



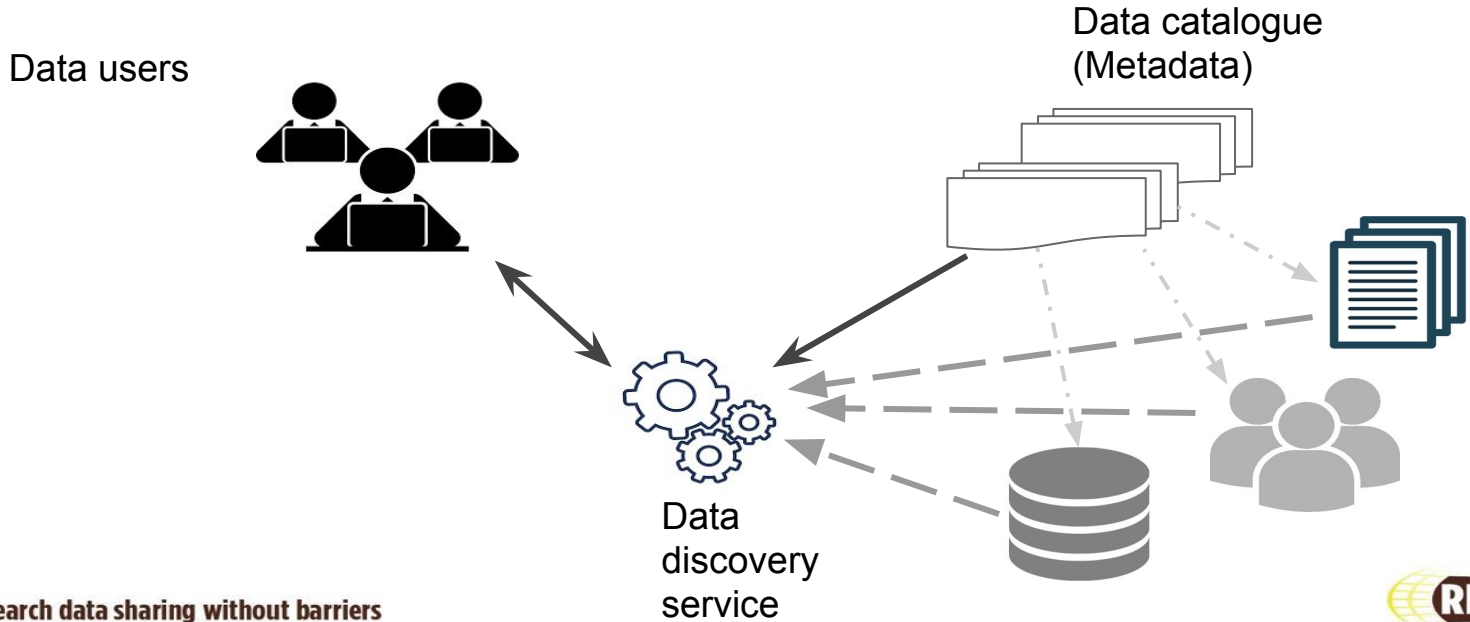
Data Discovery Paradigms Interest Group

*RDA Global Adoption week
18 June 2020*

research data sharing without barriers
rd-alliance.org

DDP Interest Group: Motivation

Helping to make research data **Findable** to support users in discovering data.



DDP Interest Group: Objective

- Provide a forum where representatives across the spectrum of stakeholders and roles can explore how to improve data discovery.
- Produce actionable recommendations for data producers, data repositories, data services providers and data seekers.

Output I - Eleven quick tips for finding research data

Tip 1: Think about the data you need and why you need them.

Tip 2: Select the most appropriate resource.

Tip 3: Construct your query strategically.

Tip 4: Make the repository work for you.

Tip 5: Refine your search.

Tip 6: Assess data relevance and fitness-for-use.

Tip 7: Save your search and data- source details.

Tip 8: Look for data services, not just data.

Tip 9: Monitor the latest data.

Tip 10: Treat sensitive data responsibly.

Tip 11: Give back (cite and share data).

Best practices for data seeker

Can be used for learning and research skills training

Gregory K, Khalsa SJ, Michener WK, Psomopoulos FE, de Waard A, Wu M (2018) Eleven quick tips for finding research data. PLoS Comput Biol 14(4): e1006038. <https://doi.org/10.1371/journal.pcbi.1006038>

Output 2 - User Requirements for a data repository

Nine requirements (from 79 use cases)

1. Indication of data availability
2. Connection of data with person/institution/paper/citations/grants
3. Fully annotated data
4. Filtering of data based on specific criteria on multiple fields at the same time
5. Cross-referencing of data
6. Visual analytics/inspections of data/thumbnail preview
7. Sharing data in a collaborative environment
8. Accompanying educational/training material
9. Portal functionality similar to other established academic portals

Data repository operators can use the requirements for the following purposes:

- As a checklist for designing and implementing a data service portal.
- For existing data discovery services, the list of requirements can be used as guidelines for heuristic evaluation of a specific data discovery service, and therefore plan for future improvements when necessary.
- In the era of big data, research on data discovery paradigms is at an all-time high. A user's perspective provides a strong foundation on which to construct the paradigms of the future.

Output 2 - Recommendations for Data Repositories to make data discovery

Recommendations:

1. Multiple query interfaces
2. Multiple access points
3. Assessable search result
4. Readable and analysable metadata records
5. Available bibliographic references
6. Available data usage statistics
7. Consistent interface
8. Identifiable duplicats
9. Findable from web search engines
10. Interoperability with other repositories

Data repositories can take the ten recommendations:

- As guidelines when implementing a new repository
- As a checklist when conducting heuristic evaluation of an existing repository.

Data repositories can implement all or prioritise their implementation based on their user needs and available resources.

Use cases published to Zenodo

<https://doi.org/10.5281/zenodo.1050976>

Output 2 - User Requirements and Recommendations for Data Repositories

	REQ1: Data availability	REQ2: Connection of data	REQ3: Annotations	REQ4: Filtering	REQ5: Cross-referencing	REQ6: Inspection of data	REQ7: Collaborative environment	REQ9: Similarity across portals	REQ8: Training material
REC 1: Query interfaces				✓		✓		✓	
REC 2: Multiple access points		✓		✓		✓		✓	
REC 3: Summarize search results	✓		✓			✓			
REC 4: Metadata records readable		✓	✓						
REC 5: Bibliographic references							✓		
REC 6: Usage statistics			✓						
REC 7: Consistency									✓
REC 8: Identify duplicates		✓			✓				
REC 9: Findability from web SEs	Support data searches from web search engines								
REC 10: Interoperability	The Fair Data Principles								

Ten simple rules for finding data

Wu, M., Psomopoulos, F., Khalsa, S.J. and de Waard, A., 2019. Data Discovery Paradigms: User Requirements and Recommendations for Data Repositories. Data Science Journal, 18(1), DOI: <http://doi.org/10.5334/dsj-2019-003>

Thanks ...

Contact

fpsom@certh.gr

mingfang.wu@ardc.edu.au

sjsk@nsidc.org

<https://www.rd-alliance.org/groups/data-discovery-paradigms-ig>