

# EOSC / RDA

## Topical Discussion

Rob van der Meer

# EOSC

## European Open Science Cloud

- Who/what is the EOSC?
- What can the EOSC do for me?
- What can the EOSC do for AENEAS?

# EOSC

EOSC HLEG	first report 11 October 2016	
EOSCpilot	H2020 project STFC (10 M€) 1-1-2017 – 31-12-2018	Matthew Viljoen
EOSC Summit	12 June 2017 Brussels	
EOSC Stakeholder Forum	28-29 November Brussels	
EOSC-Hub	H2020 project EGI.eu (30 M€) 1-1-2018 – 31-12-2020	Matthew Viljoen
INFRAEOSC-04-2018	22 March 2018 deadline Submitted (16 M€)	Michael Wise, Mark Allen
EOSC SKA ??		

# EOSCpilot

- EOSCpilot H2020 project
- WP 4 organises **Science Demonstrators**
  - 5 SD at start
  - 5 SD 1 July 2017
  - 5 SD 1 January 2018
- **ASTRON** leads **LOFAR** Science Demonstrator in EOSCpilot project

## Common Workflow Language

- Implementing CWL in pipelines in docker containers.

# EOSC-Hub

EOSC-hub H2020 project: 13 WPs, > 100 partners

- WP 8 organises **Competence Centers**
  - 8.6 - Radio Astronomy Competence Center (RACC)  
**ASTRON** leads **LOFAR** CC with 3 LTA sites  
Integration of bringing compute to the data on 3 sites and solving challenges on data management en data movement.
- Many other EOSC challenges
  - Governance, Business model
  - Joint Digital Innovation Hub, services

# ESCAPE

- INFRAEOSC-04-2018 H2020 call :
  - Connecting ESFRI infrastructures through Cluster projects
  - Deadline 22 march 2018, submitted
- 32 partners, 6 WPs on
  - Data Infrastructure for Open Science
  - Open-source scientific Software and Service Repository
  - Connecting ESFRI projects to EOSC through VO framework
  - ESFRI Science Analysis Platform
  - Engagement and COmmunication

## EOSC future

- Is this the way to go?
- Should AENEAS / SKA
  - move in the same direction,
  - be
    - leading
    - following
    - learning
    - teaching



# RDA in a nutshell

March 2018

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[https://www.rd-alliance.org/sites/default/files/attachment/RDA in a nutshell March 2018.pptx](https://www.rd-alliance.org/sites/default/files/attachment/RDA%20in%20a%20nutshell%20March%202018.pptx)

AENEAS - RDA liaison: [Francoise Genova](#), CDS, France



# THE RESEARCH DATA ALLIANCE

[www.rd-alliance.org](http://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

## 91 GROUPS WORKING ON GLOBAL DATA INTEROPERABILITY CHALLENGES

of which 33 WORKING GROUPS  
& 58 INTEREST GROUPS

## 6,769 INDIVIDUAL MEMBERS FROM 136 COUNTRIES

67% Academia & Research  
15% 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.

[WWW.RD-ALLIANCE.ORG](http://WWW.RD-ALLIANCE.ORG)  
[@RESDATALL](https://twitter.com/RESDATALL)



