



RDM webinar series

‘From Strategy to Impact

**What you need is an infrastructure
(people & technology) and a mindshift’**

Webinar 1 of 3: ‘Your institution's research data deserves a great home’

Publishing, archiving and preserving data

9 March 2023

What will await you today?

- Host: Lorenzo Feri, Director Product Management, Research Data Management Solutions @Elsevier
- ‘Building (meta-)data infrastructures – who does the work?’
Paul Vierkant, Outreach Manager @DataCite
- ‘Creating a Great Home for your Data - Where to begin, what to do, and what not to do’
Nynke de Groot, Research Data Management Specialist @Erasmus University Rotterdam
- ‘Data Publishing, Archiving and Preserving – An institutional perspective from ETH Zurich’
Dr. Julian Dederke, Consultant for Research Data Management @ETH Zurich Library

Research Data has become a high priority

- **Funders policies**

Most funders around the world have a policy on Research Data sharing

- **Publishers policies**

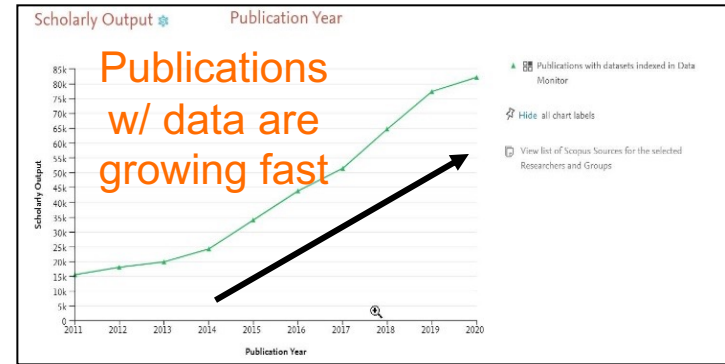
All the largest publishers (incl. Elsevier) have a policy on Research Data sharing

- **Government strategic agendas**

Govts and national bodies around the world



“No opting out of RDM”



US



France



Malaysia

Institutions are ramping up RDM efforts

- Hiring data stewards / data librarians
- Data Management Plans
- Data Repository
- Reporting (compliance, assessment, etc) on Data
- Showcasing Data



Building (meta-)data infrastructures – who does the work?

Paul Vierkant

9 Mar 2023

Your Institution's Research Data Deserves a Great Home:
Publishing, archiving and preserving data



[@datacite](https://twitter.com/datacite)



[@datacite@openbiblio.social](https://openbiblio.social/@datacite)

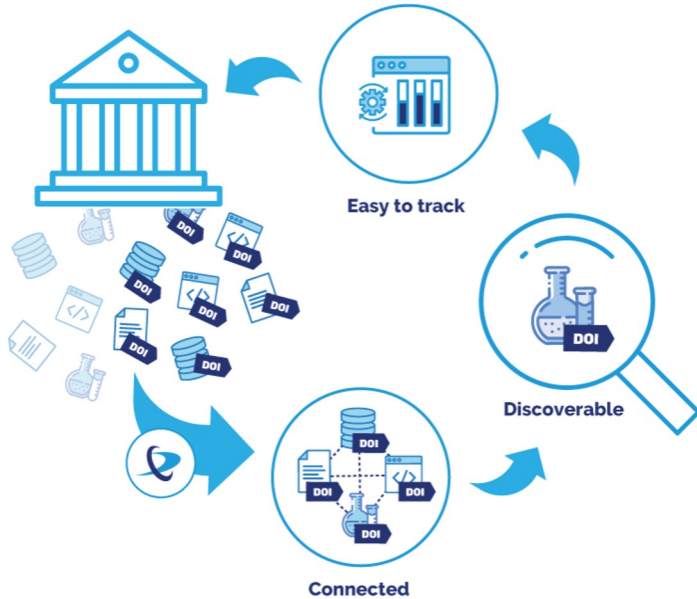
[@paul4kant@scicomm.xyz](https://scicomm.xyz/@paul4kant)



Agenda

- DataCite
- Metadata
- Standards
- Community
- Goal

About DataCite



Global non-profit membership organization working with 2700+ repositories in the world to provide DOIs for research outputs and resources.



2700+
Repositories



280+
Members



50
Countries



39m+
DOIs



1200+
Organizations

(Mar 2022)

Metadata

Metadata schema



Add your DOI metadata following DataCite Metadata Schema

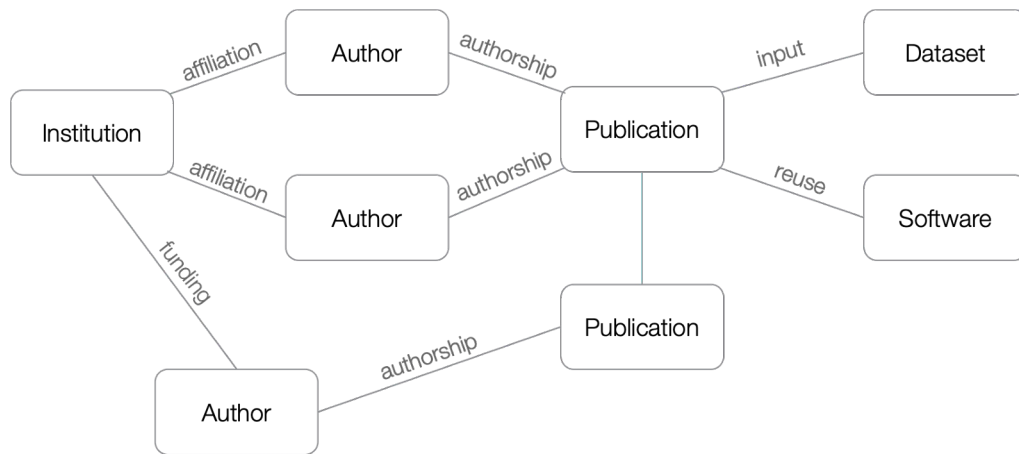
DataCite DOIs are suitable for a wide range of research outputs

| Mandatory | Recommended | Optional |
|------------------|--------------------|---------------------|
| Identifier | Subject | Language |
| Creator | Contributor | AlternateIdentifier |
| Title | Date | Size |
| Publisher | RelatedIdentifier | Format |
| PublicationYear | Description | Version |
| ResourceType | GeoLocation | Rights |
| | | FundingReference |
| | | RelatedItem |

