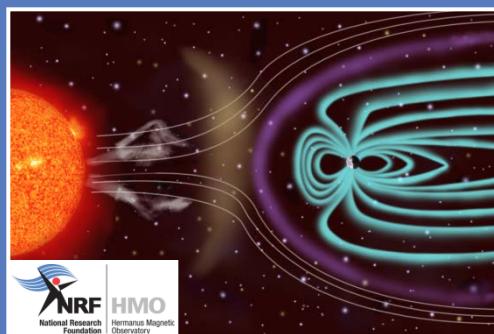
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- Consider national copyright regulations
- OA policies that support commercial re-use of research results
- Contribution to dissemination costs
- Conversations with Public regarding benefits of OA to society as a whole!

*“OA is such an important issue.
Only in a global collaboration could
we come to really reliable,
practical, sustainable, solutions”*

Matthias Kleiner – DFG President 2012

The National Facilities



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Research Infrastructure and
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HartRAO
Hartebeesthoek Radio
Astronomy Observatory



SAAO
South African
Astronomical Observatory



NZG
National Zoological Gardens
of South Africa



SAEON
South African Environmental
Observation Network



SAIAB
South African Institute for
Aquatic Biodiversity



iThemba LABS
Laboratory for Accelerator
Based Sciences



RISA
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Research and Innovation
Support and Advancement



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and Technology Advancement



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Definitions

Open access (OA) is the practice of providing unrestricted access via the internet to scholarly articles

An **Institutional Repository** is an online locus for collecting, preserving, and disseminating - in digital form - the **intellectual output** of an **institution**, particularly a **research institution**.

An institutional repository (IR) is a **digital collection** of an institution's **intellectual output**.

IRs are a key infrastructure component in the digital environment because they provide better **access** to our **digital assets** and they ensure that digital objects are **managed** appropriately.



Characteristics of Open Access

- The publisher charges directly for the service of publication/ dissemination - Costs covered by 'article processing charge' (APC)
- No barriers to access such as subscription costs
- Research immediately and permanently available via the Internet - citations
- Licensed so as to allow redistribution and reuse (Creative Commons)
- Archived permanently in an **internationally recognized repository** (e.g. PubMed Central/WDS etc) - in multiple locations to ensure long term access (DOI's)

Trusted repository

A trusted digital repository is one whose mission is to
provide reliable, long-term access to managed digital resources to its designated
community, now and in the future.

South Africa needs trusted digital repositories for research outputs (articles, theses,
data, code, ...)

Benefits of a repository



For the institution:

- Increases visibility and prestige of institution (depending on content contained)
- Content is searchable both locally and globally
- Allows institution to manage its intellectual property right (IP) by raising awareness of copyright issues and facilitating the recording of relevant rights information

For the researcher:

- Increases visibility of research output
- Increases impact of your publications, as an author at the institution
- Offer usage metrics so researchers can determine heat rates on specific papers

Benefits of a repository



For global community:

- Help research collaboration through facilitating free exchange of scholarly information
- Assists in public understanding of research endeavors and activities

Funders policies?



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OA policies

- All the major life sciences research funders have developed OA policies, of a *broadly* similar nature

Country	Agency	Policy	Max embargo	Fund APC's?
Canada	CIHR	Yes	12 months	Yes
France	Inserm	Yes	6 months	No
Germany	DFG	Yes	12 months	Yes
Italy	MIUR	Yes	6 months	Unclear
Japan	JSTA	Yes	12 months	Yes
UK	MRC	Yes	6 months	Yes
US	NIH	Yes	12 months	Yes

OA challenges



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OA - key challenges

- Developing infrastructures –
 - linking subject and institutional repositories; systems for paying APC's; determining publisher OA policies
- Addressing concerns around licences, especially for humanities and social sciences scholars
 - Publishers experiencing difficulties in expressing licences in OA articles
- And cost....



Wellcome Images, CC-BY, L0026444

Ranking Web of Repositories – July 2014

Africa

ranking	World Rank	Instituto	Country	Size	Visibility	Files Rich	scholar
1	99	University of Pretoria Institutional Repository		38	249	100	81
2	146	Stellenbosch University Scholar Repository		77	183	187	276
3	154	University of Pretoria Electronic Theses and Dissertations		1459	93	76	372
4	210	University of South Africa Institutional Repository		55	181	206	549
5	219	University of the Witwatersrand Institutional Repository		243	273	131	348
6	258	Rhodes University Eresearch Repository		356	217	448	475
7	285	University of Nairobi Digital Repository		140	794	62	145
8	296	Council for Scientific and Industrial Research Space		284	348	443	423
9	339	University of Johannesburg UJDigiSpace		536	391	222	499
10	364	Addis Ababa University Libraries Electronic Thesis and Dissertations Database		670	632	492	216
11	368	Boloka North West University Research Repository		347	595	211	360
12	402	(1) Covenant University Repository		1094	581	807	281

http://ir.nrf.ac.za/community-list

NRF Online Submi... oclc.org D IR at NRF: Com...

