

RDA Update & P10 highlights



RDA
RESEARCH DATA ALLIANCE

RDC DRC
Research Data Canada - Données des Données Canada

Université de Montréal

RDA P10thème

Montréal, Canada
19-21 September 2017
19 au 21 septembre 2017

Plenary Meeting
Conférence plénière

Irina Kupiainen, CSC/RDA Europe

10 October, 2017

RDA Finland meeting, Espoo

WWW.RD-ALLIANCE.ORG - @RESDATALL

THE RESEARCH DATA ALLIANCE

www.rd-alliance.org

*building the social and technical
bridges that enable open sharing of
data*

18 FLAGSHIP OUTPUTS

of which 4 ICT
Technical
Specifications

75 ADOPTION CASES

across multiple
disciplines,
organisations &
countries

85 GROUPS WORKING ON GLOBAL DATA INTEROPERABILITY CHALLENGES

of which 28 WORKING GROUPS
& 57 INTEREST GROUPS

5,825 INDIVIDUAL MEMBERS FROM 128 COUNTRIES

67% Academia & Research
14% Public Administration
11% Enterprise & Industry

43 ORGANISATIONAL MEMBERS & 8 AFFILIATE MEMBERS



Vision

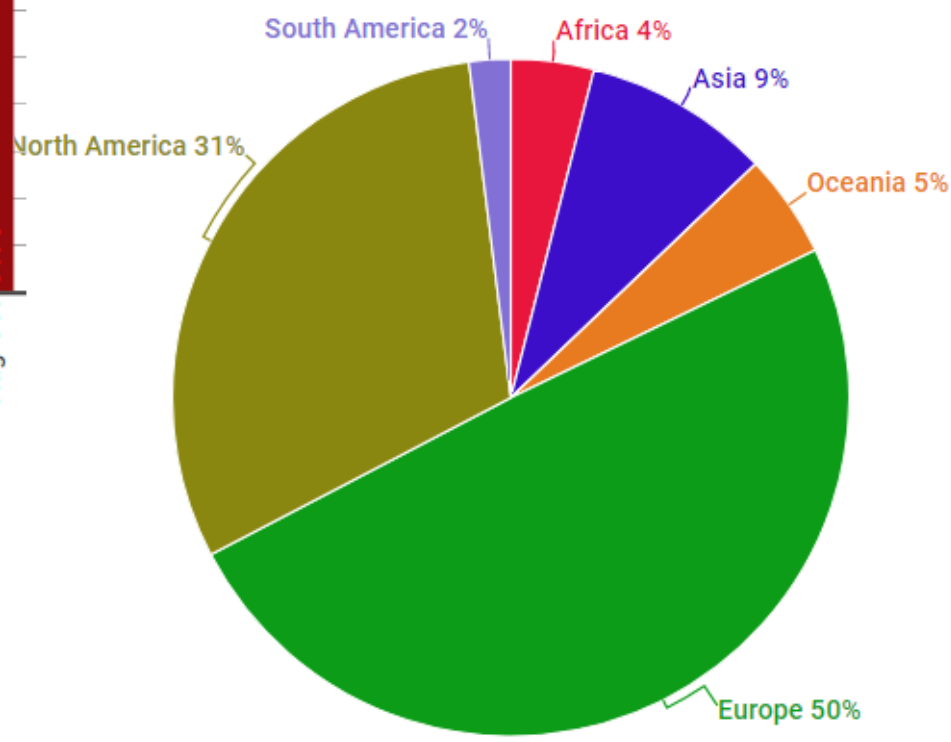
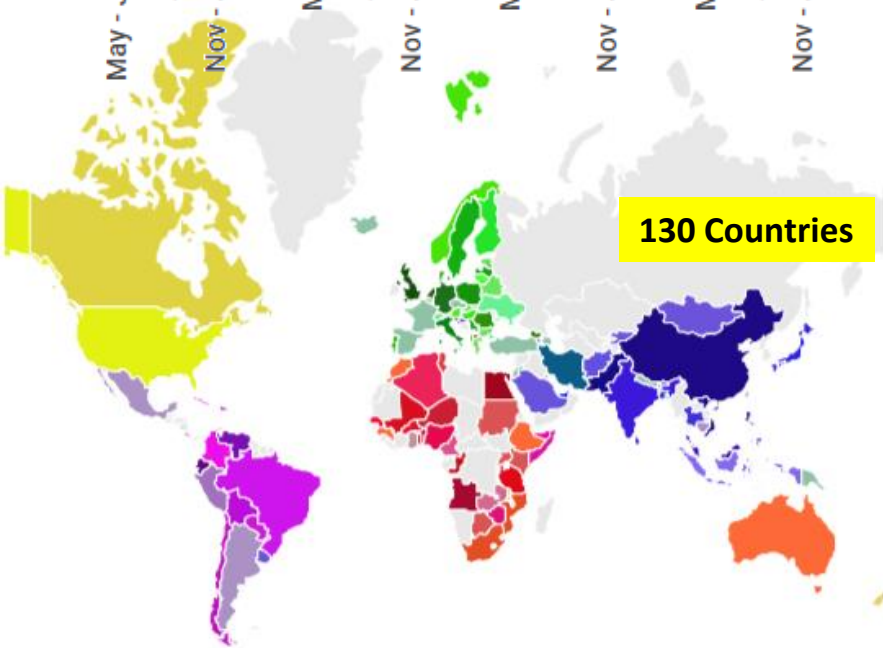
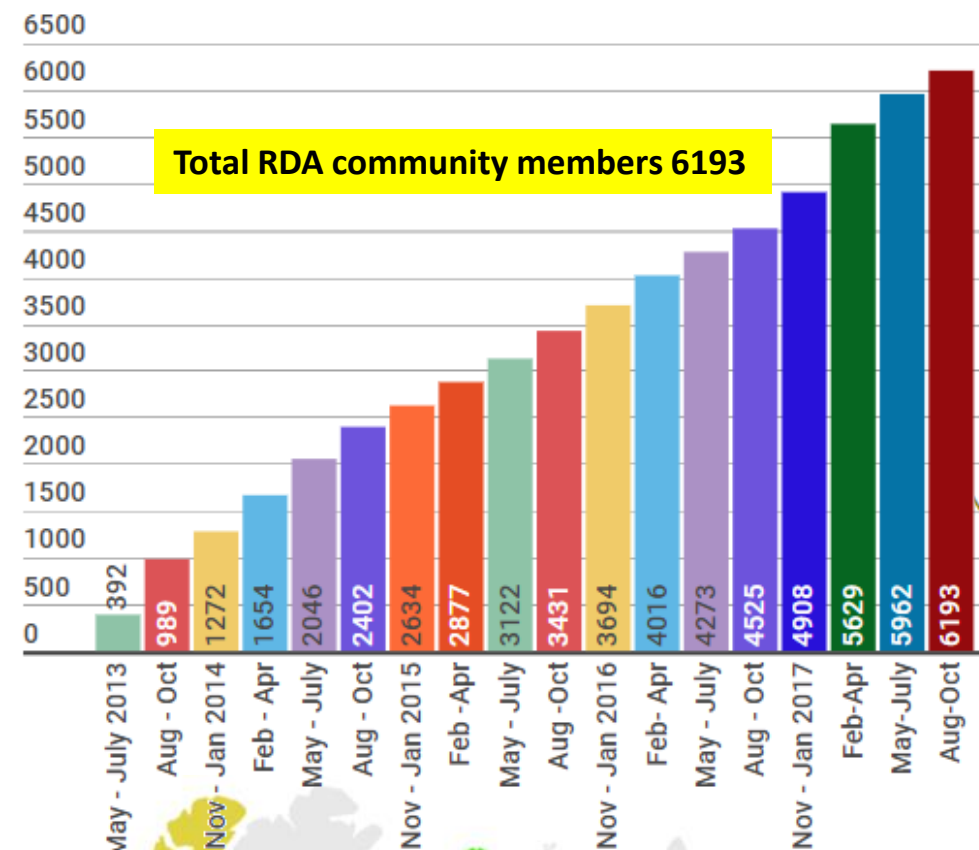
Researchers and innovators openly share data across technologies, disciplines, and countries to address the grand challenges of society.