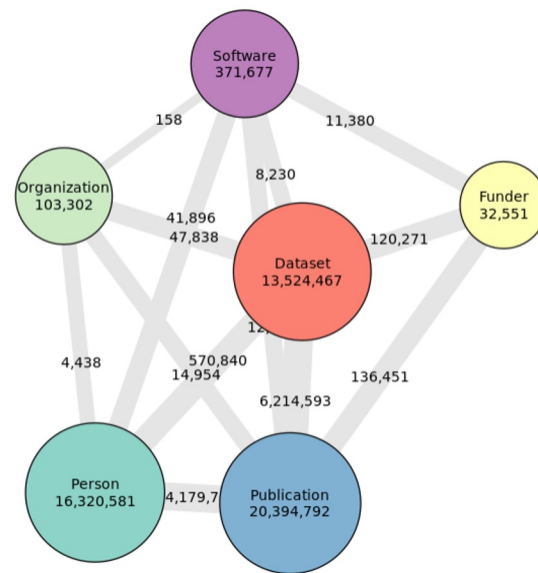
Resource types

| | |
|-----------------------|----------------------|
| Audiovisual | Model |
| Book | OutputManagementPlan |
| BookChapter | PeerReview |
| Collection | PhysicalObject |
| ComputationalNotebook | Preprint |
| ConferencePaper | Report |
| ConferenceProceeding | Service |
| DataPaper | Software |
| Dataset | Sound |
| Dissertation | Standard |
| Event | Text |
| Image | Workflow |
| InteractiveResource | Other |
| Journal | |
| JournalArticle | |

Metadata connections



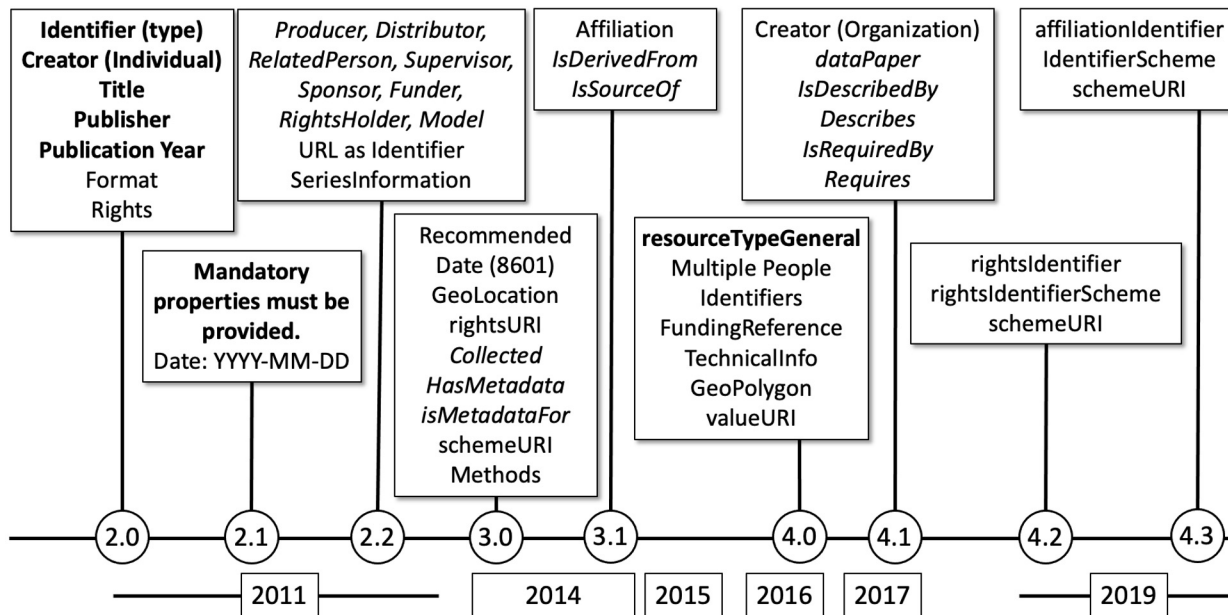
Metadata properties
and their relations



PID Graph
Numbers of nodes and connections
(March 2022)