File Edit View Favorites Tools Help

Convert Select

Ask Google

Search

Amazon CNN YouTube Weather Games Celebrity

Options Sign In

National Research Foundation

Institutional Repository

Search NRF IR

Go Advanced Search

Home

Browse

- Communities & Collections
- Issue Date
- Author
- Title
- Subject

Sign on to:

- Receive email updates
- My NRF IR authorized users
- Edit Profile
- Help

[IR at NRF >](#)

Communities and Collections

Shown below is a list of communities and the collections and sub-communities within them. Click on a name to view that community or collection home page.

- [National Zoological Gardens of South Africa](#) [38]
 - [History](#) [10]
 - [Zoön](#) [28]
- [Research and Innovation, Support and Advancement \(RISA\)](#) [23]
 - [Evaluation and Rating Data \(PERD\)](#) [3]
 - [Information Resources and Services](#) [1]
 - [NRF Annual Reports](#) [9]
 - [Registers of Grants](#) [10]

Current situation

- Input to ICSU OA statement
- Input to GRC OA statement
- Draft NRF OA statement
- Intent to sign Berlin Declaration (14 institutions)
- Institutional Repository (development)

- Adoption of DOIs (Digital Object Identifiers) system
 - Used to uniquely identify an object – *electronic document (metadata about object is stored)*
 - Differs from *id* registries such as ISBN/ISRC

- SAEON implementation: cross-domain data and meta-data repository linked to DOIs
- Distributed – data is best curated by the owner

- BUT – we need a data repository of ‘last resort’ if the owner’s institution does not have a TDR (Trusted Digital Repository)

Attributes of trusted repository

- Compliance with the *Reference Model for an Open Archival Information System (OAIS)*
An ISO standard (approved in 2003 and updated in 2009) that formally expresses the
 - Roles
 - Functions
 - and Content of an Archive
- Administrative responsibility
- Organizational viability
- Financial sustainability
- Technological and procedural suitability
- System security
- Procedural accountability

SAEON's Vision: Data Life Cycle



- Deposit Data in Trusted Digital Repository
- Create and publish meta-data
- DOI is issued
 - Allows citation in journals
- Discovery via web search facilities locally, and internationally
- SAEON already seamlessly integrates with GEO and GEOSS
- In process to expose Quality Assured data to ICSU World Data System

