



# OSCARs

Open Science Clusters' Action  
for Research & Society



Sustainable Scientific Software School

# Initiating Radical collaboration: a Checklist for Sustainable Software

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ERINHA



eoosc | EVERSE:



Funded by  
the European Union

OSCARs is a four-year Horizon Europe project that will foster the uptake of Open Science in Europe by consolidating the achievements of world-class European RIs in the ESFRI roadmap and beyond into lasting interdisciplinary FAIR data services and working practices.



## Fostering the uptake of Open Science in Europe

OSCARs will strengthen the role of the Science Clusters (SCs) in the European Research Area (ERA) by developing **Community-based Competence Centres (CCCs)** and **Composable Open Data and Analysis Services (CODAS)**, and by fostering the implementation of **Open Science projects and services** funded through a cascading-grant mechanism.

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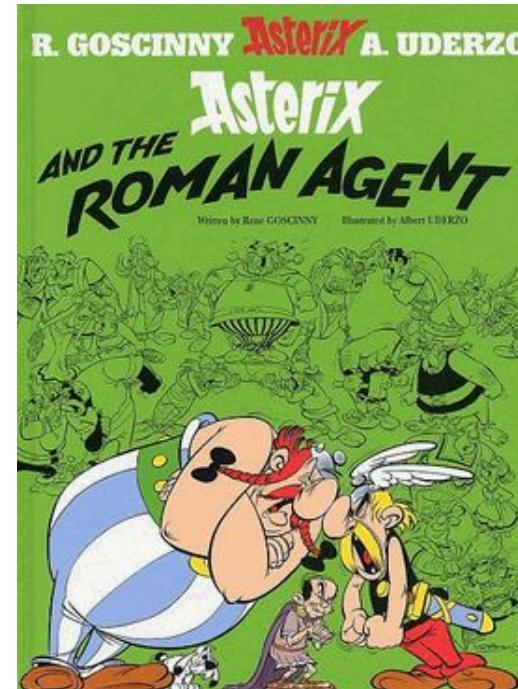


SCIENCE-CLUSTERS.eu  
Research Infrastructures for Open Science



# Where does Radical Collaboration comes from?

It comes from “conflict resolution”...



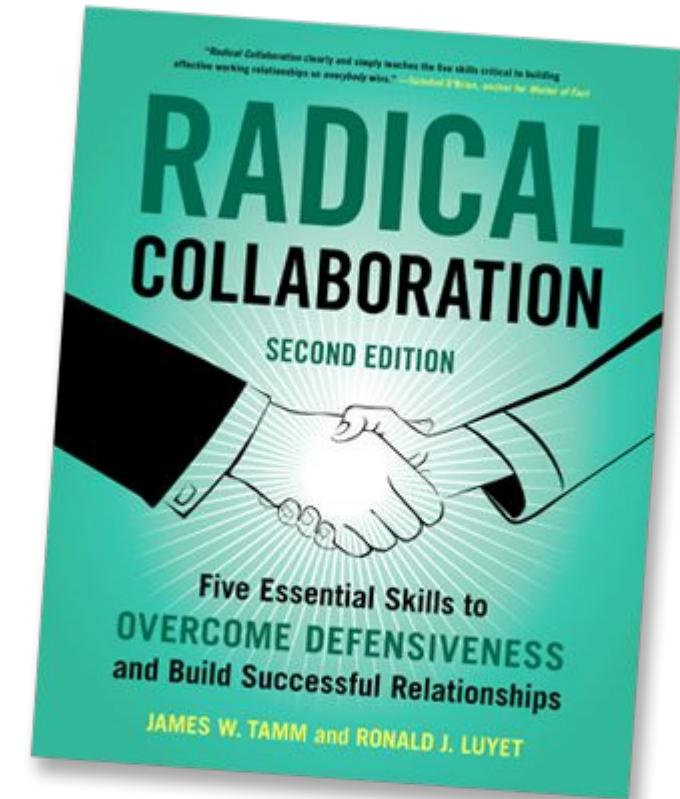
... with the idea “giving a (real) place for each possible contributor”

# Where does Radical Collaboration comes from?

To better collaborate outside, better collaborate inside

How to create an  
“ideal”  
collaborative environment?