Also to be FAIR

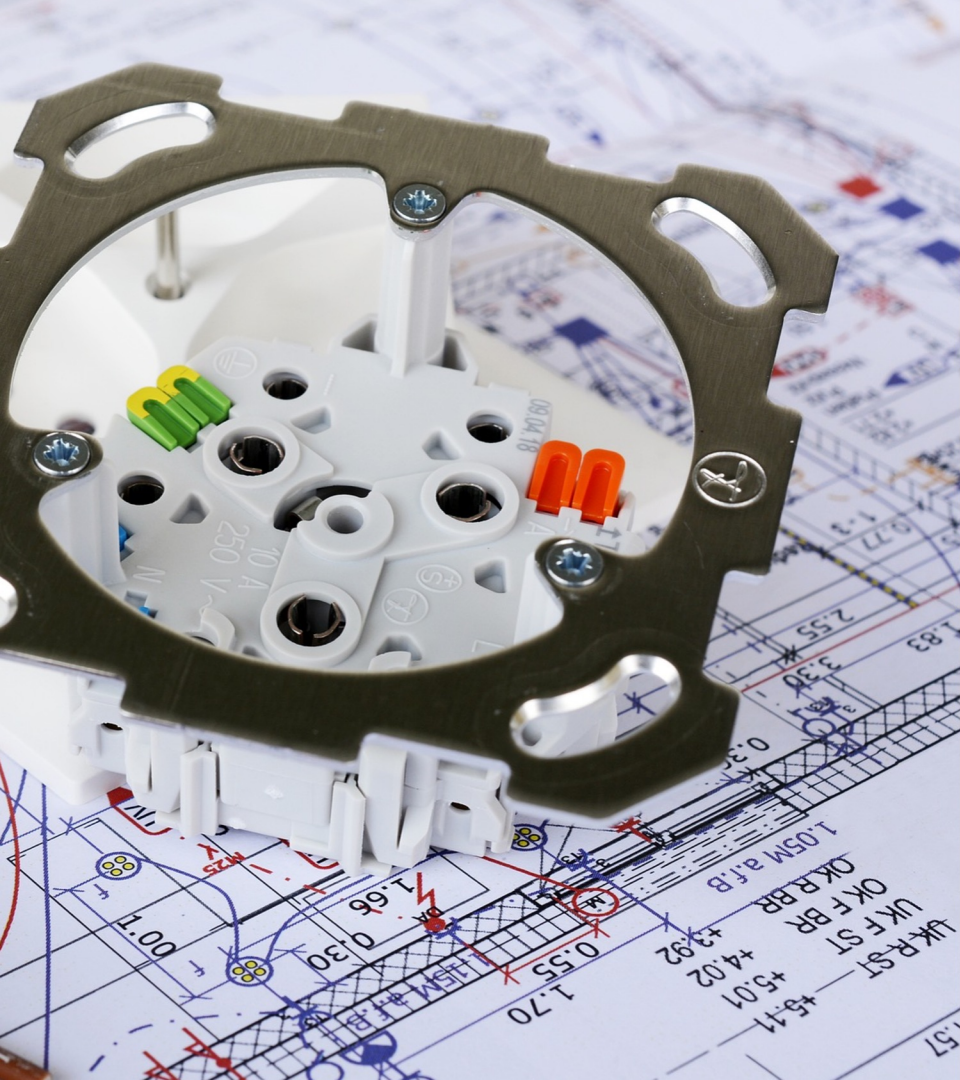
DataCite FAIR: Dialect Evolution



Standards

Use them right from the start

Persistent Identifiers Foster interoperability



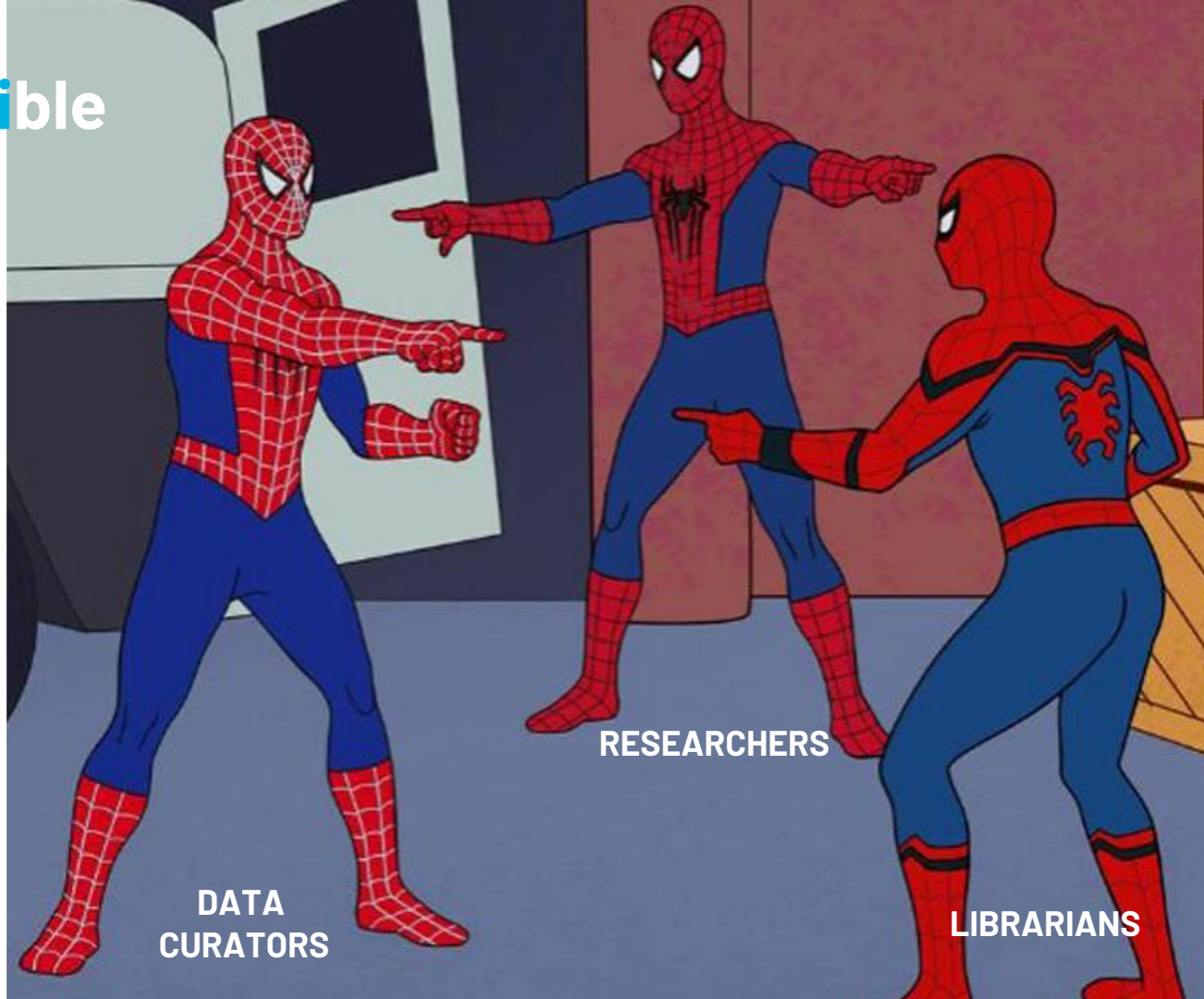
Community

Metadata

Who is doing the work?



Who is responsible
for enriching
metadata?



