



RDA 10th Plenary Joint meeting: IG Physical Samples and Collections in the Research Data Ecosystem

Bird of Feather Session

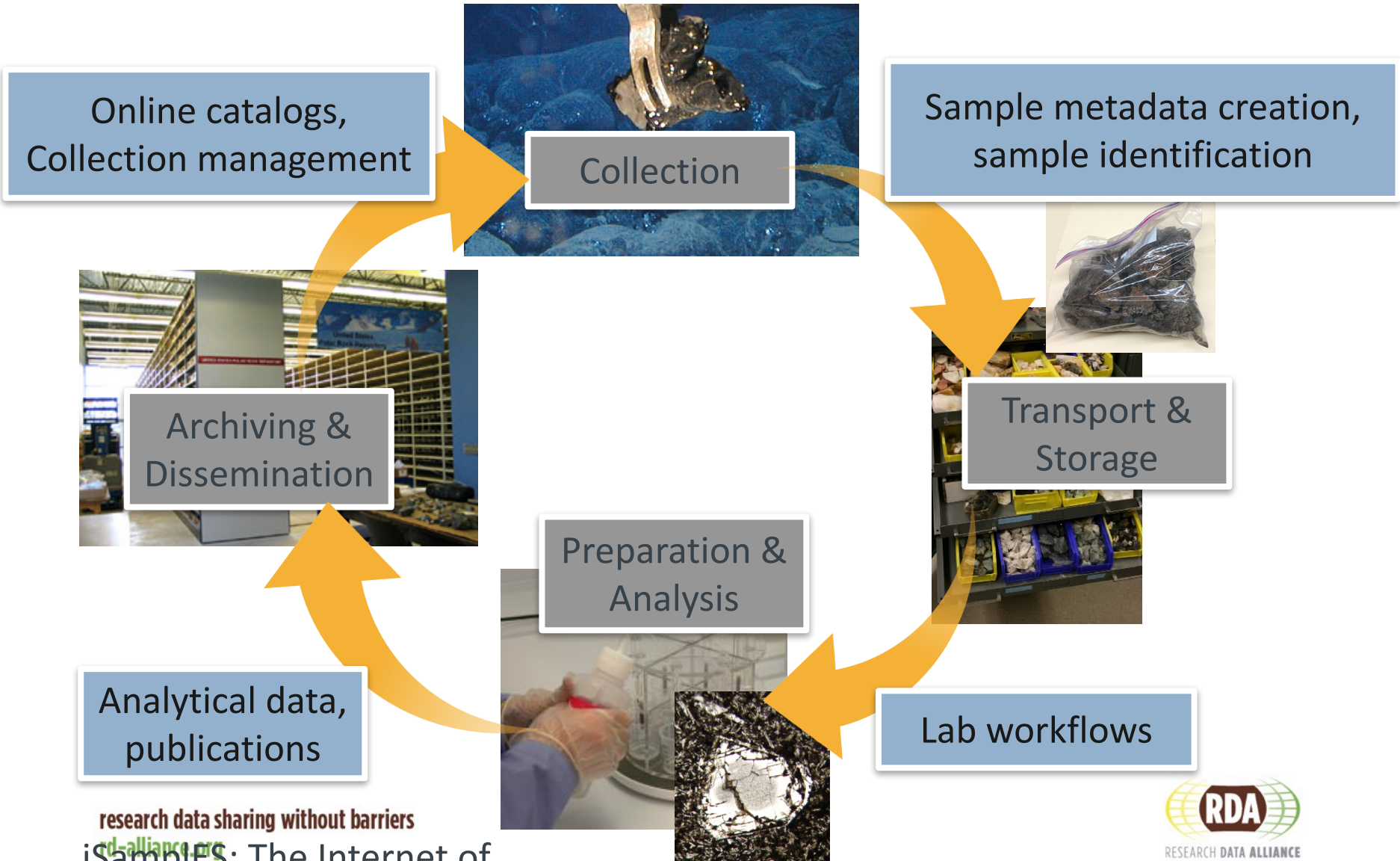
research data sharing without barriers
rd-alliance.org

Montreal, September 21, 9:00 – 10:30

- Introductions
- Report on May 2017 workshop on "Linking Environmental Data and Samples"
 - Definition of 'Sample'
 - W3C Semantic Sensor Network Ontology
- Charter for the IG
 - Objectives
 - Participants
 - Outcomes
 - Mechanisms
- Identification of activities, RDA11

- What is the problem?
- Where are the challenges?
- Stakeholders & domains
- Activities & outcomes

Samples: Physical & Digital Life Cycle



Domain Scientists

working with samples in the field, lab, or in data systems

Computer and CI Scientists

Software Engineers

Funders

Data Facilities

handling sample-based data



Curators

- core repositories
- museums
- sample repositories & collections
- academic departments

Publishers and Professional Societies

Large-scale science programs, observatories, and sampling campaigns

What is the Problem?

- Reproducibility of sample-based data across domains
 - Access to information about samples and/or the physical samples
 - Linking publications, data, and samples
- Re-usability of samples and data derived from them across domains
 - Discovery and access of samples
 - Unique and persistent identification
 - Metadata and vocabularies
- Recognition of sample collection and curation as scholarly contribution (citation & credit).

➤ FAIR Samples

What are the Challenges?

- Development of practices and standards around sample identifiers, vocabularies, registries, and software interfaces by different stakeholders and domains.
- Communication of technical solutions and organizational best practices is fragmented.
- This hinders broader adoption of best practices
 - Researchers
 - publishers and funders
- build technical and social bridges among a broad range of stakeholders to align and coordinate ongoing efforts, strengthen solutions, and broaden their adoption.

- Identify and characterize existing systems and solutions relevant to linking physical samples with digital research data and publications, identify gaps and challenges;
- Identify commonalities and diversities across the stakeholders;
- Facilitate international cooperation to develop harmonized approaches and best practices for physical object identification and digital curation.

IG Objectives

- Enable the facilitation of sample and sample identification infrastructure both at the national and international level;
- Build linkages between sample repositories and museums, digital data repositories, scientific publications, museum software providers, and science communities.

- Establish prioritized action items that may be appropriate for Working Groups
 - unique sample identifiers
 - sample documentation including vocabularies and taxonomies and alignment with international metadata standards
 - sample registration and interoperability of digital online catalogs
 - policies for sample citation in publications
 - policies for access to samples and sample metadata.

Domains

- Biodiversity
- Oceanography
- Meteorology / water quality
- Neurobiology
- Agriculture
- Soil Sciences
- Zoology
- Environmental science
- Material science
- Ethnography

Institutions

- Data repositories & archives
- Sample repositories & archives
- Museums
- Publishers
- Libraries

IG: Related RDA IGs & WGs

- PID IG
- Research Data Provenance
- Biodiversity Data Integration IG
- RDA / TDWG Metadata Standards for attribution of physical and digital collections stewardship
- Long tail of research data IG

- Report that synthesizes existing best practices for digital curation and sharing of physical samples from disparate disciplines and institutions.
- Facilitation of collaborations that advance interoperability between collection catalogs, sample registries, data repositories, and publications for improved data sharing across disparate disciplines, through e.g., alignment of sample metadata with existing metadata standards.

- Creation of RDA Working Groups to develop recommendations for best practices and standards related to sample unique identifiers, sample metadata, and sample citation.
- Organize joint sessions with other RDA groups as appropriate for knowledge exchange, to align with emerging relevant standards, and to promote recommendations from the IG.

- A journal special volume on sample and collection management in the research data ecosystem (journal TBD).