(James Tamm)



# Radical Collaboration principles

## Introduction to Red Zone, Pink Zone & Green Zone Attitudes

### RED ZONE

- Fear-based
- Defensive
- Combative Tone
- Win for self only
- Defeat others
- Self-interest only
- Feels like warfare
- Rigid/Reactive
- Hostile
- Attacking
- Controlling

### PINK ZONE

- Fear-based
- Protective
- Avoidant Tone
- Avoid losing
- Survive others
- Self-interest only
- Feels like guerilla warfare
- Rigid/Reactive
- Passive-aggressive
- Manipulating
- Withholding

### GREEN ZONE

- Trust-based
- Collaborative
- Cooperative Tone
- Mutual gain
- Connect with others
- See others as partners
- Feels like problem solving
- Open to influence
- Curious
- Joint effort
- Engaging

# Radical Collaboration 5 fundamental skills

**Collaborative intention** – Stay non-defensive and commit to mutual success in relationships.

**Problem-Solving and Negotiation** – Negotiate your way through inevitable conflicts, in a way that builds relationships rather than undermining them.

**Awareness of Self and Others** – Know yourself and others well enough to explore difficult interpersonal issues to solve problems.

**Openness** – Create a climate of honesty and openness that allows people to feel safe enough to discuss difficult issues.

**Self-Accountability** – Take responsibility for the consequences of your actions, both intended and unintended.

# Where does Radical Collaboration comes from?

## Radical Collaborations in RDA



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Research and Innovation

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RESEARCH ARTICLE 

**Radical collaboration during a global health emergency: development of the RDA COVID-19 data sharing recommendations and guidelines [version 1; peer review: 2 approved, 1 approved with reservations]**

Brian Pickering , Timea Biro , Claire C. Austin , Alexander Bernier, Louise Bezuidenhout, Carlos Casorrán , Francis P. Crawley , Romain David , Claudia Engelhardt , Geta Mitrea , Ingvill Constanze Mochmann , Rajini Nagrani , Mary O'Brien-Uhlmansiek , Simon Parker , Minglu Wang , Leyla Jael Castro, Zoe Cournia, Kheeran Dharmawardena , Gayo Diallo , Ingrid Dillo , Alejandra Gonzalez-Beltran, Anupama Gururaj , Sridhar Gutam , Natalie Harrower , Jitendra Jonnagaddala , Katherine McNeill, Daniel Mietchen , Amy Pienta, Panayiota Polydoratou, Marcos Roberto Tovani-Palone

# Conditions required to apply Radical Collaboration?

Our goal:  
*Collective  
intelligence!*

In each idea,  
there is **something**  
to keep





Umbrella Data Management  
Plans to Integrate FAIR  
Data : Lessons From the  
ISIDORe and BY-COVID  
Consortia for Pandemic  
Preparedness



COLLECTION:  
DATA MANAGEMENT  
PLANNING ACROSS  
DISCIPLINES AND  
INFRASTRUCTURES  
PRACTICE PAPER

]u[ ubiquity press

ROMAIN DAVID  RUDOLF WITTNER   
AUDREY S. RICHARD  RAFAEL ANDRADE 

ALLYSON L. LISTER  JOSÉ LÓPEZ-  
CORONADO 

# Examples

You want to know how...

*a community of  
Research Infrastructures  
and networks of researchers*

can develop a **DMP network**  
for FAIR data sharing  
addressing the complexities of multiple partners?

Check it: <https://doi.org/10.5334/dsj-2023-035>



# Radical Collaboration: some results

zenodo

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Upload Communities  david.romain@gmail.com 

September 18, 2023

**Preprint** **Open Access**

## Umbrella Data Management Plans to integrate FAIR data : lessons from the ISIDORe and BY-COVID consortia for pandemic preparedness