Mission

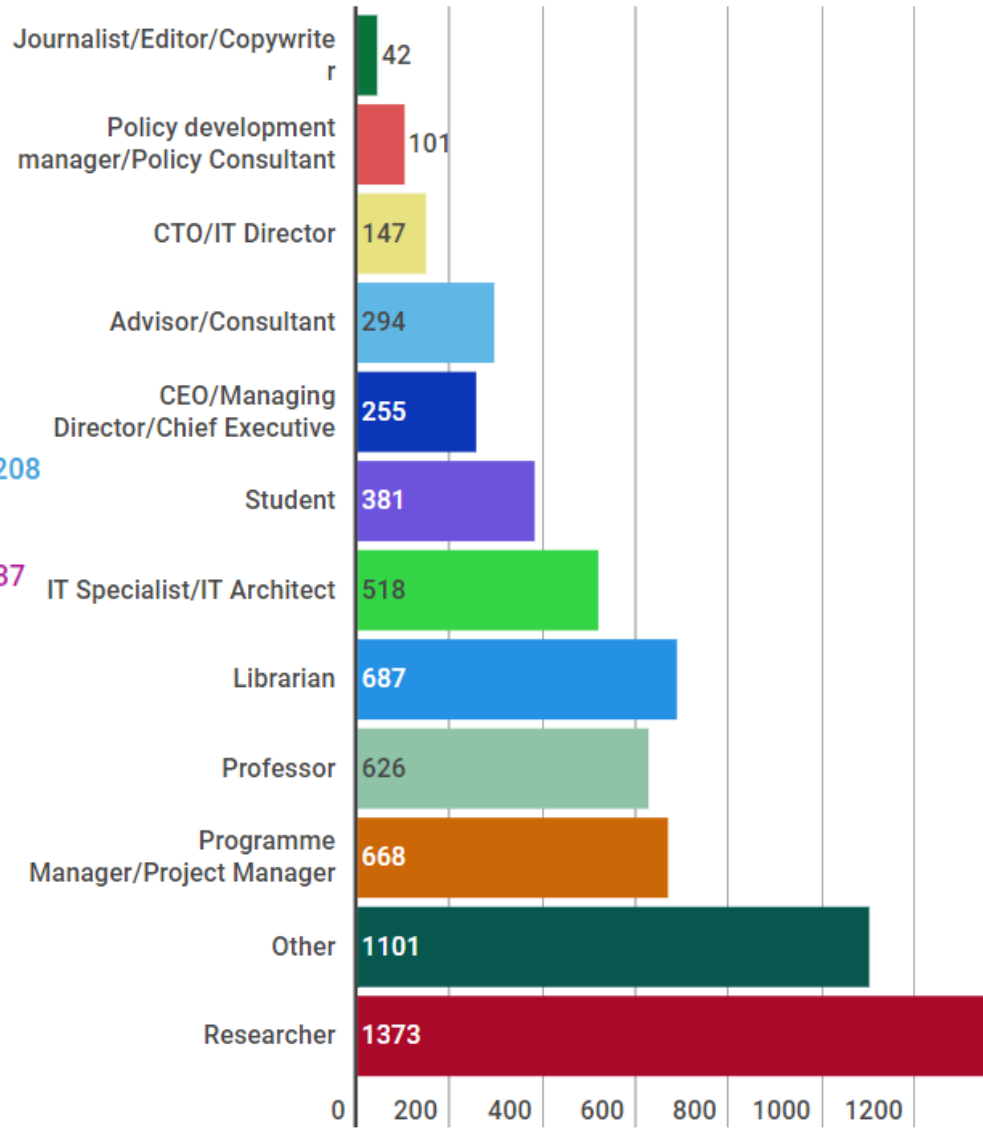
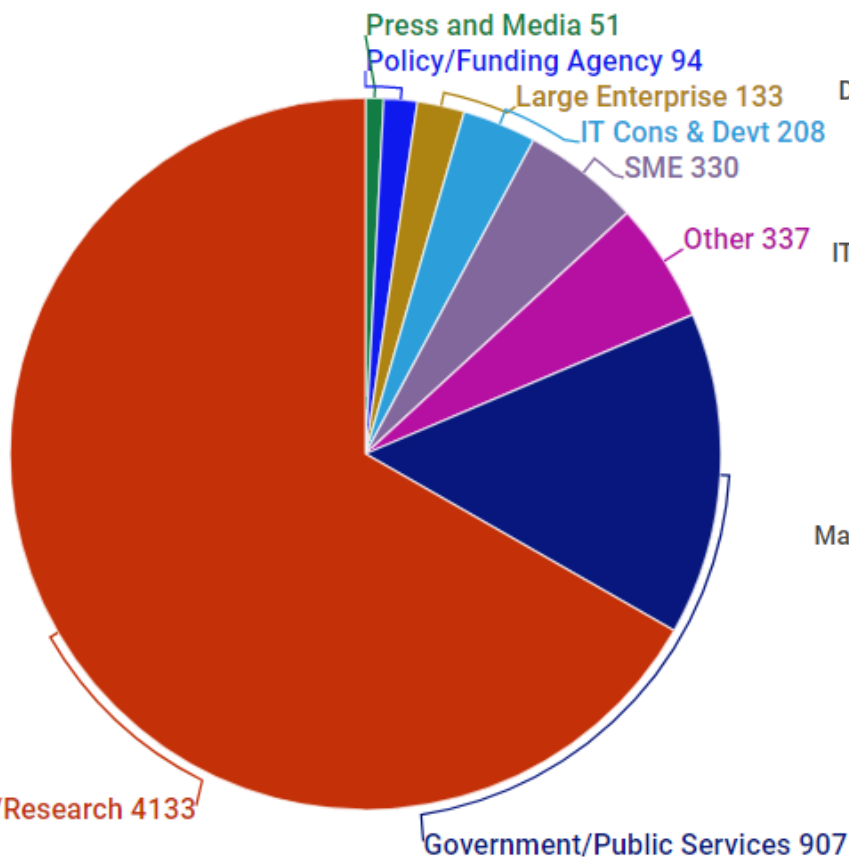
RDA builds the **social and technical bridges** that enable open sharing of data.

