RDA Future Directions Survey Report

July 12, 2015

Inna Kouper
RDA Engagement Interest Group Co-Chair
Indiana University, USA

Introduction

At the beginning of May 2015 the Research Data Alliance (RDA) has launched a membership survey to identify future directions of RDA development to support its mission and ascertain how willing RDA members are to act in support of these various directions. The survey has been posted on the RDA website and advertised to all RDA members via the RDA-all listserv. Chairs of the working and interest groups were also asked to encourage their group members to participate. Two additional reminders were sent throughout the month of May.

The survey contained questions about RDA members' background, such as professional position, gender, or role in the RDA, and questions about specific steps that need to be taken to advance the three future directions of coordination, communication, and engagement (see Plenary 5 planning document for background).

Overall, 296 responses were received by the beginning of June, the time when the survey was closed. Based on the estimated individual membership of ~3,000 people, the response rate was about 10%. This report provides an overview of the survey findings and member comments and offers some recommendations for the next steps.

Highlights

- An active RDA member is a predominantly male professional from an academic environment in the United States or Europe.
- Most common forms of involvement in RDA include staying informed (88%) and participating in plenaries (57%).
- 75% of respondents indicated that they participate in RDA because they believe in its vision and goals; 27% stated that participating in RDA is recognized positively by their employers.
- Most common barriers to participation in RDA were a lack of time (74%), no budget for travel (51%) and no financial incentives to do the work in RDA (33%).
- The future directions of coordination, communication, and engagement are important, but more specific goals, activities, and metrics of success are needed. Less talking, more doing!
- Actions that had most support: tracking of RDA activities and results, writing collaborative papers, gathering and disseminating adoption success and failure stories, organizing joint events with domain-based data management organizations, and providing training for various data-driven organizations.
- The most common themes in the first steps in realizing the future directions in RDA are: a) finding and inviting motivated individuals, b) identifying and prioritizing domains, organizations, and activities, and c) developing strong messages for the right audiences and channels.

RDA Members' Background

Professional title and types of organizations

To gather information about the professional background of RDA members, the survey provided them with dropdown lists of professional titles and types of organizations commonly used on the RDA website. As can be seen from Figure 1, the three most frequently selected professional titles were Researcher (22%), Librarian (12%), and IT Specialist (12%). The least frequent categories included Journalist (1%), Student (2%), and Policy manager (2%).

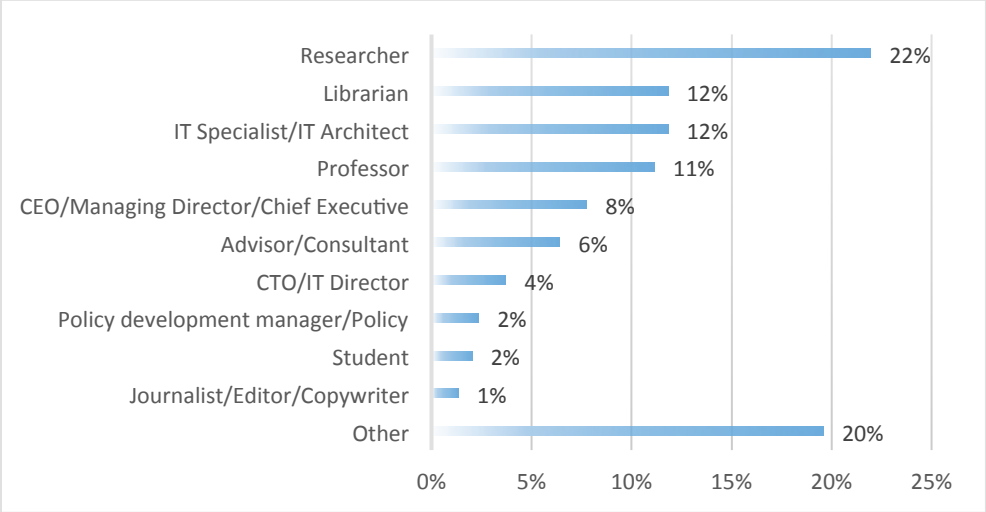

Figure 1. Distribution of professional titles (N=288).

Twenty per cent of respondents selected the category "Other," where they provided a more detailed description of their positions, such as "Dr." or "Associate Professor" or added more specific professional titles, such as "scientist" (e.g., data scientist, chief scientist, or research scientist), "data archivist", or "data manager".

In terms of organizations, most of the respondents came from the academic or research organizations (60%, Figure 2). The rest of the organization types had a considerably smaller representation.

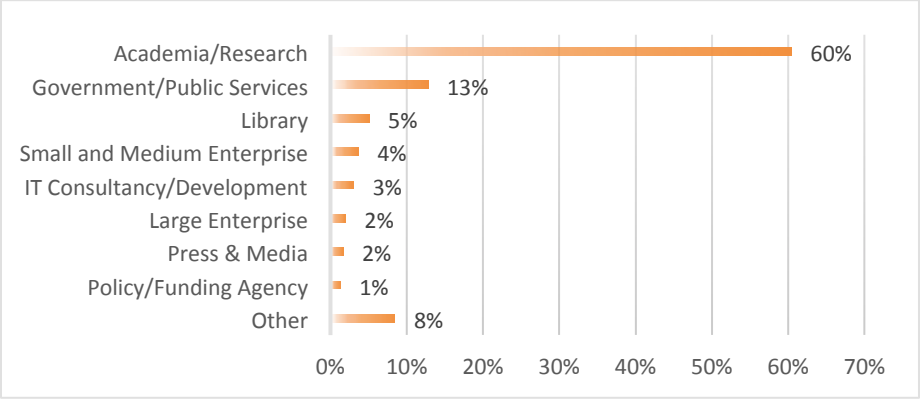

Figure 2. Types of organizations that respondents belong to (N=296).

Gender and country of residence

About two thirds of the respondents were male (60%, Figure 3), with 33% being female and 7% without an answer.

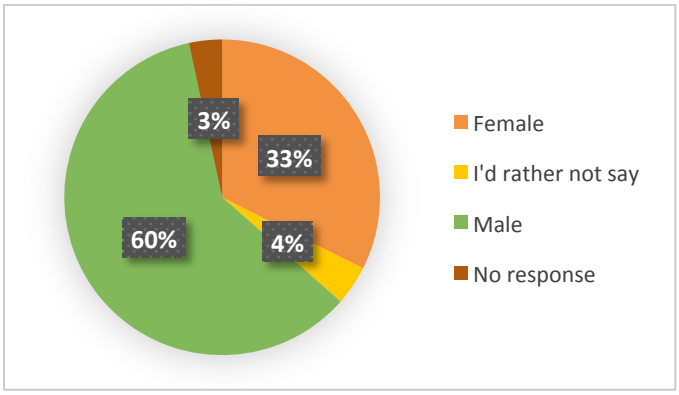

Figure 3. Gender distribution.

As can be seen from Figure 4 below, many respondents reside in the United States (34%) or the United Kingdom (13%). The residency of respondents roughly corresponds to the overall membership statistics: according to a recent presentation from RDA[1], 37% of RDA members come from North America (38% in this survey) and 50% from Europe (~42% in this survey). Australia's representation in this survey was slightly higher (6% in the survey as opposed to 4% in the total membership).