David, Romain; Richard, Audrey S.; Connellan, Claire; Lauer, Katharina B.; Chiusano, Maria Luisa; Goble, Carole; Houde, Martin; Kemmer, Isabel; Keppler, Antje; Lieutaud, Philippe; Ohmann, Christian; Panagiotopoulou, Maria; Raza Khan, Sara; Rybina, Arina; Solland-Reyes, Stian; Wit, Charlotte; Witten, Rudolf; Andrade Buono, Rafael; Marsh, Sarah Arnaud; Audergon, Pauline; Bonfils, Dylan; Carazo, Jose-Maria; Charrel, Remi; Coppens, Frederik; Fecke, Wolfgang; Filippone, Claudia; Garcia Alvarez, Eva; Gul, Sheraz; Hermjakob, Henning; Herzog, Katja; Holub, Petr; Kozera, Lukasz; Lister, Allyson L.; Lopez-Coronado, Jose; Madon, Bénédicte; Majcen, Kurt; Martin, William; Müller, Wolfgang; Papadopoulou, Elli; Prat, Christine M.A.; Romano, Paolo; Sansone, Susanna-Assunta; Saunders, Gary; Blomberg, Niklas; Ebwank, Jonathan

THIS PAPER IS NOW PUBLISHED: <https://doi.org/10.5334/dsj-2023-035>

The Horizon Europe project ISIDORe is dedicated to pandemic preparedness and responsiveness research. It brings together 17 Research Infrastructures (RIs) and networks to provide a broad range of services to infectious disease researchers. An efficient and structured treatment of data is central to ISIDORe's aim to furnish seamless access to its multidisciplinary catalogue of services, and to ensure that users' results are treated FAIRly. ISIDORe therefore requires a data management plan (DMP) covering both access management and research outputs, applicable over a broad range of disciplines, and compatible with the constraints and existing practices of its diverse partners.

We undertook an iterative, step-by-step, process to build a community-approved living document, identifying good practices and processes, on the basis of use cases, presented as proof of concepts. International fora such as the RDA and EOSC, and primarily the BY-COVID project, furnished registries, tools and online data platforms, as well as standards, and the support of data scientists. Together, these elements provide a path for building an umbrella, FAIR-compliant DMP, aligned as fully as possible with FAIR principles, which could also be applied as a framework for data management harmonisation in other large-scale, challenge-driven projects. Finally, we discuss how data management and reuse can be further improved through the writing of realistic DMPs using 'DMP profiles' and, in the future, the contribution of an inter RIs data a Community of Practice that could be integrated into planned trans-RI competence centres.



 **Communities**

BY-COVID, Beyond COVID EU Project 2021-2024   

EOSC-Life  

ISIDORe - Integrated Services for Infectious Disease Outbreak Research project 

 990  769

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# Radical Collaboration: some results

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Almetric

### Umbrella Data Management Plans to Integrate FAIR Data: Lessons From the ISIDORe

Overview of attention for article published in Data Science Journal, September 2023

**SUMMARY** **Blogs** **Twitter** **Reddit**

So far, Almetric has seen 135 tweets from 101 users, with an upper bound of 452,773 followers.

Flo Grattarola | ecoeve.social/@flograttarola  
RT @Romain\_DAVID\_13: Have you had a look at our new paper? You should have, but it is not too late! <https://doi.org/10.5334/dsj-2023-035>  
07 Oct 2023

Laurent Tranchant  
RT @Romain\_DAVID\_13: My NEW! @ERINHA\_RI PAPER #infectuous #disease #metadata sharing #DMP @EosLife @eosassociation @rihub  
06 Oct 2023

**75**

**Communities**

BY-COVID, Beyond COVID EU Project 2021-2024  
EOSC-Life  
ISIDORe - Integrated Services for Infectious Disease Outbreak Research project

**990** views **769** downloads

See more details...

