

THE RESEARCH DATA ALLIANCE MAGAZINE



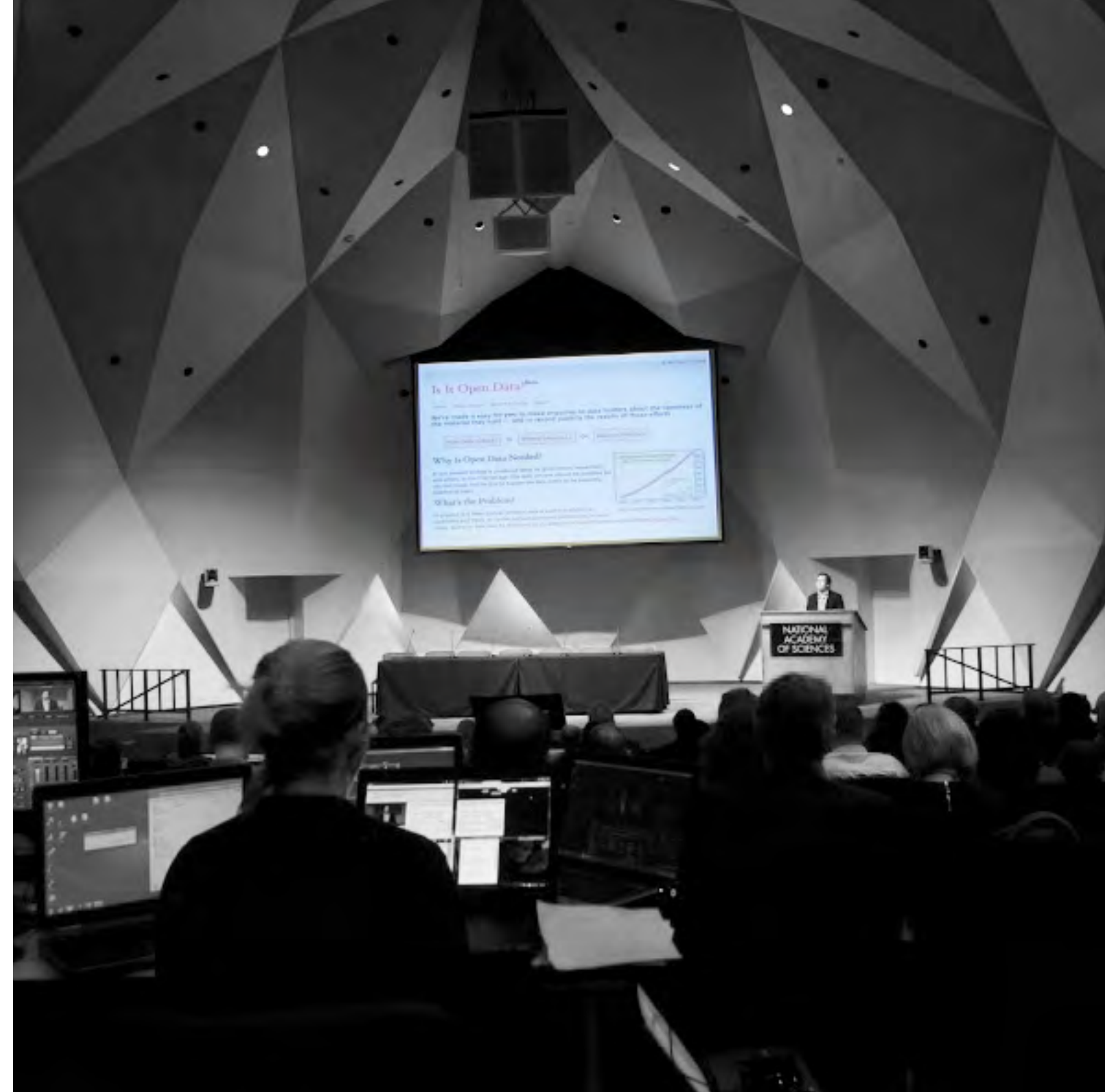
The Research Data Alliance (RDA) is an international member-based organisation focused on the **development of infrastructure and community** activities to reduce the social and technical barriers to data sharing and re-use and to promote the **acceleration of data driven innovation** and **discovery worldwide**.

The Research Data Alliance (RDA) builds the social and technical bridges that enable open sharing of data. The RDA vision is **researchers and innovators** openly sharing data across **technologies, disciplines**, and **countries** to address the **grand challenges of society**.



Table of content

6	Future directions for the Research Data Alliance	23	Making environmental tracking personal. RDA showcasing Plume Labs	40	New Working & Interest Groups
8	Seven Collaboration Projects testing RDA outputs	27	People & Places	50	RDA Seventh Plenary Meeting
12	Adoption stories from RDA US	28	RDA: Time to deliver	52	RDA Eighth Plenary Meeting
16	RDA outcomes...	32	Creating A Successful European Digital Single Market Requires Open Science, Open Innovation, Open Scholarship And Open Infrastructures	55	Engaging with industry (starting from climate)
20	...and a possible way for them to become ICT technical specifications	38	With their own words	61	RDA Europe offerings to research, industry and policy makers
		64	RDA 2016 training programme		



FUTURE DIRECTIONS FOR THE RESEARCH DATA ALLIANCE

Council Approves Future Directions Document and We Begin Implementation

Over the last nine or ten months a small, dedicated team has led an extensive community consultation activity to plan the Future Directions of RDA. This resulted in a short document describing 15 major actions in areas of Communications, Engagement, and Coordination. The document defines roles for the membership and RDA’s various governing bodies in implementing these actions.

COMMUNICATIONS	ENGAGEMENT	COORDINATION
GOALS	GOALS	GOALS
The goal of enhanced communication is to increase RDA’s impact with communities, to help promote volunteer and organizational sustainability, and to improve information dissemination and organisational efficiency. Enhanced communication will also ensure RDA remains open and welcoming to new members.	The goal of increased and improved engagement within the RDA community is to drive community cohesion, organisational health, and sustainability. The goal of increased and improved engagement between RDA and the broader community is to drive member satisfaction and community impact. The goal of improved engagement within RDA responds to the recognition that RDA depends on sustained, high quality volunteer activity for its success.	The goal of improved coordination between RDA constituent organisational groups is to help the organisation run more effectively and help maximise the impact of volunteer efforts.
ACTION PLAN	ACTION PLAN	ACTION PLAN
Develop an integrated communications approach that includes communication to external groups, internal groups, and support for enhanced communications efforts.	Develop a systemic engagement approach that enhances internal member satisfaction, and targets engagement with external stakeholders and strategic groups, and next generation leadership.	Develop robust coordination mechanisms that improve organisational effectiveness and integration.

The RDA Council has the responsibility for the future direction of RDA, and they just approved the final document. We now move forward in implementing the actions. Indeed some are already well underway. In the coming weeks and months, the Secretariat will be reaching out to individuals and the membership at large to tap into expertise and activism to help implement these actions. We continue to thrive on the incredible power of volunteers.

Thank you all.

Mark Parsons, RDA Secretary General

The final document and background materials are available online at the RDA website
<https://rd-alliance.org/groups/future-directions-planning.html>

SEVEN COLLABORATION PROJECTS TESTING RDA OUTPUTS

8

The **Research Data Alliance** is building the social and technical bridges to facilitate data sharing and re-use. These bridges are the RDA outcomes, recommendations, outputs and they must be tested in several real community applications, encouraging communities to adopt solutions and adapting the outputs based on concrete implementation cases, is fundamental to ensure a concrete uptake of **RDA results**.

The **RDA Europe** project launched a first call for collaboration projects in **September 2015** to support communities that want to test/adopt RDA outputs. **25 proposals** were submitted and **7 proposals** were selected. They have entered the administrative review phase now and should be able to start by **mid 2016**.

Collaboration Project Title:
Dynamic Data Citation & the Argo data set

RDA Output Adoption:
Dynamic Data Citation

Brief Overview:

Unambiguous citation of data used in academic publications is crucial for the transparency and reproducibility of science especially when results are used as evidence to underpin national and international policy. Data citation of static datasets is well established and documented, but measurement data from the floats in the ARGO project moving in the oceans are sent at widely unpredictable times. When such time series data are cited it must be possible to unambiguously resolve them correctly. To address outstanding dynamic data citation issues this project will liaise with CrossRef and DataCite to agree and ratify a common syntax for dynamic data citation before implementing systematically dynamic data citation for Argo data, which is constantly evolving and growing with updates and extensions to data. There are over 2,000 scientific publications based on ARGO data. This also serves as a good case study for the application of the RDA proposal for citing dynamic data to an existing data system.



9

Collaboration Project Title:
Creation of a Query interface for phenotyping data

RDA Output Adoption:
Wheat Data Interoperability (WDI)



Brief Overview:

One of the outputs of the RDA Wheat Data Interoperability (WDI) working group is a set of guidelines for data sharing along with use cases. The guidelines include phenotyping metadata recommendations like Minimal Information About Plant Phenotyping (MIAPPE) or ontologies for data annotation like the Crop Ontology. The objective of this project is to implement those recommendations and to share some public datasets as RDF assertions with the help of a dedicated SPARQL endpoint. The targeted wheat dataset is the public INRA Breeding Network, available in GnpIS, a platform involved in the Elixir European project. It includes experimentations in six locations over fifteen years.

