The Research Data Alliance: current state and looking forward

Dr.ir. Herman Stehouwer
RDA/Europe

- Some History
- RDA/Europe
- RDA
- Working Groups
- Plenaries and Future

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Looking Back – October 2010

Global attempts to improve data sharing and interoperability

European Collaborative Data Infrastructure with Common data Services

Combine grass-roots based thinking with broad engagement in implementing

N. Kroes VP
EC Commission

International organisations dealing with standardisation, research data and education issues

- The Internet Engineering Task Force (IETF)
- The World Wide Web Consortium (W3C)
- DataCite
- Committee on Data for Science and Technology (CODATA) and World Data System (WDS). Part of International Council for Science (ICSU)
- The Organisation for Economic Co-operation and Development (OECD)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- Research Data Alliance (RDA) complementing the domain

- A big number of national, continental and international research projects and infrastructures.
- And many more…

Why introduce the Research Data Alliance?

- ■ The Research Data Alliance (RDA) is a new community organization forming to facilitate **specific, short-term efforts that accelerate the sharing and exchange of research data promoting exchange between disciplines**

- ■ Supported by the funders (Australian government, European Commission, USA NSF)

- ■ **Working groups will serve as accelerants** to data sharing practice and infrastructure. Work products / deliverables to include
  - ■ New data standards or harmonization of existing standards.
  - ■ Greater data sharing, exchange, interoperability, usability and re-usability.
  - ■ Greater discoverability of research data sets.
  - ■ Better management, stewardship, and preservation of research data.

From DAITF/DWF to RDA

- Efforts have started as bottom-up activities in US and Europe and supported by NSF, NIST, Presidential Office and European Commission
  - Europe: Data Access and Interoperability Task Force (DAITF) 2011-2012
    - iCORDI project proposal refining the concept of the DAITF (EU) 2011
  - USA: Concept Paper – Data Web Forum (US) presented in 2012
- RDA emerged and built up very rapidly since August 2012 (high level push by NSF + EC + AU)
  - RDA Steering Group established in August 2012, lots of work done since then
  - "Research Data Alliance Planning Meeting: Global Data" 1 – 3 October 2012 in Washington DC
  - The first RDA Council members announced in Barcelona 2012 during the EUDAT conference: Fran Berman (US), John Wood (EU), Ross Wilkinson (AU)
- RDA launched in Gothenburg on the 18th March 2013

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Some RDA Europe history

■ We are now entering the third, possible fourth phase of the iCORDI/RDA Europe development

1. The original iCORDI proposal submitted to the Commission Call INFRA-2012-3.2

2. The iCORDI project that grew out of the combination of the iCORDI and DataGRAIL proposals

3. The iCORDI project that grew out of the changing landscape (DAITF & DWF ➔ RDA)

4. Change of iCORDI into RDA Europe and the decision HLSF ➔ RDA Europe Forum

The goals of RDA Europe

■ Facilitate and support the creation of an IETF –like (Internet Engineering Task Force) organisation for the global data interoperability and data exchange – **Research Data Alliance** (RDA)

■ Establish and support the RDA Europe and RDA Europe Forum

■ **Support** the work of **European research communities** in their effort to **collaborate** with their US counterparts through **a coordinated platform** and to extend this to **the global levels**

■ Supports regional interest/participation in RDA Global

RDA Europe Forum (HLSF)

■ RDA Europe complements and supports the work of the RDA Europe Forum (HLSF) in Europe

■ RDA Europe Forum will organize annual meetings resulting in recommendations and strategy notes both to the RDA and the European Commission.

■ The *RDA Europe Forum* is platform that allows liaising, even in ad- hoc manner, with important projects, organizations and institutions. The mission of establishing links between RDA and the wider community including the industry.