**Who is actually
enriching
metadata?**



**DATA
CURATORS**

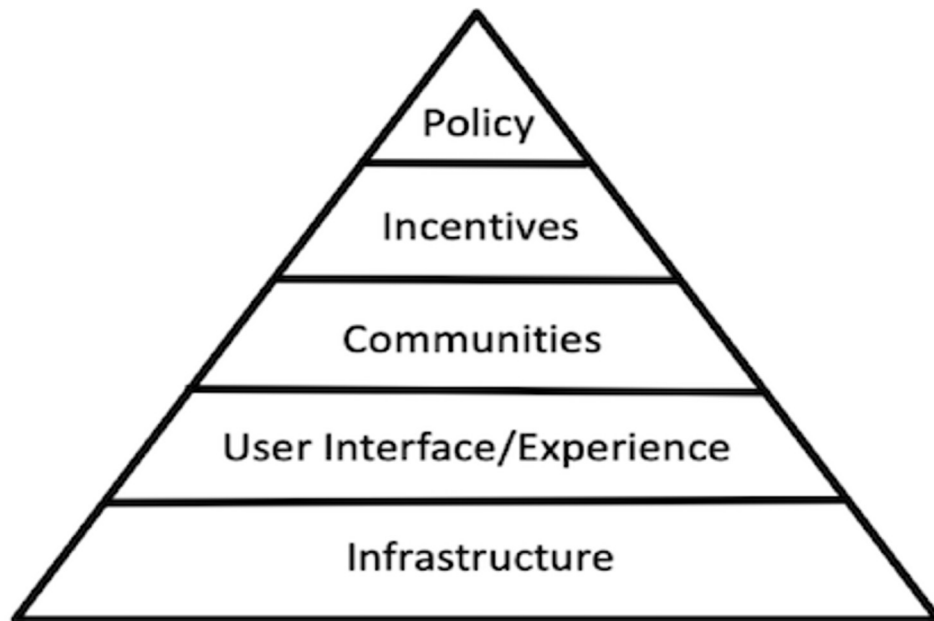
LIBRARIANS

**What was the
goal again?**

**To make research
outputs & resources
discoverable &
usable in the future.**



It takes all of us!



Make it required

Make it rewarding

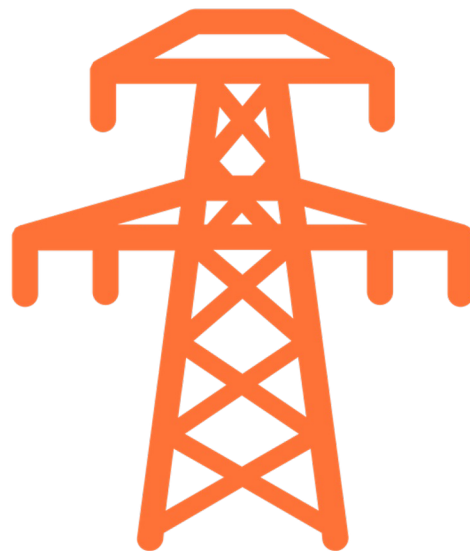
Make it normative

Make it easy

Make it possible

Open Infrastructures

Make it **possible!**



Principles of
Open Scholarly
Infrastructure

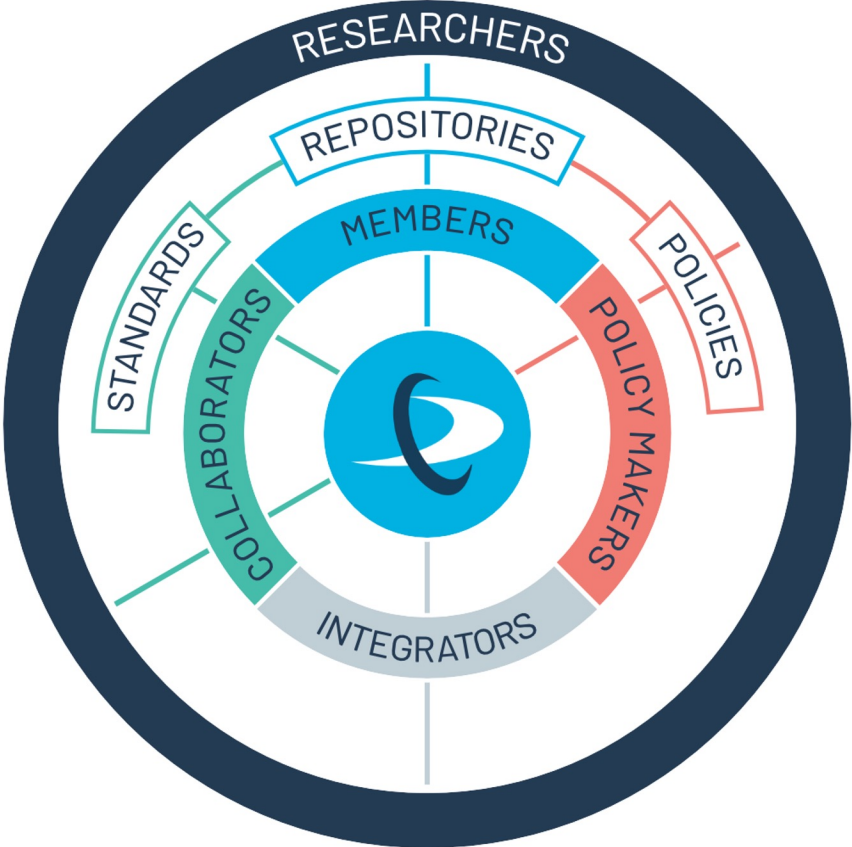
**Easy interface
experience**

Make it easy!



Communities

Make it **normative!**



Incentives

**Make it rewarding
through reframing**

Researchers:

Metadata = Academic Search Engine
Optimization

Research organizations:

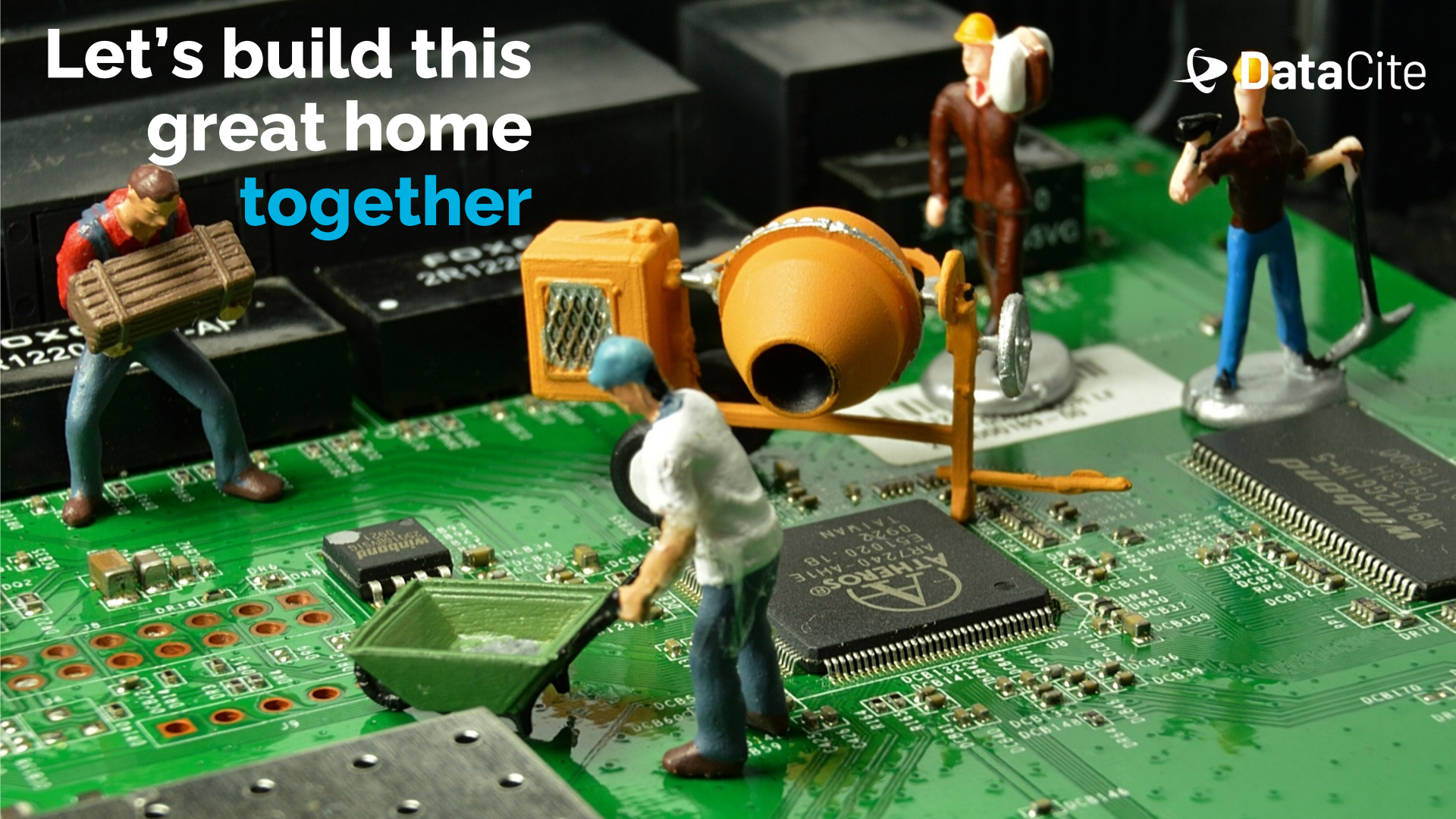
Metadata = higher visibility of
institutional research output

Funders

Make it **required!**



Let's build this
great home
together





CONNECTING RESEARCH,
IDENTIFYING KNOWLEDGE



info@datacite.org



pidforum.org



datacite.org
blog.datacite.org



support@datacite.org
support@datacite.org



[@datacite](https://twitter.com/datacite)



[DataCite](https://www.youtube.com/DataCite)



[@datacite](https://www.linkedin.com/company/datacite)

**Erasmus
University
Library**

Creating a Great Home for your Data

Where to begin, what to do, and what not to do

March 9th 2023

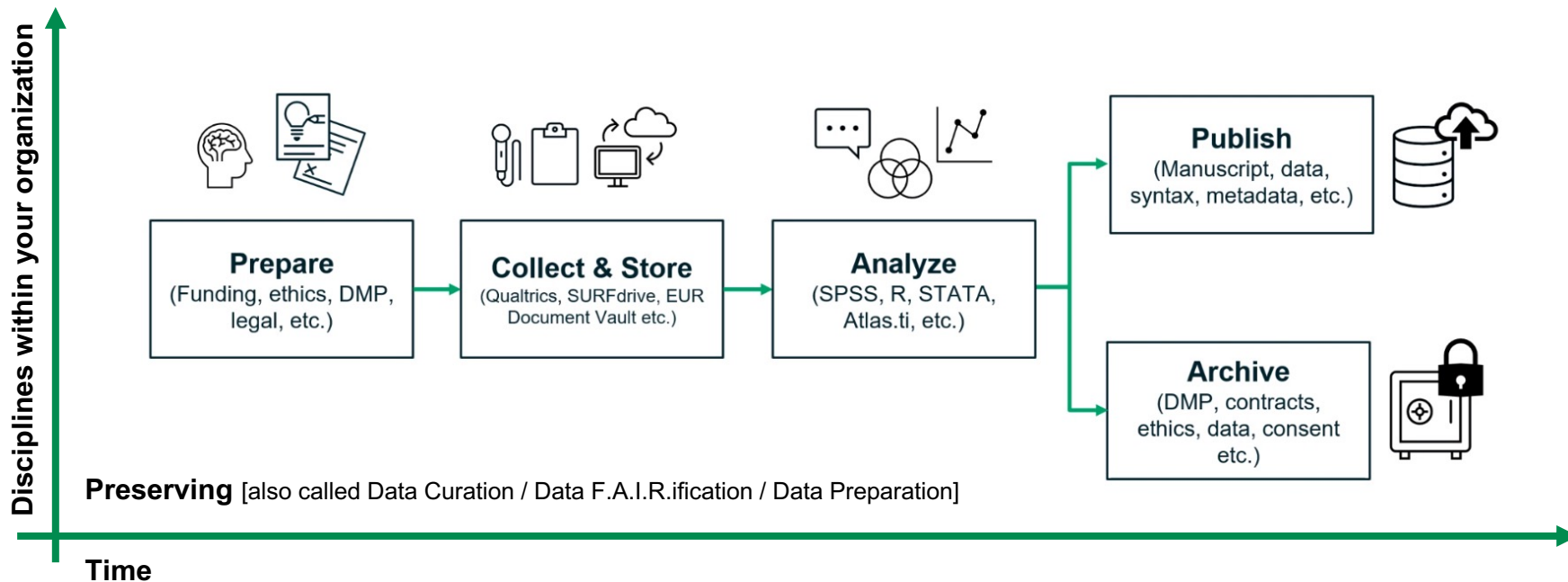
Nynke de Groot

Erasmus University Rotterdam
Research Data Management Specialist

Erasmus University Rotterdam
Make it happen.



Where to begin: publishing, archiving, and preserving



What to do: determinants of innovation success¹

#1 Characteristics of the socio-political context

The degree to which the innovation fits within existing [organizational] policy

#2 Characteristics of the organization

Innovation adoption, human resources, financial resources, available time, etc.

