



RDA-pt: a Portuguese community in the Research Data Alliance

Cristina Ribeiro, Irene Rodrigues, Maria Manuel Borges, José Borbinha, João Miranda, Pedro Moura Ferreira, Eloy Rodrigues, Francisco Barbedo



The Research Data Alliance

- Community-driven organisation
 - Starts 2013, EU+ NSF+ NIST+ Austrália
- ~11.000 members, 145 countries (June 2020)
 - Free participation for individuals, organizations contribute with fee
- Organisation
 - Interest Groups (58): focused on specific area, launch WG for tasks
 - Working Groups (40): 18 months, solution and its dissemination



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.

THE RESEARCH DATA ALLIANCE

www.rd-alliance.org

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

47 FLAGSHIP OUTPUTS

including 8 ICT Technical Specifications

100+ ADOPTION CASES

across multiple disciplines, organisations & countries

98 GROUPS WORKING ON GLOBAL DATA INTEROPERABILITY CHALLENGES

40 Working Groups
58 Interest Groups

10,761 INDIVIDUAL MEMBERS FROM 145 COUNTRIES

69% Academia & Research
14% Public Administration
11% Enterprise & Industry

53 ORGANISATIONAL MEMBERS 11 AFFILIATE MEMBERS



What is RDA?

RDA is an international **member-based organization** focused on the development of infrastructure and community activities that reduce barriers to data sharing and exchange, and the acceleration of data-driven innovation worldwide.

With more than 10K members globally representing 145 countries, RDA includes **researchers, scientists and data science professionals** working in multiple disciplines, domains and thematic fields and from different types of organisations across the globe.

RDA is building the social and technical bridges that enable open sharing of data to achieve its vision of researchers and innovators openly sharing data across technologies, disciplines, and countries to address the grand challenges of society.

RDA-Europe: European plugin to the RDA



- Pioneer nodes in RDA-4
 - **Greece** Athena Research Center
 - **UK** STFC (Science and Technology Facilities Council)
 - **Spain** BSC (Barcelona Supercomputing Centre)
 - **Italy** CNR-ISTI (National Research Council)
 - **Netherlands** DANS (Data Archiving and Networked Services)
 - **Finland** CSC (Tieteen Tietotekniikan Keskus)
 - **Germany** Max Planck Institute
 - **France** CNRS (Centre National de la Recherche Scientifique)
 - **Ireland** National Library of Ireland

RDA-Europe: Build a network of nodes

- 1st call August 2018, 4 new nodes
 - **Austria** RDA Austria
 - **Denmark** DM Forum (National Forum for Research Data Management)
 - **Portugal** INESC TEC (leading a group of 8 institutions)
 - **Slovenia** ADP (Social Science Data Archives)

RDA-Europe: Build a network of nodes

- 2nd call April 2019, 6 new nodes
 - **Croatia** SRCE (University of Zagreb Computing Center)
 - **Czech Republic** Plan4all
 - **Hungary** HRDA
 - **Lithuania** *Group of institutions*
 - **Norway** NSD (leading a group of 7 institutions)
 - **Sweden** SND (Swedish National Data)

RDA-Europe: Build a network of nodes

- 3rd call September 2019
 - **Bulgaria** Sofia University St. Kliment Ohridski
 - **Estonia** University of Tartu
 - **Romania** Exec. Agency for Higher Ed., R & D & I Funding

- Accomplished goal of RDA-4: network of **22 nodes**
 - 9 pioneer, 4 first call, 6 second call, 3 third call

The RDA Europe National Node Network



RESEARCH DATA ALLIANCE
EUROPE



Final 22 nodes

RDA-pt RDA in Portugal

- **Vision**

- Researchers, institutions and FCT define data management practices, choose technologies and use a network infrastructure for data access, preservation and sharing

- **Mission**

- RDA-pt builds a community with interest in open data; disseminates, proposes technical solutions and surveys case studies in multiple domains