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**OpenAIRE**

**Radical collaboration  
also efficient in  
communication  
phase!**

# Radical Collaboration: some results



September 12, 2023

## Preprint: "Be Sustainable", Recommendations for FAIR Resources in Life Sciences research: EOSC-Life's Lessons

David, Romain; Rybina, Arina; Burel, Jean-Marie; Heriche, Jean-Karim; Audergon, Pauline; Boiten, Jan-Willem; Coppens, Frederik; Crockett, Sara; Exter, Katrina; Fahrner, Sven; Fratelli, Maddalena; Goble, Carole; Gormanns, Philipp; Granter, Tobias; Grunberg, Bjorn; Gurwitz, Kim Tamara; Hancock, John; Harmse, Henriette; Holub, Petr; Jutj, Nick; Karnbach, Geoffrey; Karoune, Emma; Kepler, Antje; Klemeier, Jessica; Lancelotti, Carla; Legras, Jean-Luc; Lister, L. Allyson; Livio Longo, Dario; Ludwig, Rebecca; Madon, Benedict; Massimi, Marzia; Matser, Vera; Matteoni, Rafaële; Mayrhofer, Michaela Th.; Ohmann, Christian; Panagiotopoulou, Maria; Parkinson, Helen; Persell, Isabelle; Pfander, Claudia; Pieruschka, Roland; Raess, Michael; Rauber, Andreas; Richard, Audrey S.; Romano, Paolo; Rosato, Antonio; Sanchez-Pla, Alex; Sansone, Susanna-Assunta; Sarkans, Ugis; Serrano-Solano, Beatriz; Tang, Jing; Tanoli, Zlauriehman; Tedds, Jonathan; Wagener, Harald; Weise, Martin; Westerhoff, Hans V.; Wittner, Rudolf; Ewbank, Jonathan; Blomberg, Niklas; Gribbon, Philip

### "Be SURE - Be SUstainable REcommendations"

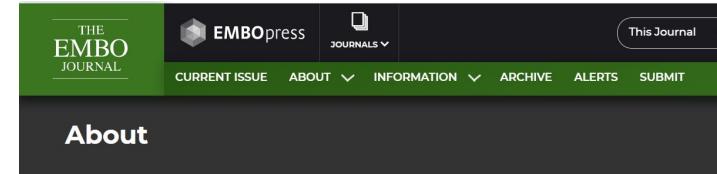
The main goals and challenges for the Life Science (LS) communities in the Open Science framework are to increase reuse and sustainability of data resources, software tools, and workflows, especially in large-scale data-driven research and computational analyses. Here, we present key findings, procedures, effective measures and recommendations for generating and establishing sustainable LS resources based on the collaborative, cross-disciplinary work done within the EOSC-Life (European Open Science Cloud for Life Sciences) consortium. Bringing together 13 European LS Research Infrastructures (Ris), it has laid the foundation for an open, digital space to support biological and medical research. Using lessons learned from 27 selected projects, we describe the organisational, technical, financial and legal/ethical challenges that represent the main barriers to sustainability in the life sciences. We show how EOSC-Life provides a model for sustainable FAIR data management, including solutions for sensitive- and industry-related resources, by means of cross-disciplinary training and best practices sharing. Finally, we illustrate how data harmonisation and collaborative work facilitate interoperability of tools, data, solutions and lead to a better understanding of concepts, semantics and functionalities in the life sciences.

IN PRESS EMBO Journal: <https://www.empopress.org/journal/14602075>



ch is mainly a product of the EOSC-Life European programme funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°824087. Complementary support was provided by the EU funded project AeroServ (grant agreement N°101058020) EU funded project RY-COVID (grant

**IN PRESS!!**



## About

The EMBO Journal has been EMBO's flagship publication since its launch in 1982. With a scope that spans all areas of molecular biology, the journal has an international reputation for quality and originality.

- Aims & Scope
- Transparent Process
- Bibliometrics
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- Privacy Policy