#3 Characteristics of the innovation

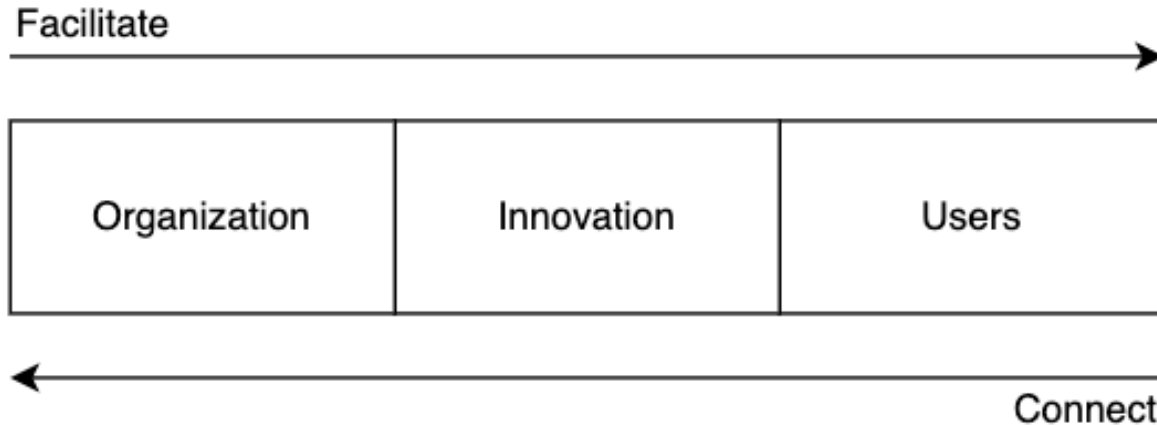
Procedural clarity, complexity, relevance, etc.

#4 Characteristics of the adopting person [user, client, researcher]

Perceived benefit, importance, satisfaction, etc.

¹ Margot A.H. Fleuren, Theo G.W.M. Paulussen, Paula Van Dommelen, Stef Van Buuren, Towards a measurement instrument for determinants of innovations, *International Journal for Quality in Health Care*, Volume 26, Issue 5, October 2014, Pages 501–510, <https://doi.org/10.1093/intqhc/mzu060>

Determinants of innovation success



#1 Characteristics of the Socio-Political Context

- This includes all relevant policies

From general to specific:

- National policy: duty of care
- University policy: open science
- Faculty policy: publication package



#2 Characteristics of the Organization

- Formal adoption of the innovation by management
- Sufficient number of people and continuity in case of e.g. absence
- Sufficient resources: time, money, materials, equipment, space, etc.
- Presence and effects of concurrent innovations
- Etc.

#3 Characteristics of the Innovation

- Clarity of the steps that have to be taken
- Complexity, completeness, and correctness of the innovation
- The degree the innovation connects with current way of working
- Relevance and visibility of the outcomes for the user
- Etc.

#4 Characteristics of the adopting person

- Confidence in the innovation: does it work
- Perceived benefit and satisfaction
- Experienced support by colleagues, management, other professionals etc.
- Descriptive and subjective norm
 - Descriptive = observed behavior; adoption of innovation
 - Subjective = influence of significant others in adopting the innovation
- Etc.

What [not] to do: experiences of a veteran

#1 Characteristics of the Socio-Political Context

- Learn to live with [inter]national and institutional policy
 - Create a best-practice bottom-up and policy will follow
 - Be aware how your position and [absence of] policy may affect e.g. results and uptake of the innovation

#2 Characteristics of the Organization

- Gather a multidisciplinary team and:
 - Create a shared vision and strategy that combines organizational & user needs
 - Be very clear about the scope and set definitions for terms used [what is 'archiving', what is a 'backup']
 - Sketch out your ecosystem that includes all tools, services, roles, tasks, and responsibilities
 - Emphasize that no one tool does it all, nor one service
 - Present the same information in various ways for e.g. visual- versus text-oriented persons

What [not] to do: more experiences of a veteran

#3 Characteristics of the innovation

- If a tool is not user friendly, the ‘adopting person’ will not adopt
 - No matter how perfect the tool is

#4 Characteristics of the adopting person

- Researchers want to do research; not admin
 - Provide hands-on support for your users for every step, no matter how small or simple
 - Use LSD: Listen, Summarize, Dig deeper: often users ask A when they mean B
 - Create information materials that center around one specific topic and keep it short
 - Not: Introduction to Data Preservation
 - Yes: How to connect your ORCID with [‘name of your institutional archive’]

What [not] to do: even more experiences of a veteran

#5 Make it everybody's problem

- Key persons need to feel responsible for the outcome
 - Head of faculty: I want my users to do X, so we must have this innovation, this means I need to provide Y
 - Make prominent users [e.g. influential researcher] advocates for your innovation

#6 Reach out to other organizations for help and a look into the mirror

- Every organization has the same struggles

#7 Please do 'touch that with a 10 foot pole'

- Point out all issues, no matter how big or small or on what level
 - If your building blocks are not aligned, you cannot build up
 - If you can sort them out, sort them out. If you can't delegate 'up' and leave a paper trail

Conclusion

- Think twice before you innovate
 - Is the organization ready for an innovation?
 - Do your users need this innovation?
 - Do you have what it takes to be part in this innovation?
- A good beginning is the job half done
 - Take time to get your building blocks in order
 - Take time to get all noses pointing in the right direction

Remember: we all struggle with the same issues



**Erasmus
University
Library**

Thanks for listening

Erasmus University Rotterdam
Make it happen.

The Erasmus University logo, featuring the word "Erasmus" in a stylized, cursive script font.

Data Publishing, Archiving and
Preserving
– *An institutional perspective from ETH*

Dr. ~~Juriah~~ Dederke, ETH Zurich Library
9 March 2023, Online



The potential of managing research data

- Embracing good practice principles
- Enabling acknowledgement for FAIR research output
- Good practice in RDM can build on community standards and sometimes on long established processes that are already in place.
- RDM Guidelines support ETH Zurich researchers with filling gaps in achieving best practice in RDM.



