

Research data management and libraries: Current activities and future priorities

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RDM Context

- **Increasing amounts of data** being produced by growing numbers of researchers across different disciplines
- **‘Data’** can take a wide variety of forms, including physical records, HPC calculations, image files, etc, etc
- Major **challenges** associated with storage, security, transfer, analysis, preservation and reuse of data – some of the main components of RDM
- **‘Research data management’** (RDM) is “the organisation of data, from its entry to the research cycle through to the dissemination and archiving of valuable results” (Whyte and Tedds, 2011)
- Growing awareness of the need for **institutions** to provide a framework for RDM
- **Libraries** have a potentially significant role to play

Research questions

- The research aimed to address the following questions:
 - What current services do libraries in UK HEIs offer to support RDM?
 - What services are seen as a priority for the future?
 - What are the key issues and attitudes to RDM across the sector?
- Building on the work of
 - Lewis (2010), Corrall (2012), Lyon (2012), Auckland (2012)
 - RDMRose: Cox, Sen & Verbaan (2012)



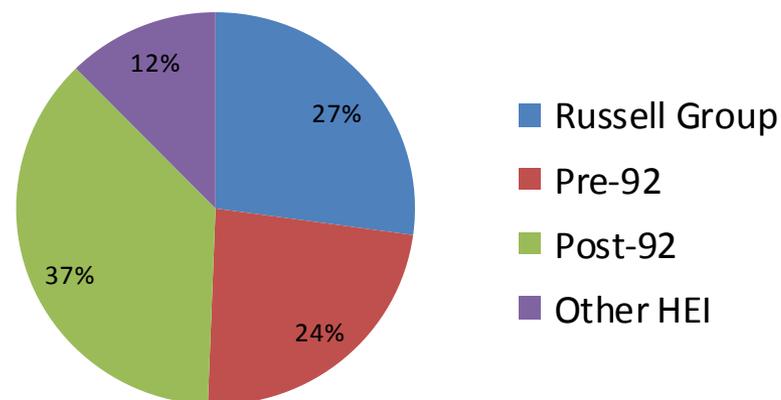
Research design

- Questionnaire structure:
 - **Introduction:** On the participants themselves including institution, role and experience of research
 - **Institutional RDM policy:** On whether the institution had a formal policy and the extent to which the library was involved
 - **Library support for RDM:** On a range of possible RDM services and the extent to which they are currently offered by the library or strategic priorities for future development
 - **Other questions:** On cultural change, major challenges, skills and training requirements, charging and advocacy
- Requests for participation circulated on a variety of email discussion lists
- Responses gathered between 12 November and 12 December 2012

Responses to the survey

- Responses were received from 81 separate UK higher education institutions
- 61 (75%) of respondents were from the library senior management team
- Others most commonly research support staff
- 21 (26%) were from converged library and IT services

Institutions responding (N=81)