RDA activity in Portugal before RDA-pt

- Participation in Interest Groups/ Working Groups
 - 58 people registered
 - Contributions to documents and presentations
- Responsibility in Groups
 - *Repository Platforms for Research Data*: João Rocha is a co-chair
 - *RDA in Portugal*: Cristina Ribeiro, Irene Rodrigues coordinators
- RDA plenaries: 19 participations
 - Including various contributions: special sessions in projects, session organization, presentations in sessions, posters

RDA-pt key personnel

Cristina Ribeiro (INESC TEC, University of Porto)

Irene Rodrigues (University of Évora)

Maria Manuel Borges (University of Coimbra)

José Borbinha (Instituto Superior Técnico, University of Lisbon)

João Miranda (Polytechnic Institute of Portalegre)

Pedro Moura Ferreira (ICS, University of Lisbon)

Eloy Rodrigues (University of Minho)

Francisco Barbedo (DGLAB, Portuguese National Archives)

RDA-pt planned activities



RESEARCH DATA ALLIANCE

JROPE



	pre-contract			Part 1									Part 2							
	2018			2019									2020							
MONTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Ago	Set	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
EVENT		E1						E2	E3				E4	E5				E6		
PLENARY		P12											P14							P15
E1	RDA-pt presentation in Forum GDI, national RDM forum																			
E2	(in disciplinary event) RDA-pt co-located event																			
E3	(in disciplinary event) RDA-pt co-located event																			
E4	Organisation of co-located RDA-pt event in ConfOA (Brazil)																			
E5	(in disciplinary event) RDA-pt co-located event																			
E6	(in disciplinary event) RDA-pt co-located event																			
(P12)	Plenary 12, no plan by RDA-pt																			
P13	Plenary 13, Philadelphia, RDA-pt participation																			
P14	Plenary 14, Helsinki, RDA-pt participation																			
P15	Plenary 15, ??, RDA-pt participation																			

RDA-pt ongoing activities

	pre-contract			Part 1												Part 2											
	2018			2019												2020											
MONTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Ago	Set	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Ago	Set			
EVENT		E1						E2	E3	E4		E5	E6	E7					E8								
PLENARY		P12					P13						P14						P15								
E1	RDA-pt presentation in Forum GDI, national RDM forum																										
E2a, E2b, E2c	Participation in disciplinary events								Porto4Ageing				C4G Coordination Council				WS Comp. Data Analysis Num. Methods										
E3, E4	RDA-pt participation in disciplinary event+ National Science												Biodata.PT- ELIXIR						Ciência 2019								
E5	Organisation of co-located RDA-pt event in OSF												Open Science Fair: RDA-pt The Portuguese Node of the Research Data Alliance														
E6	Organisation of co-located RDA-pt event in ConfOA (Brazil)												WS at the Portuguese-Brazilian Conference on Open Access														
E7	(in disciplinary event) RDA-pt co-located event												Session at 5th Forum GDI (national RDM meeting)														
E8	(in disciplinary event) RDA-pt co-located event												Session at 6th Forum GDI (national RDM meeting)														
P13	Plenary 13, Philadelphia, RDA-pt participation								João Rocha da Silva, RDA-pt node								Joana Rodrigues, RDA Early Career Grant										
P14	Plenary 14, Helsinki, RDA-pt participation								Cristina Ribeiro, Irene Rodrigues, RDA-pt node								4 RDA-pt grants + 2 RDA Early Career Grants										
P15	Plenary 15, Melbourne, RDA-pt participation								Maria José Almeida, RDA-pt node								2RDA-pt grants (João Aguiar Castro, Jéssica Barbosa)										

The RDA Plenaries

- Meetings where IG and WG present work
 - IG and WG propose sessions
 - New groups can test their proposal and recruit people
 - Twice a year, see [previous and upcoming](#)
- P14: 10 Portuguese participants
 - 2 Early Career grants: Yulia Karimova, João Cardoso
 - 4 RDA-pt Grants: André Pacheco, Angela Lomba, Helena Amaral, Susana Barbosa
 - Cristina Ribeiro, Irene Rodrigues, Pedro Príncipe, Mário J. Silva



RESEARCH DATA ALLIANCE
EUROPE



RDA-pt goal: Build a community

- More participation in RDA global
 - Number of members (started 58, 197 in June 2020)
 - Contributions to Interest Groups/ Working Groups
- Co-organization of events
 - RDA presentations in events: disciplinary and open science
- Open calls for plenary participation