SAEON's Collateral



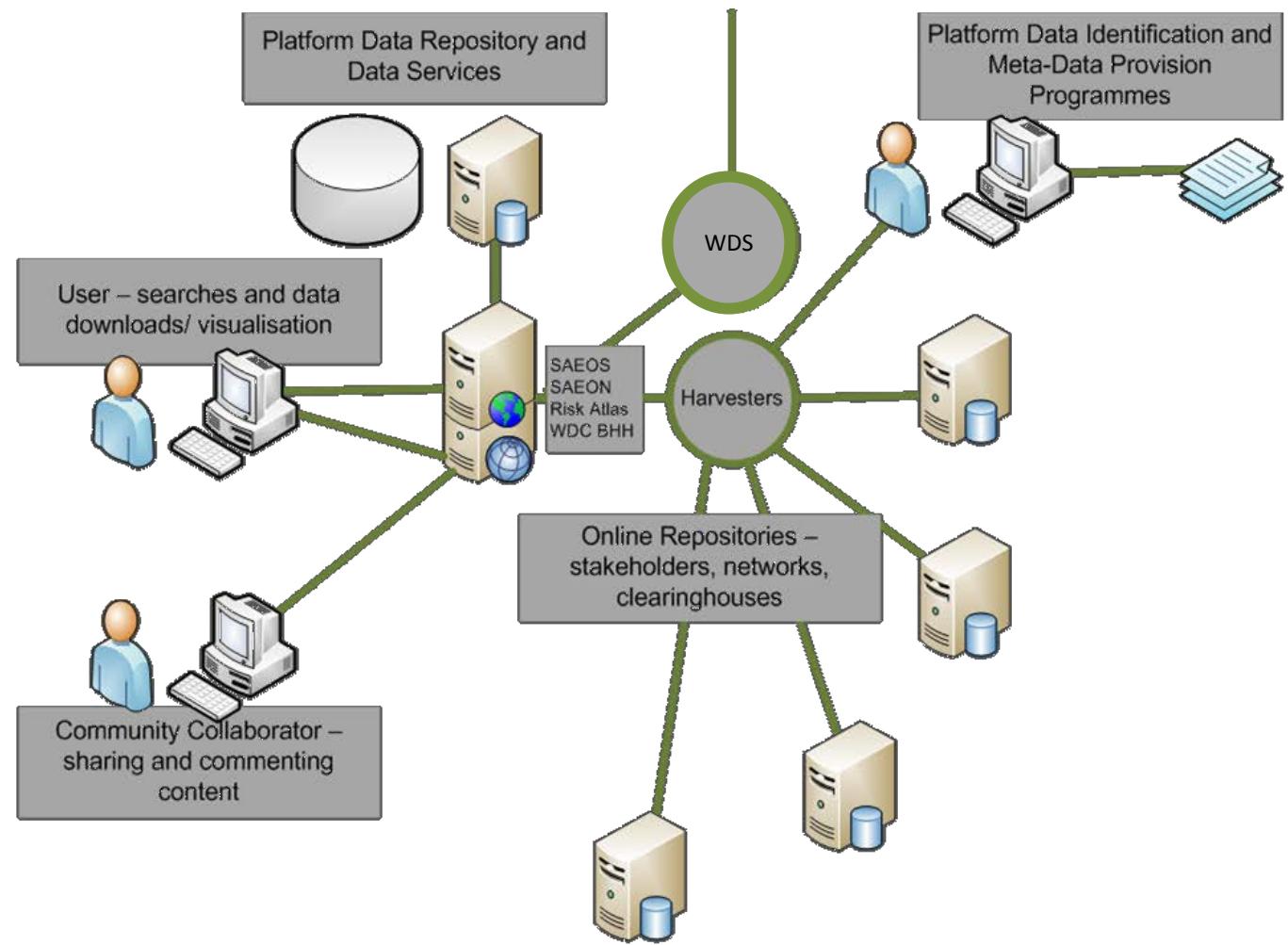
- Infrastructure
 - Adequate ... but we would like to extend that (SKA?)
- Software and Systems
 - Support for 2 of three important use cases (overleaf)
 - Open source, capable of working with multiple meta-data and data formats
- Soft Infrastructure
 - Research, documentation, international collaboration on Trusted Digital Repositories, mediation, data center maturity measurements and audit, knowledge networks, governance and networks, policies and licenses, ...
- Data
 - Own data, as well as contributions from other research institutions, projects, initiatives, government departments
- Multiple Gateways
 - SAEON Data Portal, SAE OSS, Risk and Vulnerability Atlas, BioEnergy Atlas, Socio-Economic Network Data Centre for Africa, ICSU WDS prototypes, ..
- Ready to collaborate on and establish an Institutional Data Repository for NRF
- This will be a significant contributor to DST Cyber Infrastructure proposals

Main Use Cases: Discovery and Visualisation

The platform is based on a shared and aggregated meta-data repository, and the meta-data repository is capable of accepting and working with a range of well-established meta-data standards.

These include Dublin Core, SANS 1878, the ISO 19115 family, EML, DIF, and FGDC. The list is likely to be extended from time to time to accommodate other standards in widespread use by a user community or new provider.

Harvesters can be used to automate meta-data acquisition from standardised providers.



