THE RESEARCH DATA ALLIANCE AND DATA OPPORTUNITIES FOR LIBRARIES

Presentation Notes, Hilary Hanahoe, Secretary General Research Data Alliance

National Library of Ireland, RDA Ireland – Meet the Expert Series 14 January 2019

Slide 1: Good afternoon to you all. Thank you all very much for coming here today and giving up your lunch break to attend this public lecture on "The Research Data Alliance and Data Opportunities for Libraries". I would like to thank Dr. Sandra Collins, Director of the National Library of Ireland, and a Research Data Alliance Council member as well as the coordinator of the RDA Irish National Node. I am very grateful to you, Sandra, and your colleagues at NLI for organising this series of events and inviting me to open them. I am truly honoured and delighted to be here today. I would also like to thank the Digital Repository or Ireland, Dr Natalie Harrower – Executive Director and her team, including Timea Biro who are partners and drivers of the RDA European project and as well as promoting and supporting RDA on a pan-European and international level, I know they invest time and effort to supporting and nurturing the national / local community too.

As Sandra introduced me, my name is Hilary Hanahoe, and you can probably tell from the accent that I am Irish, from Dublin but have been living and working in Italy for many years now.

I have been involved with the Research Data Alliance since it's launch in 2013, in fact since the project support started in 2012. I have held many roles in RDA over the past 5 years and have been the Secretary General since Feb last year. So, I am just approaching my 1st anniversary in fact and again I am really honoured to be here today to spend this lunchtime together. My presentation today, focuses on the Research Data Alliance and the opportunities in terms of data.

Slide 2: as outlined in the overview of today's lunchtime lecture, the emergence of data intensive science and data management mandates extended to traditional libraries mean that the challenges faced by libraries, and in particular librarians, archivists and information service professionals, in relation to digital data and digital research are quite significant.

Slide 3: Our little lunch interlude will cover the following topics in the hope of giving you a flavour of what RDA does, how you as stakeholders fit in to the alliance, why you are of value to the community but also why RDA can be of help and support to you. I will give you a few concrete examples of what RDA has done and is doing that help you contextualise the alliance, it's community and it's outputs and how this could, I hope, translate into concrete support and assistance for you and the organisation that you represent. I would like this to be as interactive as possible, not always easy, but I do invite you to stop me, intervene and ask questions, clarifications and further information at any time you wish.

Slide 4:

The Research Data Alliance (RDA) has a very ambitious vision: "**Researchers and innovators openly sharing data across technologies, disciplines, and countries to address the grand challenges of society**". Basically, we strive to support many different stakeholders and data professionals to find solutions to enabling FAIR (and not only) data across technologies, across disciplines and across countries. Why? Simple because the grand challenges of society are everybody's challenges and being able to find, access, interoperate, reuse research data offers limitless possibilities to everyone.

Slide 5: The RDA mission

so how do we intend to achieve our ambitious vision? By facilitating the social and technical bridges that enable open sharing and re-use of data. We put equal emphasis and importance on the social and the technical aspects. One cannot happen without the other but I will come back to that in just one moment

Slide 6:

How do we do that, or what is the approach?

The RDA Approach is to further research innovation, efficiency and reproducibility by identifying and facilitating socio-technical best practices and standards for research data, tools and infrastructure. These will advance solutions to Grand Challenges and the UN Sustainable Development Goals.

Slide 7:

Infrastructure model – the international local, social and technical axes. The image here is from the **Toward Information Infrastructure Studies: Ways of Knowing in a Networked Environment by Geoffrey C. Bowker Karen Baker Florence Millerand David Ribes, 2010** and without going into any detail on it. It is an interesting concept and model that was as true in 2013 when RDA was launched as it is today, with the RDA in the centre, where the social and the technical axes are equally important to the alliance.

Slide 8: Many times the "letting a 1000 flowers bloom" metaphor has been used in reference to RDA or indeed likened to a hothouse where plants nurture and grow.

RDA has a **grass-roots**, **inclusive** approach covering all data lifecycle stages, engaging data producers, users and stewards, addressing data exchange, processing, and storage. It is a **neutral social platform** where international research data experts meet to exchange views and to agree on topics including social hurdles on data sharing, education and training challenges, data management plans and certification of data repositories, disciplinary and interdisciplinary interoperability, as well as technological aspects.

Slide 9: what are the main RDA problem solving & discussion mechanisms? Since 2013, RDA members have set up Working & Interest groups self-formed by volunteers from across the globe to resolve and discuss specific research data management challenges. Working Groups develop and implement

data infrastructure, e.g. tools, policy, practices & products that are adopted and used by projects, organizations, and communities and have a duration of 12-18 months (though many times 24 months before activity is fully complete and endorsed), currently we have 35 Working Groups. Interest groups focus on solving a specific data sharing problem and identifying what kind of infrastructure needs to be built. They last as long as a group is active and currently there are 66 Interest Groups.