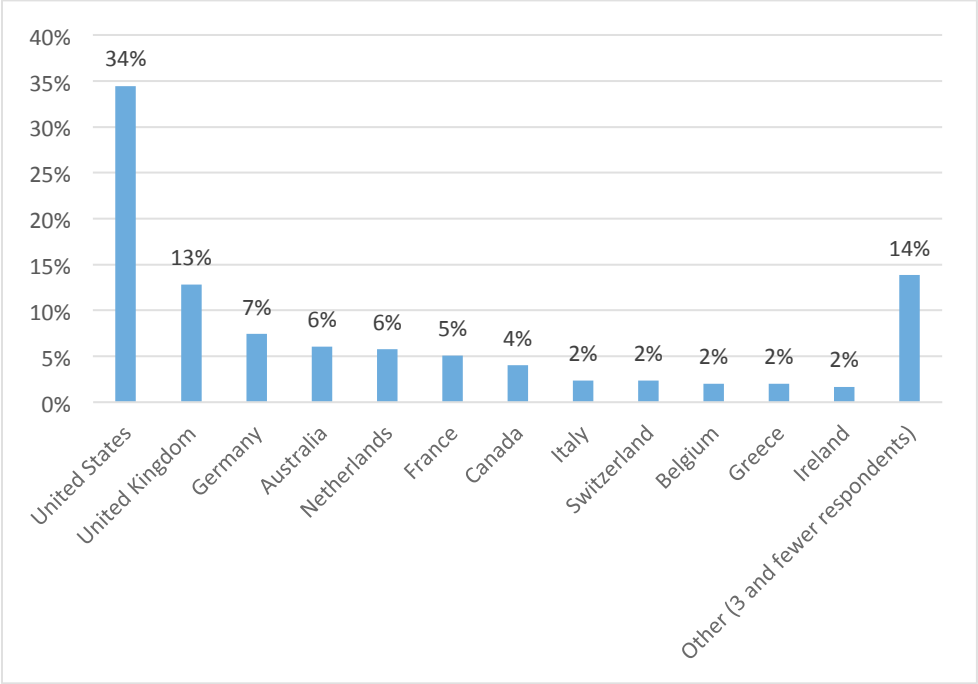

Figure 4. Respondents' country of residence.

[1] "The RESEARCH DATA ALLIANCE: Individual & Organisational Members", presentation from March 2015, available at https://www.rd-alliance.org/sites/default/files/RDA-Members%2005Mar2015.pptx

The RDA respondents' country of residence distribution is a long tail distribution with a relatively large number of individuals residing in the US and a small number of respondents residing in each of the many other countries represented. In addition to Australia and the European countries, there were respondents from Brazil, Chile, China, Ethiopia, Saudi Arabia, and Vietnam.

Forms of involvement

Among the different types of RDA-related activities in which the respondents were involved, the majority preferred to stay informed and participate in events (88% and 57% of all respondents correspondingly, Table 1). A considerable number of respondents also contributed to RDA communication and to group activities (48% and 39% of all respondents correspondingly). A small group contributed to the governing and coordinating bodies of RDA by participating in the advisory boards, secretariat, and the council.

Table 1. Involvement in RDA-related activities in 2014-2015.

RDA-related activities in 2014-2015	**%%**
Stayed informed (e.g., visited RDA website, subscribed to listservs, checked news)	88%
Participated in events (e.g., attended a plenary)	57%
Participated in communication (e.g., shared information about RDA, commented on documents)	48%
Contributed to the WG/IG work (e.g., proposed a group, wrote text or code, provided examples or use cases)	39%
Served on TAB, OAB, Secretariat or Council	9%
Served as a representative of organizational or affiliate member	8%
None of the above	7%
Other	1%

In response to the question about chairing a group or a birds-of-a-feather session, 18% said they chaired a group or organized a BoF in 2014-2015.

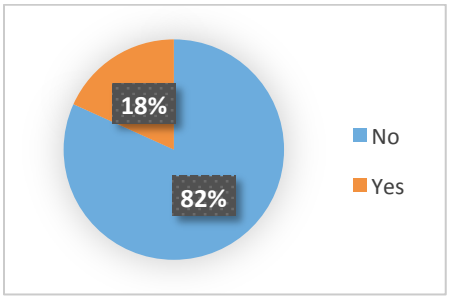

Figure 5. Number of chairs of WG/IG/BoF among the respondents.

The next chart (Figure 6) provides more details about types of contributions to the working and interest groups in 2014-2015. Predictably, more individuals contributed by participating in meetings than by doing anything else (56% of the respondents), but a sizable number also commented on draft documents (38%).

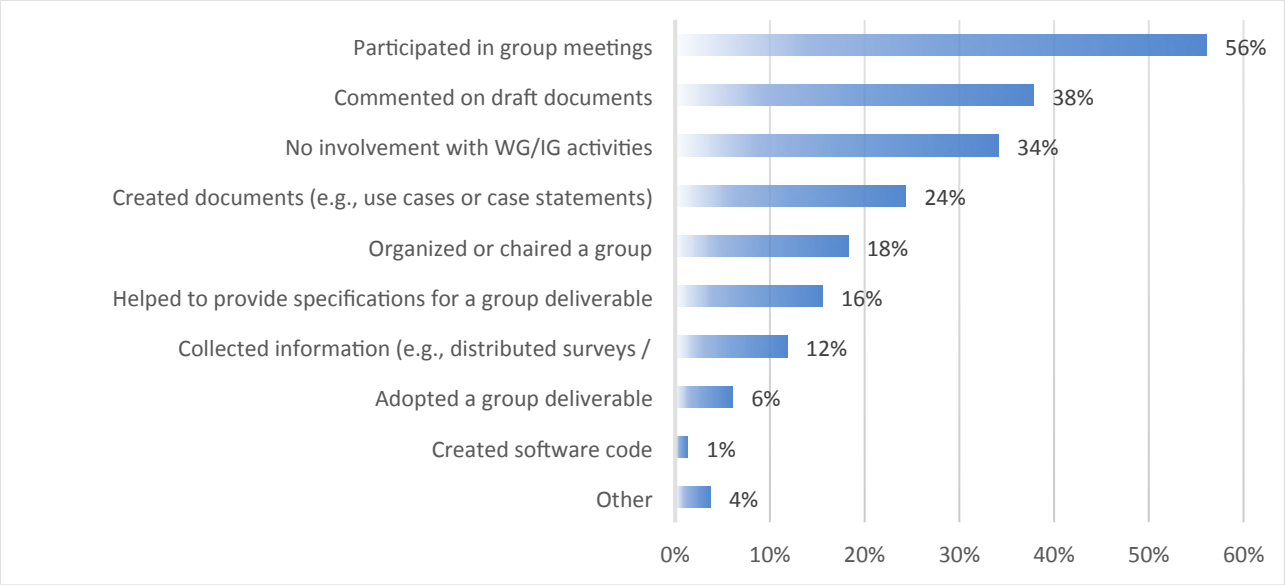

Figure 6. Types of activities in Working and Interest Groups (more than one option could be selected).