## Journal's Impact IF

2022-2023

13.783



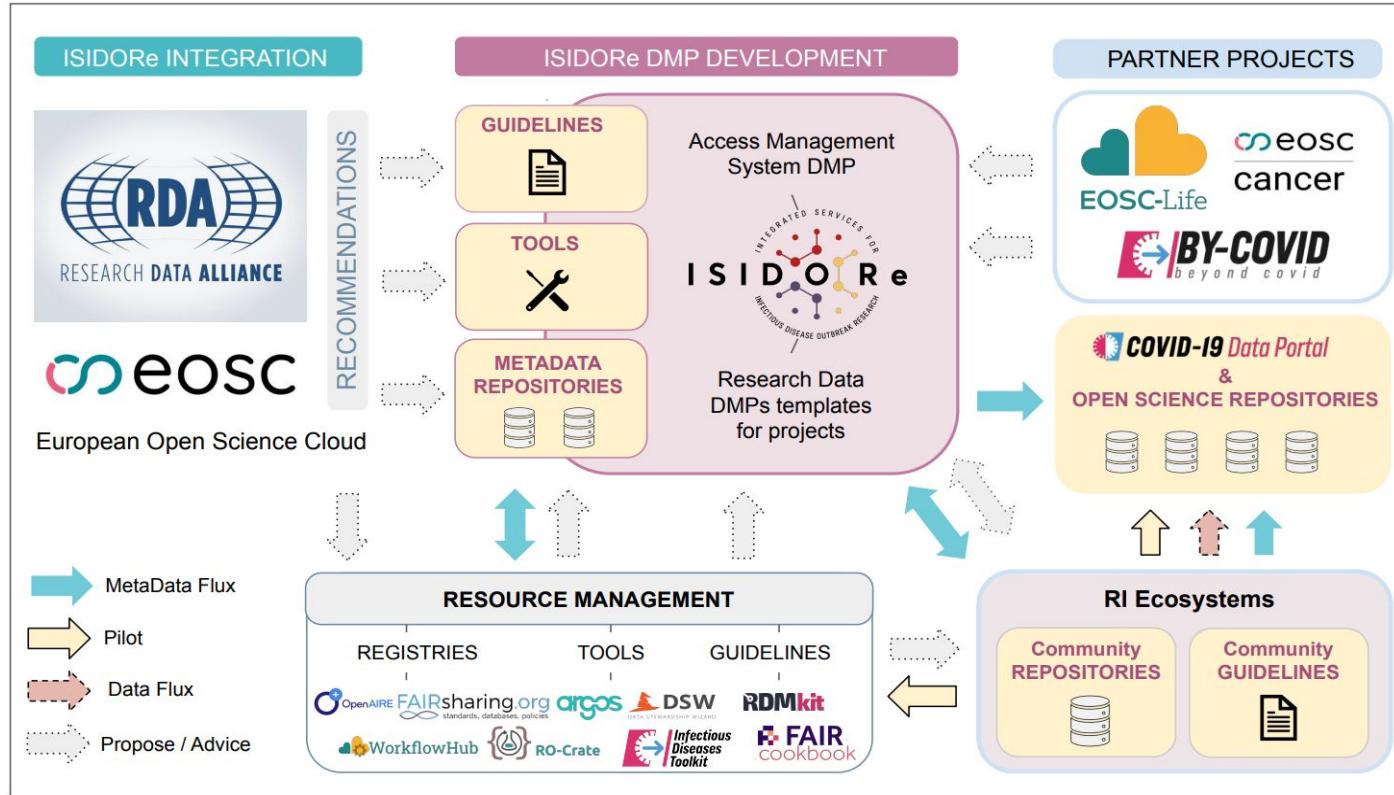
# How we applied Radical Collaboration?

- 1) Inviting everybody (*collaborative intention*)
- 2) Fixing the rules and the goals together (*Openness*)
- 3) Everybody can come in and come out **when she/he want** (*Openness - Awareness of Self and Others*)
- 4) Mutual interest and common and individual **benefits clearly exposed** (*Awareness of Self and Others - Self-Accountability*)
- 5) **Dividing the effort** as possible as it is: shorts steps / quick realisations (*Awareness of Self and Others*)
- 6) High frequency of discussion, with **agreement researched** for all questions (*collaborative intention - Self-Accountability - Problem-Solving and Negotiation*)
- 7) Giving responsibilities, but **no penalties in case of a failure** (*Awareness of Self and Others - Self-Accountability - Problem-Solving and Negotiation*)
- 8) Trying to resolve issues commonly, without indexing 1 responsible, **refixing realistic goals and redistributing tasks** when something is blocked (*Awareness of Self and Others - Self-Accountability - Problem-Solving and Negotiation*)
- 9) Rewarding and Crediting everybody **for small inputs as well as big inputs** (*Awareness of Self and Others - Openness*)

# Radical Collaboration: some tools

- Paper sprints
- Paper draft: google doc
  - Tagging others to obtain participations
  - Permit comments
  - Track changes with versions (saved each 1 to 3 days)
- Google slides
  - Ideas and concepts for teasers and figures
  - Versioning
- Rolling notes (as a memory for exchanges and decisions)
- Googlesheet tracking rules, actions and roles