RDA-pt goal: Liaise with infrastructures

- Alignment with international infrastructures
 - ELIXIR (U. Lisboa)
 - EPOS (U. Évora, INESC TEC, P. Portalegre)
 - CESSDA (ICS)
 - CLARIN (U. Évora)
 - LifeWatch (INESC TEC)
- Entry point: infrastructures of the Portuguese roadmap

RDA-pt goal: collaborate Europe + Brazil



- European nodes
 - Take advantage of the network and activities in RDA-4
 - Learn from extensive experience of pioneer nodes
- Brazil
 - RDA in Brazil starting
 - Joint RDA-pt and RDA in Brazil workshop on October 4, 2019, part of CONFOA, the Portuguese-Brazilian Conference on Open Access

RDA Recommendations and outputs

- RDA Outputs
 - Technical & social infrastructure solutions developed by RDA Working Groups or Interest Groups
 - Enable data sharing, exchange, and interoperability
 - Solve data sharing problems
 - Adoption in infrastructure environments by individuals, projects and organisations
 - Improve global data sharing, exchange and interoperability

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

RDA-pt goal: Adopt recommendations

RECOMMENDATION	GROUP	IMPACT	FORESEEN ADOPTION	USE CASE	IMPLEMENTATION ACTIONS
 <p>Scalable dynamic data Citation Methodology</p> <p>The Challenge: Supporting accurate citation of data subjected to change, for the efficient processing of data and linking from publications.</p> <p>What is the solution? The Dynamic Data Citation Working Group developed a simple, scalable mechanism that allows the precise, machine-actionable identification of arbitrary sub-sections of dataset objects point in time irrespective of any subsequent addition, deletion or modification.</p>  <p>Produced by: Data Citation (DC) WG https://rd-alliance.org/groups/data-citation-wg.html</p>	<p>What is the impact?</p> <p>The main impact is on the reproducibility of work: it allows databases to be dynamically updated as needed, while users can still retrieve the data as it was at a specific point in time, providing valuable semantic information on the way the specific dataset was constructed.</p> <p>As data gets migrated to new representations, the queries to identify the specific dataset subset can be migrated accordingly, ensuring stability across technological changes, enhancing data interoperability, sharing and re-use.</p>  <p>Find out more about the Data Citation WG recommendation</p>	 <p>Persistent Identifier Type Registry</p> <p>The Challenge: Defining standard core PID information types to enable simplified verification of data identity and integrity.</p> <p>What is the solution? The PID Information Types Working Group identified the essential types of information associated with persistent identifiers, defined and registered a number of core persistent identifiers (PID) information types. The working group developed a conceptual model for structuring the typed information, an application programming interface to access to typed information and a demonstrator implementing the interface.</p>  <p>Produced by: PID Information Types (PT) WG https://rd-alliance.org/groups/pid-information-types-wg.html</p>	<p>What is the impact?</p> <p>In complex data domains, unique and persistent identifiers (PIDs) are at the core of proper data management and access, providing a unified access method to all PID service users and the automatic processes to deal with heterogeneous data allowing them to fully exploit the huge amount of data available. Registered PID Information Types are one of the fundamental building blocks to enable semantic interoperability of data.</p> <p>Developers are able to use a simple API to deal with PID related information, such as checksum verification, to assess data identity and integrity, thus enabling software development to become more efficient.</p>  <p>Find out more about the PT WG Recommendation</p>	 <p>Repository Audit and Certification Catalogues</p> <p>The Challenge: Creating harmonized Common Procedures for certification of repositories.</p> <p>What is the solution? Drawing from the procedures already out in place by the Data Seal of Approval (DSA) and the ICSU World Data System (ICSU-WDS), the RDA Repository Audit and Certification (DSA-WDS) Partnership Working Group has produced a convergent DSA-WDS certification standard aiming to eliminate duplication of effort, increase certification procedure coherence and compatibility thus benefiting researchers, data managers, librarians and scientific communities.</p>  <p>Produced by: The Repository Audit and Certification DSA-WDS Partnership WG https://rd-alliance.org/groups/rdaws-certification-digital-repositories-ig.html</p>	<p>What is the impact?</p> <p>The convergent DSA-WDS certification standard marks a step towards having more coherent, increasingly stringent and compatible standards for repository certification. The harmonization of repository certification criteria will facilitate adoption and thus number of certified repositories, building trust for data generators, data consumers and funding bodies.</p>  <p>Find out more about the Repository Audit and Certification DSA-WDS Partnership WG recommendation</p>