About a third of the respondents (34%) indicated that they had no involvement in working and interest group activities. For some of those respondents it can be explained by their involvement in coordinating groups, but for the majority no involvement meant the preference for staying informed (e.g., visiting RDA website, subscribing to listservs and checking news) as their main RDA-related activity instead of more active participation.

Plans, reasons for and barriers to participation

Slightly over 60% of the respondents indicated that they plan to participate in RDA next year (2015-2016). About one third of the respondents haven't decided yet and 4% firmly said "No".

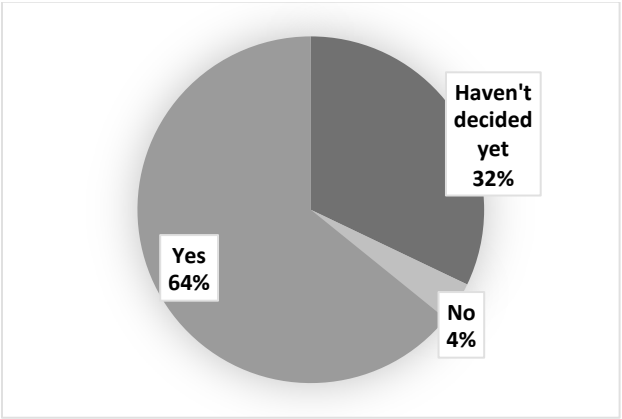

Figure 7. Plans to participate in RDA in 2015-2016.

In response to the question of why members participate in RDA, an overwhelming 75% stated that they believed in RDA vision and goals. The next two most common reasons included close alignment with work responsibilities and having ideas or skills that may benefit RDA (58% each). Slightly less than a half of the respondents believe that RDA is a good place to find collaborators and to learn about data sharing.

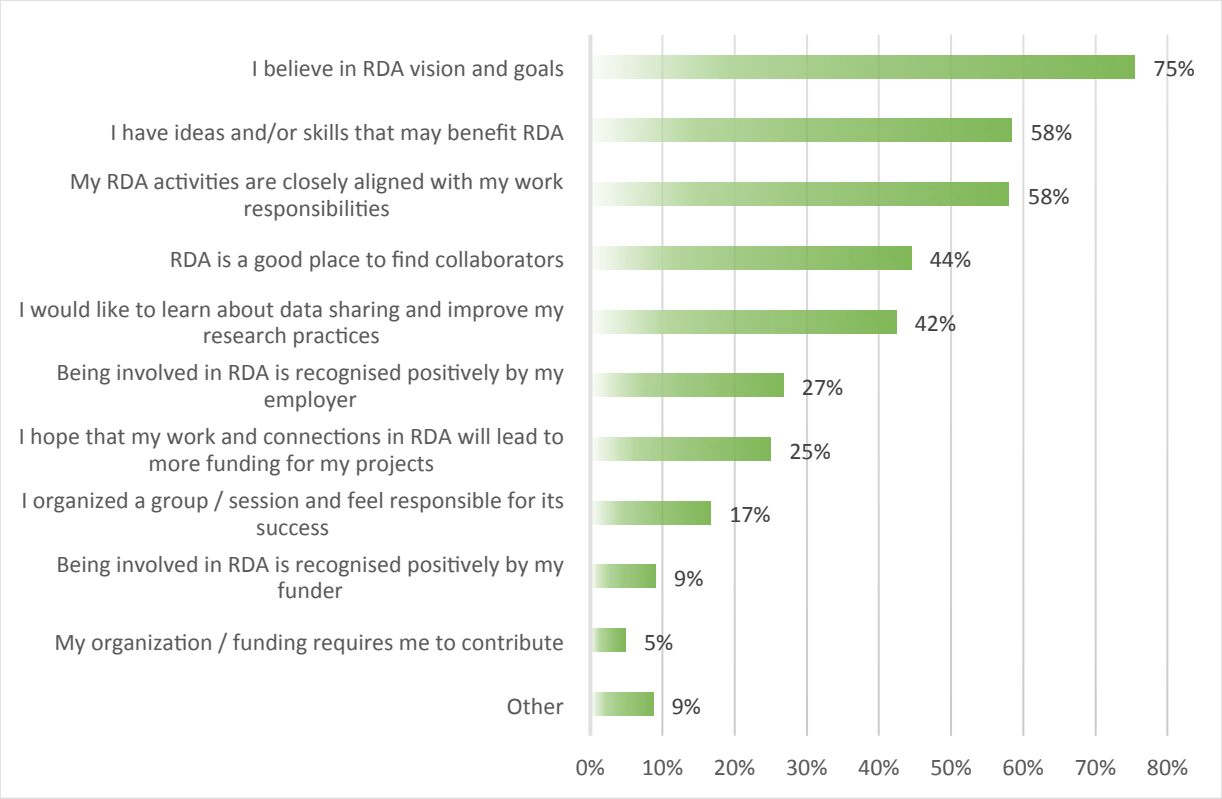

Figure 8. Reasons to participate in RDA.

In addition to selecting the provided options, some respondents elaborated on their reasons to participate in the comment box. Many commented that they are still trying to learn about RDA and understand what this organization does and what its value is. As one of the respondents phrased it, RDA is worth keeping an eye on, but it is not unique and it is rather hard to see what the tangible deliverables are.

When asked about barriers to participation, the respondents specified lack of time as one of the major barriers (74%, Figure 9). Another major barrier that about a half of the participants selected was lack of financial resources to travel. Less prevalent barriers selected by about one third of the respondents were lack of financial incentives for being involved in RDA, unclear goals and activities within RDA, and no academic recognition for the RDA work.