RDA worldwide growth

Total RDA community members 6193



Who is RDA?



RDA Interest (IG) & Working Groups (WG) by Focus (1)

Total 88 groups:
30 Working Groups & 58 Interest Groups

Domain Science - focused

- Agrisemantics WG
- BioSharing Registry WG
- Fisheries Data Interoperability WG
- On-Farm Data Sharing (OFDS) WG
- Rice Data Interoperability WG
- Wheat Data Interoperability WG
- Agricultural Data IG (IGAD)
- Biodiversity Data Integration IG
- Chemistry Research Data IG
- Digital Practices in History and Ethnography IG
- Geospatial IG
- Global Water Information IG
- Health Data IG
- Linguistics Data Interest Group
- Mapping the Landscape IG
- Marine Data Harmonization IG
- Quality of Urban Life IG
- RDA/CODATA Materials Data, Infrastructure & Interoperability IG
- Research data needs of the Photon and Neutron Science community IG
- Small Unmanned Aircraft Systems' Data IG
- Structural Biology IG
- Weather, Climate and air quality IG

Community Needs - focused

- Certification and Accreditation for Data Science Training and Education WG
- RDA/CODATA Summer Schools in Data Science and Cloud Computing in the Developing World WG
- Teaching TDM on Education and Skill Development WG
- Archives & Records Professionals for Research Data IG
- Data for Development IG
- Development of Cloud Computing Capacity and Education in Developing World Research IG
- Early Career and Engagement IG
- Education and Training on handling of research data IG
- Ethics and Social Aspects of Data IG
- International Indigenous Data Sovereignty IG

RDA Interest (IG) & Working Groups (WG) by Focus (2)

Total 88 groups:
30 Working Groups & 58 Interest Groups

Reference and Sharing - focused

- Data Citation WG
- Data Description Registry Interoperability WG
- Data Security and Trust WG
- Empirical Humanities Metadata WG
- International Materials Resource Registries WG
- Provenance Patterns WG
- QoS-DataLC Definitions WG
- RDA / WDS Publishing Data Bibliometrics WG
- Repository Core Description WG
- Research Data Collections WG
- Research Data Repository Interoperability WG
- Data Discovery Paradigms IG
- National Data Services IG
- RDA/CODATA Legal Interoperability IG
- Reproducibility IG
- Sharing Rewards and Credit (SHARC) IG