CC BY-SA 4.0

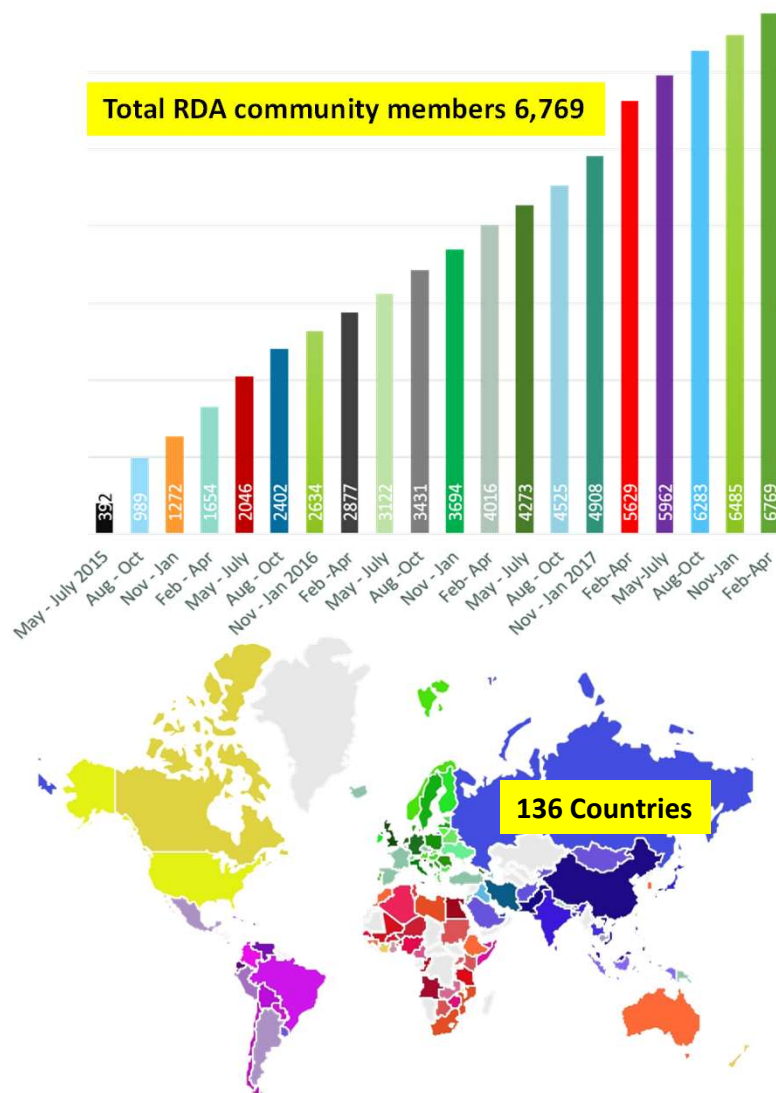
# What does RDA do?

*Members come together through self-formed, volunteer, focussed Working Groups, exploratory Interest Groups to exchange knowledge, share discoveries, discuss barriers and potential solutions, explore and define policies and test as well as harmonise standards to enhance and facilitate global data sharing & re-use.*

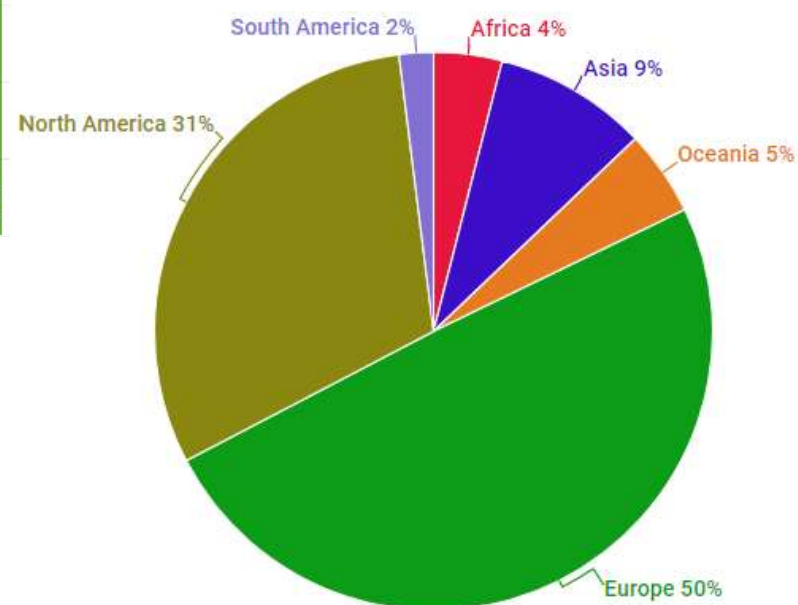
RDA members collaborate together across the globe to tackle numerous infrastructure & data sharing challenges related to:

- ❖ Reproducibility
- ❖ Data preservation
- ❖ Best practices for domain repositories
- ❖ Legal interoperability
- ❖ Data citation
- ❖ Data type registries
- ❖ Metadata
- ❖ and so many more!