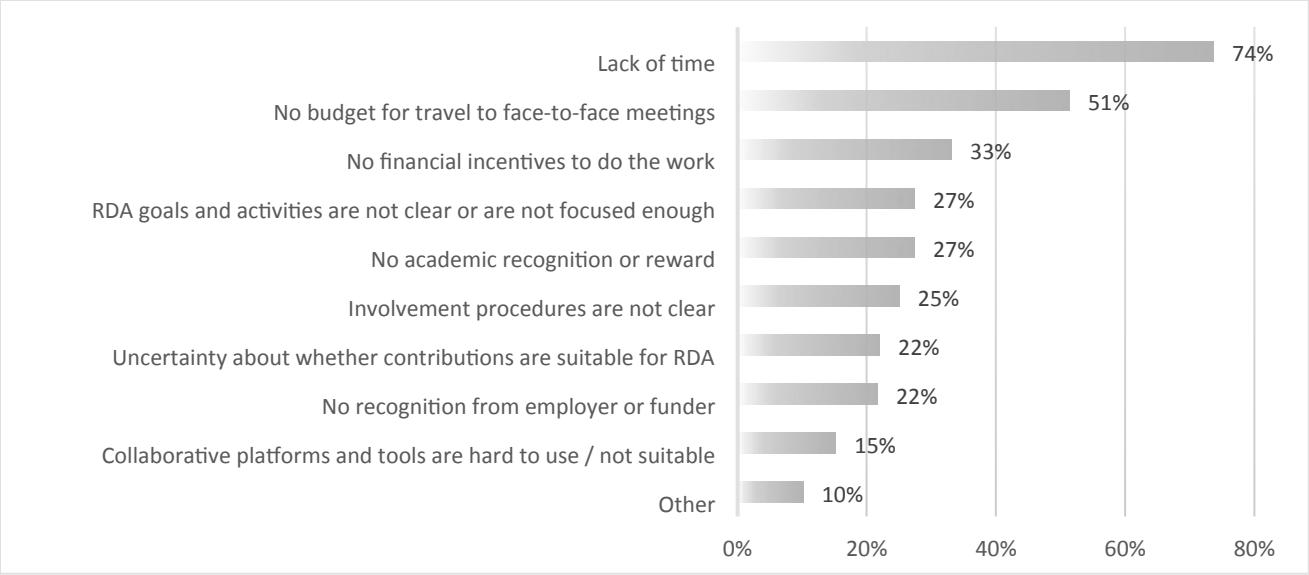

Figure 9. Barriers to participation in RDA (N=296, more than one option could be selected).

Expressing their opinions about their reluctance to participate in RDA in a free text section, the respondents mentioned that they do not know where to start, what to do beyond attending the meetings, or how to make sure that their work is worthwhile after the end of a working group (WG):

> "RDA groups talk a lot, but little gets built. Most RDA participants like to talk and attend meetings, but not do any real follow up work. For many, this is then just a waste of time."

> "RDA is everything, some ideas are developed in parallel or even in competition with each other. The direction is not clear: Will one or the other idea be taken up after the end of the WG? Which will get operational?"

Future Directions and First Steps: Less Talking, More Doing

Another segment of the survey provided RDA members with actions related to coordination, communication and engagement (CC&E) and asked whether members agreed that those three directions are important for future development of RDA, whether the respondents were willing to participate in those actions and what concrete steps need to be taken. The respondents who wished to participate in certain actions provided their emails and made free-text suggestions about what needs to be done.

As can be seen from Figure 10 below, 71% of the respondents agreed that CC&E should be the main directions for RDA development. Only 5% disagreed and said "No", and 22% were not sure.

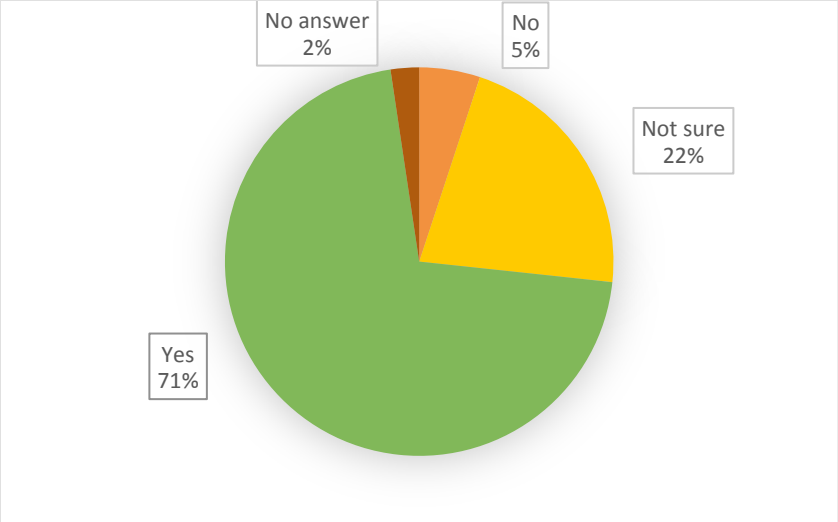

Figure 10. Distribution of agreement / disagreement with the three directions of coordination, communication, and engagement.

While the majority agreed that CC&E were important, many respondents commented that it is not enough to have such broad directions and that more specific goals and directions need to be identified. They described the broad directions as too generic and having no meaning without concrete plans and problems to solve:

> "I would expect any volunteer organisation to be focused on co-ordination, communication and engagement. These are generic management/organisational tasks and while they are important I don't think they communicate the direction of the RDA, unless it is solely an advocacy network. I would like to see some more specific content in the future directions of RDA about what we, as a global community, are aiming for - in terms of perhaps agreed standards, interoperability, quality assurance, and/or shared solutions. …"

> "Only the "Engagement" goal has a component of identifying and addressing a problem. The first two only seem to address "advertising" RDA. Shouldn't the grounding be in identifying and solving problems?"

> "I agree in principle that these three goals are important for RDA, but these goals give me a feeling that they are more about talking than doing. I'd like to see more on doing things, such as initiatives that can bring practical benefits and implications. The organization has a lot of groups, but few project-oriented initiatives to make real impact on science and data management."

In their free-text comments the respondents provided many useful suggestions about other more specific directions of RDA, some of which are presented below in a condensed form:

- Enable delivery of results (e.g., development of tools, standards, consensus)
- Encourage and tack adoption of RDA deliverables
- Certify and endorse tools and best practices
- Advocate for change of policies and more funding of data initiatives
- Assess data needs in various communities
- Train and build capacities

Another concrete suggestion was to move away from the outreach efforts and develop a set of real or close-to-real purposeful projects, such as addressing a chemical spill, fighting invasive species or epidemics, tracking climate shifts, and so on), which can be used to develop useful technologies and demonstrate the importance socio-technical solutions.

Coordination, communication and engagement (CC&E) actions

Overall, 105 out of 296 individuals expressed their willingness to participate in one or more of the actions and provided their email addresses. 68 individuals volunteered to be involved in the coordination area, 81 in the communication area, and 80 in the engagement area. Based on the number of volunteers who provided their emails and suggestions for the first steps, some actions were perceived as more clear or important than others. Tables 2, 3 and 4 present the overall numbers of volunteers who indicated their willingness to engage in the actions provided in the survey and the number of suggestions for the first steps for each of the actions provided in the survey or for additional "other" actions. The most popular actions are highlighted in green.

Table 2. Coordination actions and the number of volunteers and suggestions.

Coordination actions provided in the survey	Number of volunteers	Number of suggestions for first steps
13.1 Establish a coordination group at Plenary 6 to seek and support domain champions.	19	22
13.2 Evaluate existing organizational models of non-technical organizations and their suitability for RDA.	22	4
13.3 Identify and promote the roles and responsibilities of the volunteer RDA members.	21	31
13.4 Establish priorities and metrics for effective coordination (e.g., in terms of goals, funding, staffing, etc.).	22	31
13.5 Develop a tracking mechanism for RDA processes, actions, and deliverables.	**29**	**30**
13.b What other actions can help to support COORDINATION within and beyond RDA?	n/a	22
Total provided	**68**	**140**

Table 3. Communication actions and the number of volunteers and suggestions.