# Radical Collaboration: Metadata RC in ISIDORe



# Radical Collaboration: Metadata RC in ISIDORe

## A paper is planned

Work on metadata

Metadata for  
ISIDORe projects  
results

### ISIDORe Project Metadata collections

MANDATORY COMMON MINIMUM METADATA REQUIREMENT (M-CMMR)

DESIRABLE COMMON MINIMUM METADATA REQUIREMENT (D-CMMR)

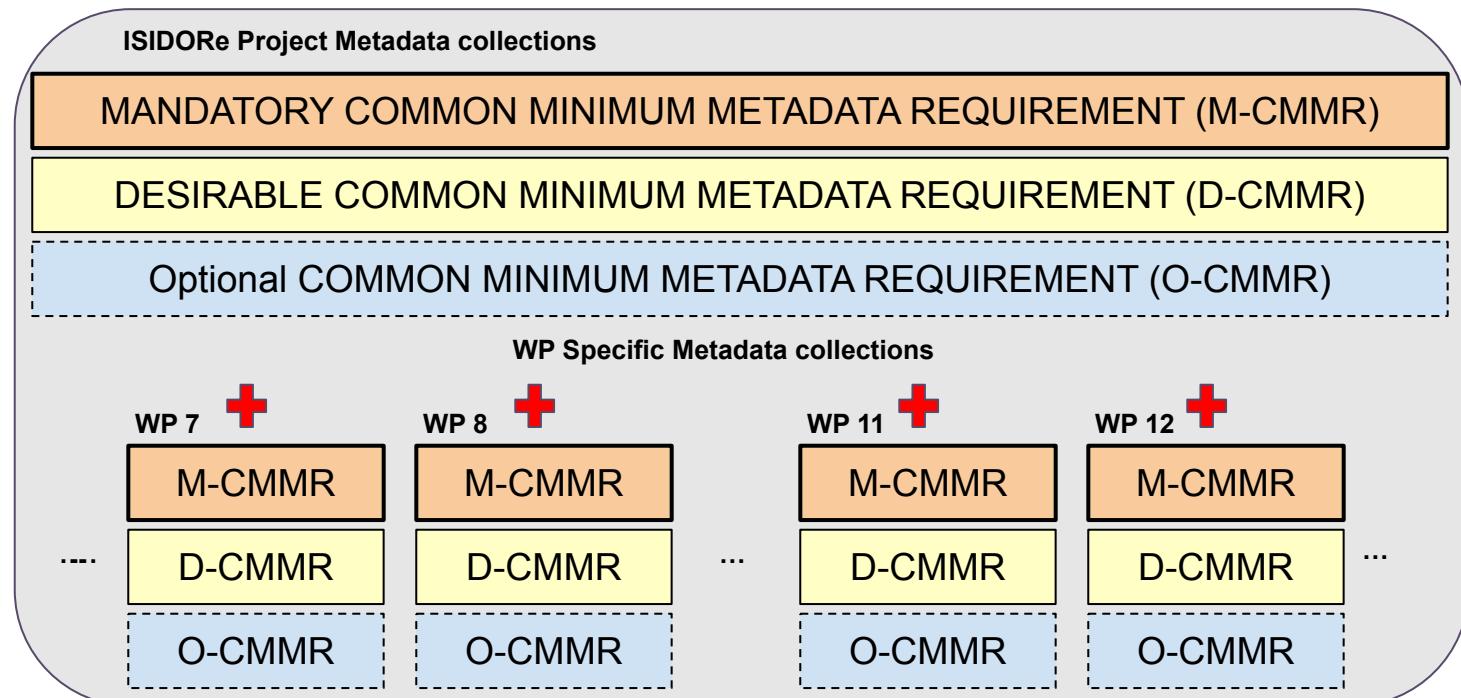
Optional COMMON MINIMUM METADATA REQUIREMENT (O-CMMR)

...