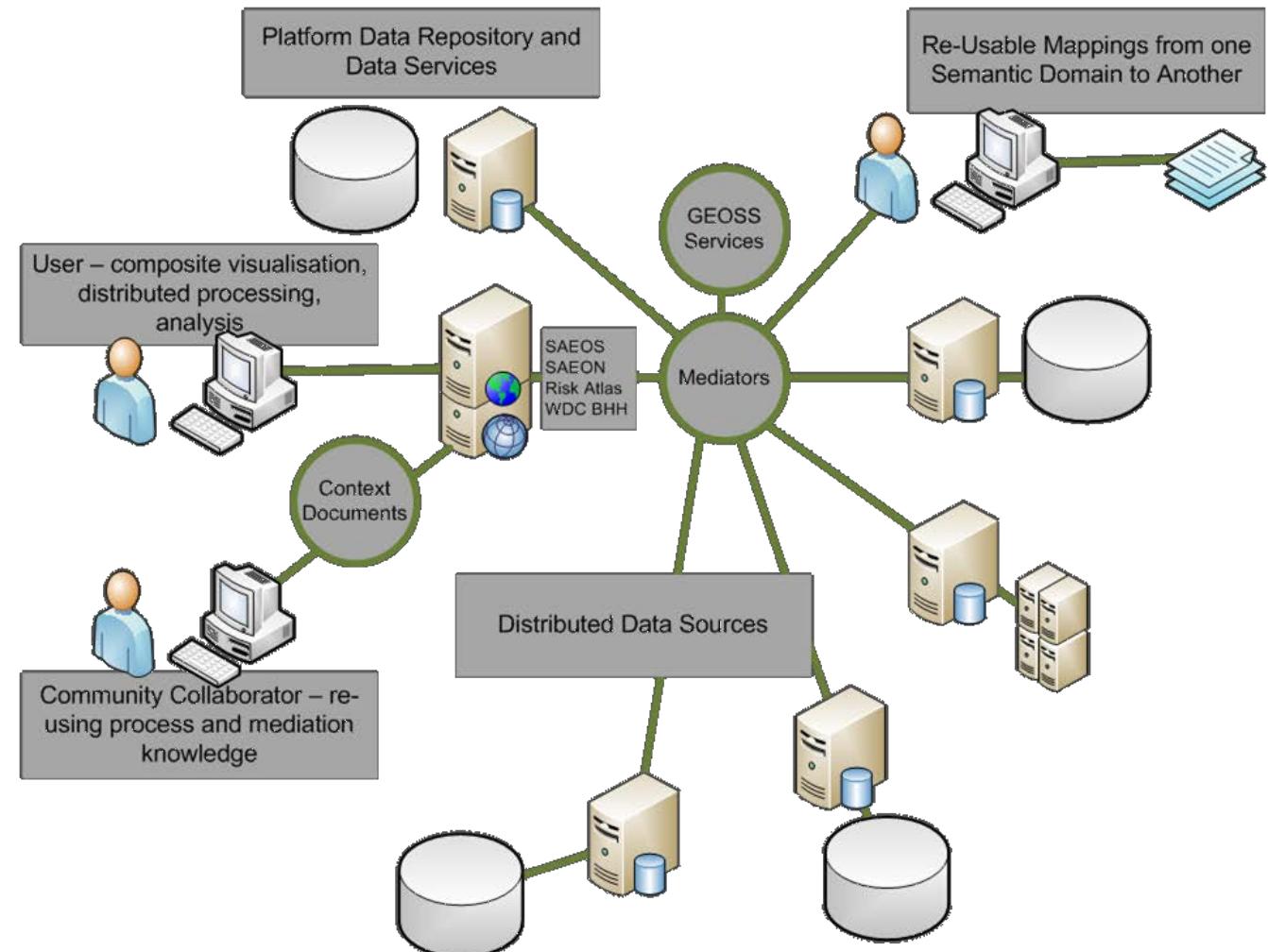
Main Use Cases: Mediation and Collation

Mediators are required to tailor (bind) a data source or sources to a process or service.

The service can be as simple as a mapping service, and the mediation as rudimentary as renaming the layers to match the context of a map.

More advanced mediations define the linkages between distributed data sets, how data should be aggregated for analysis or display purposes, which columns to match to a charting service, and so on.

Mediations are stored in 'Web Context Documents'.