Communication actions provided in the survey	Number of volunteers	Number of suggestions for first steps
14.1 Identify and promote RDA "messengers" among the membership to disseminate RDA information via informal and formal channels.	25	24
14.2 Create a running list of data-related events and encourage RDA members to attend such events.	31	34
14.3 Write collaborative position or research papers.	**47**	**46**
14.4 Gather and actively disseminate success and failure stories resulting from adoption of RDA results.	**32**	**31**
14.5 Gather feedback on outputs/activities/gaps by approaching individuals and organizations.	22	16
14.b What other actions can help to support COMMUNICATION within and beyond RDA?	n/a	23
Total provided	**81**	**174**

Table 4. Engagement actions and the number of volunteers and suggestions.

Engagement actions provided in the survey	Number of volunteers	Number of suggestions for first steps
15.1 Organize joint events with domain-based data management organizations.	**43**	**47**
15.2 Offer training / webinars for various data-driven organizations.	**41**	**40**
15.3 Identify and establish a cohort of RDA Champions within research domain organizations (e.g., GEOSS) and develop materials to support them.	22	23
15.4 Invite representatives of industry / start-ups / entrepreneurship to RDA plenaries and related events.	12	9
15.5 Issue regular calls for volunteers to encourage members to assume leadership roles in RDA.	15	9
15.b What other actions can help to support ENGAGEMENT within and beyond RDA?	n/a	25
Total provided	**80**	**153**

The numbers of volunteer emails and suggestions in the tables above differ because some respondents provided suggestions without providing emails, while others provided emails but did not elaborate on the first steps for each action. Among the coordination actions provided in the survey, the respondents reacted most actively to Action 5 – develop a tracking mechanism for RDA processes, actions, and deliverables (29 emails and 30 suggestions for first steps). Among the communication actions, Actions 3 "Write collaborative position or research papers" and 4 "Gather and actively disseminate success and failure stories resulting from adoption of RDA results" were considered most important (47/46 and 32/31 emails/suggestions correspondingly). Actions 1 "Organize joint events with domain-based data management organizations" and 2 "Offer training / webinars for various data-driven organizations" (43/47 and 41/40 emails suggestions correspondingly) received most support in the engagement direction.

As can be seen from the numbers of volunteers in the tables, there was a significant overlap in volunteers across the three CC&E directions. Many respondents usually volunteered for more than one action within the direction area or across.

Figure 11 illustrates the overlap in volunteering across the three areas. Each black dot in the middle represents a respondent who provided his or her email, the gray, green, and blue lines connect the respondents to each of the three directions (coordination, communication, and engagement respectively). The red lines in the middle shows how volunteers are connected to all three directions.

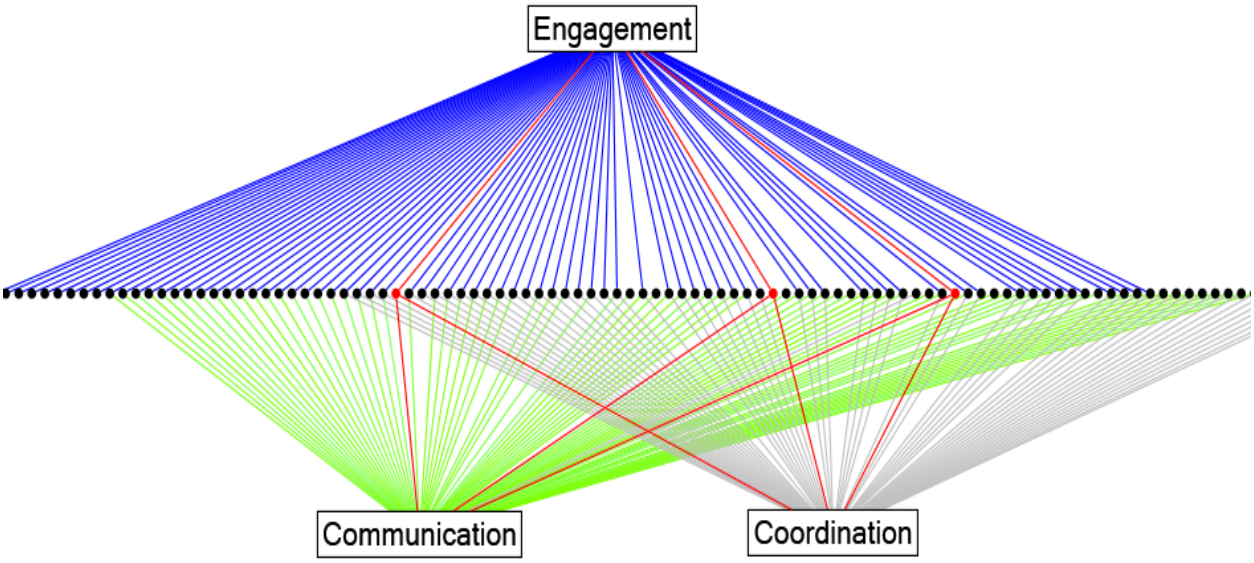

Figure 11. Overlap of respondents selecting to volunteer for three areas of coordination, communication, and engagement.

First steps for CC&E actions

To identify to first steps that are needed to take each of the CC&E actions, respondents were provided with a text box where they could type their answers in a free from. Overall, four hundred and sixty seven comments (467) were provided by the respondents. After excluding the comments such as "see above" or "I already said this", 463 comments were used in the subsequent analysis.

The analysis procedure consisted of the following. First, the suggestions in each direction area were read closely twice and each suggestion was characterized by a concise phrase that represented that suggestion. Second, the phrases were examined for differences and similarities in order to develop a coding scheme. During this stage, it was established that suggestions across the three direction areas overlap. Moreover, the amount of specific steps and concrete detail-based initiatives was rather low. Therefore, it was decided to develop a single coding scheme with a number of thematic categories (see Appendix A) and apply it to all suggestions from all three directions. The distribution of the thematic categories is provided in Table 5, followed by the discussion and examples.

Table 5. CC&E first steps suggestions grouped into thematic categories ($N_{suggestions}$ = 463).

Standardized category	Percent to all suggestions
Identify and invite the right people (champions, coordinators, writers, evaluators)	13%
Identify and prioritize domains, organizations and activities	8%
Identify communication messages, audiences, channels, and tools	7%
Facilitate cross-domain / cross-organizational sharing beyond RDA	7%
Create and use good communication materials (incl. cases, stories, publications)	6%
Define and scope RDA goals and activities and how to evaluate success	5%
Create a community-curated list of all relevant events	5%
Dedicate resources (people, money, tech) to track RDA progress and success	5%
Define volunteer roles, time commitments, outputs, and coordination / communication mechanisms	4%
Learn and borrow from other organizations	4%
Identify RDA outputs, track their use / adoption	4%
Provide training for both RDA members and beyond	3%
Provide focused funding	3%
Simplify processes, create clear guidelines for all types of volunteers	2%
Improve tools (incl. website, listservs, repositories)	2%
Promote and reward volunteers and successful deliverables	2%
Encourage cross WGs/IGs collaborations and mutual sharing	1%
Other	8%
Comment, not a step	11%

A theme that received most comments and suggestions across all three directions was the theme of **identifying and finding the right people among the researchers, scientists, and librarians,** who could serve in a variety of active volunteer roles, including champions, coordinators, writers, and evaluators. Such volunteers would need to be motivated and knowledgeable experts who are well connected in their respective communities and have concrete ideas/projects that can benefit RDA. Some respondents suggested that the right people need to be nominated, while others – that they need to volunteer themselves:

> "Identify those people who are suitable embedded in the RDA and sufficiently motivated to participate in this group" *(coordination suggestion)*

> "Look at the opportunities both for formal and informal communication channels currently used by members - identify prolific presenters/communicators amongst members - co-opt them as" *(communication suggestion)*

> "Figuring out who the important people are to make sure that they attend?" *(engagement suggestion)*

> "Nominating individuals to serve as these RDA champions - is there interest from the community to have these champions and are there people willing to do it?" *(engagement suggestion)*

To avoid tackling all domains and all activities at once, the respondents suggested to **prioritize domains, organizations and activities** and select a few. This can be done by examining domains that are already represented in the RDA working and interest groups, by creating a forum where the importance of the

domains can be discussed and prioritized, or by creating lists of most influential domains and groups from which RDA could benefit. After the domains and organizations are identified, the best ways of interacting with them, including joint events, training, outreach and support, or championing, need to be identified.

The next two common themes for the first steps were **identifying communication messages and ways to disseminate them** and **facilitating cross-domain and cross-organizational interactions beyond RDA**. None of the respondents provided suggestions about the content of communication messages, but many pointed out that defining what to say about RDA via the social media, conferences or research publications and tying the message to tangible deliverables is an important first step for both communication and engagement directions. The message identification could be happening through the focused brainstorming sessions, broader calls for suggestions, or consensus development and decisions of small editorial groups.

The following academic, library and commercial organizations were mentioned with regard to establishing partnerships for joint events and sharing: the University of Oregon, IFLA, OLAC, ELAR, the Language Archive, DARIAH, CESSDA, CLARIN IASSIST, CAA, GigaScience, CODATA, Data Carpentry, Open Data Institute, NDSR, Google and Microsoft (see also Appendix B. The List of User Groups, Individuals, and Organizations with which RDA Should Engage.). A number of comments suggested to create lists of groups and organizations of interest to RDA and facilitate sharing and interactions at plenaries and joint events, by providing training events and cross-membership or via individual networking:

> "I think it would be helpful to link some form of meeting to other professional groups involved in similar activities. Perhaps working groups could identify conference that their members attend and hold face-to-face meetings or make presentations." *(coordination suggestion)*
>
> "Identify data-driven organizations and communicate with them to identify common areas of interest that might allow for webinars on common interests OR training to help their members understand the complexity of issues around data sharing." *(engagement suggestion)*
>
> "Engage and communicate with other projects & infrastructures in a meaningful way. In all the projects I work on RDA is NEVER considered as relevant as an external engagement target for the project/infra. RDA is flying under everyone's radar, but not in a good way." *(engagement suggestion)*

To better inform the right audiences about RDA it is important to **create and use good communication materials**. This theme slightly overlaps with the theme of identifying messages, but it has a stronger component of branding and communicative strategies in delivering the messages. Several times the respondents mentioned collecting success and failure stories, developing communication kits and talking points, and using regular publications to help with RDA external and internal communications. It was suggested to create a new website or to use an initiative of the DCC and the RDA Engagement IG, a data stories blog, to collect, publish, and promote RDA-related stories. Another suggestion was to create a regular publication, either a newsletter or a magazine or journal article, that would disseminate RDA updates on projects and deliverables to the outside communities.

Some respondents also insisted on **RDA vision, goals, and activities to be defined, clarified, and coordinated**, along with the clear descriptions of what a successful outcome or participation is. Clarity was perceived to be lacking not only in the vision and goals overall, but also in current priorities of the RDA, in the expectations of outcomes and their value, and in the contributions of each of the RDA groups:

> "Identification of specific priorities - perhaps based on the WG's outputs to date. Lesson learnt process from first WG outputs to improve co-ordination. Suitable metircs identified once priorities are established." *(coordination suggestion)*

> "focus efforts on outcomes - for any product: who will use it, why should they use it (what are the benefit(s)), and does it add value as expected. Without some assessment of whether products are delivering value and whether the set of products as a whole is advancing RDA goals, you can end up with vanity publishing..." *(coordination suggestion)*

> "Explain how the 58 groups listed on the website are contributing to RDA goals... my guess is that RDA is currently strongest in coordination of data research directions and application of research in software. If true, engagement could focus on those funding research and those who need to plan for best practices a few years out, and RDA could focus its story, e.g. if you're area of science is facing challenges in gathering data across disciplines, RDA has groups working on common vocabularies, interoperability services, cross-respository provenance, etc. as well as groups sharing current best practices for data conversion, etc." *(engagement suggestion)*

Other themes that were expressed less frequently, included dedicating human, financial, and technical resources to solving problems and tracking RDA progress, defining volunteer roles and rewarding volunteers, and learning and borrowing from other organizations. Identifying, clarifying and tracking RDA outputs and their impact were among other noticeable themes:

> "First, RDA results (especially their use and value) need to be explained clearly to the wider community, then a call similar to the adoption call can be issued, but the adopting projects need to have an observer (e.g., from RDA fellows or someone interested in this type of research) who can record the stories."

> "Perhaps there could be a more general forum for members where WGs/IGs could request particular expertise for their projects and/or share progress (apologies if this exists already). This would also work well in terms of a cross group user-community/implementation platform. It ties in with having clearer RDA goals and creating actions that members, who are not involved with the groups, can contribute to without feeling that they have to make a massive commitment. This can be as simple as putting a RDA membership 'badge' on their e-mail signature."

Other suggestions included holding special sessions at Plenary 6 dedicated to CC&E next steps, conducting more surveys, especially the stakeholder needs and gaps survey, a cost-benefit analysis of RDA groups and deliverables, and reaching out to funders, government officials, librarians and underrepresented domains, such as engineering.

Conclusion, Recommendations and Next Steps

This report provides an overview of members' background and summarizes member feedback on the future directions of RDA and their willingness to participate in future actions. The findings indicate that with regard to the professional and personal characteristics of the respondents, the most common type of an RDA member is male, academic, from the United States or Europe. It is evident that more efforts are needed to encourage diversity and more participation from females and non-Western parts of the world in RDA. Such a conclusion is also supported by the respondents' suggestions of who should be involved in RDA (see Appendix B).

Overall, the RDA vision and goals of removing barriers to data sharing have a strong support from the membership, although, the members felt that the vision, goals, outcomes, and activities need to be defined more clearly and connected to the outcome evaluation metrics. While the respondents endorsed both the vision and goals of RDA and the future directions of coordination, communication, and engagement, they

also indicated that lack of time and funding prevents them from more active participation in RDA. An effort to identify potential avenues for targeted funding of RDA-related activities, better information about funding opportunities tailored to the localities and domains and better understanding of how RDA members can align their RDA activities with their work-related activities can help to address these issues. Some respondents also expressed frustration with the current situation in RDA, which they perceived as focusing on discussions and self-promotion rather than on actual work and delivery of results.

