



HAL
open science

Operationalizing and evaluating the FAIRness concept for a good quality of data sharing in Research: the RDA-SHARC-IG (SHARing Rewards and Credit Interest Group)

Romain David, Laurence Mabile, Mohamed Yahia, Anne Cambon-Thomsen,
Anne-Sophie Archambeau, Louise Bezuidenhout, Sofie Bekaert, Gabrielle
Bertier, Elena Bravo, Jane Carpenter, et al.

► To cite this version:

Romain David, Laurence Mabile, Mohamed Yahia, Anne Cambon-Thomsen, Anne-Sophie Archambeau, et al.. Operationalizing and evaluating the FAIRness concept for a good quality of data sharing in Research: the RDA-SHARC-IG (SHARing Rewards and Credit Interest Group). assemblée MaDICS 2018, Nov 2018, Strasbourg, France. , 2018, 10.5281/zenodo.1745374 . hal-01929834

HAL Id: hal-01929834

<https://hal.science/hal-01929834>

Submitted on 21 Nov 2018

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution 4.0 International License

Romain David, Laurence Mabile, Mohamed Yahia, Anne Cambon-Thomsen, Anne-Sophie Archambeau, Louise Bezuidenhout, Sofie Bekaert, Gabrielle Bertier, Elena Bravo, Jane Carpenter, Anna Cohen-Nabeiro, Aurélie Delavaud, Michele De Rosa, Laurent Dollé, Florencia Grattarola, Fiona Murphy, Sophie Pamerlon, Alison Specht, Anne-Marie Tassé, Mogens Thomsen, Martina Zilioli, and the RDA-SHARC Interest Group.

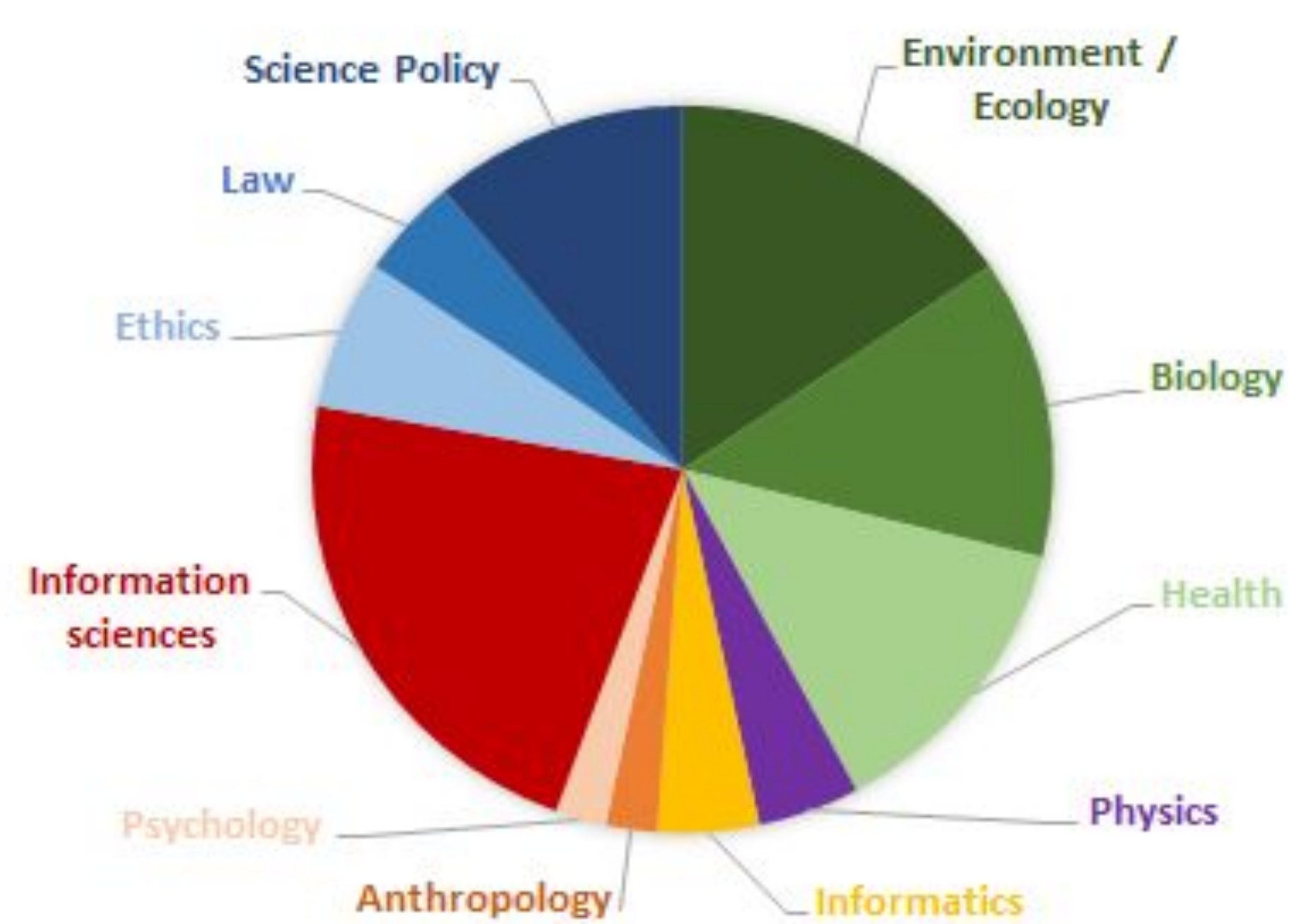
Contacts: Romain David romain.david@imbe.fr Laurence Mabile: laurence.mabile@univ-tlse3.fr Anne Cambon-Thomsen: anne.cambon-thomsen@univ-tlse3.fr