RDA-pt goal: Adopt recommendations



RESEARCH DATA ALLIANCE
EUROPE

A repeating pattern of the RDA logo in various colors (green, yellow, brown) on a white background, serving as a decorative border for the central text box.

What is the impact?

The convergent DSA-WDS certification standard marks a step towards having more coherent, increasingly stringent and compatible standards for repository certification. The harmonization of repository certification criteria will increase adoption and the number of certified repositories building trust for data generators, data consumers and funding bodies.

A square QR code located in the bottom right corner of the green text box, which links to more information about the RDA-WDS Partnership WG Recommendation.

Find out more about the Repository Audit and Certification DSA-WDS Partnership WG Recommendation



Repository Audit and Certification Catalogues

The Challenge:

Creating harmonized Common Procedures for certification of repositories

What is the solution?

Drawing from the procedures already put in place by the Data Seal of Approval (DSA) and the ICSU World Data System (ICSU-WDS), the RDA Repository Audit and Certification DSA-WDS Partnership Working Group has produced a convergent DSA-WDS certification standard aiming to eliminate duplication of effort, increase certification procedure coherence and compatibility thus benefitting researchers, data managers, librarians and scientific communities.



Produced by: The Repository Audit and Certification
DSA-WDS Partnership WG

[https://rd-alliance.org/groups/
rdawds-certification-digital-repositories-ig.html](https://rd-alliance.org/groups/rdawds-certification-digital-repositories-ig.html)

RDA-pt goal: Adopt recommendations



RESEARCH DATA ALLIANCE
EUROPE



Persistent Identifier Type Registry

The Challenge:

Defining standard core PID information types to enable simplified verification of data identity and integrity

What is the solution?

The PID Information Types Working Group identified the essential types of information associated with persistent identifiers, defined and registered a number of core persistent identifiers (PIDs) information types. The working group developed a conceptual model for structuring the typed information, an application programming interface to access to typed information and a demonstrator implementing the interface.



Produced by: PID Information Types (PIT) WG

<https://rd-alliance.org/groups/pid-information-types-wg.html>

What is the impact?

In complex data domains, unique and persistent identifiers (PIDs) are at the core of proper data management and access, providing a unified access method to all PID service users and the automatic processes to deal with heterogeneous data allowing them to fully exploit the huge amount of data available. Registered PID Information Types are one of the fundamental building blocks to enable semantic interoperability of data.

Developers are able use a simple API to deal with PID related information, such as checksum verification, to assess data identity and integrity, thus enabling software development to become more efficient.



Find out more about the PIT WG Recommendation



Metadata Standards Directory

The Challenge:

Enabling discovery of metadata standards for documenting research data, regardless of academic discipline, and addresses issues related to coverage, ease of maintenance and sustainability.

What is the solution?

The Metadata Standards Directory Working Group adopted, enriched, & expanded the Disciplinary Metadata Standards Catalogue set up by the UK Digital Curation Centre (DCC), and developed a functional prototype directory based around the GRISS infrastructure, that places the information from the DCC directory into an environment where it can be maintained transparently with full version control.



Produced by: Metadata Standards Directory (MSD) WG

<https://rd-alliance.org/groups/metadata-standards-directory-working-group.html>

What is the impact?

The Metadata Standards Catalogue was built to guide researchers towards the metadata standards, and tools relevant for their discipline. The directory drives up adoption of those standards, improving the chances of future researchers finding, accessing, and reusing the associated data.

By raising awareness of existing standards, the directory reduces the proliferation of ad hoc metadata formats and helps direct future standards development efforts towards those areas that most need it.