RDA Europe Forum as of March 2013

- John Wood (Chair – RDA International and RDA Europe)
- Paul Ayris (LIBER - Association of European Research Libraries)
- Paul Boyle (Science Europe)
- Donatella Castelli (ERF - The European association of national Research Facilities laboratories)
- Sandra Collins (ALLEA - ALL European Academies)
- Peter Linton (European Internet Foundation)
- Norbert Lossau (LERU The League of European Research Universities)
- Marja Makarow (Academy of Finland and former ESF)
- Jens Vigen (Eiroforum)
- Martin Vingron (Max Plank Society)
- Norman Wiseman (KE - Knowledge Exchange)

- The group can expand

Political Support

■ "To the greatest extent and with the fewest constraints possible publicly funded scientific research data should be open, while at the same time respecting concerns in relation to privacy, safety, security and commercial interests, whilst acknowledging the legitimate concerns of private partners."

■ "Open scientific research data should be easily discoverable, accessible, assessable, intelligible, useable, and wherever possible interoperable to specific quality standards"

　　■ From the science ministers of "G8 extended configuration" to include "Outreach Countries (O6)": India, China, Brazil, South Africa, Mexico and Australia: https://www.gov.uk/government/news/g8-science-ministers-statement

International organisations dealing with standardisation, research data policy and education and training issues

- The Internet Engineering Task Force (IETF)
- The World Wide Web Consortium (W3C)
- DataCite (DataCite helps researchers to find, access, and reuse data)
- Committee on Data for Science and Technology (CODATA) and World Data System (WDS). Part of International Council for Science (ICSU)
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RDA/Europe

- Support follows the Riding the Wave strategy recommendations
- Example of regional activities supporting RDA Global
- Supports RDA to achieve its goals
    - People
        - Secretariat, Council, TAB, OAB, Working Groups, Interest Groups
    - RDA Europe Forum
    - Science Workshop(s) in Europe
    - Analysis program
    - Prototypes program
    - Travel Support
    - Organization of Plenary
- Supports regional interest/participation in RDA Global

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

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

Deliverables that make data work

- Adopted code, policy, infrastructure, standards, or best practices that enable data sharing
- "Harvestable" efforts for which a 12-18 month effort can eliminate a roadblock

  - Efforts that have a substantial impact within the data community, but might not apply to all
  - Efforts for which scientists and researchers can start today.

RDA Principles
Openness
Consensus
Balance
Harmonization
Community Driven
Non-Profit

Initializing RDA: Organizational Framework

- Informal Colloquium of Funders
  - Follow but not interfere
- Current:
  - EU (EC), USA (NSF, NIST), AUS (Government through ANDS)
- Upcoming:
  - UK, FR, IT, SP, DE, NL, JP, SA
- EC is supporting RDA through RDA/Europe
  - will continue in H2020
  - Strong commitment.

RDA Boards

- **Council:**
  - **Patrick Cocquet** (France)
  - **Doris Wedlich** (Germany)
  - **Kaye Raseroka** (Botswana)
  - **Tony Hey** (US)
  - **Ross Wilkinson** (AU)
  - **John Wood** (UK), co-Chair
  - **Fran Berman** (US), co-Chair