Collaboration Project Title:
Integration of the RDA Metadata Standards Directory into DMPonline

RDA Output Adoption:
Metadata Standards Directory



Brief Overview:

Data management planning of some form has been accepted as good practice for many years as a means to ensure that data outputs are more likely to be discoverable, reusable and preserved. The production of data management plans (DMPs) is required by an increasing number of funders in Europe and North America. This proposal is to develop transparent integration between one leading data management planning tool (the Digital Curation Centre's DMPonline) and the RDA Metadata Standards Directory. One area of interest that has been raised by the DMPonline user community is the desire for machine-readable Data Management Plans, so that the content created by researchers can be more easily analysed and exploited. The project expects to use the Metadata Standards Directory to offer a standardised range of options that could be selected when answering questions on metadata.

Collaboration Project Title:
Analysis of the OpenPhilology/Perseus and the CLARIN data repositories

RDA Output Adoption:
Data Foundation and Terminology



Brief Overview:
This project will make an analysis of 2 clusters of well-known data repositories in the humanities (OpenPhilology/Perseus and CLARIN) using the Data Foundations & Terminology (DFT) framework to ensure a common semantic foundation. In a second step a gap analysis will be made vis-à-vis the Data Fabric concept. All of this will lead to a higher degree of data and service interoperability in the humanities, in particular concerning metadata harvesting and reuse, the interoperability of different persistent identifier systems (CTS URN:NBN's and Handles), Research Data Collections, and Federated Identity Management. The output of the project will facilitate further integration of 2 humanities Research Infrastructures that are located on different continents (Perseus in North America and CLARIN in Europe) and it will provide a test case for the RDA recommendations of DFT by these two research infrastructures that are already quite mature in their technical foundations and that are largely compatible with RDA recommendations to begin with.

Collaboration Project Title:
Implementation of a Query Store for the VAMDC infrastructure

RDA Output Adoption:
Data Citation



Brief Overview:
The VAMDC Consortium technical framework relies on the use of the e-science VAMDC infrastructure that provides the international research community with access to a broad range of atomic and molecular (A&M) data compiled within a set of A&M databases accessible in a unified way through the provision of a single portal. Special attention is paid to problems linked with data citation and reproducibility of the data-extraction process. The collaboration project will have two main goals: building a software layer (as generic as possible) designed for helping data providers in building their own Query Store and using this software layer to provide the VAMDC infrastructure with a working implementation of the query store.

Collaboration Project Title:
Introduction of PIDs to the Data-Intensive Sciences in Armenia

RDA Output Adoption:
PID Information Types



Brief Overview:
The Armenian e-infrastructure is going to become a complex national IT infrastructure consisting of both communication and distributed computing infrastructures. It is recognized that this emerging infrastructure needs to be based on proper data organisation methods and thus RDA outputs are going to be implemented. For example, the Armenian life science community is one of the key communities using the distributed computing and storage resources to manage and simulate large amounts of biological data. The main aim of this proposal is to systematically introduce the implementation of PIDs for the life science community by using PIT and DTR outputs in order to increase the easy access, interoperability and data sharing in Armenia and beyond with the support of RDA community.

Collaboration Project Title:
Integration of the DLI Service into the OpenAIRE infrastructure

RDA Output Adoption:
Publishing Data services



Brief Overview:
The Data-Interlinking (DLI) Service, today running as a test system within the hardware infrastructure, populates a graph of interrelated publications and datasets whose metadata and relationships are collected from data centres and publishers. The OpenAIRE infrastructure is a production system funded by the EC to maintain a graph of interrelated publications, datasets, funders, projects, organizations, and persons and to support a number of functionalities over such graphs. The project will deliver links between datasets and publications to a larger audience, through a system of reference, in order to improve their ability to discover datasets (in context), therefore reuse them, and enhance the OpenAIRE services. So the DLI Service will be promoted to a production level as an OpenAIRE service and the OpenAIRE information space will be enriched by including DLI service as an OpenAIRE data source and aggregating its content.

ADOPTION STORIES FROM RDA US

12

Collaboration Project Title:
Opening up Northern Forest Research Data - Improving Citation and Documentation Systems to Increase Participation in Publishing Data

RDA Output Adoption:
Data Type Registry, Dynamic Data Citation

Brief Overview:
The Vermont Monitoring Cooperative (VMC) maintains a long-standing repository of research and monitoring data relevant to assessing the condition of Vermont’s forested ecosystems. This currently includes 179 research and monitoring projects with 320 curated datasets contributed by 191 scientists and professionals. VMC will adopt Recommendations and outputs from RDA’s Data Type Registry and Dynamic Data Citation Working Groups to address supply- and demand-side infrastructure challenges of the existing system. The group plans to update the VMC data catalogue infrastructure with Dynamic Data Citation Recommendations to provide users the ability to cite data and track its history, improving existing functionality. They also plan to incorporate Data Type Registry Recommendations to help users better understand and interoperate with VMC data holdings. The improved infrastructure will remove barriers to data publishing, add clarity to the existing metadata infrastructure, and improve discoverability for a large and active community.

Collaboration Project Title:
Implementation of the Research Data Alliance Data Citation Recommendations at the Biological and Chemical Oceanography Data Management Office (BCO-DMO)

RDA Output Adoption:
Dynamic Data Citation

Brief Overview:
The Woods Hole Biological and Chemical Oceanography Data Management Office (BCO-DMO) has been working with ocean science researchers since 2006 to provide data management support throughout the full research data lifecycle and to improve preservation and access to marine research data. Although BCO-DMO encourages proper citation of data from its online catalogue, they have not yet included explicit dataset-specific instructions for the citation of data, nor can they adequately support data versioning. Adoption of the Recommendations and outputs from the RDA Dynamic Data Citation Working Group will extend the current system to support online retrieval of previous datasets and provide a valuable addition to system functionality. It will also help BCO-DMO better support the DataONE discovery services currently being used to integrate BCO-DMO data with data from Long Term Ecological Research (LTER) sites.

13

Collaboration Project Title:
Bringing Visibility to Food Security Data Results: Harvests of PRAGMA and RDA

RDA Output Adoption:
PID Information Types, Data Type Registry

Brief Overview:
The Pacific Rim Applications and Grid Middleware Assembly (PRAGMA) is a long-standing international collaboration among Pacific Rim countries to build and experiment with computational and data infrastructure systems and services. This project will focus on the incorporation of PID Information Types and Data Type Registry Recommendations and outputs into the PRAGMA framework at AIST in Japan and within the National Data Service environment at the University of Illinois. The enhanced infrastructure will benefit PRAGMA’s and NDS’ user communities and will be of particular use to the International Rice Research Institute (a PRAGMA member) who will utilize the improved AIST deployment to enhance discovery workflows and create an environment that improves traceability in rice genome sequence analysis. The project builds on initial work done at Indiana University and within PRAGMA on implementation of RDA Recommendations that is now ready for adoption and deployment.

Collaboration Project Title:
Moving Biomedical Big Data Sharing Forward: An adoption of the RDA Data Citation of Evolving Data Recommendation to Electronic Health Records

RDA Output Adoption:
Dynamic Data Citation

Brief Overview:
The citation of queries made against Electronic Medical Record (EMR) data is essential to verify claims, support data sharing, and improve the reproducibility of biomedical research. Recommendations from the RDA Dynamic Citation Working Group will be integrated into an open source electronic medical health record aggregator, i2b2, to support a dynamic, query-centric view of data sets and expand current data capabilities. The enhanced i2b2 code will be made available to the broad i2b2 community, which includes NIH-funded Clinical and Translational Science Award (CTSA) health centers. Enhanced data access and data documentation through improved methods of data citation and version control will aid in the verification and reproduction of research findings and improve the capacity for data quality checks and validation throughout the research data lifespan. The code will be contributed to the community and released via GitHub for further use and integration.



RDA OUTCOMES...

12 outputs delivered by RDA Working Groups

The Research Data Alliance is a fast growing international community of close to 4000 members (Feb 2016) from over 110 countries, and multiple organisations committed to removing social and technical barriers and enabling research data sharing globally. Data practitioners, community representatives, scientists and technologists come together through focused global RDA Working Groups, and exploratory RDA Interest Groups to exchange knowledge, share discoveries, discuss barriers and potential solutions, explore and define policies and test as well as harmonise standards, and recommend pre-existing standards to enhance and facilitate global data sharing.

RDA has 20 Working groups and 43 Interest groups, all self-formed and directly managed by RDA members.

What RDA Produces is as diverse as its engagement.
So far RDA Working groups have delivered 12 outputs, which are flagship outcomes of RDA.

These recommendations are detailed up below to best help you take advantage of what RDA is generating as well as facilitate the uptake of the solutions it promotes.

The first 4 recommendations have already completed the endorsement process.