Image: Andres Bucher (<http://andresbucher.ch/colibrary.html>)

Major RDM requirements at ETH Zurich



ETH Zurich researchers should **include RDM in the planning of their activities**¹



A DMP is expected for every research project at ETH Zurich with clear temporal boundaries.¹



Research data must be **published in a FAIR repository**, generally at the time of publication of results.¹



All publications of research results **must contain a Data Availability Statement**.¹



Research data must be **retained generally for at least 10 years (minimum storage period)**¹



Project members **shall determine as early as possible how data is shared externally and how data may be used by persons leaving the project team**.²

¹Guidelines for Research Data Management at ETH Zurich (RDM Guidelines), 1 July 2022, <https://rechtssammlung.sp.ethz.ch/Dokumente/414.2en.pdf> (own emphasis in bold)

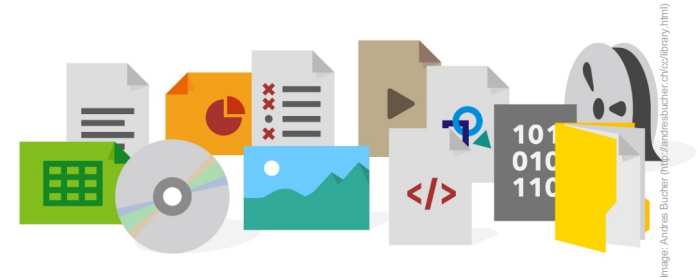
²ETH Zurich Guidelines on scientific integrity (Integrity Guidelines), 1 January 2022, <https://rechtssammlung.sp.ethz.ch/Dokumente/414en.pdf> (own emphasis in bold)

Principles underlying RDM Guidelines

- RDM Guidelines define and support **research data management as a scientific activity** (consistent with ETH, national and international initiatives)
- Data publishing, archiving and preserving are integral parts of RDM
- Recognised standards and best practices of research communities are important reference points
- Explicit link between RDM and **scientific integrity**
- Specified vocabulary **and principles for RDM and Open Research Data**
- Determining **responsibilities** for research data and RDM at ETH Zurich

The role of community standards

- Diversity of disciplines at a large technical university
- Heterogeneous data and heterogeneous community practices
- No ‘1 size fits all’
- **Community standards are a relevant anchor of RDM Guidelines:**
 - “Research Data are all data that the relevant scientific community accepts as necessary for validating research findings” (Art. 3(1), [ETH Zurich RDM Guidelines](#)).
 - “Community Standards are understood as both explicit, formalised standards and informal, but well established and widely accepted best practices within a community. A community can, e.g. comprise researchers sharing an interest in the same object of research or working with the same methods. Common Community Standards address, e.g. identification, citation and reporting of Research Data and Metadata. They reflect a community’s consensus, at a certain point in time, on how reproducible and reusable research should be implemented” (Art. 3(7), [ETH Zurich RDM Guidelines](#)).



Data Publication – Requirements

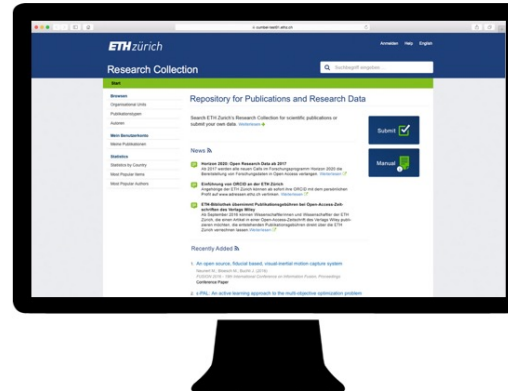
- **“Research Data and Programming Code that are considered as directly relevant for a result publication based on Community Standards must be published and deposited in a FAIR repository along with rich, openly available Metadata”** (Art. 6(1a), [ETH Zurich RDM Guidelines](#), own emphasis)
- Relevant data can be subsets of collected data, or aggregated data
- Ethical and/or legal restrictions may apply
- Commercial repositories should be avoided



Image: pexels.com ✓ Free to use. ✓ No attribution required.

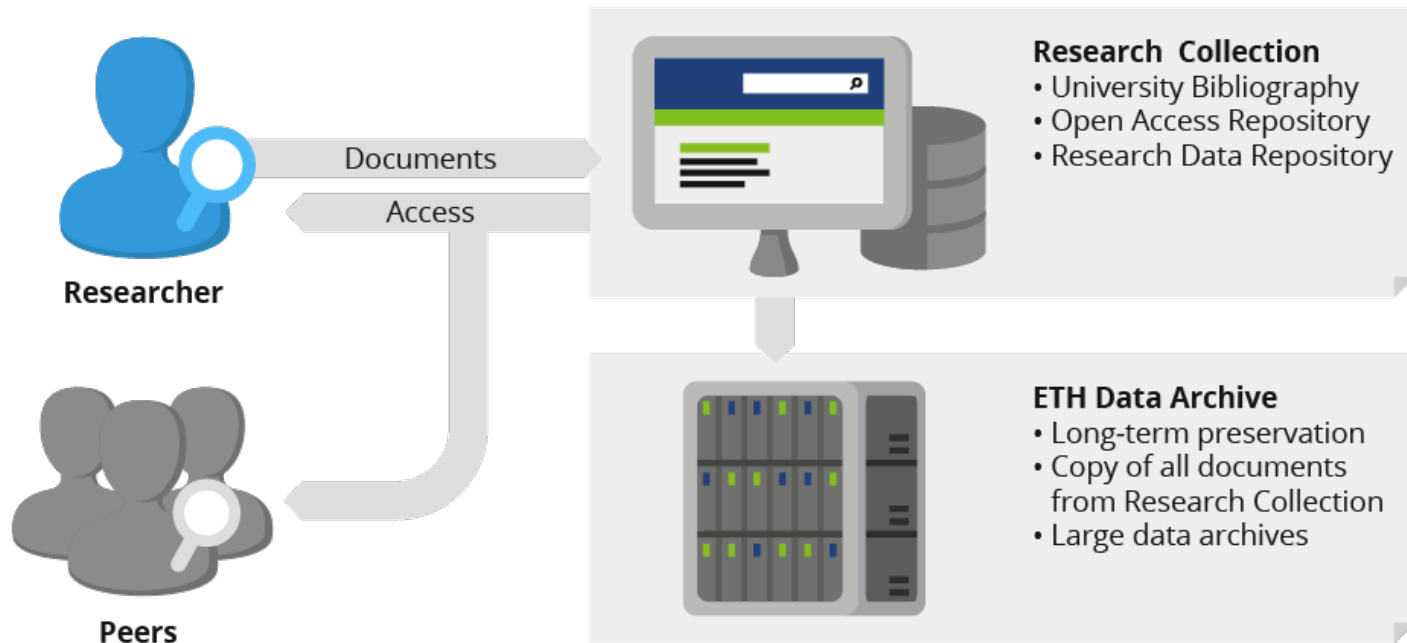
Data Publication – Solutions

- Discipline-specific repositories advantageous, because they may provide discipline-specific metadata schemes
- [ETH Research Collection](#) as institutional, FAIR repository
 - “Catch-all” repository
 - Data at ETH Zurich, i.e. at the same location as bibliography and article