Partnership Groups

- RDA / TDWG Metadata Standards for attribution of physical and digital collections stewardship WG
- RDA/WDS Scholarly Link Exchange Working Group
- ELIXIR Bridging Force IG
- RDA/NISO Privacy Implications of Research Data Sets IG
- RDA/WDS Publishing Data IG

RDA Interest (IG) & Working Groups (WG) by Focus (3)

Total 88 groups:
30 Working Groups & 58 Interest Groups

Data Stewardship and Services – focused

- ❑ Brokering Framework WG
- ❑ DMP Common Standards WG
- ❑ Exposing Data Management Plans WG
- ❑ RDA / WDS Publishing Data Workflows WG
- ❑ WDS/RDA Assessment of Data Fitness for Use WG
- ❑ Active Data Management Plans IG
- ❑ Data in Context IG
- ❑ Data Rescue IG
- ❑ Data Versioning IG
- ❑ Domain Repositories IG

- ❑ Libraries for Research Data IG
- ❑ Long tail of research data IG
- ❑ Physical Samples and Collections in the Research Data Ecosystem IG
- ❑ Preservation e-Infrastructure IG
- ❑ Preservation Tools, Techniques, and Policies IG
- ❑ RDA/WDS Certification of Digital Repositories IG
- ❑ RDA/WDS Publishing Data Cost Recovery for Data Centres IG
- ❑ Repository Platforms for Research Data IG
- ❑ Research Data Provenance IG
- ❑ Virtual Research Environments IG

Base Infrastructure – focused

- ❑ Array Database Assessment WG
- ❑ Data Type Registries WG
- ❑ Metadata Standards Catalog WG
- ❑ PID Kernel Information WG
- ❑ Data Fabric IG
- ❑ Data Foundations and Terminology IG
- ❑ Disciplinary Interoperability Framework IG
- ❑ Big Data IG

- ❑ Brokering IG
- ❑ Federated Identity Management IG
- ❑ Metadata IG
- ❑ PID IG
- ❑ Software Source Code IG
- ❑ Vocabulary Services IG

Top 10 EU countries

Country	Actual Members
United Kingdom	511
Germany	301
France	241
Netherlands	210
Italy	171
Ireland {Republic}	119
Finland	97
Greece	90
Spain	82
Belgium	56
Switzerland	51
Austria	39

RDA Outputs and adoption

RDA Recommendations that make data work



“Create - Adopt - Use”

- ✓ Adopted code, policy, specifications, standards, or practices that enable data sharing
- ✓ “Harvestable” efforts for which 12-18 months of work can eliminate a roadblock
- ✓ Efforts that have substantive applicability to groups within the data community but may not apply to all
- ✓ Efforts that can start today

18 flagship recommendations & outputs, over 75 cases of adoption in different domains, organisations and countries