- **Secretariat:**
  - **Hilary Hanahoe** (UK)
  - **Stefanie Kethers** (AU)
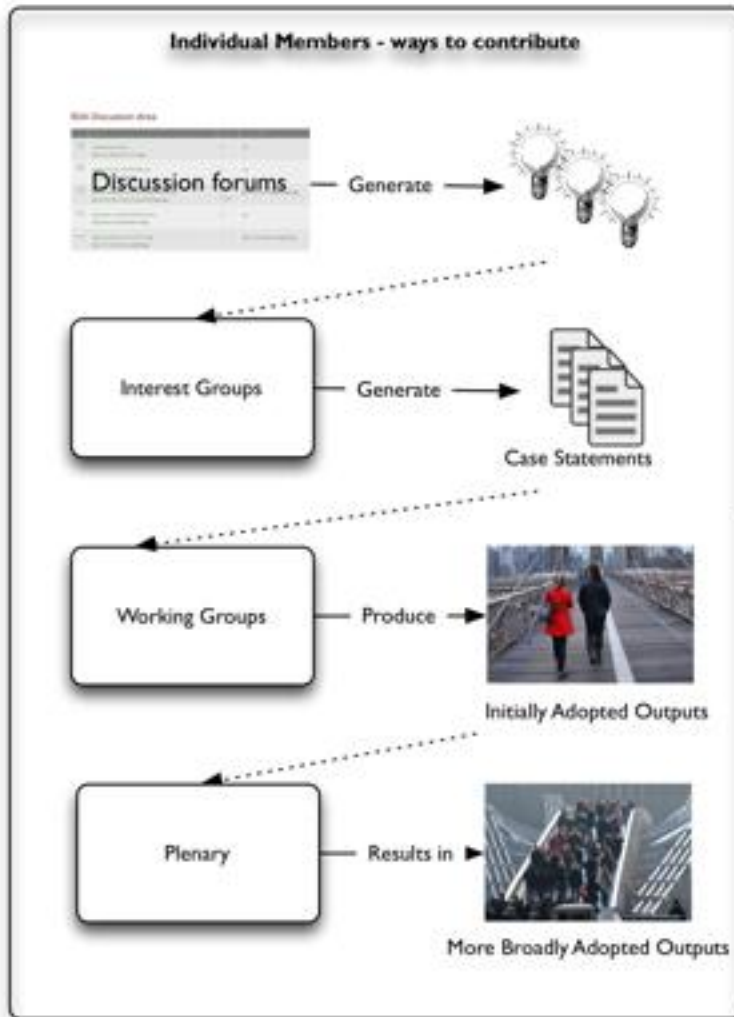 - **Herman Stehouwer** (NL)
  - **Mark Parsons** (US)

- **Technical Advisory Board**
  - **Peter Wittenburg**
  - **Francoise Genova**
  - **Andrew Treloar**
  - **Bill Michenor**
  - **Beth Plale, Chair**
  - 6 new TAB members to be announced end October & 12th TAB member to be appointed by Council
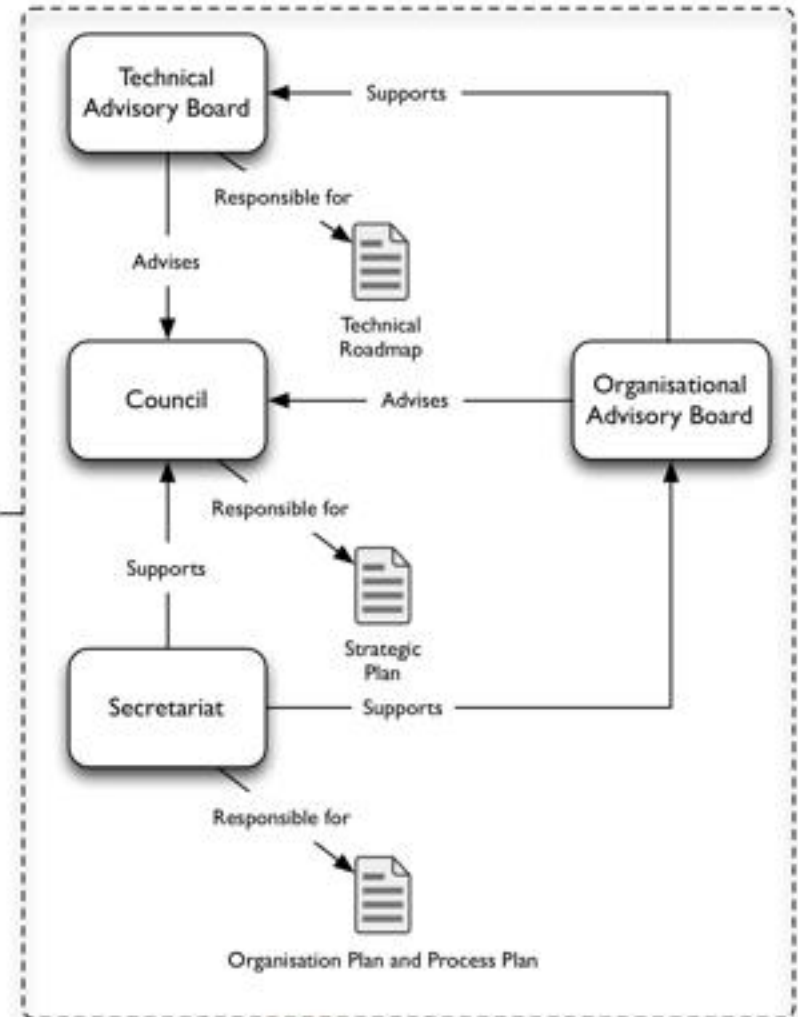
- **Organizational Assembly**
  - **Juan Bicarregui,** co-Chair
  - **Leif Laaksonen,** co-Chair