## RDA worldwide growth





# RDA Recommendations that make data work

## **“Create - Adopt - Use”**

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- ✓ 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 with over  
75 cases of adoption in different domains, organisations and countries

# Adoption & Implementation

*“Solving the problem must include **adopters** in the process, to ensure that real problems are addressed. Open problem solving is the key.”*

RDA Recommendations and Outputs take the form of technical specifications, code, policies or practices, harmonized standards or reference models. In the widest sense these aim for:

- ☐ Greater data sharing, exchange, interoperability, usability and re-usability;
- ☐ Greater discoverability of research data sets;
- ☐ Better management, stewardship, and preservation of research data;
- ☐ New data standards or harmonization of existing standards.

## RECOMMENDATIONS & OUTPUTS

All Recommendations & Outputs

Adoption Use Cases

Become an RDA Adopter

## Addressing data challenges

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

## 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>

[rd-alliance.org/recommendations-and-outputs/all-recommendations-and-outputs](https://www.rd-alliance.org/recommendations-and-outputs/all-recommendations-and-outputs)

[WWW.RD-ALLIANCE.ORG](http://WWW.RD-ALLIANCE.ORG)  
@RESDATALL




The screenshot displays several key documents and stories from the RDA website:

- RESEARCH INFRASTRUCTURES IMPLEMENTING RDA OUTPUTS FOR MAPPING METADATA STANDARDS**
- IMPLEMENTING RDA OUTPUTS FOR SCHOLARLY COMMUNICATION**
- RDA Adoption & Implementation Stories - Tell us yours!**
- ADOPTING RDA OUTPUTS FOR ... CLIMATE DATA**
- DKRZ adopts 6 RDA outputs for climate data modelling**
- The Challenge**: A section discussing the difficulties of managing data and the need for interoperable standards.
- RDA RECOMMENDATIONS ADOPTED**: A list of specific RDA outputs that have been adopted by various organizations.
- ANSWERING COMMUNITY NEEDS**: A section explaining how RDA outputs address the needs of the research community.
- WHY RDA?**: A section highlighting the benefits of RDA for research data management.
- Find out more**: A link to the RDA website for more information.



## RDA Plenary Meetings: benefits of attending



Exchange knowledge, share discoveries, discuss barriers and potential solutions



Learn about new trends, strategies, research developments, directions and policies




Expand your network and meet new committed and passionate data science professionals, working in multiple disciplines



Contribute to acceleration of data infrastructure development



## Looking Forward to Plenary 12: Botswana



**Digital Frontiers of Global Science**

**INTERNATIONAL DATA WEEK  
IDW 2018**

Gaborone, Botswana: 22–26 October 2018

To find out more visit: <https://www.rd-alliance.org/plenaries/rda-twelfth-plenary-meeting-part-international-data-week-2018-gaborone-botswana>

Co-organised within the framework of  
International Data Week with CODATA & WDS

## RDA in a Nutshell

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### RDA Global

Email - [enquiries@rd-alliance.org](mailto:enquiries@rd-alliance.org)

Web - [www.rd-alliance.org](http://www.rd-alliance.org)

Twitter - @resdatall

LinkedIn - [www.linkedin.com/in/ResearchDataAlliance](http://www.linkedin.com/in/ResearchDataAlliance)

Slideshare -

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

### RDA Europe

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Twitter - @RDA\_Europe

### RDA US

Twitter - @RDA\_US



## My take-away from RDA 11, Berlin

- Data management plans get a lot of attention
  - Making it easier to complete
  - Making it work for you
- Plenary talks SAP
  - SAP data-Hub
  - Dashboard to bring compute to the data

## Learn or teach?

- People look at astronomy, because it is a good example, as they do “this” since forever.
- What can we learn?
- What can we teach?