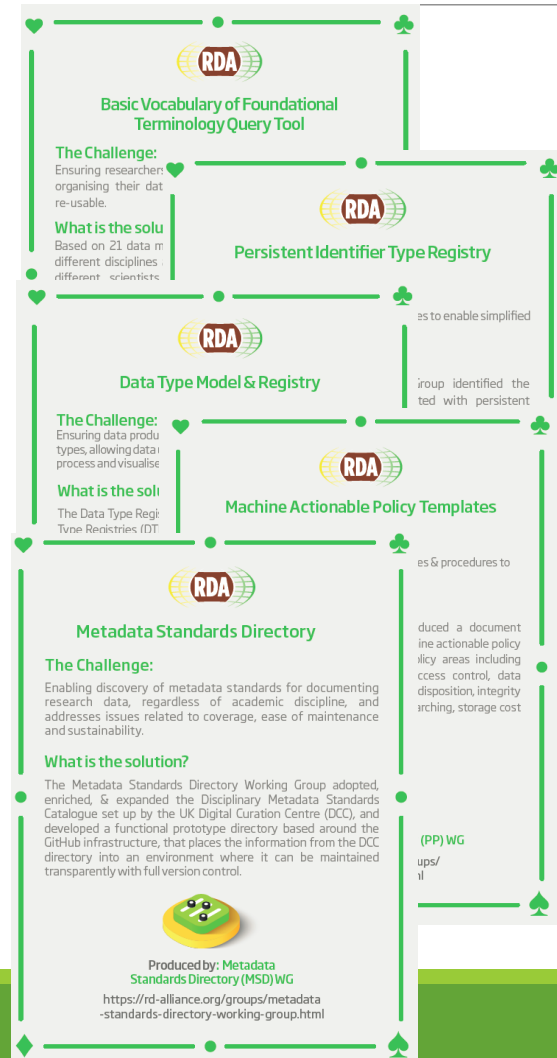
75 Adoption Cases

<https://www.rd-alliance.org/recommendations-outputs/adoption-recommendations>

Find out how you can become an Adopter

<https://www.rd-alliance.org/recommendations-and-outcomes/become-rda-adopter>

RDA Recommendations & Outputs



Data Foundation & Terminology: a model for data in the registered domain.

PID Information Types: a common protocol for providers and users of persistent ID services worldwide.

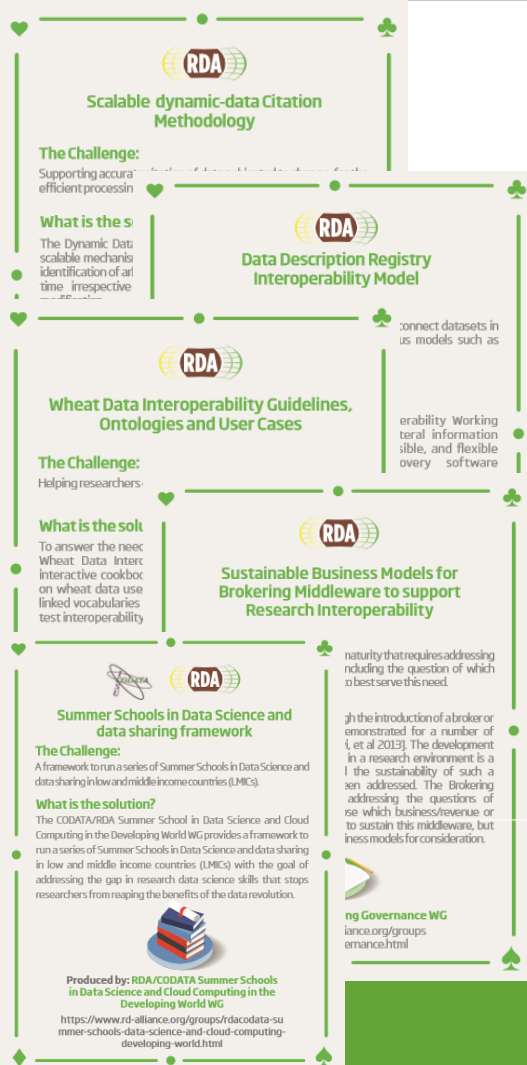
Data Type Registries: allowing humans and machines to act on unknown, but registered, data types.

Practical Policy: defining best practices of how to deal with data automatically and in a documented way with computer actionable policy.

Metadata standards directory: Community curated standards catalogue for metadata interoperability

rd-alliance.org/recommendations-and-outputs/all-recommendations-and-outputs

RDA Recommendations & Outputs



Scalable dynamic-data Citation Methodology

The Challenge: Supporting accurate efficient processin

What is the s
The Dynamic Data scalable mechanism identification of all time irrespective

Data Description Registry Interoperability Model

connect datasets in us models such as

Wheat Data Interoperability Guidelines, Ontologies and User Cases

The Challenge: Helping researchers

What is the solt
To answer the need Wheat Data Inter interactive cookbook on wheat data use linked vocabularies test interoperability

Sustainable Business Models for Brokering Middleware to support Research Interoperability

erability Working teral information sible, and flexible every software

Summer Schools in Data Science and data sharing framework

The Challenge: A framework to run a series of Summer Schools in Data Science and data sharing in low and middle income countries (LMICs).