# Radical Collaboration: Metadata RC in ISIDORe

## A paper is in finalisation phase

Work on metadata  
Metadata for  
ISIDORe projects  
results



IF Scientific Data : 8.5

IF Journal of Data and Information Quality 0.73

IF Gigascience 7.6



**Journal of Data and Information Quality**

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nature > scientific data > news & comment

### News & Comment

Article Type	Year
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#### Comment

Open Access  
06 Mar 2023

#### Ten lessons for data sharing with a dat

A data commons is a cloud-based data platform with a g and share its data. Data commons provide a research cor using the elastic scalability provided by cloud computing accelerate the pace of research. Over the past decade, a i some of the lessons learned from this effort.

Robert L. Grossman

#### Comment

Open Access  
23 Feb 2023

#### Addressing barriers in FAIR data practi

Laura D. Hughes, Ginger Tsueng ... Lars Pache

#### Comment

Open Access  
30 Sept 2022

#### An agenda for addressing bias in confi

With increased availability of disaggregated conflict ever inclination, prejudice, or directionality to information, in i including confidence in whether data collection procedu data projects, we are uniquely aware of biases that are pr honest discussion about the responsibilities of all stakeholders thoughtfully and transparently reflect on those biases; use data in good faith; and acknowledge limitations. We therefore posit an agenda for data responsibility

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Volume 12  
2023

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### About the journal

*GigaScience* is an open access, open data, open peer-review journal focusing on 'big data' research from the life and biomedical sciences.

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*GigaScience* has been selected as the 2018 Prose Awards Winner for "Innovation in Journal Publishing."

**Scientific Data** is an open access journal dedicated to data, publishing descriptions of research datasets and articles on research data sharing from all areas of natural sciences, medicine, engineering and social sciences. It aims to advance the sharing and reuse of scientific data, promote wider data sharing and reuse, and to credit those that share.

*JDIQ*'s mission is to publish high quality articles that make a significant and novel contribution to the field of data and information quality. *JDIQ* welcomes

# Radical Collaboration: S3 Checklist

Who to be involved?

What to bring together

Rules and roles in RC?

Common and individual  
benefits?

Output to attract and/or  
to go further?

Possible next step(s)?

# Radical Collaboration: S3 Checklist

Who to be involved? -> Do you want TO  
BE in the DREAM TEAM?

**What to bring together**

**Rules and roles in RC?**

**Common and individual  
benefits?**

Output to attract and/or  
to go further?

Possible next step(s)?

# Radical Collaboration: S3 Checklist

Who to be involved? -> Do you want TO  
BE in the DREAM TEAM?

**What to bring together?** -> some ideas (others are expected from the group, this one can be dropped)

- *Template for Sustainable Software*
- Workshop “XXX”
- Advisory group on minimal Recommendation
- **Checklist template for easy publication**

*(to be published in an indexed journal as a concept?)*

## Common and individual benefits:

- credits for researcher (reports, citation of data, visibility, e-reputation: to draw a model)
- Rewards and credits for the group: an international publication (high Journal, high topic of interest...)

# Radical Collaboration: S3 Checklist

Who to be involved? -> Do you want TO  
BE in the DREAM TEAM?

**What to bring together**

**Rules and roles in RC?**

**Common and individual  
benefits?**

Output to attract and/or  
to go further?

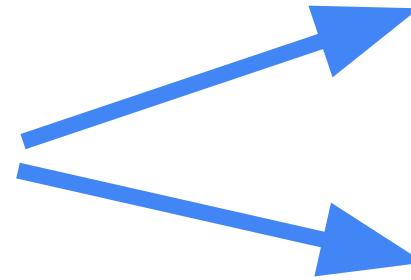
Possible next step(s)?

# Radical Collaboration: S3 Checklist

Possible next step(s)?

Are you in the CORE TEAM?

**What do you want to bring  
collectively for enhancing  
sustainability of software in  
Open Sciences?**



Rules and roles in RC?

**YOU will decide!**

Common and individual  
benefits?

**YOU will decide!**

# Radical Collaboration: S3 Checklist

Possible next step(s):

ARE YOU READY?

It is madness to hate all roses  
because a thorn pricked you, to  
abandon all dreams because one of  
them did not come true, to give up  
all attempts because one failed...

Le Petit Prince, Antoine de Saint-Exupéry