THE RDA OUTCOMES LEGEND

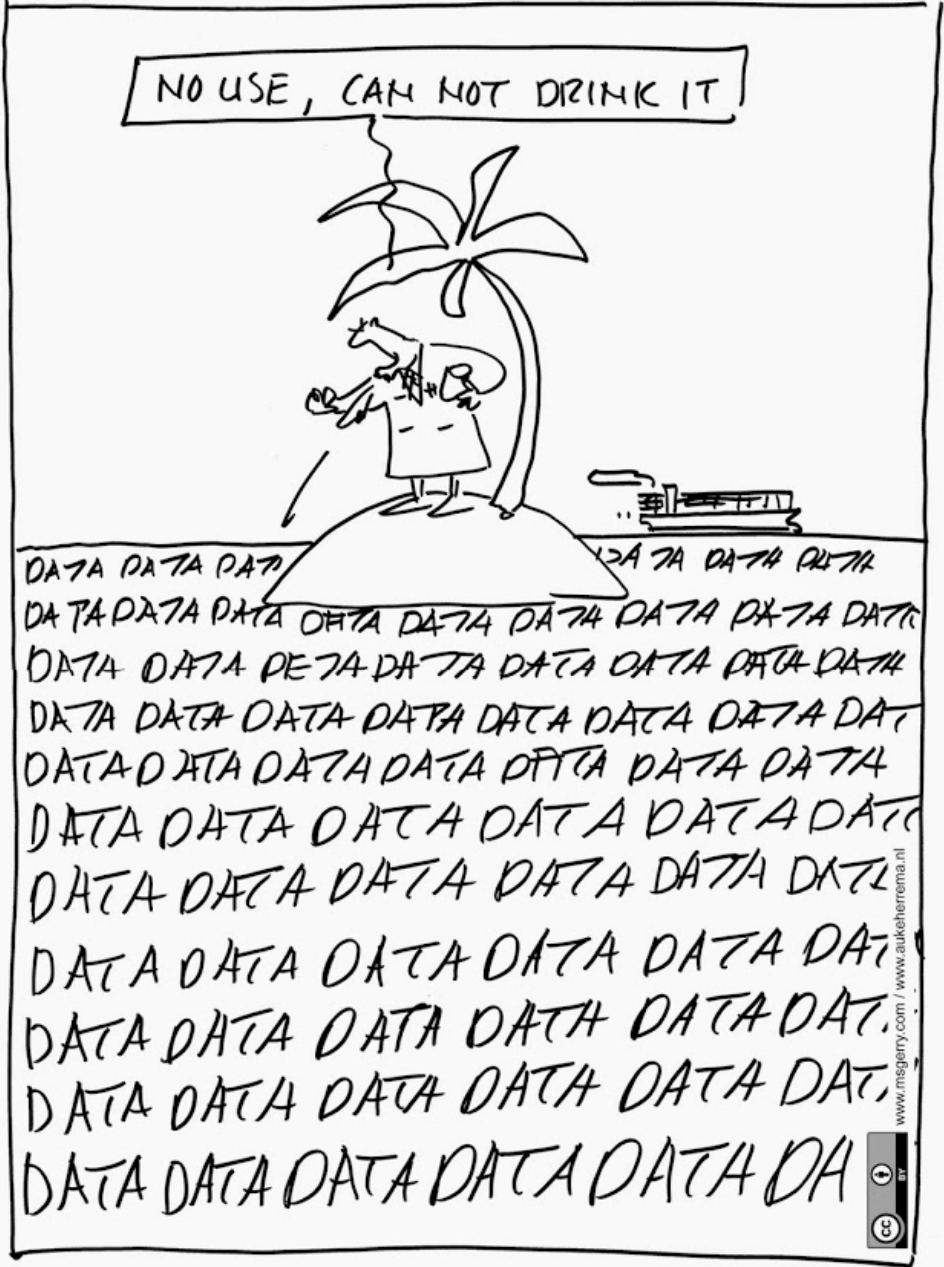
Recommendations: are as currently defined and should be presented as the flagship outputs of RDA. We should specifically use the word RECOMMENDATION. They are RDA’s equivalent of the “specifications” or “standards” that other organisations create and endorse. The process for creating and endorsing these is already defined.

Supporting Outputs: are the outputs of RDA WGs and IGs that are fruit of RDA work, but are not necessarily adoptable bridges. “Upon request”, these sort of outputs go through a community comment period and if no major objections or gaps are identified they get the RDA Brand.

Other Outputs: include workshop reports, published articles, survey results, etc. Anything a WG or IG wants to register and report. Upon request, these are published and discoverable on the RDA website but have no level of endorsement.

Output	Function	Individual Researchers	RI / Community Manager	Service Providers
Data Foundation & Terminology Model	An agreed basic core model and query tool of basic principles and terminology to harmonize data organisation solutions			
Persistent Identifier (PID) Information Types API	A persistent identifier type registry to help search engines understand what they are pointing to and retrieving			
Data Type Registries Model	A data type model and registry (“MIME-types” for data) to help tools interpret, display and process data			
Practical Policies Recommendations	A set of machine actionable policies to enhance trust & interoperability			
Metadata Standards Directory	Community curated standards catalogue for metadata interoperability			
Data Citation Recommendations	Recommendations covering Versioning, Timestamping & Identification to reliably cite dynamic data			

Output	Function	Individual Researchers	RI / Community Manager	Service Providers
Data Description Registry Interoperability Model	Specifications enabling cross platform discovery based on existing open protocols and standards		✓	✓
Wheat Data Interoperability Guidelines	Guidelines and bio-portal to ensure discovery, reusability, and interoperability of data within the wheat community	✓	✓	
RDA/WDS Publishing Data Bibliometrics Recommendations	Mechanism for quantifying the usefulness of a dataset to encourage its sharing and proper documentation, facilitating reuse and collaboration	✓	✓	✓
RDA/WDS Publishing Data Services Recommendations	One-for-all cross-referencing service for the links between data and publications	✓	✓	✓
RDA/WDS Publishing Data Workflows Recommendations	Reference models and implementations for application in new data workflows	✓	✓	✓
Repository Audit and Certification DSA-WDS Partnership	Catalogue of Common Procedures to develop a common framework for certification and a service of trusted data repositories		✓	✓



DATA OCEAN

...AND A POSSIBLE WAY FOR THEM TO BECOME ICT TECHNICAL SPECIFICATIONS

RDA 4 endorsed outputs presented for ICT Technical Specifications

The European Commission has a flexible approach to standardisation when identifying new ICT technical specifications. The European Commission can identify ICT technical specifications that are not national, European, or international standards, provided they meet precise requirements. Once identified and approved, these specifications can then be referenced in European public procurement. This flexible approach allows the EU to respond to the fast evolution of technology in ICT. It also helps encourage competition, promote interoperability and innovation, and facilitate the provision of cross-border services.

The Research Data Alliance was invited to present the first 4 RDA Outputs under this scheme

Member States And Eta Countries

ICT Standardisation Bodies

Industry, Smes And Society Representatives

THE PROCESS

The European Multi Stakeholder Platform (MSP) is an expert advisory group on ICT standardisation. It sets up evaluation groups to examine the compliance of technical specifications in the field of ICT that are not national, European or international standards based on a set of requirements.

The Multistakeholder platform (MSP) is chaired and coordinated by the European Commission.

RDA COMPLIANCE WITH REQUIREMENTS FOR ICT TECHNICAL SPECIFICATIONS

REQUIREMENTS

- ✓ (a) maintenance
- ✓ (b) availability
- ✓ (c) intellectual property rights
- ✓ (d) relevance
- ✓ (e) neutrality and stability
- ✓ (f) quality

- Market acceptance & promote interoperability
- No conflict with EU standards
- Developed by a non-profit making organisation which is a professional society, industry or trade association or any other membership organisation

Organisational Processes of the organisations must fulfil the following criteria:

- ◇ Openness: the technical specifications were developed on the basis of open decision-making
- ◇ Consensus: decision-making process was collaborative and consensus based
- ◇ Transparency

THE STATUS TODAY

RDA successfully submitted the application for the following outputs to assess technical specifications:

The Research Data Alliance was favourably evaluated and was invited to present to the Multistakeholder platform on the 26th of November 2015. As a result the Evaluation Committee set up and Evaluation process which started in December 2015.

This application is being coordinated by Hilary Hanahoe, RDA Secretariat & Trust-IT Services Ltd. For more information, please contact Hilary at h.hanahoe@trust-it-services.com

Output	
TS1	Data Foundation & Terminology Model
TS2	Persistent Identifier (PID) Information Types API
TS3	Data Type Registries Model
TS4	Practical Policies Recommendations

“We were delighted to be recognized at the 6th RD Plenary as the winner of the Climate Change Data Challenge as well as the Experimentation Day, which gave us a chance to present Plume Labs and our open data for environmental health application the Plume Air Report at a major COP21 side-event at Grand Palais.

We hope RDA 2016 will be another occasion to showcase how useful open data can be to help support innovators and tackle societal challenges.”

Romain Lacombe,
CEO of Plume Labs



MAKING ENVIRONMENTAL TRACKING PERSONAL

RDA SHOWCASING PLUME LABS

Stories from the RDA 6th Plenary Meeting

Plume Labs (www.plumelabs.com) was one of the companies showcased during the RDA Experimentation Day (24 Sept 2015). The company is using open data to raise the awareness about air quality, and predict the air quality conditions. Using their apps, users in polluted cities are better aware when, for example, to go running, take kids to the park or eat outside and this way decrease their environmental health risk by avoiding excessive exposure at peak times.

The company's aim is to develop a dense net of personal air quality sensors, and this way users can get more detailed information about the air quality in the exact spot where the user is. The data collected by these portable sensors is also crowdsourced to create a better coverage of air quality sensors throughout the world even to places where air quality sensors wouldn't otherwise exist.