Slide 10: navigating the RDA groups is challenging. We are working on ways of making the RDA world and vibrant "heart" or groups more comprehensible. At the moment, we have a menu of sorts where we use six different "loose" categories.

Classification	WGs	IGs	Total
Base Infrastructure	6	11	17
Community Needs	1	10	11
Data Stewardship and Services	6	17	23
Domain Science	8	20	28
Partnership Groups	3	3	6
Reference and Sharing	11	5	16
	35	66	101

Interestingly we have a large number of groups focused on domain science areas (28), data stewardship and services have a significant amount of activity too. In fact that is where the Libraries for Research Data Interest Group is classified. I will give you some more information on that group later on.

SLIDE 11

Anna works in a research centre that deals with agricultural data, specifically wheat data. She collaborates locally, nationally and internationally to increase food security, nutritional value and safety while taking into account societal demands for sustainable and resilient agricultural production systems.

SLIDE 12

Together with her collaborators, from funders to end users, and all that go in between, in 18 months they created a set of guiding rules to foster wheat data interoperability, with the purpose of helping researchers create, manage and exchange wheat data. So by working together, with funders, policy & decision makers, researchers, data professionals and farmers, the result is a practical, usable and efficient output that has had huge impact has been created by the Wheat Data Interoperability Working Group of the Research Data Alliance.

SLIDE 13

Just one example of how cross discipline, co-creation, collaboration and cooperation can have efficient, quick and concrete impact on society.

Slide 14: I have given you a very high-level overview of the RDA mechanisms and groups, but who are these international experts that are driving, contributing and observing to the community?

Slide 15:

RDA is an international organisation, it is unique in its bottom up approach, its openness and its collaborative nature.

Currently there are 7,700 members of RDA from 137 countries across the globe. With over 50% of them from Europe. And indeed we have 145 members from Ireland. The large Northern hemisphere contingent is explained by the fact that both the European Commission and several US federal agencies fund large programmes in these regions to support and animate the community. In fact, this event is an example of the type of activities that are supported by these programmes.

Slide 16:

And what about the professions of our members? A disclaimer that these statistics are generated from self-classification of their profession, but it is useful to have an understanding of the types of professionals that are involved.

As you can see from this graph the largest grouping is that of the Researchers (over 1,700) but we have the librarians at 893 which is 12% of the membership.

Slide 17:

To round up the statistics for a while, the type of organisation that the community members represent (again self-organised), are Academia & Research (over 67%) and government and public services at 14%. These numbers follow the stakeholders focused on by the RDA.

Slide 18:

So where do you fit into the RDA? What about Librarians, Archivists & Information Professionals in RDA?

Slide 19:

Archivists, information service professionals and librarians are tasked with acquiring, appraising, arranging, managing, preserving and making accessible research material, both digital and analogue. As the global community works towards the harmonisation of research data management, you, as these professionals, have skills and expertise which can contribute greatly to the development of best practices.

Library and information service professionals within RDA are one of the largest single stakeholder groups in the community, currently counting over 12% of the members[1]. There are many on-going activities in RDA of interest to libraries and their staff, and it is clear that libraries are taking the initiative in addressing the technical and social infrastructure needed to enable and sustain open research.

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[1] 893 RDA members classify themselves as Librarians, see stats at https://www.rd-alliance.org/about-rda/who-rda.html

Slide 20:

Why are these professionals engaging with RDA?

- Get involved in an enabling organisation offering a global, open, neutral, experienced and independent forum for librarians to interact with data professionals, researchers, ICT experts and academics;
- Partner with experts from across the globe to augment the library community and corresponding data interoperability solutions;
- Develop strategic, collaborative relationships and partnerships with data producing stakeholders (researchers, data scientists, computer scientists etc.) across various domains;
- Engage in institution-wide advocacy processes for development of institutional and national technical and human infrastructures, legal frameworks, training programmes and policies for data stewardship.

Slide 21:

- Engage in an international forum that facilitates the harmonisation, integration and/or implementation of existing standards and methods for data interoperability;
- Adopt RDA recommendations and outputs to support the strategic aims of libraries in relation to research data management, curation, preservation and publication;
- Get actively involved in a unique forum for creating use cases and a 'working space' for library and information professionals;
- Discover and engage in opportunities and networks for data management skills development and expertise.

So there are a number of different opportunities and areas of engagement.

Slide 22:

You will probably identify many of the opportunities above as ones of great benefit and interest to your institution or organisation, but what about YOU as individuals, as professionals. RDA can be a vehicle for YOU to

- Gain greater experience and expertise in data management and data science regardless of whether one is a student, early or seasoned career professional;
- Enhance the quality and effectiveness of personal work and activities;
- Improve their competitive advantage professionally and position themselves for international leadership within the broader research and data community;
- Access an extraordinary network of international colleagues and organisations with a broad set of experiences, perspectives, practices, and intellectual frameworks relevant to data-driven innovation.