DEVELOPING CREDITING PROCESSES & ACTIONS TO FOSTER DATA SHARING

Data sharing statements and promotion is a strong reality but challenging, especially when considering the many obstacles that remain on several fronts. Among these obstacles is the lack of relevant and recognized rewarding mechanisms for the very specific efforts required to share organized datasets and physical resources (Cambon-Thomsen *et al.*, 2011; Mabile *et al.*, 2016). The RDA-SHARC interest group is an interdisciplinary volunteer member-based group set up to unpack and improve crediting and rewarding mechanisms in the data/resources sharing process. The objectives are:

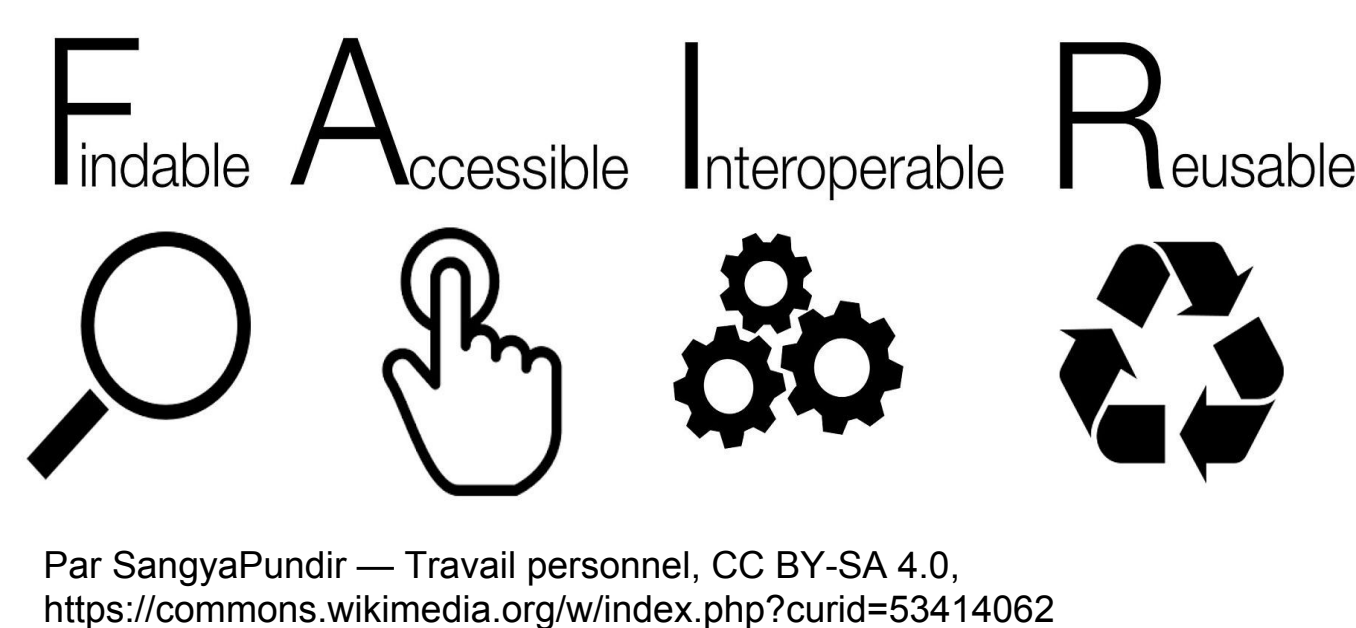
- 1/ To review the existing rewarding mechanisms and their limits in various scientific communities, and to identify key factors to improve the process and optimize the sharing of datasets and bioresources; i.e. data and physical samples (ex: tools, incentives, requirements...).
- 2/ To develop processes for stepwise adoption of principles and implementation measures tuned to national, local and institutional contexts.
- 3/ To rely upon this analysis to encourage the inclusion of physical bioresources sharing-related criteria in the research evaluation process at the European and national institutional levels;
- 4/ To disseminate information and findings to diverse communities of stakeholders;