Individual member participation

Individual Members - ways to contribute

Discussion forums → Generate →

Interest Groups → Generate → Case Statements

Working Groups → Produce → Initially Adopted Outputs

Plenary → Results in → More Broadly Adopted Outputs

Enables

Technical Advisory Board — Supports
Responsible for → Technical Roadmap
Advises
Council — Advises — Organisational Advisory Board
Responsible for → Strategic Plan
Supports
Secretariat — Supports
Responsible for → Organisation Plan and Process Plan

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Diagram CC BY @atreloar

RDA Research Data Sharing without barriers

Individual Member Participation

- Register to the on-line community, agree to the RDA Principles and become a Member of RDA.
- No fees involved for individual participation.
- Membership is open to any individual who subscribes to the RDA Guiding Principles.
- As a Member one may join and form Working and Interest Groups and participate in RDA elections.
- https://www.rd-alliance.org/user/register

Organisational Member Participation

- Organisational Members are approved by the RDA Council and can include R&D agencies, for-profit companies and non-profit foundations, community organizations, institutions, etc.
  - **Annual membership fee based on size of organisation (in number of persons).**
- Affiliation with likeminded organisations in order to coordinate efforts in mutual areas of interest and to avoid unnecessary duplication and conflict.
  - **There are no financial considerations on either side.**
  - **Memorandum of Understanding (MoU) requested**

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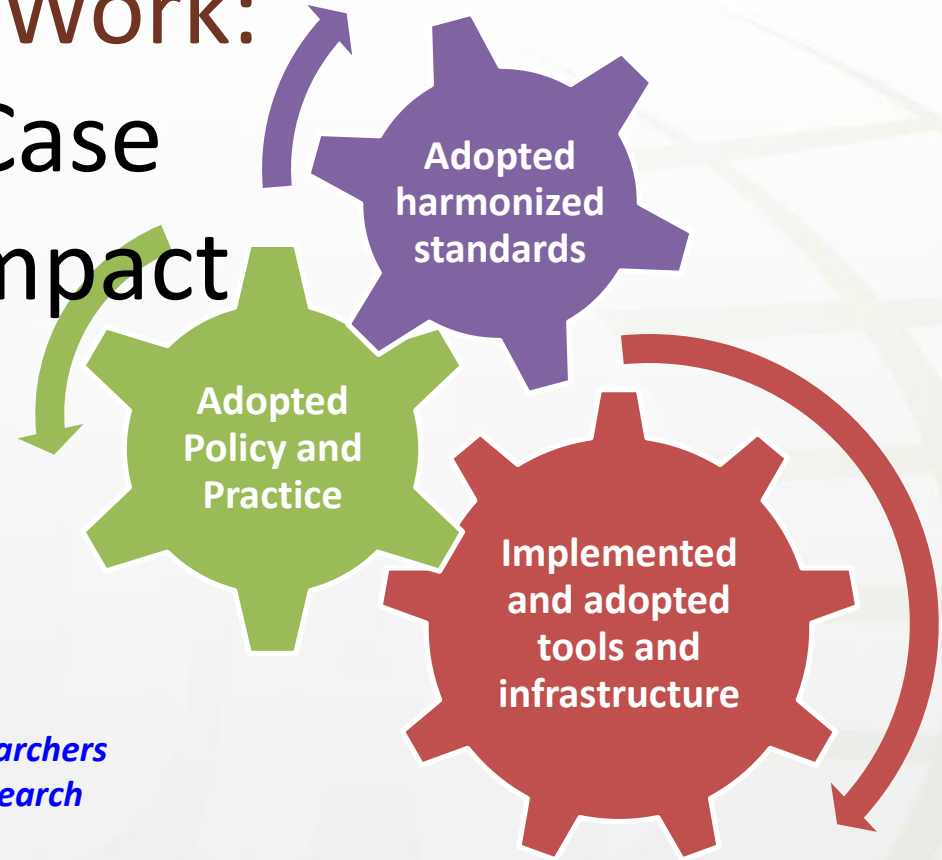■ Working Groups