While being generally in agreement that CC&E are important directions in the future RDA development, RDA members suggested to further develop those broader areas and focus on the delivery and adoption of results, needs assessments, and certification, endorsement and advocacy for funding and policy change. Among the coordination actions, tracking of RDA activities and results has generated the largest number of both volunteers and suggestions for first steps, indicating the preference for this action as the most immediate one. Among the communication actions it was writing collaborative papers and gathering and disseminating success and failure stories of the adoption of RDA results. From the engagement actions joint events with domain-based data management organizations and training for various data-driven organizations were preferred. All those suggestions can be further implemented by those who volunteered to participate in the future developments of RDA. Based on the action preferences and the members' insistence on more working and less talking, the implementation of the CC&E actions need to be coupled with further analysis of how to make the working and interest groups more productive and accountable.

The significant volunteer overlap within each of the CC&E directions and across indicates that a) those three directions have many similarities, and b) the same core volunteer group is willing to do most of the work. The themes identified in the first steps suggestions further support those interpretations. Finding the right people, prioritizing domains and organizations, and creating strong messages and materials that can help to disseminate them occurred in the suggestions for first steps in all three CC&E actions. The overlap in the directions can be used to consolidate efforts and identify a smaller number of tasks, perhaps, without the division into CC&E, that can be accomplished for stronger impact.

The survey and its findings provide abundant information that can facilitate further elaboration and clarification of the future development directions as well as the definition of the next steps in their implementation. In addition to sharing the public version of this report with the RDA membership, the immediate next steps should focus on determining how to accommodate the CC&E directions work on both the global and the regional levels and how to best support the self-organization and accountability of the volunteers from Appendix A. The volunteers can then use the findings from this report to work on such directions as encouraging better delivery of results, improving RDA diversity, developing outcomes and adoption tracking, and ensuring that RDA increases its impact by providing useful tools, recommendations, and resources.

Acknowledgments

This survey and the subsequent report is the result of the collective efforts of all the respondents who provided many thoughtful comments and suggestions and the team of RDA members, who contributed to the development and administration of the survey. Some of them are mentioned below.

Beth Plale from the RDA Technical Advisory Board provided the initial guidance and encouragement that made it possible for the Indiana University team to participate.

The Indiana University Center for Survey Research, and particularly, Lilian Yahng, reviewed first two drafts of the survey and provided feedback that helped to improve its clarity, readability, and reliability.

Fran Berman (RDA Council co-Chair and RDA/US Chair), Larry Lannom (RDA Organizational Advisory Board), and Mark Parsons (RDA Secretary General) guided the development of the survey and helped to solicit feedback from the survey team – Juan Bicarregui, Francoise Genova, and Ingrid Dillo – who all contributed to the survey design and decisions with regard to the administration of the survey. Juan Bicarregui helped to analyze the first batch of the responses; Ingrid Dillo's comments on the results helped with some interpretations in the report.

Timea Biro from the Trust-IT Services set up the survey on the RDA website and was incredibly helpful in overcoming all the technical challenges in survey administration.

Appendix A. The First Steps Coding Scheme.

Codes
Comment, not a step (apply when no suggestions were provided)
Create a community-curated list of all relevant events
Create and use good communication materials (incl. cases, stories, publications)
Dedicate resources (people, money, tech) to track RDA progress and success
Define and scope RDA goals and activities and how to evaluate success
Define volunteer roles, time commitments, outputs, and coordination / communication mechanisms
Encourage cross WGs/IGs collaborations and mutual sharing
Facilitate cross-domain / cross-organizational sharing beyond RDA
Identify and invite the right people (champions, coordinators, writers, evaluators)
Identify and prioritize domains, organizations and activities
Identify communication messages, audiences, channels, and tools
Identify RDA outputs, track their use / adoption
Improve tools (incl. website, listservs, repositories)
Learn and borrow from other organizations
Other (apply when other codes do not fit)
Promote and reward volunteers and successful deliverables
Provide focused funding
Provide training for both RDA members and beyond
Simplify processes, create clear guidelines for all types of volunteers

Appendix B. The List of User Groups, Individuals, and Organizations with which RDA Should Engage.

- Africa, Asia and South America
- Atmospheric Circulation Reconstructions over the Earth (ACRE)
- Australian Government
- Canada
- CGIAR group
- CLIR-DLF postdoctoral program
- Cloud providers: Amazon, Microsoft, Google
- COAR, Openaire, Digital Curation Centre
- CODATA
- Commercial publishers
- Developing countries
- Early career (graduate) researchers
- EarthCube
- EIROForum IT WG, WLCG, Europe: an event in 2016 please.
- Engineering
- ESIP, NASA, DoE
- EUDAT, ENES (IS-ENES): climate modelling, CNRS-IPSL - France, CINES - France, Meteo-France, Ouranos (Montreal), Environment Canada
- Europe - the EU 2020 people.
- Faculty
- Financial industry models and data standards (e.g., FIBO, ACTUS, Legal Entity Identifier, BCBS 239, financial regulations, market data, reference data, balance sheet positions and contracts)
- Force11 (scholarly communication)
- Foundations: Moore, Sloan, Macarthur
- Funders
- Gender, generational and racial diversity
- Geography outside of N America and EU
- Geospatial clearinghouses (NSDI)(GSDI)
- Government/ministry members
- Health and engineering data holders
- High school students
- Industry
- Industry leaders, e.g. Business Council of Australia
- Institutional repositories
- IT and librarians
- IT architects
- IT specialists
- Journals (editors, data policies)
- Large national libraries and archives
- Leaders and managers
- Learned societies
- Major data-related players should be involved (like IBM, EMC ...)
- Mozilla and other open source s/w organisations, private foundations for support

- National Science Communication Institute (nSCI): http://nationalscience.org/
- Neuroscience - INCF, HBP
- Next generation leaders
- Non-data scientific organizations (both policy and research)
- NRENs, research councils, funding organisations
- Ocean and atmospheric observing groups, medical groups
- OGC; ISO; Inspire; EmodNET
- Open data communities (e.g. datameet.org)
- Open government data initiatives
- Open knowledge foundation
- People working on data standards
- Policy makers - funders
- Private industry, Earth science and other domain repositories
- Private sector, companies, especially SMEs (e.g., INSPIRE in the EU).
- Public libraries and K-12
- Public organisations
- Publishers
- Qualitative researchers
- Real users groups
- Research funders
- Researchers
- Researchers from developing countries
- Researchers on alien species and biodiversity informatics
- Russia and Middle East
- SLA Data Caucus
- South East and East Asia
- Storage service providers
- Students, all major government agencies in each country, all major scientific organizations
- The humanities
- The Open Government initiatives http://www.opengovpartnership.org/countries
- The satellite data community, the global coupled climate modeling community, the emerging climate data climate services community, science and project offices that lack information and examples on open data policies and practices
- Those responsible at US government agencies responsible for meeting data-access mandates
- Unemployed science researchers
- United Nations IGF Governance Forum
- Universities and research institutions
- University Consortium of Geographic Information Science (UCGIS)
- US "Big" Data infrastructure projects (ex. SDSC, NCSA, TAAC, etc)
- USDA big data Initiative in the USA
- User groups and other data organisations
- Users of qualitative methodologies
- W3C, IETF, OGC
- World Data System
- World Meteorological Organization
- WSSSPE (scientific software)
- Young females and males from Arab countries

Appendix C. Questionnaire.