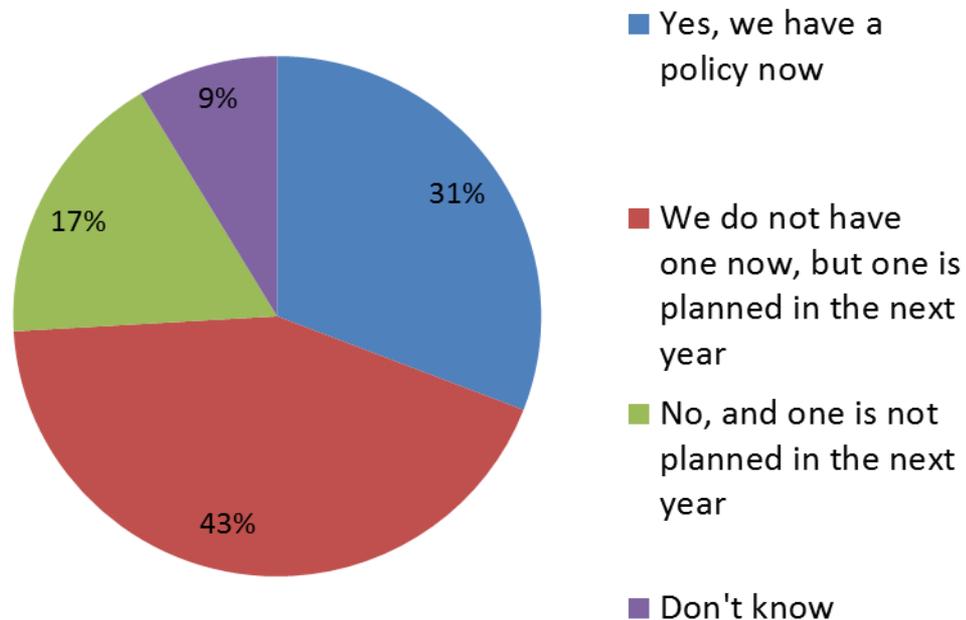


Responses from across the HE and research sector

Institutional RDM policy

- 25 (31%) had a formal RDM policy in place
 - This compares with 17% reported by Corral (2013) from the beginning of 2012
- 35 (43%) expected to have a policy in place in the next year
- 40% of Russell Group institutions had a policy cf 25% of others

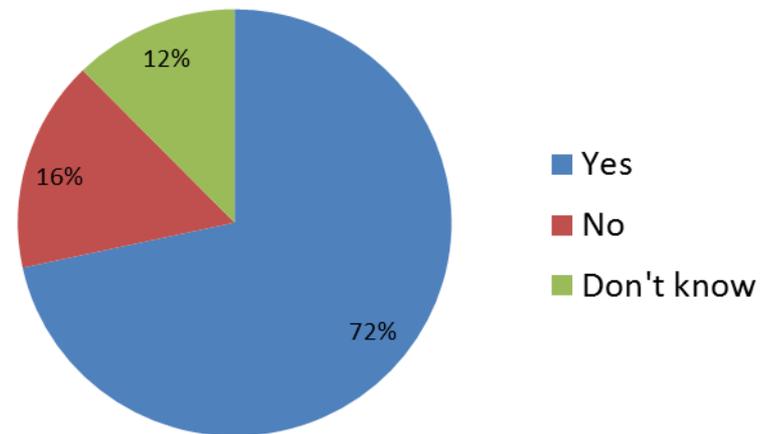
Institutional RDM policy (N=81)



The library and institutional policy

- 58 (72%) reported the library had been involved in RDM policy development
- There was an emphasis on collaboration between different units across the institution
- Pathfinder projects in institutions (many Jisc-funded) were seen as being important

Has the library been involved in developing the policy? (N =81)





The library and institutional policy: comments

“The library took the lead by initially conducting a DAF [Data Asset Framework] study, taking the results to University Research Committee and then chairing the subsequent working group which developed the research data policy.”

“The Library is leading the University’s project to define a policy for research data and sharing.”

“The Director of the Library is the “process owner” for RDM and will therefore take the lead in policy development.”



The importance of collaboration: comments

“Library working closely with DVC [Deputy Vice-Chancellor] Research and Research and Innovation unit to joint author policy.”

“Library Services and Research Management & Administration staff have worked together on this. We are also involved in...[a] JISC-funded ...Project.”

“We all work together – Research Strategy and Innovation, IT Services, Library, DCC [Digital Curation Centre] reps.”



Cultural change

“Has the culture of RDM changed in your institution in the last year?”

- 53 (70%): Yes
- 15 (20%): No
- 8 (12%): Don't know (N=76)

“There is increasing recognition that this is an important area and support is required for it.”

“RDM is gaining more importance – albeit fairly slowly. There is currently activity on data security and storage, and a growing awareness of the issues around curation and preservation.”

“There is more engagement due to a combination of awareness raising, requirements of funders and the recognition (by some) that data management supports ‘good science’. There is also high level commitment as demonstrated by the funding of the project manager post.”