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RDA Working Groups

- ***Form the Foundation for RDA Community Impact!***

- ***An Interest Group can be established prior to a Working Group for community discussion of issues and areas that facilitate data-driven research. Many groups are forming at forum.rd-alliance.org***

- ***Working Groups envisioned as accelerants to data sharing practice and infrastructure in the short-term*** with the overarching goal of advancing global data-driven discovery and innovation

- RDA Working Group profile:

  - *Short-term: 12-18 months*

  - *Focused efforts with specific actions adopted by specific communities*

  - *International participation*

  - *Open, voluntary, consensus-driven*

  - *Complementary to effective efforts elsewhere*

Potential outcomes / deliverables:

- New data standards or harmonization of existing standards.

- Greater data sharing, exchange, interoperability, usability and re-usability.

- Greater discoverability of research data sets.

- Better management, stewardship, and preservation of research data.

Making Data Work: Assessing Case Statement Impact

Adopted harmonized standards

Adopted Policy and Practice

Implemented and adopted tools and infrastructure

Key questions for Candidate Working Groups:

1. *What are the practical outcomes of the work?*

2. *Who will benefit from the work and what research issues will be facilitated?*

3. *How do the deliverables make it easier for researchers to do their work? How do they change how research will be undertaken?*

4. *Who will implement / adopt the deliverables? Are adopters and beneficiaries included in the Working Group?*

5. *What is the schedule for implementation / adoption?*

6. *What are the advantages of this approach over existing approaches?*

Current WGs and IGs

- It is the beginning and only a few have been fully set up but many topics are being discussed

- Working groups (9): Community Capability Model, Data Citation, Data Foundation and Terminology, Data Type Registries… https://rd-alliance.org/workinggroup-list.html

- Interest groups (18): Agricultural Data Interoperability, Big Data Analytics… https://rd-alliance.org/interestgroup-list.html

Collaborations

- Codata
  - Legal Interoperability group
  - Materials data management group
- WDS
  - Publishing Data group
- Datacite
  - Co-located event at Plenary2

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Plenary 1: March 18-20, 2013

- **at Gothenburg, Sweden**
- **~240 attendees**

Plenary 2: September 16 - 18, 2013

- **at the National Academy of Sciences in Washington, DC, USA**
- **~400 attendees**

■ Plenary 3: Dublin, Ireland
  - ■ March 26-28, 2014
  - ■ hosted by Australia and Ireland
  - ■ ~500 attendees

■ Plenary 4: Netherlands

  - ■ late September, 2014

  - ■ ~600 attendees

Future

- Legal Entity
- Secretary General
- Working Group outcomes
- Collaboration with data organisations
  - Already collaborating with Codata,WDS,Datacite,etc.
  - Expand, more formal
- Worldwide participation

■ **Information:**
rd-alliance.org

■ **Questions, comments:**
enquiries@rd-alliance.org

■ **Registration and Forum:**
rd-alliance.org

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