SKILLS REPRESENTED IN THE SHARC GROUP



ASSESSING DATA SHARING ACTIONS TO BUILD CREDITING/REWARDING PROCESSES

As a way to foster data sharing, the RDA-SHARC-IG is developing **two assessment grids** using criteria to establish if data are compliant to the F.A.I.R principles (findable / accessible / interoperable / reusable) from **FORCE 11***, and on the Open Science Career Assessment Matrix designed by the **EC Working group on Rewards under Open science***



BUILDING FAIR- BASED ASSESSMENT GRIDS

To be generic and trans-disciplinary, assessment grids should be understandable by all scientist including ones who are not expert in data science.

The **two grids** are based on previous works on FAIR data management (Reymonet *et al.*, 2018; Wilkinson *et al.*, 2018; and E.U.Guidelines*):

- 1/ The self-assessment grid to be used by a scientist as a 'checklist' to identify her/his own activities and to pinpoint the hurdles that hinder efficient sharing and reuse of his/her data by all potential users.
- 2/ The two-level grid (quick/extensive) to be used by the evaluator to assess the quality of the researcher/scientist sharing practice, over a given period, taking into account the means & support available over that period. Assessment criteria are classified according to their level of stringency for FAIRness (mandatory / recommended / optional).

SHARC-IG TARGETED OUTCOMES

- Background paper on 'rewarding' mechanisms for sharing datasets & bioresources and their link to research institutional evaluation -To be published as an RDA endorsed paper in an open access highly visible science journal with a science policy section
- Set of generic recommendations towards relevant stakeholders meant at helping the implementation of crediting/rewarding processes for FAIR sharing
- Dissemination of the ongoing work in relevant spaces: RDA P9, Apr 2016, Barcelona, SP; RDA P11 Mar 2018, Berlin, GE; European Science Open Forum, ESOF July 2018, Toulouse, FR; RDA-P12, Nov 2018, Gaborone, BW; MaDICS Nov 2018, FR; Journées nationales Science Ouverte, Dec 2018, Paris FR.
- Connecting SHARC with RDA working groups to address specific issues such as developing a grid for assessing the FAIR sharing activity