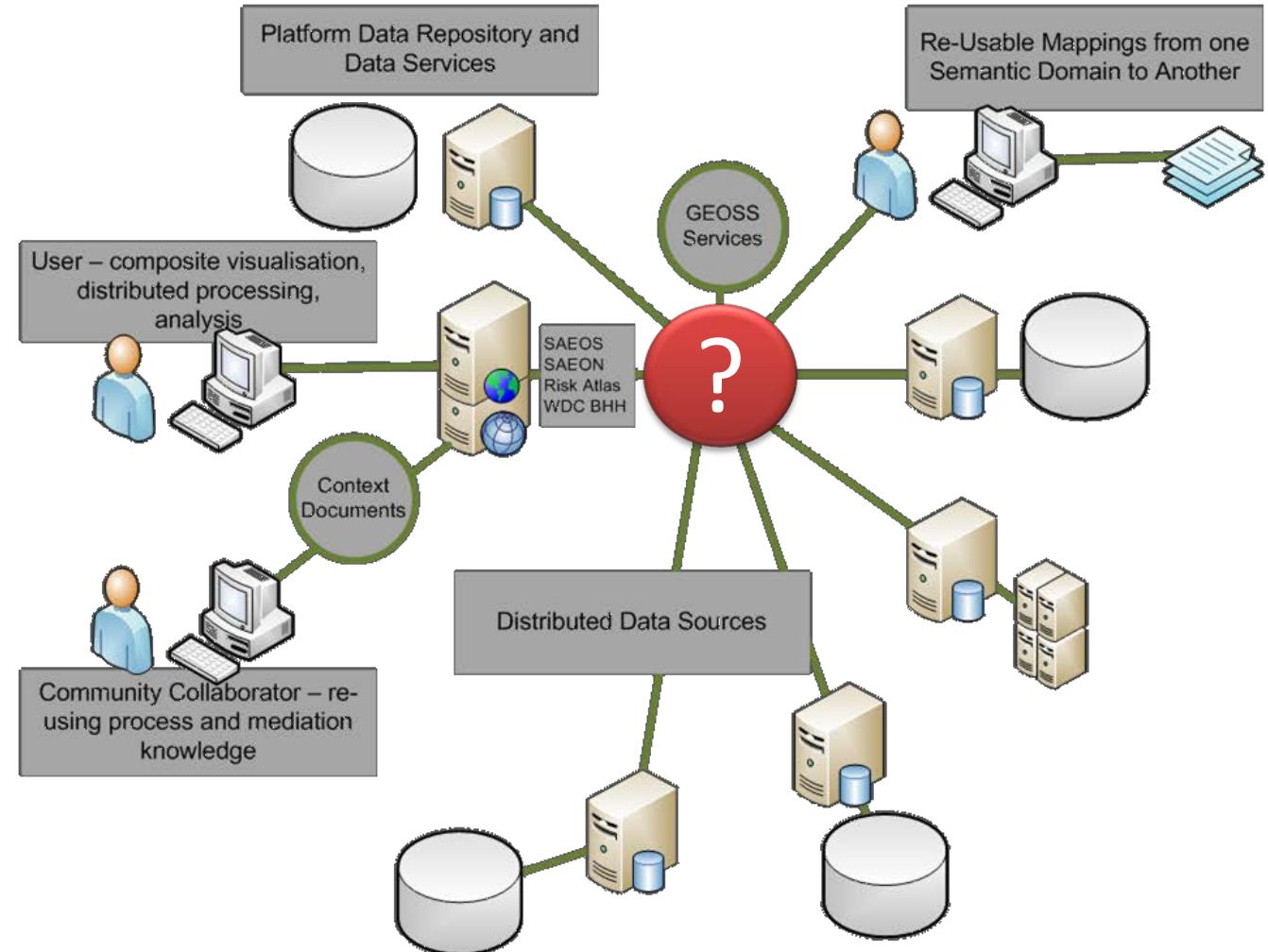


Main Use Cases: Automated Process Chaining

Distributed data sources and processes can also be chained together: in such cases, one needs to describe the process in a standardised way for future re-use.

This happens already in e-commerce systems, and it is likely that the same standards in use for automation of web commerce will be used in scientific process automation – but the jury is still out on this.

Automation and mediation rely greatly on ontologies for their efficient functioning. These are agreed dictionaries of terms, and can automate some of the mediation.



The current composite indicator for webometrics



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Webometrics Methodology, 2013

Visibility (50%)

- Impact. The quality of the contents is evaluated through a “virtual referendum”, counting all the external inlinks that the University web domain receives from third parties.

Activity (50%)

- Presence (1/3). The total number of web pages hosted in the main web domain (including all the subdomains and directories) of the institution as indexed by the largest commercial search engine (Google).
- Openness (1/3). The global effort to set up institutional research repositories is explicitly recognised in this indicator that takes into account the number of rich files (pdf, doc, ppt, docx) published in dedicated websites according to the institution search engine. **Google scholar**. The objective is to consider recent publications published between 2008 and 2012 (new period).
- Excellence (1/3). The institutional papers published in high impact international journals are playing a very important role in the ranking of institutional repositories. Using simply the total number of papers can be misleading, so we are restricting the indicator to only those excellent publications, i.e. the institution' scientific output being part of the 10% most cited papers in their respective scientific fields.