Slide 23:

What is the benefit to RDA in encouraging and nurturing the involvement of libraries and information service institutions in its activities?

RDA is a multi-disciplinary and cross-domain global initiative, offering an all-encompassing community of stakeholders. As the global community works towards the harmonisation of research

data management, library professionals have skills and expertise which can contribute greatly to the development of best practices. Libraries offer significant contributions to the Research Data Alliance by:

- Augmenting and enriching the worldwide network of international data experts and information professionals to address data challenges via RDA groups;
- Contributing to the development and maintenance of high-quality, practical solutions for data interoperability in libraries across the globe, as well as addressing real-world challenges when creating and shaping RDA's future Recommendations;
- Acting as the bridge and communication hub for all activities surrounding the data creation and publication lifecycle;
- Acting as RDA adopters who amplify, direct, and promote RDA Recommendations for the greatest effect and utility in libraries.

Slide 24:

Libraries for Research Data Interest Group is one of the largest Interest groups in RDA with 440 members ….

Objectives of the Libraries for Research Data Interest Group include:
- Define organizational and service models to support RDM in research libraries
- Promote best practices and interoperability of library infrastructures with domain repositories and other RDM initiatives.
- Develop strategies for embedding data management services at academic and research institutions
- Identify sustainable organisational business models for libraries in support of RDM
- Foster the adoption of data-related skills into information literacy instruction for scholars and librarians
- Act as a conduit to bring together the activities of different regional library groups including IFLA, LIBER, ARL, CARL, etc.
- Develop advocacy and outreach material for RDM in the research and education communities, in particular with university administrators

Slide 25:

Launched in June 2016, by the RDA Libraries for Research data (L4RD) Interest Group, this output is the result of a brainstorming on how IFLA and RDA could collaborate on a joint programme on supporting Libraries to engage in research data management. It is a useful practical overview to navigate the sea of free, online resources and tools that can be used to incorporate research data management into the practice of librarianship. The 23 things are clustered into 10 "pillars", namely:

1. Learning Resources
2. Data Reference & Outreach
3. Data Management Plans
4. Data Literacy
5. Metadata
6. Citing data

7. Data Licensing & Privacy
8. Data Preservation
9. Data Repositories
10. Communities of Practice

The practical guide is a non-exhaustive, non-comprehensive list of research data management resources, it should be viewed as a window into the information available online. It is currently available in 11 languages, reflecting the wide interest in this practical overview.

Slide 26:

Based on the RDA 23 Things: Libraries for Research Data output generated by the Libraries for Research Data Interest Group, the Australian National Data Service (ANDS) created a practical and easy to use 23 Research data things programme2.

A self-paced learning style, relevant examples, combination of thinking and doing exercises and grouping around data management topics were part of the inspiration behind the generation of this programme.

Designed to build capability and a community of practice around research data management, the programme was targeted to librarian and research support staff though it is open to all those interested in learning more about the subject. The programme uses a variety of mediums and channels to deliver the course and has achieved considerable success to date.

During its design in 2016, more than 1500 people participated from across Australia, New Zealand and beyond. Grouped into several research data management topics including citation and impact, metadata, ethics, rights and sensitive data, repositories, the programme also accommodates different levels of understanding. 23 research data things programme can be reused and repurposed anywhere in the world to suit specific needs and has been customised for a number of thematic domains.

You can access all the materials and readapt them though the 23 things toolkit https://www.ands.org.au/working-with-data/skills/23-research-data-things/toolkit you can:

Use it as a self paced learning activity or as a refresher

Adopt it as suggested training for all staff

Contextualize it for your discipline or situation

Adapt it to meet your specific research data knowledge needs

I've illustrated the core of RDA, the composition of the community, an interest group activity or output of interest (I hope) to you, an example of practical implementation of that tool in the library & research organisation sphere … I think we should start to look at some practical ways of getting

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2 http://www.ands.org.au/working-with-data/skills/23-research-data-things

involved and joining and participating in the community. OK? Before that just one slide on RDA and open science, open data.

Slide 27:

How does RDA support Open Science and Open Data? What is its relationship to the European Open Science Cloud? And indeed other international efforts of this type like the NIH Data Commons or the African Open Science Platform? What about the FAIR concept?

Concepts or words that come to mind when thinking of these initiatives and open science and open data in general, are

- Allowing collaborative and collective work
- Ensuring that scientific research, data and dissemination accessible to all levels of society (amateur & professional)
- Safeguarding that knowledge is transparent and accessible and shared and developed through collaborative networks

RDA supports the design and development of solutions and best practices that support the realisation of these fundamental aspects, part of the principles of Open Science.