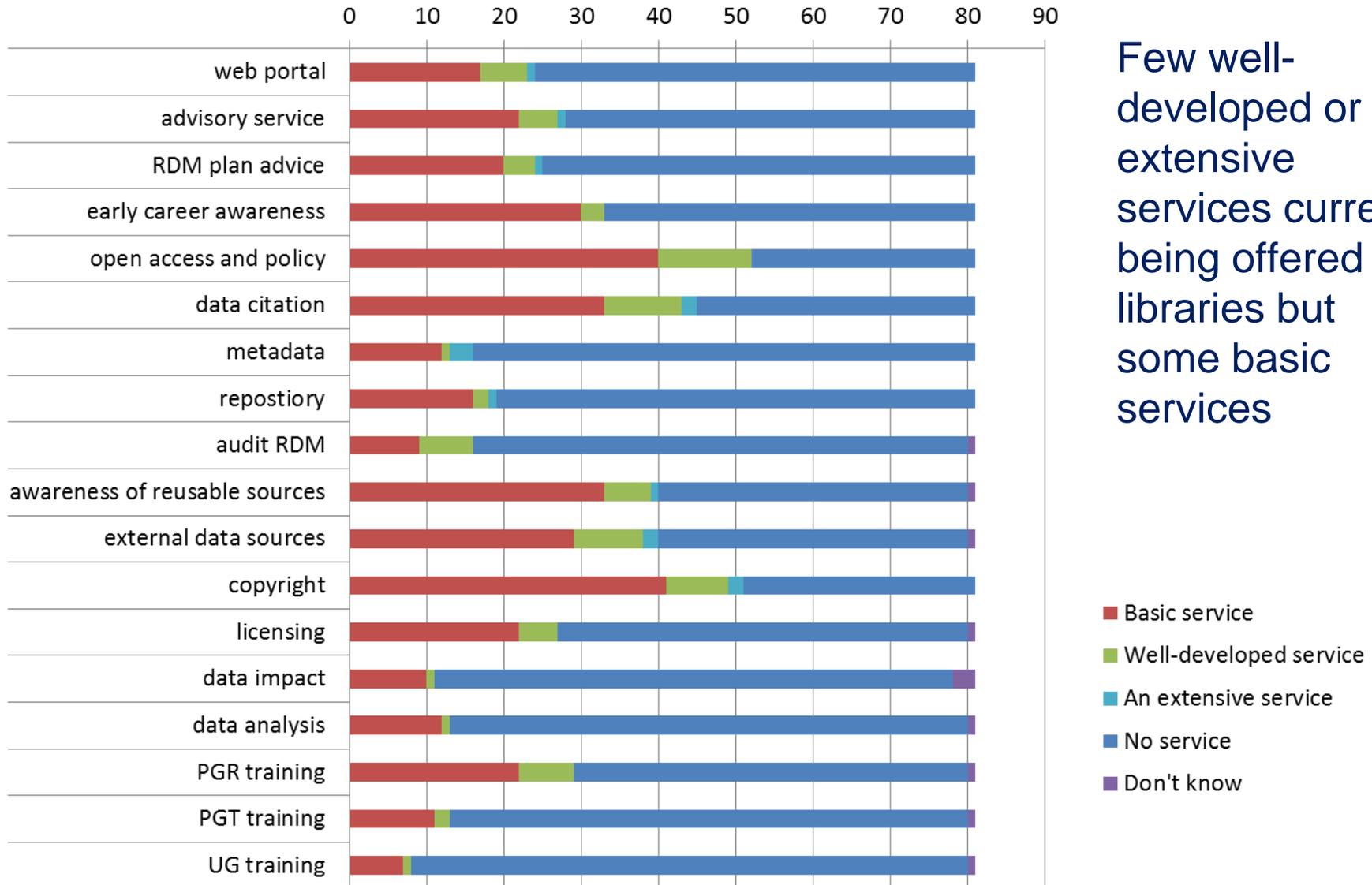
Current RDM services and future priorities

Respondents were asked to comment on the following detailed roles:

1. Maintain a web page portal of links for local advice and useful resources on RDM?
2. Offer an RDM advisory service to researchers?
3. Offer advice specifically on Research Data Management Plans?
4. Raise early career researchers' RDM awareness?
5. Raise open access to data and RDM policy issues?
6. Offer advice on how to cite data?
7. Offer metadata services for a local catalogue of research data assets?
8. Run a data repository?
9. Undertake an audit of the institution's RDM resources?
10. Promote awareness of reusable data sources, such as data archives?
11. Provide support for research and retrieval of external data sources?
12. Offer advice on copyright/ Intellectual Property Rights issues relating to RDM?
13. Offer advice on licensing of data?
14. Carry out any activities relating to data impact issues?
15. Offer advice on data analysis/ mining?
16. Offer data management training to Postgraduate Research (PhD) students?
17. Offer data management training to Postgraduate Taught students?
18. Offer data management training to Undergraduate students?



Current RDM services



Few well-developed or extensive services currently being offered by libraries but some basic services

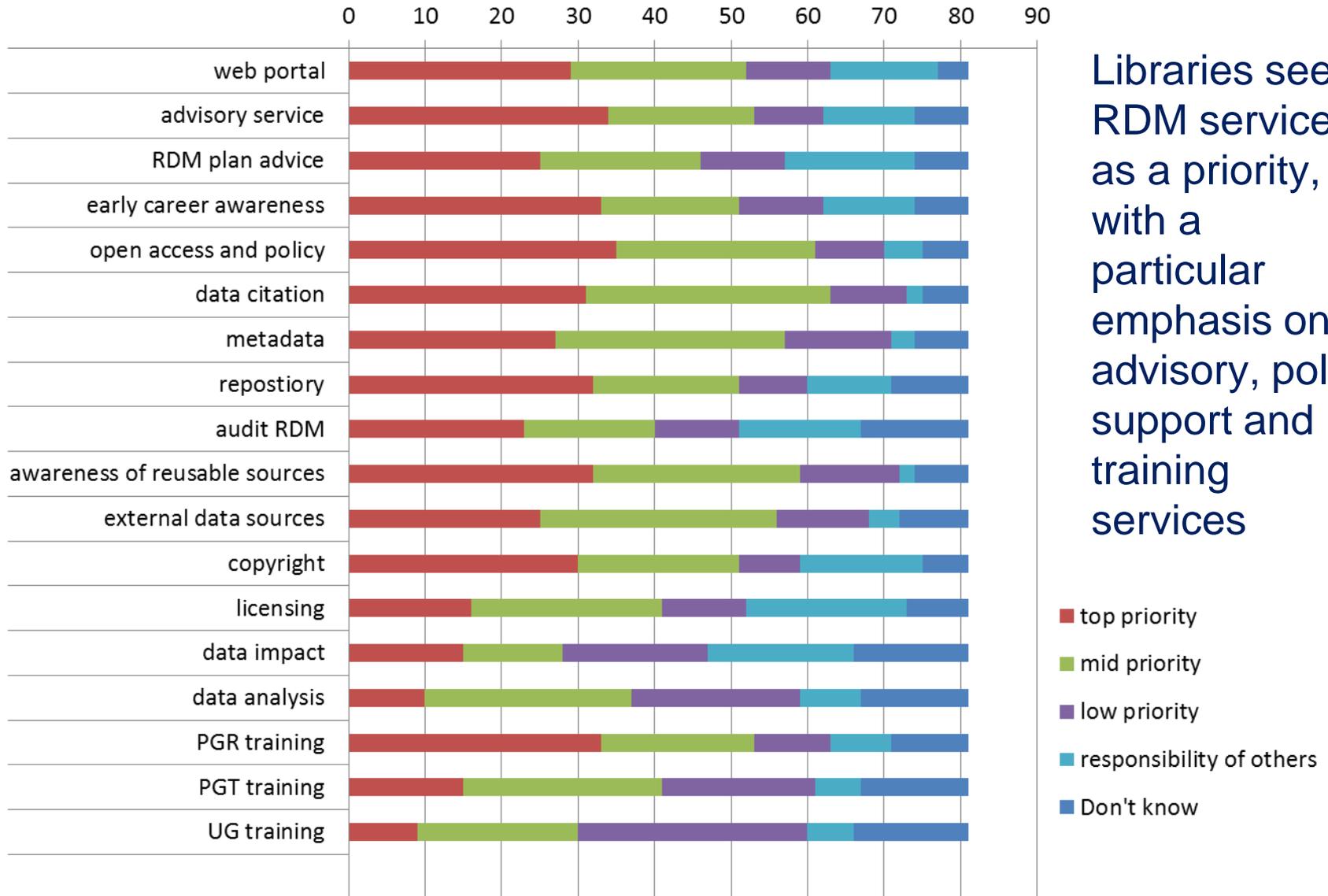
Russell Group and others

	Russell Group institution with any service (N=22)		Non-Russell Group with any service (N=59)	
Web portal	11	46%	13	22%
Advisory service	11	46%	17	29%
RDM plan advice	8	33%	17	29%
Early career awareness	13	54%	20	34%
Open access and policy	16	67%	36	61%
Data citation	9	38%	36	61%
Metadata	4	17%	12	20%
Data repository	7	29%	12	20%
RDM audit	6	25%	10	17%
Awareness of reusable sources	14	58%	26	44%
External data sources	11	46%	29	49%
Copyright	14	58%	37	63%
Licensing	9	38%	18	31%
Data impact	3	13%	8	14%
Data analysis	4	17%	9	15%
PGR training	10	42%	19	32%
PGT training	5	21%	8	14%
UG training	2	8%	6	10%

Russell Group HEIs currently have more services in place (but there is also good practice elsewhere)



Priorities for the next 3 years