What is the solution?
The CODATA/RDA Summer School in Data Science and Cloud Computing in the Developing World WG provides a framework to run a series of Summer Schools in Data Science and data sharing in low and middle income countries (LMICs) with the goal of addressing the gap in research data science skills that stops researchers from reaping the benefits of the data revolution.

ng Governance WG
ianco.org/groups erance.html

Produced by: RDA/CODATA Summer Schools in Data Science and Cloud Computing in the Developing World WG
<https://www.rd-alliance.org/groups/rdacodata-summer-schools-data-science-and-cloud-computing-developing-world.html>

Data Citation: defining mechanisms to reliably cite dynamic data

Data Description Registry Interoperability solutions enabling cross platform discovery based on existing open protocols and standards

Wheat Data Interoperability impacting the discoverability, reusability and interoperability of wheat data by building a common framework for describing, representing linking and publishing wheat data

Brokering Governance WG: Sustainable Business Models for Brokering Middleware to support Research Interoperability

RDA/CODATA Summer Schools in Data Science and Cloud Computing in the Developing World WG: A framework to run a series of Summer Schools in Data Science and data sharing in low and middle income countries (LMICs)

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RDA Recommendations & Outputs



Repository Audit and Certification Catalogues



Bibliometric Indicators for Data Publishing



Workflows for Research Data Publishing: Models and Key Components



An open, universal literature-data cross-linking service

The Challenge:
Sharing information about the links between the literature and research data.

What is the solution?
Building on pre-existing components and international initiatives, the RDA/WDS Publishing Data Services Working Group is one of the drivers behind the "Data Literature Interlinking Service" (DLI), developed in a synergy with OpenAIRE & PANGAEA. DLI is aimed at improving visibility, discoverability, re-use and reproducibility by bringing 2M+ existing article/data links together, normalize them using a common schema, and exposing the full set as an open service.



Produced by: RDA/WDS Publishing Data Services WG
<https://rd-alliance.org/groups/rdawds-publishing-data-services-wg.html>

Repository Audit and Certification DSA–WDS: A convergent DSA-WDS certification standard to help eliminate duplication of effort, increase certification procedure coherence and compatibility thus benefitting researchers, data managers, librarians and scientific communities.

RDA/WDS Publishing Data Bibliometrics: improved research data metrics and corresponding services, with the final goal of increasing the overall availability and quality of citations and research data itself.

RDA/WDS Publishing Data Workflows: enhance the possibilities for greater discoverability and a more efficient and reliable reuse of research data benefitting other stakeholders like publishers, libraries and data centres.

RDA/WDS Publishing Data Services: A universal interlinking service between data and the scientific literature. **The Scholix initiative** a high level interoperability framework for exchanging information about the links between scholarly literature and data. It aims to build an open information ecosystem to understand systematically what data underpins literature and what literature references data.

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RDA Recommendations & Outputs

23 Things For Research Data Management

Legal Interoperability of Research Data: Principles and Implementation Guidelines

Matrix of use cases and functional requirements for research data repository platform

The Challenge:
Gather and analyze research data use cases in the context of repository platform requirements

What is the solution?
Based on use cases, the matrix describes forty-four functional requirements identified for research data repository platforms and provides a score identifying relative importance. These functional requirement scores can be used to assess research data repository platforms and to prioritize functional requirements for development and adoption.

Produced by: **Repository Platforms for Research Data IG**
<https://www.rd-alliance.org/groups/repository-platforms-research-data.html>

23 Things: Libraries For Research Data An overview of practical, free, online resources and tools that users can immediately take advantage of to incorporate research data management into the practice of librarianship.

Legal Interoperability of Research Data Principles and Implementation Guidelines: a set of principles and practical implementation guidelines offered as high-level guidance to all members of the research community —the funders, managers of data centers, librarians, archivists, publishers, policymakers, university administrators, individual researchers, and their legal counsel.

Matrix of use cases and functional requirements for research data repository platform Based on use cases, the matrix describes forty-four functional requirements identified for research data repository platforms and provides a score identifying relative importance.

BioSharing Recommendations Data repositories, standards and policies in the life, biomedical and environmental sciences

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Call for Supporting and Other RDA Outputs



If your group has produced something that you would like to share with the broader community, please send it to enquiries@rd-alliance.org and indicate whether you would like it to be considered as a 'Supporting' or 'Other' output.