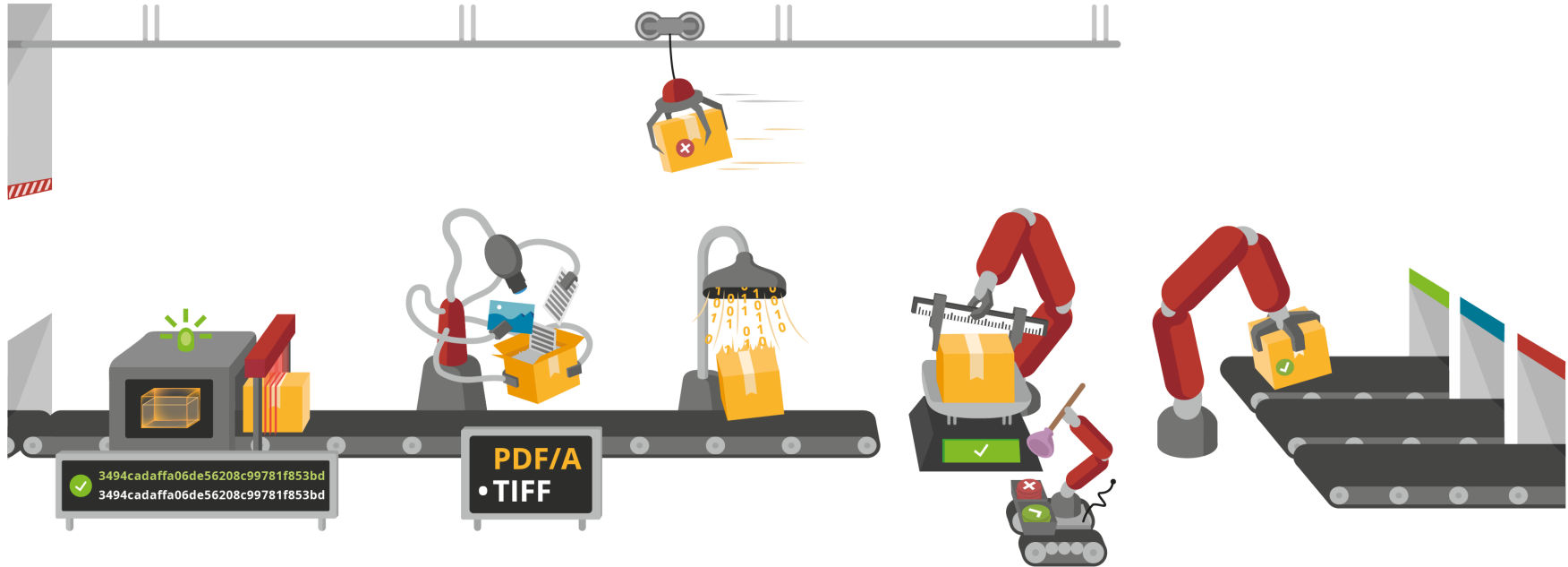


ETH Research Collection and ETH Data Archive

Repository and digital preservation solution for ETH Zurich, operated by ETH Library



Data Archiving and Preservation



Checksum Verification
& Virus Check

File Format
Identification

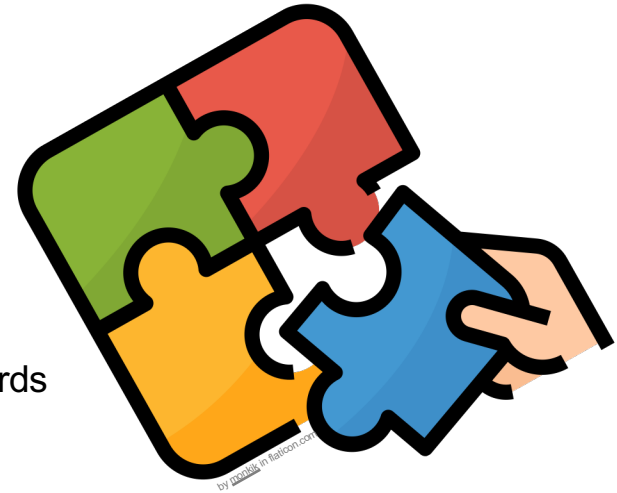
Metadata
Extraction

File Format
Validation

Enrichment

What's the key take-away?

- Formal requirements are only one side of the coin
- Incentives and continuous cultural change are important
- What does it take?
 - Institutional commitment
 - Meeting researchers where they are, embracing community standards
 - Enabling research communities
 - Provision of infrastructure and support



Dr. Julian Dederke
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Research Support Services

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data-management@library.ethz.ch

Please join us for more



Webinar 1 today

Your Institution's Research Data Deserves a Great Home: Publishing, archiving and preserving data

Guest speakers:

- [DataCite](#)
- [Erasmus University Rotterdam](#)
- [ETH Zurich](#)



Webinar 2 on 16 March 2023, 14:00 CET

Needle in a Haystack: Where is my Institution's Data? Monitor & report research data

Guest speakers:

- [The University of Manchester](#)
- [University of Groningen](#)



Webinar 3 on 23 March 2023, 14:00 CET

RDM is a Team Sport, Not a Single Player Mission: Best national practices and future outlook

Guest speakers:

- [Swedish National Data Service](#)
- [Technopolis Group](#)

Sign up here: <https://bit.ly/RDMWeb1>



How to organize the research data of my institute with Elsevier?

Floortje Flippo

Regional Director **Research Intelligence Europe**

Elsevier

f.flippo@elsevier.com