Libraries see RDM services as a priority, with a particular emphasis on advisory, policy support and training services

- top priority
- mid priority
- low priority
- responsibility of others
- Don't know

Key challenges

Respondents highlighted a number of key challenges, including:

- Skills gaps
- Resourcing and funding
- Relationships with other parts of the institution (including the library's perceived role)
- Infrastructure development

“The skill set of the library workforce, the costs of RDM and the difficult economic climate.”

“Capacity and workload in a context of shrinking resources”

“Taking the rest of the institution with us!”



Skills gaps: comments

- About a third of respondents said the library had the right skills to play a significant role in RDM
- Over 50% said the library did not have the right skills

“There is a wide range of skills required for research data management, and where the library is very strong in is: cataloguing including metadata, digital preservation, curation, training, academic engagement, copyright, publication process”

“A few library staff have some of the right skills”



Charging and funding: comments

“There must be central funding and service to [the] end user should be free.”

“...I would say that the service should be provided to researchers as part of the routine provision at the University.”

“fEC issues still to be resolved. Charging for data storage (not a library responsibility) seems reasonable.”

Research findings: summary

- Limited services offered by libraries at the end of 2012
- Russell Group libraries have more services in most areas
- But it is a time of change
- The institutional culture is changing
- RDM policies are being put in place
- Libraries are involved in policy development
- Libraries see RDM as a core activity for them in the future
- An emphasis is being placed on advisory, policy support and training service development
- Funder mandates and pathfinder projects are drivers for change
- Significant challenges remain, including skills gaps, resourcing/funding and relationship building/credibility