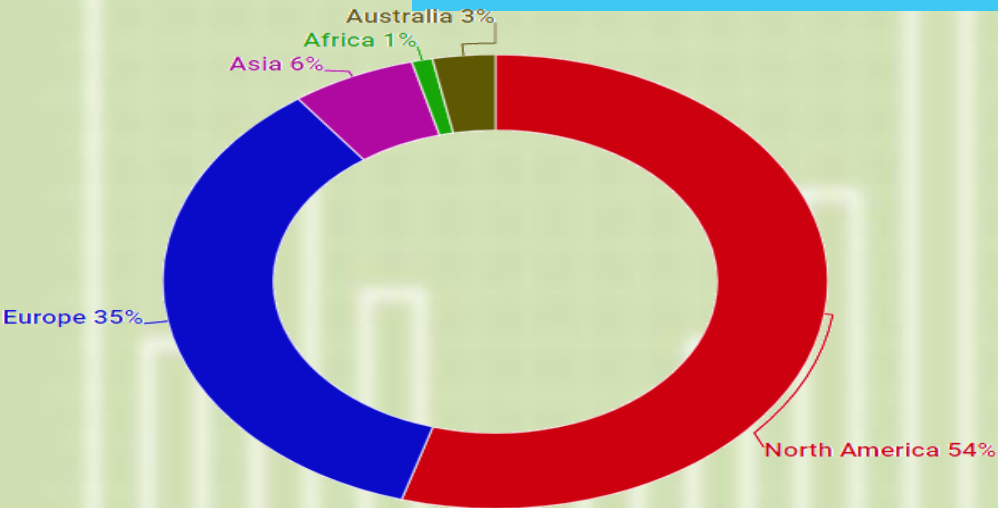
**THE RESEARCH
DATA ALLIANCE**
RECOMMENDATIONS
& OUTPUTS



<https://rd-alliance.org/call-supporting-and-other-rda-outputs>



Over **430** participants from **30** countries



Increased female participation 44%
 the highest sofar

73 Breakout meetings
 of which 14 Working Groups
 of which 37 Interest Groups
 of which 6 Joint Working & Interest Groups
 of which 16 Birds of a Feather
 6 Outputs presented / 1 Final Release
 60 Posters



Highlights from P10

Growth - and what to do about it?

At the time of P1, there were 240 members from 30 countries.

At the time of P10, there are more than 6000 members 130 countries.

Need to professionalize:

- **Strategy**
- **Sustainability**
- **Scalability**
- **Impact**
- **Standardized approaches**
- **Regional coordination**

Challenges and new emerging issues...

- ◆ Dominance of Europe and US
- ◆ Humanities + medical and health sciences still under-represented
- ◆ How to boost impact and benefit for all members and communities?
- ◆ Voluntary basis important, but some level of support is needed : Community feedback and follow-up collection by Secretariat – more inclusiveness, more integrative activities
- ◆ Gender and diversity issues
- ◆ Improving the handling of recommendations, DOIs
- ◆ Tracking IG/WG publications with help of OpenAIRE

Implications for Finland?

- ◆ Finland's activity in working and interest groups
- ◆ National level uptake of RDA outputs
- ◆ Linkages to and coherence with parallel European RI initiatives such as the European Open Science Cloud
- ◆ Linkages to other initiatives such as CODATA etc.
- ◆ Contribution to RDA's future development on the strategic level
- ◆ Entering into the next phase of RDA Europe...

Irina Kupiainen
irina.kupiainen@csc.fi
@IrinaKupiainen

WWW.RD-ALLIANCE.ORG/
@RESDATALL



RDA Global

Email - enquiries@rd-alliance.org

Web - www.rd-alliance.org

Twitter - [@resdatall](https://twitter.com/resdatall)

LinkedIn - www.linkedin.com/in/ResearchDataAlliance

Slideshare -

<http://www.slideshare.net/ResearchDataAlliance>

RDA Europe

Email - info@europe.rd-alliance.org

Twitter - [@RDA_Europe](https://twitter.com/RDA_Europe)

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