Climate Data Challenge

The 6th Plenary RDA hosted in Paris from 23-25 September 2015, featured a special focus on research data for climate change, leveraging on the UN Climate Change Conference (COP21) held in Paris in December 2015. As a part of this special focus Cap Digital & RDA created a special Data Challenge designed to connect Climate Change related Data Sets with startups, SMEs and larger organizations with practical application for these data. [Three SMEs were awarded prizes by the jury: Plume Labs, France - Vizonomy, USA - Göteborg University, Department of Marine Sciences, Sweden.](#)

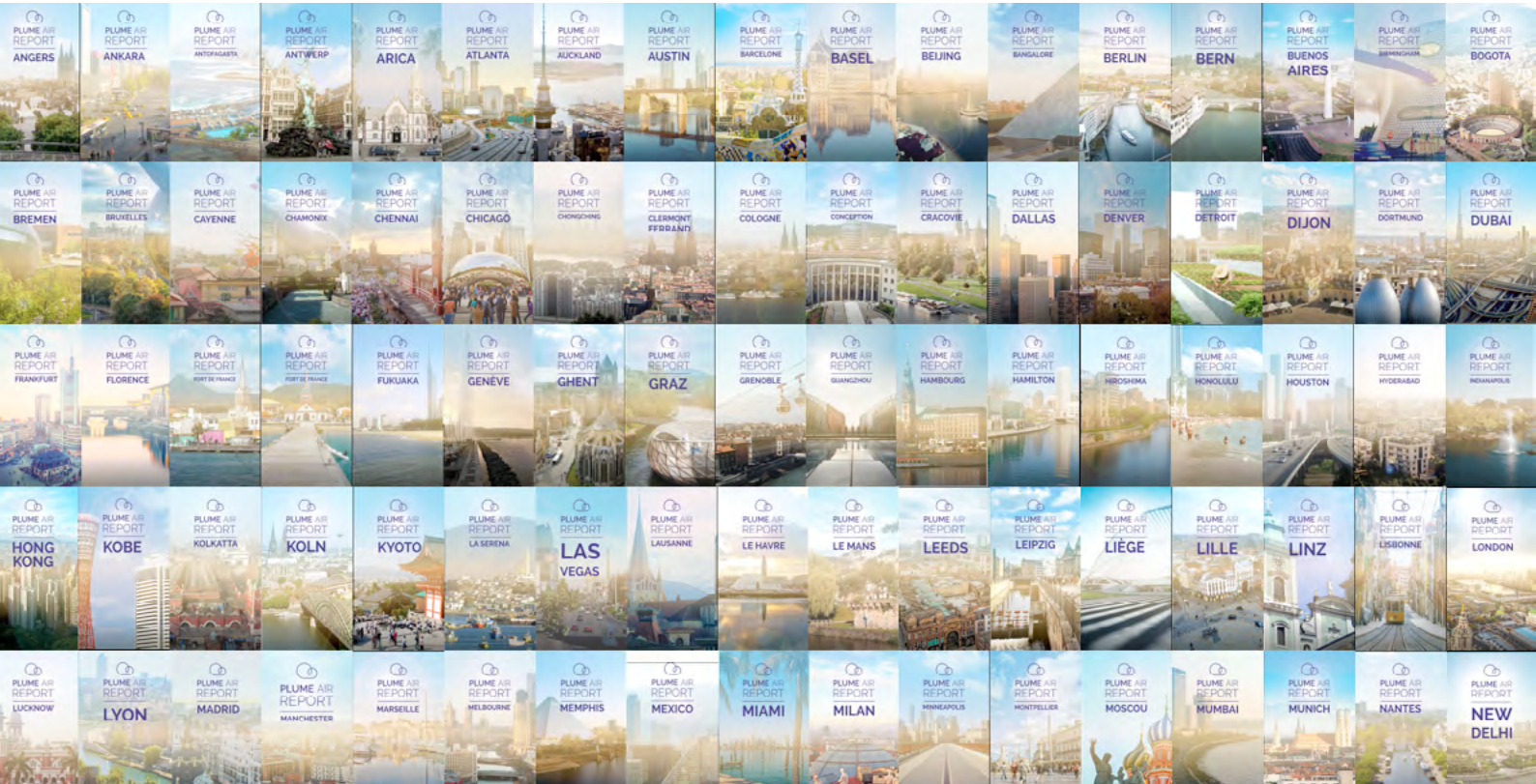
21 Companies with solutions or products with a focus on climate change were showcased during the Experimentation Day. The goal of the Experimentation Day was to foster exchange between RDA members and data related company representatives, sharing views, challenges and dreams about data sharing.



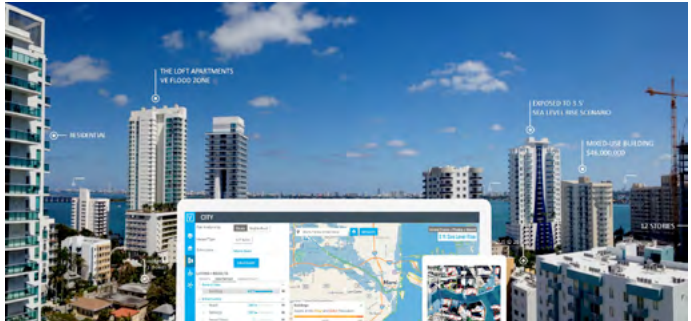


PLUME LABS LAUNCHES THE PLUME AIR REPORT IN YOUR CITY!

After a busy summer, the Plume Labs team is thrilled to announce the launch of the Plume Air Report, our free air quality forecast app, in 150+ cities around the world!



Vizonomy, Usa, For A Solution To Assess The Risk Of Natural Disasters Such As Flooding.



Vizonomy is making the climate risk assessment process more accessible to any U.S. community that is at risk to sea level rise or flooding. Vizonomy is doing this by leveraging +80 federal, state, and local datasets (e.g. NOAA Sea Level Rise Scenarios, FEMA floodplains, DHS critical infrastructure, etc) along with OpenStreet Map and open source mapping software.

Göteborg University, Department of Marine Sciences, Sweden

For A Model To Predict The Spread Of Diseases By Studying Mosquitoes' Displacements.

The goal of the initiative is to ensure researchers, authorities, and consultant companies use the platform in the future to predict the abundance and outbreaks of invasive species as well as pathogens such as mosquito-borne diseases based on landscape features, climate, biology as well as socio-economic data.

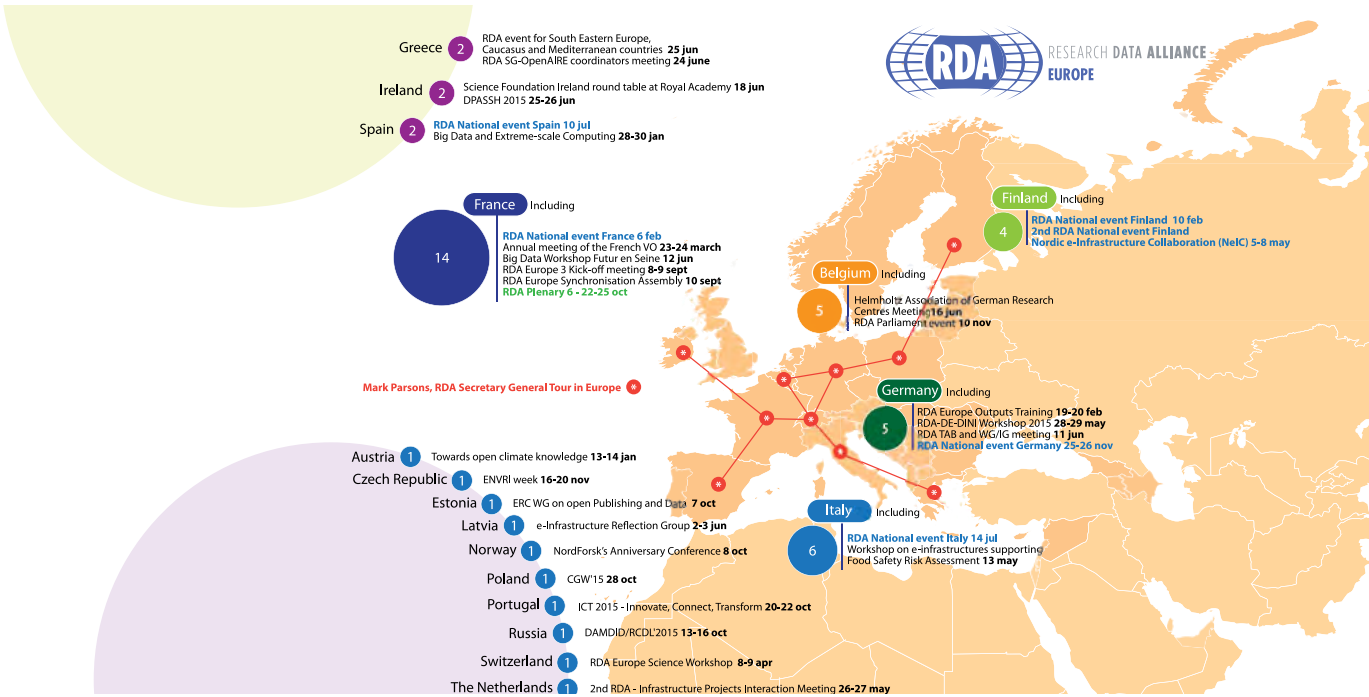




PEOPLE & PLACES

Without the passionate and continuous work done by data scientists, information scientists, computer scientists and domain scientists, RDA simply would not be what it is today. Almost 4000 members (Feb 2016) meet virtually and physically every month, if not every week, to discuss

the potential of having the right ecosystem for data management. In 2015 RDA was presented at more than 50 events only in Europe, not to count the events that took place all over the world.