Thank you for agreeing to participate in this survey!

The survey's goal is to identify future directions of RDA as an emerging volunteer-driven organization and to ascertain how to harness the power of RDA members to support RDA mission and activities.

Background information

1. Your professional title (choose from the list: Advisor/Consultant, CEO/Managing Director/Chief Executive, CTO/IT Director, IT Specialist/IT Architect, Journalist/Editor/Copywriter, Librarian, Policy development manager/Policy Consultant, Professor, Researcher, Student, Other-Specify)
2. Your gender (Male/Female/ No Answer)
3. Your primary disciplinary domain or area of practice (free text)
4. Organization type (choose from the list: Academia/Research, Government/Public Services, IT Consultancy/Development, Large Enterprise, Policy/Funding Agency, Press & Media, Small and Medium Enterprise, Library, Other)
5. Country of residence (list)
6. Are you a chair of a working/interest group or a birds-of-a-feather session organizer? (Yes/ No)
7. In 2014-2015, in which of the following RDA-related activities have you been involved? (check all that apply)
    a. Stayed informed (e.g., visited RDA website, subscribed to listservs, checked news)
    b. Participated in communication (e.g., shared information about RDA, commented on documents)
    c. Participated in events (e.g., attended a plenary)
    d. Contributed to the WG/IG work (e.g., proposed a group, wrote text or code, provided examples or use cases)
    e. Served on TAB, OAB, Secretariat or Council
    f. Served as a representative of organizational or affiliate member
    g. None of the above
    h. Other (Please specify)
8. Are you planning to contribute to RDA in 2015-2016? (Yes / No / Haven't decided yet)

Participation in RDA

9. Why do you participate in RDA? (check all that apply)
    a. I organized a group / session and feel responsible for its success
    b. I have ideas and/or skills that may benefit RDA
    c. My RDA activities are closely aligned with my work responsibilities
    d. Being involved in RDA is recognised positively by my employer
    e. RDA is a good place to find collaborators
    f. I would like to learn about data sharing and improve my research practices
    g. My organization / funding requires me to contribute
    h. I hope that my work and connections in RDA will lead to more funding for my projects

i. Being involved in RDA is recognised positively by my funder
j. I believe in RDA vision and goals
k. Other-Specify

10. In your opinion, what are the barriers to more active involvement of RDA members into RDA? In other words, what prevents members from self-organizing or creating more or better deliverables and products? (this question can be "check all that apply" or rating from highest to lowest barrier)

    a. Lack of time
    b. No budget for travel to face-to-face meetings
    c. No financial incentives to do the work
    d. No academic recognition or reward
    e. No recognition from employer or funder
    f. Uncertainty about whether contributions are suitable for RDA
    g. Involvement procedures are not clear
    h. RDA goals and activities are not clear or are not focused enough
    i. Collaborative platforms and tools are hard to use / not suitable
    j. Other-Specify

11. If you have been or are involved in WG/IG activities, what type of activities have you performed (check all that apply)?

    a. Organized or chaired a group
    b. Commented on draft documents
    c. Created documents (e.g., use cases or case statements)
    d. Created software code
    e. Collected information (e.g., distributed surveys or interviewed people)
    f. Participated in group meetings
    g. Adopted a group deliverable
    h. Helped to provide specifications for a group deliverable
    i. No involvement with WG/IG activities
    j. Other

Future directions

12. During the planning day at Plenary 5 it was suggested that the future directions of RDA be grounded in the three larger goals of coordination, communication, and engagement (see descriptions below).

    - Coordination - RDA groups and individuals working together and with other organizations, creating awareness of RDA as a whole and connections within it
    - Communication - exchanging information within RDA and outside about RDA plans and activities
    - Engagement - being involved and contributing, and also facilitating involvement of stakeholders from outside RDA

    a. Do you agree that these should be the main directions of RDA development? (Yes/No/Not sure)

    b. What other directions do you think are important? (free text)

13. During the planning day at Plenary 5 a number of actions were suggested to advance the goals of coordination, communication, and engagement.

13. a. In which of the COORDINATION actions would you like to be involved? For each choice, please complete the corresponding free text field that appears below. *

a. Establish a coordination group at Plenary 6 to seek and support domain champions.
b. Evaluate existing organizational models of non-technical organizations and their suitability for RDA.
c. Identify and promote the roles and responsibilities of the volunteer RDA members.
d. Establish priorities and metrics for effective coordination (e.g., in terms of goals, funding, staffing, etc.).
e. Develop a tracking mechanism for RDA processes, actions, and deliverables.
f. None of the above.

13. b. In your opinion, what are the first concrete steps for each of the COORDINATION actions above?

13. c. What other actions can help to support COORDINATION within and beyond RDA?

14. During the planning day at Plenary 5 a number of actions were suggested to advance the goals of communication.

14. a. In which of the COMMUNICATION actions would you like to be involved? For each choice, please complete the corresponding free text field that appears below. *

a. Identify and promote RDA “messengers” among the membership to disseminate RDA information via informal and formal channels.
b. Create a running list of data-related events and encourage RDA members to attend such events.
c. Write collaborative position or research papers.
d. Gather and actively disseminate success and failure stories resulting from adoption of RDA results.
e. Gather feedback on outputs/activities/gaps by approaching individuals and organizations.
f. None of the above.

14. b. In your opinion, what are the first concrete steps for each of the COMMUNICATION actions above?

14. c. What other actions can help to support COMMUNICATION within and beyond RDA?

15. During the planning day at Plenary 5 a number of actions were suggested to advance the goals of coordination, communication, and engagement.

15. a. In which of the ENGAGEMENT actions would you like to be involved? *

a. Organize joint events with domain-based data management organisations.
b. Offer training / webinars for various data-driven organizations.
c. Identify and establish a cohort of RDA Champions within research domain organisations (e.g., GEOSS) and develop materials to support them.

d. Invite representatives of industry / start-ups / entrepreneurship to RDA plenaries and related events.
e. Issue regular calls for volunteers to encourage members to assume leadership roles in RDA.
f. None of the above.

15. b. In your opinion, what are the first concrete steps for each of the ENGAGEMENT actions above? For each choice, please complete the corresponding free text field that appears below.

15. c. What other actions can help to support ENGAGEMENT within and beyond RDA?

16. RDA recognizes the importance of diversity and reaching out to and engaging with diverse constituencies, generations, geographies, and so on. In the text box below please provide recommendations, if you have any, about which specific stakeholders RDA needs to engage with, such as:

Constituencies (user groups)
Next generation leaders (individuals or types of organizations)
Other data organisations (especially with potentially alternative points of view)
Geographies (countries, continents)
Current or future adopters of RDA products (organization names or types)
Others

a. Please specify user groups, individuals, or organizations that RDA should engage with:

17. If you have any other suggestions about RDA future directions or volunteering within RDA, please provide them below.

Please provide an e-mail if you would like to be involved or wish to receive more information to decide. (Optional)