Find out more about the MSD WG Recommendation

RDA-pt goal: Adopt recommendations



RESEARCH DATA ALLIANCE
EUROPE



Metadata Standards Directory

The Challenge:

Enabling discovery of metadata standards for documenting research data, regardless of academic discipline, and addresses issues related to coverage, ease of maintenance and sustainability.

What is the solution?

The Metadata Standards Directory Working Group adopted, enriched, & expanded the Disciplinary Metadata Standards Catalogue set up by the UK Digital Curation Centre (DCC), and developed a functional prototype directory based around the GitHub infrastructure, that places the information from the DCC directory into an environment where it can be maintained transparently with full version control.



Produced by: Metadata Standards Directory (MSD)WG

<https://rd-alliance.org/groups/metadata-standards-directory-working-group.html>

What is the impact?

The Metadata Standards Catalogue was built to guide researchers towards the metadata standards and tools relevant for their discipline. The directory drives up adoption of those standards, improving the chances of future researchers finding, accessing, and reusing the associated data.

By raising awareness of existing standards, the directory reduces the proliferation of ad hoc metadata formats and helps direct future standards development efforts towards those areas that most need it.

Find out more about the MSD WG Recommendation



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.



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>

What is the impact?

The RDA/CODATA Working group is focused on consolidating the framework and the continued collaboration for the development and improvement of the curriculum and training materials, which include the principles and practice of Open Science, research data management and curation, the use of a range of data platforms and infrastructures, large scale analysis, statistics, visualisation and modelling techniques, software development.

The need for a consistent education in Research Data Science is increasingly paramount for many stakeholders, from scientists to funders to policy makers from many nations. All disciplines need to ensure that research is reproducible and that provenance is documented reliably and this requires a transformation in practice and the promotion of the necessary culture, practice and skills.

RDA/CODATA Summer Schools in Data Science and Cloud Computing in the Developing World WG Recommendation





RESEARCH DATA ALLIANCE
EUROPE



RDA-pt goal: Adopt recommendations

Group	Recommendation - Short description & Impact	Recommendation details	Adopters
Repository Audit and Certification / DSA-WDS Partnership	Repository Audit and Certification Catalogues Creates harmonized Common Procedures for certification of repositories at the basic level, drawing from the procedures already put in place by the Data Seal of Approval (DSA) and the ICSU World Data System (ICSUWDS)	Recommendation page: https://www.rd-alliance.org/group/repository-audit-and-certification-dsa-wds-partnership-wg/outcomes/dsa-wds-partnership	<ul style="list-style-type: none">• CLARIN• International Oceanographic Data and Information Exchange (IODE) programme• CESSDA SaW Project
Research Data Repository Interoperability WG	Research Data Repository Interoperability WG Final Recommendations Provides recommendations with respect to an interoperable packaging and exchange format for digital content.	Recommendation page: https://www.rd-alliance.org/group/research-data-repository-interoperabil... DOI: http://dx.doi.org/10.15497/RDA00025	<ul style="list-style-type: none">• Fedora Commons• DARIAH-DE Repository• ICat Project• KIT Data Manager



RESEARCH DATA ALLIANCE
EUROPE



RDA-pt goal: contribute to sustainability

- RDA global
 - RDA Regional Engagement Group
 - Discussion: basis for contributions (PIB, members, region dimensions)
- RDA Europe
 - Project RDA-4 is reporting on node perspectives
- Sustainability in RDA-pt
 - Alignment with national Open Data strategy

How can you participate in RDA?

- Join as a member
 - No cost, access to all groups and results
 - Sign up for Interest Groups and Working Groups
- Participate
 - Plenaries: posters, sessions, breakout of new groups
 - Take your results to the relevant communities

www.rd-alliance.org/

How can you participate in RDA-pt?

- Join RDA in Portugal (group)
 - Highlight the presence of the Portuguese community in RDA
 - 90 of the ~200 Portuguese members of RDA have signed up for the node
- Promote activities and suggest actions
 - Related to open science and research data
 - Disseminate actions in disciplinary events

<https://rd-alliance.org/groups/rda-portugal>