If you wish to share with us information about relevant upcoming events taking place in your country or if you want to invite some RDA experts to attend an event you are organizing, please send your requests to enquiries@rd-alliance.org.

RDA: TIME TO DELIVER

Peter Wittenburg

RDA Europe Director and a member of the global RDA Technical Advisory Board

RDA's key message is to build the social and technical bridges that enable open sharing of data and after just over 2.5 years of formal existence, we want and need to "deliver". But do we all share the same interpretation of the word "deliver" - what do we mean? 12 RDA working groups produced concrete results and this after a relatively short period of time. Does this mean that we have "delivered"?

Most data practitioners (RDA Working Groups include on average 60 members) will answer without any hesitation "yes" as they have created concrete bridges to overcome some barriers that hamper progress with respect to interoperability and/or efficiency in their work. But stakeholders beyond these members hardly see the big impact that is so urgently needed, given the waste of costly resources when integrating and re-using data. Most of them compare RDA with the early Internet community that produced TCP/IP with its enormous global breakthrough in communication. Of course this comparison is not fully correct since it took 15 to 20 years - depending on the view - from the definition of TCP/IP until its global acceptance. At the very beginning only a few experts believed in the huge impact a protocol stack such as TCP/IP could have. It is too simple for us to just wait for some years to pass to wait for RDA outputs to demonstrate their impact.

It is true that the data landscape is much more complex than connecting computers and that RDA's results may seem to be isolated outcomes of groups working fairly independently. Some of the members of these first RDA Working Groups realized this gap and defined the term "data fabric" which is a term to describe, metaphorically, that we are looking for specifications of a set of common (generic) components (CoCo) that can be combined in a flexible way to efficiently solve classes of problems such as constructing large data federations or building virtual research environments. According to this practitioner view, RDA needs to analyse existing solutions across disciplines and countries to identify such common components and demonstrate that they can be combined to tackle real problems. Most of the current results can be placed in this Data Fabric landscape. Is this what is meant with "deliver"? It seems to be going in the right direction, but it is still not enough. Investors are funding a huge number of information infrastructures of different



scope (geographic, scientific) and all these infrastructures are developing components in silos that serve immediate needs. The positive effects of this strategy (let a thousand flowers bloom) is that many scientists and technologists were and are engaged, thus creating a broad basis of infrastructure experts, and that our understanding about what information infrastructures should do is much much deeper and richer now. Recent discussions showed that heading down this road cannot be continued, it has become very clear that the heterogeneity of solutions is decreasing interoperability and thus increasing inefficiencies, it is too costly and cannot be maintained and it prevents scientists and industry from investing.

An urgent change is required. Since cross-boundary information infrastructures are complex entities there is agreement that only applying the paradigm of "virtuous circles" will help in achieving progress. This means that we need to put the RDA Outputs and results in place, to test and adopt them and to learn from these exercises how to improve the results, to detect gaps, etc. This is the way to "deliver": continue producing bottom-up results and by rough consensus, using opportunities to test and adopt them, extracting experience from these tests and feeding the conclusions back to the RDA process. We need many communities across many countries in this active process, since this will create the momentum which is necessary to reach the desired impact in a short time scale.

Some may think that this bottom-up driven process is all that is needed to do to “deliver”. This assumption is incorrect. We need to combine this with policy level work, since having implemented such a virtuous circle does not per se guarantee that the solution space will decrease with all its consequences. There must be a policy momentum as well, that has the power to turn wide agreements into recommendations.

TCP/IP would not have been accepted if there was no policy momentum. Of course, RDA is recognizing that there are other initiatives as well working on generic components, that a number of strong communities came up with highly relevant solutions and that infrastructures grown over years cannot throw away all their solutions overnight. Bringing all these aspects together at policy level to come to global recommendations is the real challenge and it will cost time. But we need to start **NOW**.

Let me ask finally whether RDA Europe, as a funded project, is heading down the right road in this global puzzle?

The core group seems to support the views as sketched: we reserved funds to support testing and adoption, we are aware of the necessity to extract knowledge from all the testing and to feed it back to RDA. We also see the need to interact on all levels (policy makers, practitioners) to bring people together to evolve from all the testing experiences to recommendations. But we also see the urgent need that even more activity is required to accelerate the virtuous circle which can only be achieved by creating additional motivation.

Some people are still asking the question whether RDA is the right vehicle to stimulate and catalyse all this. After having shown that RDA is able to bring people together across disciplinary and geographic boundaries based on widely agreed principles there is only one answer for me: if you think that RDA is not working well enough, convince the crowd and let's change it. It's all of us data scientists, data managers, and data librarians etc. who are responsible to define the structures that are needed to be effective.



CREATING A SUCCESSFUL EUROPEAN DIGITAL SINGLE MARKET REQUIRES OPEN SCIENCE, OPEN INNOVATION, OPEN SCHOLARSHIP AND OPEN INFRASTRUCTURES

Finnish MEP **Henna Virkkunen** and Scottish MEP **Catherine Stihler** co-hosted a meeting on **Open innovation, open scholarship and open infrastructures insights to the European Digital Single Market** at the European Parliament, Brussels, 10 November 2015

to understand from a group of European stakeholders how these three areas can and must be a strong component of a winning European Digital Single Market.

Three leading experts, John Wood - Association of Commonwealth Universities, **Sandra Collins** - National Library of Ireland and **Kimmo Koski** - Finnish IT Center for Science call for a set of actions and interventions from the European Parliament in order to support more jobs for Europe, improve democracy and citizen power and exploit innovation.

Additionally the Cabinet of Commissioner **Günther Oettinger**, represented at the meeting by **Marlene Holzner**, Communication Advisor, emphasized the urgency around the European Supercomputing capacity as a means for processing and exploiting the growing volumes of data, and the financial resources that are necessary to implement the HPC strategy, including paying for the infrastructure required.

Ms. Holzner also touched on the imminent European Open Science Cloud with legislative aspects that are very important to bear in mind, which tied well with repeated warnings from John Wood about being careful not to regulate what is not yet understood: data regulation can cause serious barriers for innovation and job creation. Open science and open innovation IS and MUST remain a free and global market, and in terms of regulation, it is wiser to proceed in small steps.

MEP Henna Virkkunen, sensitive to the recurring theme of trust, reminded participants of the difficult balance between trust and regulation and how politicians fight a constant battle to find the correct balance so as not to overregulate and at the same time ensure a highly competitive European Union.

All three speakers' underlined that the European Digital Single Market needs joint commitment, collaboration and concrete actions in order to reach the common vision of creating better access for consumers and business to online goods and services across Europe. Clearly, it requires new inventions and research to enable the successful creation of new innovations in Europe. Sustainable infrastructures are key to allow researchers, citizens and society to profit from the scientific data created all over Europe. As MEP Catherine Stihler mentioned, examples from e.g. Great Britain show, that modernizing copyright law to enable text and data mining for research, can be implemented without endangering the commercial rights of the data owners.

Now Europe has an opportunity to be the forerunner in creating this unique possibility for new inventions, jobs and prosperity. Concrete actions must be taken to make it happen. Policy and legislation play a key role in enabling the full use of skills and resources through digitalization and open data infrastructures. The rapid and dramatic changes happening in the way research is conducted require new ways of thinking and acting, and the Digital Single Market can be a game changer if we build it in a way that provides support, rather than regulation for open science, infrastructures and innovation. Europe's competitiveness is at stake, so now is the time to act.



34

The clear and decisive request to the European Parliament was to take the following measures:

- 1** **Review and modernise copyright:** Europe needs a copyright exception for text and data mining. Data protection and copyright should not create barriers to open science and research.
- 2** Support a **code of conduct for ethical data practice** that would build trust in data research.
- 3** Ensure that **skills in data processing and data management** are sufficiently supported in the DSM: Europe needs skills education on all levels, across all scientific fields. Teachers need to be educated as well.
- 4** Ensure **sustainable funding:** Making sure Horizon 2020 is successful and working, and creating new funding models for open science infrastructures (through e.g. structural funding) and venture funding to support business exploiting open science.
- 5** Support a **code of conduct for e-Infrastructure service providers**, aiming at creating trust between ICT and research in building user-driven, interoperable services that build upon existing e-Infrastructures, e.g. in the emerging European Open Science Cloud for Research.
- 6** Enable **seamless access for researchers to research infrastructures.**
- 7** Support **promotion and adoption of common standards and protocols** for all resources and digital services.
- 8** Acknowledge the importance of exploring the **societal impact and implications of the Digital Single Market**, in order to further exploit the potential of innovation, and to identify challenges and risks, and to find best ways to tackle them.

The complete statements can be viewed at:

Professor John Wood



Open data, open science, open innovation - jobs for Europe. Why must Open Science be in the core of Digital Single Market?

Dr. Kimmo Koski



Open scholarship improved democracy and citizen power. Why is open scholarship essential for the Digital Single Market?

Dr Sandra Collins



Open infrastructures - innovation exploitation. Why do we need e-Infrastructures in building a successful Digital Single Market?



Photos by Leif Laaksonen and Micke Kari.



WITH THEIR OWN WORDS

RDA boasts a series of engaging bloggers! Check them out to keep abreast of relevant news and trends in the data landscape.

AGU AND RDA HOW PARTNERSHIPS GROW

Kathleen Fontaine,

RDA Secretariat

Some of you may have heard me talk about or reference 'AGU' from time to time, and when I do, it's almost always met with blank stares, or questions of 'What's that?' It's time to partially answer that question, and give at least one reason I talk about the American Geophysical Union (AGU). Turns out that AGU and RDA complement each other's work, so I thought I share a bit about the organization, where I see synergies, and why it's important to talk about other organizations.