A very brief word on the EOSC. RDA is one of the MANY organisations that has a key role in supporting the EOSC and working together in Europe and internationally for the benefit of the EOSC users is our ambition and hope. The working and interest group mechanism is one of the ways in which this can be pragmatically supported.

Slide 28:

Getting Involved … some insights on starting to feel RDA with your own hands…

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RDA Guiding Principles are at the heart of RDA. The foundations on which we are built and upon which we operate.

- Openness – RDA community meetings and processes are open, and the deliverables of RDA Working Groups will be publicly disseminated.
- Consensus – The RDA moves forward by achieving consensus among its membership. RDA processes and procedures include appropriate mechanisms to resolve conflicts.
- Balance – The RDA seeks to promote balanced representation of its membership and stakeholder communities.
- Harmonization – The RDA works to achieve harmonization across data standards, policies, technologies, infrastructure, and communities.
- Community-driven – The RDA is a public, community-driven body constituted of volunteer members and organizations, supported by the RDA Secretariat.
- Non-profit - RDA does not promote, endorse, or sell commercial products, technologies, or services.

Slide 30:

Getting involved as an individual member …To join simply visit RDA web site at https://rd-alliance.org/user/register

Complete your details and agree to abide by our guiding principles. Your membership will be approved within 2 working days.

Slide 31:

Another way of connecting with RDA and interacting on a local or national level is to join the RDA in Ireland group. The RDA in Ireland group is coordinated by the National Library of Ireland and by joining the group (once you have registered as a member of RDA) you will be subscribed to the group and receive updates and insights to data related matters in Ireland that the group publicises. These groups are new and I am sure that the NLI would be delighted to have more members and receive your news and insights that could be disseminated not only within the RDA in Ireland group but also to the global community. So think of it also as a forum for communication and outreach.

Slide 32:

Plenary Meetings

Organised around the world every 6 months, they are exciting & productive events bringing together a unique community of data science professionals, from multiple disciplines and domains; The plenary meetings help move the community forward in creating tangible deliverables that improve data sharing across disciplines, technologies, and countries;. The heart of the plenaries are working meetings of RDA Working & Interest groups and new potential groups through Birds of a Feather meetings and of course it is also the milestone for the presentation of new RDA Outputs and Adoption cases.

So what are the benefits of attending?

1. Exchange knowledge, share discoveries, discuss barriers and potential solutions
2. Learn about new trends, strategies, research developments, directions and policies
3. Meet new committed and passionate data science professionals, working in multiple disciplines
4. Contribute to acceleration of data infrastructure development

Slide 33:

Data professionals, researchers, industry leaders, entrepreneurs and policymakers from all disciplines and geographies will reconvene from April 2-4, in Philadelphia, Pennsylvania for RDA's 13th Plenary Meeting (P13).

With a track record of success represented by strong attendance, concrete outcomes, and overwhelmingly positive meeting satisfaction and value for attendees, RDA Plenaries are consistently successful in facilitating the international RDA data community in connecting data conversations across the globe and among all disciplines.

Slide 34:

And if you feel Philadelphia is too far then wait just a little longer and participate in the 14th Plenary meeting which comes back to Europe, in Helsinki from 23-25 October 2019. You should know that the plenary meetings also have a huge number of side meetings and co-located events that attract participants, making it a week long intense meeting with untold benefits.

Slide 35:

2 opportunities for you that are being funded by the RDA Europe project at the moment and that might facilitate participation in Philadelphia …

1. Focused on supporting Early Careers which in this context means that she/he is currently engaged in Bachelor, Masters, PhD or Postdoc studies. Applicants must be enrolled in a higher education study course or within maximum 5 years after completing a PhD in the case of the Postdoc studies; https://grants.rd-alliance.org/OpenCalls/call-early-careers-p13
2. The expert programme is targeting "Experts" that are broadly defined as mid-career or senior data professionals / scientists" and have been involved and have knowledge of RDA and its activities.

You can find out more at the Webinar on 22 January 2019, 16:00 CET / 15:00 GMT which will be an Overview And Q&A Session on the RDA Europe Early Career And Expert Grants. It is given by Dr Natalie Harrower, who is here today … so you might want to take the opportunity to ask her for more information here 😊

Slide 36:

Just as we started .. *the emergence of data intensive science and data management mandates extended to traditional libraries mean that the challenges faced by libraries, and in particular librarians, archivists and information service professionals, in relation to digital data and digital research are quite significant*.

Through engaging with the Research Data Alliance community, I hope that RDA can support you and your organisations in dealing with some of those challenges. RDA is here to facilitate in any way that it can. So, if you are not already engaged with RDA, I do hope that you will consider it after today's webinar. I personally am also very willing to support and help in any way that I can.

Slide 37:

Go raibh mile maith agut for your kind attention.