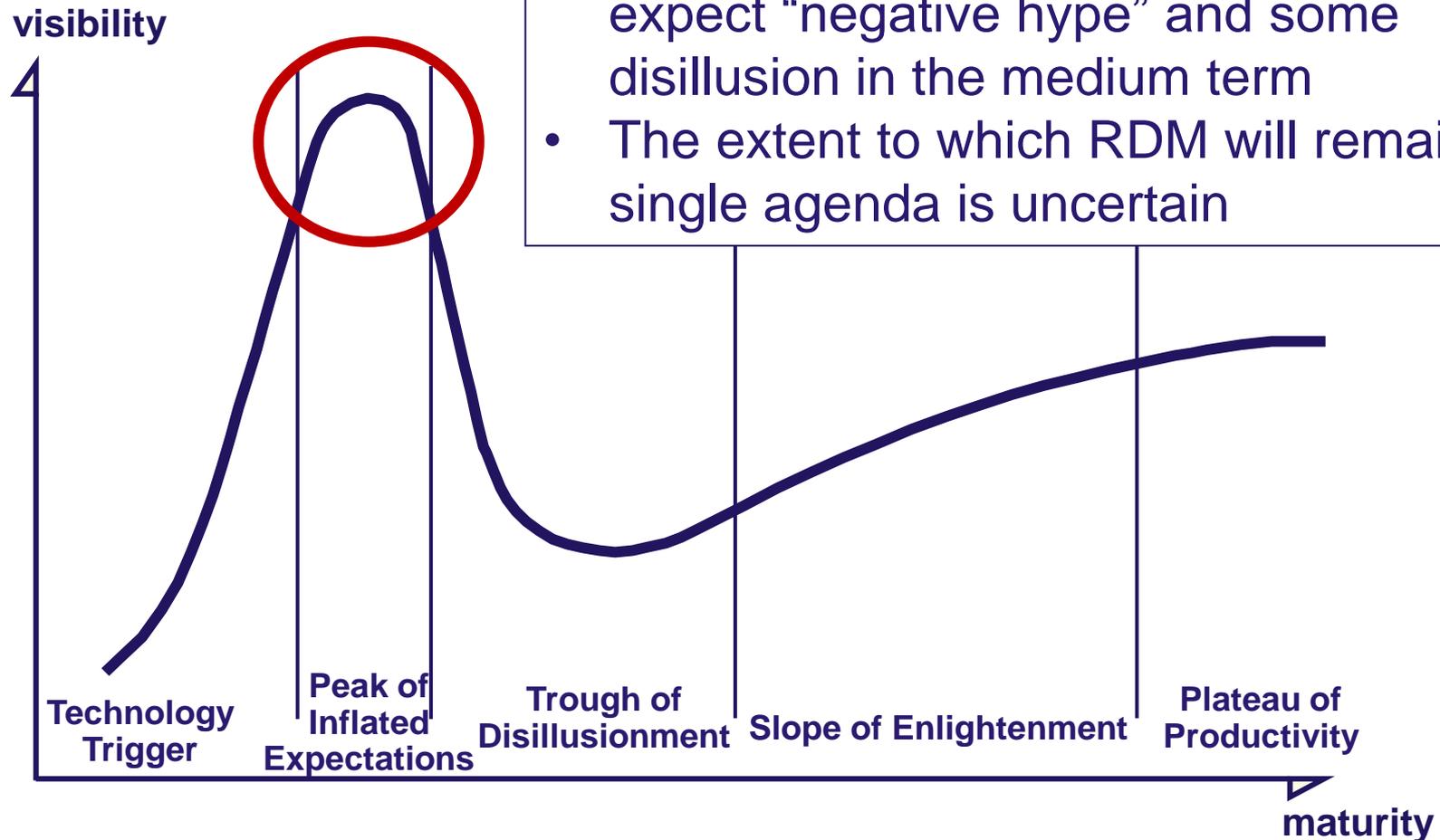


International comparisons

- Tenopir, C., Birch, B. and Allard, S. (2012). *Academic libraries and research data services*. Association of College & Research Libraries. Available at http://www.ala.org/acrl/sites/ala.org.acrl/files/content/publications/whitepapers/Tenopir_Birch_Allard.pdf
- Corral, S. (2013). Bibliometrics and research data management: emerging trends in library research support services. *Library Trends*. In press.



Discussion: the Hype Cycle



- We are currently experiencing “positive hype” around RDM and can reasonably expect “negative hype” and some disillusion in the medium term
- The extent to which RDM will remain a single agenda is uncertain



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Questions?



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