THE GRASS ROOT LEVEL POINT OF VIEW

Heidi Laine,

doctoral candidate at the University of Helsinki, Finland and RDA Early Career winner

www.thehonestbroker.com

I've known RDA from the beginning. I was working in 2013 at the Council of Finnish Academies which is a cooperative body for the four science academies in Finland. At that time we were just beginning to start discussions about Finland becoming a member of CODATA.



MEMOIR OF THE SIXTH RDA MEETING IN PARIS

Godwin Yeboah,

researcher at University of Aberdeen in the UK and RDA Europe Early Career winner

For the first time, I had a chance to participate in one of the most attended and educative plenaries in Research Data Alliance (RDA) history for which I am very proud indeed. This was made possible through RDA Europe's travel and subsistence support to Early Career European Researchers and Scientists working with Data; I was one of eleven winners selected through a fair and rigorous application process.



Meet all our bloggers at

<https://www.rd-alliance.org/blog>

RDA WORKING & INTEREST GROUPS

RDA is a pragmatic and agile organization, and through the work of its Working and Interest Groups, directly and logically tackles numerous data infrastructure challenges.

Any RDA member may initiate or join a Working or Interest group. To become a member of the RDA, individuals should register with the RDA online community and affirm their support for the RDA Guiding Principles. RDA Working Groups and Interest Groups currently total 69.

To see all Working & Interest groups visit: www.rd-alliance.org/groups

Working Groups

Working Groups are short-term (12-18 months) focusing on the development and implementation of data infrastructure, which could be tools, policy, practices and products that are adopted and used by projects, organizations, and communities. Embedded within these groups are individuals who will use the infrastructure and help in making it broadly available to the public.

Interest Groups

Interest groups are open-ended in terms of longevity. They focus on solving a specific data sharing problem and identifying what kind of infrastructure needs to be built. When an Interest Group has a clear idea, it then submits a proposal to create a Working Group.

Active Data Management Plans IG	rda-datamanagplans@rda-groups.org	David Glaretta, Helen Glaves, Kevin Ashley
Agriculture Data IG (IGAD)	rda-agrdatainterop-ig@rda-groups.org	Imma Subirats, Devika Madalli, Johannes Keizer

Archives and Records Professionals for Research Data IG	rda-archives-records-ig@rda-groups.org	Elise Dunham, Rebecca Grant
Array Database WG	array_database@rda-groups.org	Peter Baumann
Big Data IG	rda-bigdata-ig@rda-groups.org	Peter Baumann, Ben Evans, Kwo-Sen Kuo, Morris Riedel
Biodiversity Data Integration IG	rda-biodivdataintegr-ig@rda-groups.org	Nicola Nicolson, Vince Smith, Paul Kirk, Dimitris Koureas
BioSharing Registry: connecting data policies, standards & databases in life sciences WG	rda-biosharing-wg@rda-groups.org	Susanna-Assunta Sansone, Rebecca Lawrence, Simon Hodson & Peter McQuilton
Brokering Framework Working Group	bf@rda-groups.org	Wim Hugo, Michael Diepenbroek, Jay Pearlman, Stefano Nativi
Brokering Governance WG	brokering-governance@rda-groups.org	Stefano Nativi, Max Craglia, Jay Pearlman
Brokering IG	rda-brokering-ig@rda-groups.org	Stefano Nativi, Jay Pearlman
Chemistry Research Data IG	chemistry-research-data@rda-groups.org	Leah McEwen, Stuart Chalk, Ian Bruno, David Martinsen, Richard Kidd
Data Citation WG	rda-datacitation-wg@rda-groups.org	Andreas Rauber, Ari Asmi, Dieter van Uytvanck

Data Description Registry Interoperability (DDRI) WG	rda-ddri-wg@rda-groups.org	Amir Aryani, Adrian Burton
Data Fabric IG	rda-datafabric-ig@rda-groups.org	Alan Blatecky, Yunqiang Zhu, Peter Wittenburg
Data for Development IG	rda-datadev-ig@rda-groups.org	Ingvill C. Mochmann
Data Foundation and Terminology WG	rda-dft-wg@rda-groups.org	Peter Wittenburg, Gary Berg-Cross, Raphael Ritz
Data Foundations and Terminology IG	rda-dft@rda-groups.org	Gary Berg-Cross, Raphael Ritz
Data In Context IG	rda-datacontext-ig@rda-groups.org	Keith Jeffery, Rebecca Koskela
Data Rescue IG	data-rescue@rda-groups.org	Elizabeth Griffin, David Gallaher, Lesley Wyborn
Data Type Registries WG	rda-dtr-wg@rda-groups.org	Larry Lannom, Daan Broeder
Development of cloud computing capacity and education in developing world research IG	rda-devcloudcomp-ig@rda-groups.org	Hugh Shanahan, Andrew Harrison
Digital Practices in History and Ethnography IG	rda-dphe-ig@rda-groups.org	Kim Fortun, Mike Fortun, Jason Baird Jackson

Domain Repositories Interest Group	domain-repositories-ig@rda-groups.org	George Alter, Ruth E. Duerr, Robert J. Hanisch, Peter Doorn
Education and Training on handling of research data	rda-edu-ig@rda-groups.org	Yuri Demchenko, Laura Molloy
ELIXIR Bridging Force IG	rda-elixir-ig@rda-groups.org	Bengt Persson, Carole Goble, Rob Hooft
Empirical Humanities Metadata Working Group	empirical-humanities-metadata@rda-groups.org	Brandon Costello-Kuehn, Dominic DiFranzo, Jarita Holbrook, Lindsay Polier, Mike Fortun
Engagement IG	rda-engagement-ig@rda-groups.org	Inna Kouper, Andrew Maffei
Ethics and Social Aspects of Data IG	ethics-social-aspects-ig@rda-groups.org	Kalpana Shankar, Candice Lanius
Federated Identity Management IG	rda-fedidmng-ig@rda-groups.org	Daan Broeder, Bob Jones
Geospatial IG	rda-geospatial-ig@rda-groups.org	Suchith Anand, Peter Baumann, Luciene Delazari, Andrea Perego, Chris Pettit
Global Water Information IG	globalwaterinformation@rda-groups.org	Ilya Zaslavsky, Sylvain Grellet, Tony Boston, Matthew Fry
Health Data	healthdata@rda-groups.org	Yannis Ioannidis, Edwin Morley-Fletcher

Libraries for Research Data IG	rda-libresearchdata@rda-groups.org	Wolfram Horstmann, Kathleen Shearer, Michael Witt
Long tail of research data IG	rda-tailresearchdata-ig@rda-groups.org	Kathleen Shearer and Wolfram Horstmann
Marine Data Harmonization IG	rda-marinedh-ig@rda-groups.org	Helen Glaves, Cyndy Chandler, Dawn Wright
Metabolomics Data Interoperability IG	metabolomics@rda-groups.org	Christoph Steinbeck, Shankar Subramanian, Susanna Sansone
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Metadata Standards Catalog WG	mscwg@rda-groups.org	Rebecca Koskela, Keith Jeffery, Alex Ball
Metadata Standards Directory WG	rda-mdir-wg@rda-groups.org	Jane Greenberg, Keith Jeffery, Rebecca Koskela, Alex Ball
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Preservation QoS-DataLC Definitions WG	qos-data-lc-definitions@rda-groups.org	Paul Millar
Quality of Urban Life IG	rda_qoul_ig@rda-groups.org	Chris Pettit, Massimo Craglia, Piyushmita (Vonu) Thakuriah
RDA / TDWG Metadata Standards for attribution of physical and digital collections	rda-mds-attribution@rda-groups.org	Anne E. Thessen, Matt Woodburn, Dimitris Koureas
RDA/CODATA Legal Interoperability IGstewardship	rda-legalinterop-ig@rda-groups.org	Paul F. Uhler, Enrique Alonso Garcia, Bob Chen
RDA/CODATA Materials Data, Infrastructure & Interoperability IG	rda-matdatainfrainterop-ig@rda-groups.org	James A. Warren, Laura M. Bartolo
RDA/CODATA Summer Schools in Data Science and Cloud Computing in the Developing World WG	rda-codata-summer-schools@rda-groups.org	Hugh Shanahan, Andrew Harrison, Simon Hodson
RDA/NISO Privacy Implications of Research Data Sets WG	rdaniso-privacy@rda-groups.org	Todd Carpenter, Bonnie Tijerina
RDA/WDS Certification of Digital Repositories IG	rda-wds-certdigitalrep-ig@rda-groups.org	Micheal Diepenbroek, Ingrid Dillo, Mustapha Mokrane