## Back-up slides

- Slides from the AENEAS all-hand meeting in Granada October 2017

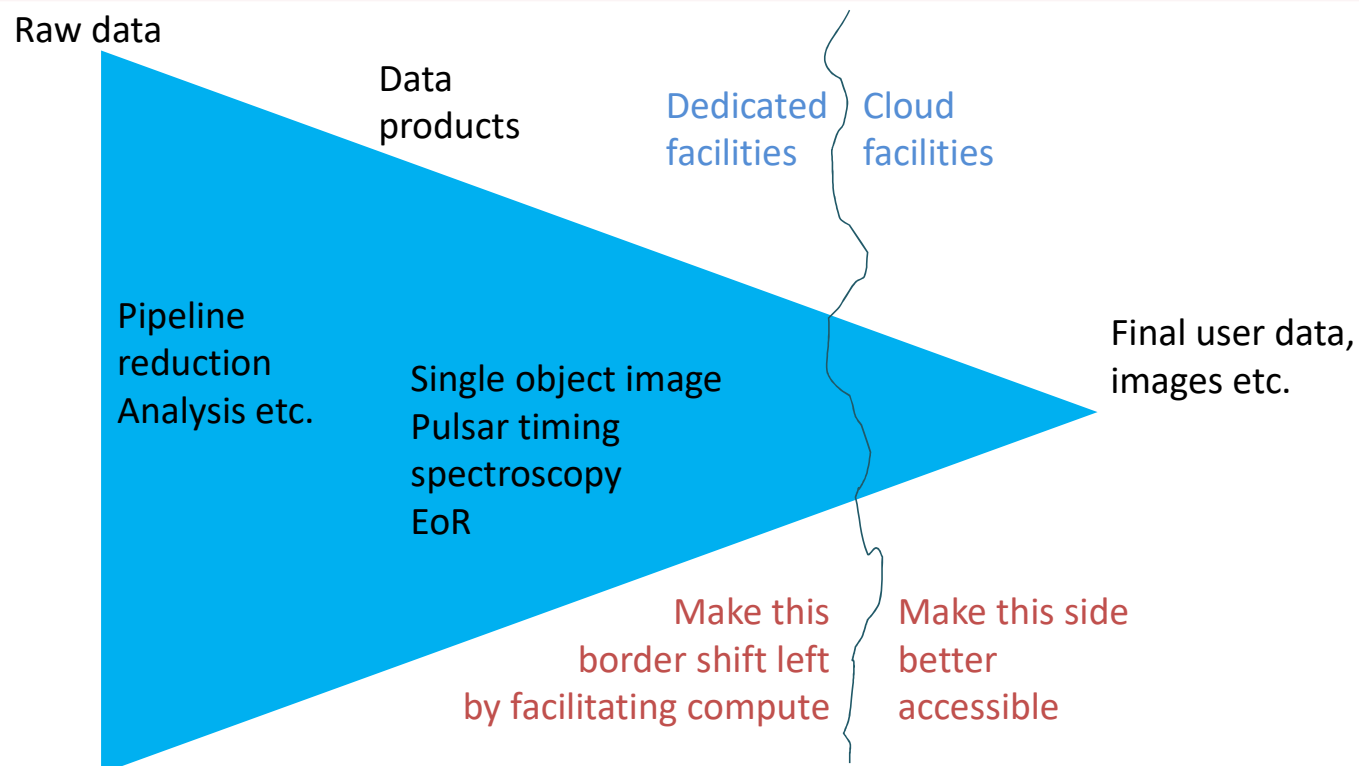
# EOSC Summit 12 June 2017

## First, what will the Cloud look like?

In two years from now, I imagine researchers using the Cloud on a daily basis. Every researcher will be able to find and access data from all publicly funded research in Europe in a single click. They will be able to access data from different disciplines. And to combine the data and analyse it in new ways. Each researcher will also be able to store and manage their own data. And share their data with others in a secure and trusted environment.

*Carlos Moedas, EOSC Summit: The European Open Science Cloud – The New Republic of Letters*

# EOSC pilot tasks



# Challenge & Use cases

## Challenges

- Data provenance
- Federated Identity
- Compute to data
- Multiple LTA sites
- Where →  
what is my data

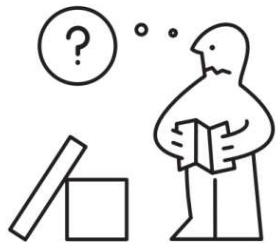
## Facilitate

- easy access for power user.  
Free/sandbox compute with own algorithm, parameters, on small local data set.
  - Then scale up to larger data set on remote cluster
- Make LOFAR LTA accessible to non power users
  - Standard pipeline and GUI for ~10 free parameters.

# Plan of attack



1. Define “perfect” environment
2. Existing tools and resources  
immediately start building
3. from there define new projects  
for improving the working system



Use this demonstration to show both possibilities and limitations of current software and e-Infrastructure.

# RDA

- RDA is partner
- We proposed to connect to RDA
- RDA does useful things
  - Working groups
  - Define standards
  - Distribute standards
- How do we connect / reach out?