RDA/WDS Publishing Data Bibliometrics WG	rdawds_bibliometrics_wg@rda-groups.org	Kerstin Lehnert, Todd Carpenter, John Kratz, Sarah Callaghan
RDA/WDS Publishing Data Cost Recovery for Data Centres IG	rdawds-cost-recovery@rda-groups.org	Aita de Waard, Ingrid Dillo, Simon Hodson
RDA/WDS Publishing Data IG	rda-wds-publishingdata-ig@rda-groups.org	Todd Carpenter, Micheal Diepenbroek, Eefke Smit, Jonathan Tedds, Mustapha Mokrane
RDA/WDS Publishing Data Services WG	rdawds_services_wg@rda-groups.org	Hylke Koers, Adrian Burton
RDA/WDS Publishing Data Workflows WG	rdawds_workflows_wg@rda-groups.org	Sunje Dallmeier-Tiessen, Fiona Murphy, Amy Nurnberger, Varsha Khodiyar
Repository Audit and Certification DSA-WDS Partnership WG	dsa-wds-certification@rda-groups.org	Lesley Rickards, Mary Vardigan, Rorie Edmunds
Repository Platforms for Research Data IG	rda-repoplatforms-ig@rda-groups.org	David Wilcox, Stefan Kramer, Ralph Müller-Pfefferkorn
Reproducibility IG	reproducibility-ig@rda-groups.org	Bernard Schutz, Victoria Stodden
Research Data Collections WG	rda-collection-wg@rda-groups.org	Bridget Almas, Frederik Baumgardt, Tobias Weigel, Tom Zastrow
Research data needs of the Photon and Neutron Science community IG	rda-rdnpnsc-ig@rda-groups.org	Amber Boehnlein, Brian Matthews, Frank Schlünzen, Thomas Proffen

Research Data Provenance	rda-researchdataprov-ig@rda-groups.org	David Dubin, Bridget Almas
Service Management IG	rda-ig-servicemanagement@rda-groups.org	Owen Appleton, Michael Brenner, Thomas Schaaf
Structural Biology IG	rda-structuralbiology-ig@rda-groups.org	Lucia Banci, Chris Morris, Antonio Rosato
Vocabulary Services Interest Group	vocabulary_services@rda-groups.org	Stephan Zednik and Simon Cox
Wheat Data Interoperability WG	rda-wdinterop-wg@rda-groups.org	Esther Dzalé Yeumo, Richard Fulss
Working Group Data Security and Trust	rda-dst-wg@rda-groups.org	
Working Group on International Materials Resource Registries	imrr-wg@rda-groups.org	



RDA SEVENTH PLENARY MEETING

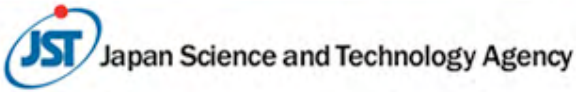
Hosted and co-organised by the **Japan Science and Technology Agency** under the theme “Making data sharing work in the era of Open Science” the **7th Research Data Alliance (RDA)** Plenary meeting held in **Tokyo, Japan** from the **1st** to the **3rd** of **March 2016**.

Making data sharing work in the era of Open Science

First in Asia

RDA 7th Plenary in Tokyo, Japan
March 1st to 3rd, 2016

Data Sharing Symposium - pre-RDA Plenary
February 29th, 2016



Open science is fundamentally community driven and dependent on free knowledge sharing and access to tools and services. As an organisation of volunteers and self-formed collaboration, RDA is committed to promoting “openness” and delivering tangible outputs that improve data sharing across disciplines, technologies, and countries.

The Research Data Alliance holds its plenary meeting every six months in a different region around the world.

These three-day working meetings bring together a unique community of data scientists, librarians, computer and domain scientists, policy makers and strategists to meet and discuss concrete actions and plans. For the first time, RDA organised its plenary meeting in Asia with the kind support of Japan.

The 7th Plenary is built around the RDA Working and Interest group meetings, and will also see the release of

a new set of group outputs with sessions dedicated to adoption and success stories. Participants who are new to RDA will have a chance to learn about it and how to get involved during the RDA for Newcomers session on February 29th.

The 7th RDA Plenary meeting will be preceded by the “**Open Symposium: Data-driven Science - The trigger of Scientific development**” organised by JST and taking place on February 29th 2016.



RDA EIGHTH PLENARY MEETING INTERNATIONAL DATA WEEK

From **September 11-17, 2016**, data professionals and researchers from all disciplines and from across the globe will convene in **Denver, Colorado** for **International Data Week (IDW)**. The theme of this landmark event is 'From Big Data to Open Data: **Mobilizing the Data Revolution**'.

INTERNATIONAL DATA WEEK 2016

WWW.INTERNATIONALDATAWEEK.ORG

Organized by:



As such, International Data Week will bring together data scientists, researchers, industry leaders, entrepreneurs, policy makers and data stewards to explore how best to exploit the data revolution to improve our knowledge and benefit society through data-driven research and --innovation.

Organized by the Research Data Alliance, (RDA), CODATA, the Committee on Data of the International Council of Science (ICSU) and the ICSU World Data System, IDW will take place at the Sheraton Denver Downtown Hotel.

IDW comprises three complementary events:

IDW comprises three complementary events:

SciDataCon 2016-Advancing the Frontiers of Data in Research: Convened by WDS and CODATA, SciDataCon 2016 is a scientific research conference that will advance the frontiers of data in research.

An International Data Forum: This event will be the centrepiece of IDW, bringing together international researchers, industrialists, policy makers and educators to discuss the major opportunities and challenges of the data revolution, from 'Big Data' to 'Open Data.'

The 8th RDA Plenary Meeting: The 8th RDA Plenary Meeting offers attendees a unique opportunity to network and collaborate with colleagues and peers in various disciplines, and make concrete progress in technical and social areas on topics related to research data sharing and exchange.

About ICSU-WDS:

ICSU-WDS was established in 2008 (its predecessor bodies were established in 1957). Its membership is comprised of data repositories, data service providers, and their partners. Its focus is on identifying, creating, and sustaining institutions that provide stewardship, long-term preservation, and access to data.

ABOUT ICSU-CODATA

ICSU-CODATA was established in 1966. Its membership is comprised of National Academies, Science Councils, international Scientific Unions, and related organizations that care about data. Its focus is on creating both a culture and a framework of standards, agreements and protocols that enable data to be shared and reused.

www.internationaldataweek.org

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RDA 9th Plenary Meeting
5-7 April 2017, Barcelo Sants Hotel,
Barcelona, Spain

Organised by Barcelona Supercomputing Center (BSC) with the support of RDA Europe



ENGAGING WITH INDUSTRY

Starting From Climate

Research & Industry collaboration concretely shows how new capabilities for exchanging and processing data, as well as work done within the RDA, can provide elements of solutions to multiple problems.

The Earth Sciences department at Barcelona Supercomputing Center (BSC) intends to create an Interest Group about weather, climate and air quality, to explore and discuss the challenges for the use and efficient analysis of large and diverse datasets from the climate, weather and air quality communities.

Based on a collaboration between several research meteorological and European climate institutes and taking into account input from the private (renewable energy, satellite and agriculture sectors for example) and public sectors, this IG will suggest practical and applicable solutions for Big Data issues encountered by these communities, both at technological and policy level.

Francisco Javier Doblas-Reyes, ICREA research professor at the Barcelona Supercomputing Center-Centro Nacional de Supercomputación (BSC-CNS), Head of the Earth Sciences Department tells us more.

What's the status of the weather, climate and air quality industry today?

Weather, climate and air quality are issues of societal importance. However, it is uncommon to find industrial partners ready to be engaged with data scientists in these fields because the problems dealt with are mainly of social interest, with relatively small monetary relevance and with no patenting tradition. In addition, an important fragmentation is found in the industry producing and disseminating this kind of information. For instance, traditionally weather information is provided by national or regional weather services, which have both a public-service and/or commercial sides, and that compete at the same time with small and large consultancies and brokers. The actors producing and disseminating air quality and climate information coincide some times, and suffer from the same level of fragmentation. This makes that the industry and the social actors that are sensitive to environmental problems linked to our communities have to deal with a complex market, making the benefit that improved weather, climate and air quality information produce largely unknown to researchers. On top of this, the industry is often confronted with a varying level of openness of the data, to the point that sometimes it is even difficult to find the correct provider of a product when such product is not available in the public domain.



Why weather, climate and air quality information?

The COP21 was the most important international gathering of 2015. The agreement that came out of that conference, even if far from perfect, will have far-reaching consequences for the global economy, the ecosystems and the organisation of societies and will require that society, industry and research work together to build the solutions to make the agreement a reality. The decisions expected will entail astronomical sums of money, so that even a small sensitivity to weather, climate and air quality has an important impact in absolute terms. This will imply a huge demand for multi-faceted data, which must be reliable and sufficiently accurate to allow industries and policy makers to make better decisions. This is an example of the kind of challenges addressed by the weather, climate and air quality communities: the production of information from a wide variety of data sources, many of them producing some of the largest datasets in the world, for society to take adapt to and protect itself from environmental risks. The energy, health and world food security are directly linked to the efficient provision of weather, climate and air quality data. RDA is a good framework to facilitate the encounter of the weather, climate and air quality experts with those from other communities and ensure that the most recent technical developments benefit the search for better environmental information. Those developments should promote that information on weather, climate and air quality that already exists can be disseminated through a range of heterogeneous channels and with improved quality levels.

How you are engaging with industry stakeholders in RDA?

Scientists working in weather, climate and air quality problems have only recently started to engage with the industry. The change of culture necessary to make this engagement a reality has been favoured by the relatively recent involvement of researchers from social sciences into our research problems. As a result, standard practices in social sciences are increasingly being used by environmental research and operational institutions. For instance, for the energy sector, where public calls for funding are frequently open, we participate in bidding consortia with an industrial partner and under the condition that a scientist will spend time at the company's premises to ensure an appropriate transfer of knowledge. Some of this knowledge, maybe the most valued by the industrial partner, is the access to the data available using the data discovery tools that are continuously developed by our communities. Our contacts with the industry are registered in a local database that could be eventually explored by social scientists. Besides, we have found that one of the most rewarding approaches to interact with the industry consists in, instead of organising generic workshops for a range of users, participating actively in professional conferences. This approach is more costly in terms of both time and financial investment for research institutions, but allows the engagement with a whole sector at a time and to get first-hand information about their needs

Think how to calculate the actual value of data management for this industry?

As mentioned above, a large part of the information provided by our communities does not have a monetary but a social value because it helps citizens to improve their lives. Hence, creating, managing and disseminating weather, climate and air quality data in a proper and efficient way is good for society. It is difficult to say what financial return can be made out of these data because the private sector does not naturally provide monetary information of their sensitivity to external factors, and even less of the impact of the specific solutions our communities provide (such as a new and more robust source of climate information for adaptation to climate change) to reduce such sensitivity. However, we work with industrial partners to demonstrate that there is an ingestion of the information we produce into their decision making processes and that they are ready to invest in licences to obtain this information operationally. In this context, the analysis of surveys on social aspects of the environmental management, which could also measure their environmental responsibility (their actions in towards emission reductions), the number of joint ventures, the uptake of practices, software and freeware codes, and the creation of spin-offs could be used to estimate the performance of our engagement with the industry.





RDA EUROPE OFFERINGS TO RESEARCH, INDUSTRY AND POLICY MAKERS

The digital world and the huge increase of volume and complexity of data is revolutionizing science and industry. The Research Data Alliance is taking an active role in meeting the challenges and opening new opportunities by:

- ◇ working on identifying and removing social and technological barriers for improved data sharing and re-using.
- ◇ identifying and specifying common building blocks for global data infrastructures in a complex global landscape where many initiatives create solutions.

The first 12 RDA recommendations and outputs overcome several current barriers for data sharing and re-use. To encourage and foster testing, uptake and adoption of these recommendations and outputs, RDA Europe supports interested parties in research and industry in a number of ways:

- ◇ Organizing a variety of training opportunities.
- ◇ Deploying the online RDA Atlas of Knowledge.
- ◇ Providing support and collaboration opportunities.

For more information about all these opportunities please contact us at info@europe-rd.alliance.org

Support & Collaboration

RDA Europe provides support to interested initiatives and projects

- ◇ Giving help and advice on data related questions where possible
- ◇ Sending RDA experts for on-site visits to support local teams incl. hiring external experts
- ◇ Funding collaboration projects to test and/or adopt RDA outputs.

Help and advice is provided in the first instance through the Atlas of Knowledge. RDA Europe launched a first call for collaboration in Autumn 2015 to test and/or adopt RDA recommendations. A first set of projects are currently under the review process. A new call will be launched in April 2016.

Experience gained in all testing activities will serve to improve the RDA results, identify gaps and in doing so accelerate the speed to come to widely accepted agreements.

Atlas of Knowledge

RDA Europe gives advice about research data issues to everyone interested and to also carry out analysis work to clarify open questions. This is executed in collaboration with research communities and experts from different fields and initiatives with deep experience and knowledge to offer the most comprehensive answers.

RDA Europe is building and maintaining a cumulatively growing Atlas of Knowledge to which interested experts are invited to contribute.

Contributions are welcomed from all and can come under different forms, e.g. raising questions, giving comments or providing content. The Atlas of Knowledge is a moderated wiki that focuses first on the issues raised by RDA Working Groups and Interest Groups, but will also incorporate topics with a much broader focus.

Check out the Atlas of Knowledge at

<https://confluence.csc.fi/display/RDAEUKB/RDAEU3+Atlas+of+Knowledge+Home>



REUSABLE DATA

Cartoons by Auke Herrema

RDA 2016 TRAINING PROGRAMME

64

The digital change and the huge increase of volume and complexity of data will revolutionize science and industry. To Make Sense Of This Evolving And Complex Landscape, And To Make Sure The Work Done Has A High Impact, RDA Euope Will Continue To Provide Training Opportunities.

RDA Europe offers a series of training webinars, face-to-face workshops, hackathons/ datathons partly organized as “summer schools” and special meetings on request.

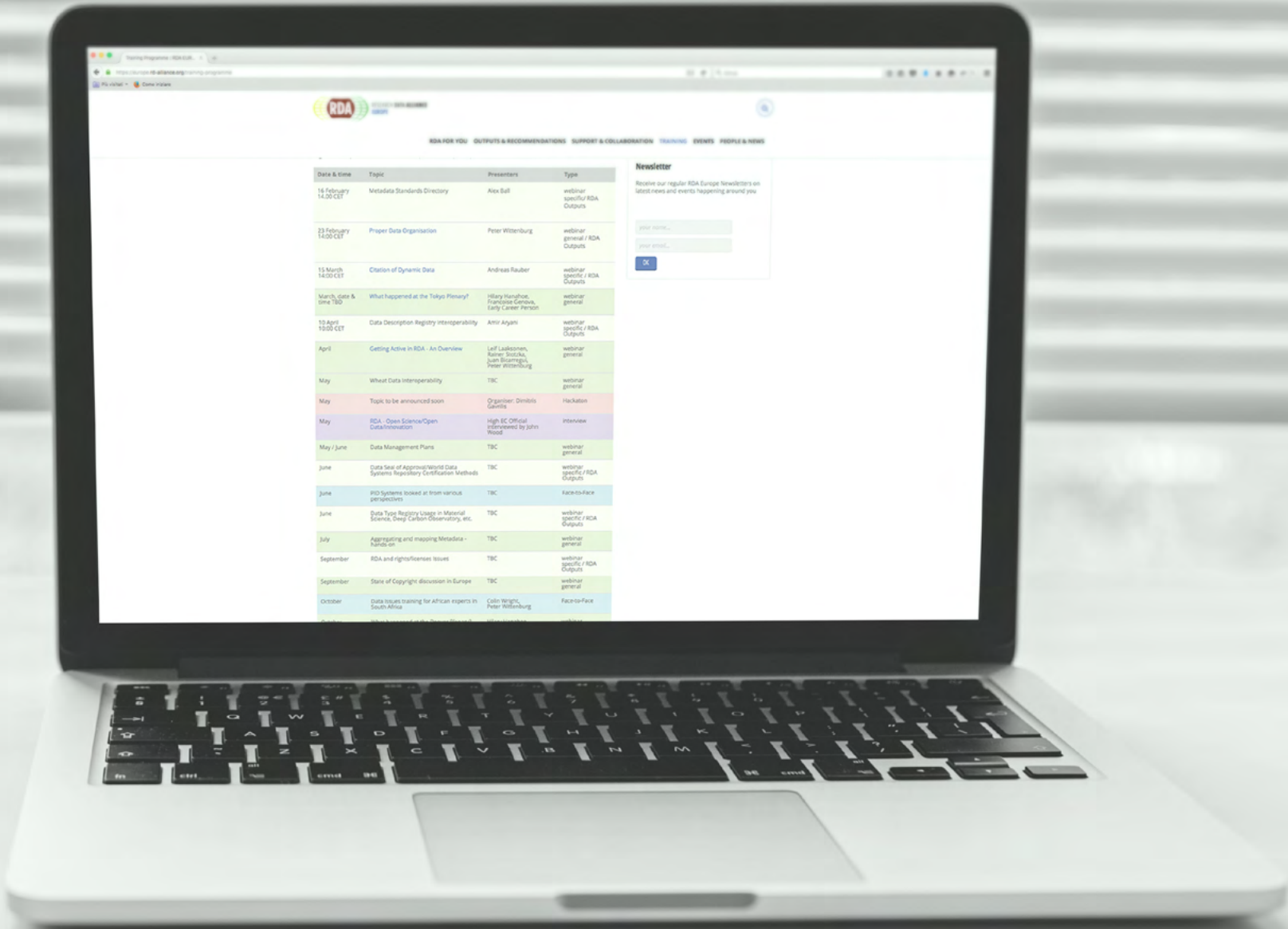
The topics will be primarily related with RDA recommendations and outputs, but it will also address general topics facilitating data sharing and re-use, interviews with notable people and information sessions such as reports from RDA plenaries.

The Programme

For all its events RDA will make use of the potential of international experts engaged in RDA groups. To ensure an integrated and complimentary training programme, RDA Europe synchronises training activities with other European initiatives including EDISON, EGI-ENGAGE, EUDAT, LEARN, OpenAIRE and other interested initiatives.



<http://europe.rd-alliance.org/training-programme>



CONTRIBUTE!

Increase your visibility by sharing your news with almost 4000 scientists, policy makers, data practitioners and industry stakeholders from 104 countries all over the world. Contribute to RDA sharing of data across technologies, disciplines, and countries to address the grand challenges of society.

contribute

Submit Your News

Share your news with RDA and the community
We value all contributions and will support you in spreading the word!

ENTER

contribute

Submit Your Event

Want to highlight a conference, working meeting or workshop? tell us more and we will help you promote it!

ENTER



RESEARCH DATA ALLIANCE

RDA Europe, the European plug-in to RDA, is mandated to ensure that European political, research, industrial and digital infrastructure stakeholders are aware of, engaged with and actively involved in the global RDA activities



The Research Data Alliance (RDA) builds the social and technical bridges that enable open sharing of data. The RDA vision is researchers and innovators openly sharing data across technologies, disciplines, and countries to address the grand challenges of society.

RESEARCH DATA ALLIANCE

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