References

- Cambon-Thomsen A, Carpenter J, Dagher G, Dalglish R, Deschênes M, di Donato JH, Filocamo M, Goldberg M, Hewitt R, Hofman P, Kauffmann F, Leitsalu L, Lomba I, Mabile L, Melegh B, Metspalu A, Miranda L, Napolitani F, Oestergaard MZ, Parodi B, Pasterk M, Reiche A, Rial-Sebbag E, Rivalle G, Rochaix P, Susbielle G, Tarasova L, Thomsen M, Thorisson GA, Zawati MH, Zins M: BRIF workshop group. The role of a Bioresource Research Impact Factor as an incentive to share human bioresources. *Nature Genetics*. 2011; 43(6):503-4.
- Mabile L, De Castro P, Bravo E, Parodi B, Thomsen M, Moore S, Cambon-Thomsen A. Towards new tools for bioresource use and sharing. *Information Services & Use*. Dec 2016. DOI: <http://dx.doi.org/10.3233/isu-160811>
- Reymonet N, Moysan M, Cartier A, Délémontez R. Réaliser un plan de gestion de données « FAIR » : modèle, 2018. (sic_01690547v2)
- Wilkinson MD, Sansone SA, Schultes E, Doorn P, Bonino da Silva Santos LO, & Dumontier M (2018). A design framework and exemplar metrics for FAIRness. *Scientific data*, 5, 180118. doi:10.1038/sdata.2018.118
- Wilkinson MD., Dumontier M, Aalbersberg IJ, Appleton G, Axton M, Baak A, Blomberg N, Boiten JW, da Silva Santos LB, Bourne PE, Bouwman J, Brookes AJ, Clark T, Crosas M, Dillo I, Dumon O, Edmunds S, Evelo CT, Finkers R, Gonzalez-Beltran A, Gray AJ, Groth P, Goble C, Grette JS, Heringa J, 't Hoen PA, Hoofst R, Kuhn T, Kok R, Kok J, Lusher SJ, Martone ME, Mons A, Packer AL, Persson B, Rocca-Serra P, Roos M, van Schaik R, Sansone SA, Schultes E, Sengstag T, Slater T, Strawn G, Swertz MA, Thompson M, van der Lei J, van Mulligen E, Velterop J, Waagmeester A, Wittenburg P, Wolstencroft K, Zhao J, Mons B. The FAIR Guiding Principles for scientific data management and stewardship. *Sci Data*. 2016 Mar 15;3:160018. doi: 10.1038/sdata.2016.18.

GRAMINEES members have been participating actively in the SHARC Interest Group from the beginning. As the aim of GRAMINEES action is **to develop analyses based on the graph theory with an interdisciplinary approach**, FAIRness of data sharing is a *sine qua non* condition to permit transdisciplinary work without misunderstanding as well as preserving consistency of aggregated data.

SHARC'S MECHANISM

SHARC-IG is a recognised and endorsed interest group (40 pers., oct 2018) within RDA (Research Data Alliance). RDA is a community-driven organisation that aims to enable open sharing of data worldwide. RDA provides a neutral space where its members can come together through focused global Working and Interest Groups. SHARC-IG works through virtual web meetings & tools as often as necessary, with a minimum of once a month for a regular update and face to face meetings when possible at each RDA plenary conference every 6 months. When needed, task sub-groups are formed to work on specific issues. Regular information and feedback is relayed via the RDA SHARC's mailing list and webpage towards RDA members.

Ongoing background paper available on the RDA SHARC's webpage.

INPUT NEEDED FROM RESEARCH COMMUNITIES

To implement a highly fair assessment of the sharing process, appropriate criteria must be selected in order to design optimal generic assessment grids. This process **requires participation, time and input from volunteer scientists data producers/users from various fields**. Since the beginning of this task group in RDA-SHARC-IG on sept 4th, 2018, about two teleconferences per week have been held as a working subgroup, to enable exchanges between participants on this specific issue. The aim was to get feedback from a larger community regarding the validity of the criteria over various fields. The assessment grids **will circulate within the RDA community as an online questionnaire before end of 2018**.

Are you a scientist producing or using data? **Please participate** to the development of the FAIRness assessment grids by completing the questionnaire. **It will help you get credit back for your efforts!**

HOW?

Join the SHARC RDA community (free) at <https://www.rd-alliance.org/get-involved.html> and there join the SHARC interest group at <https://www.rd-alliance.org/groups/sharing-rewards-and-credit-sharc-ig> You will then be informed in real time.



<https://www.rd-alliance.org/groups/sharing-rewards-and-credit-sharc-ig>

* MORE INFORMATION AT:

- FAIR principles: FORCE 11:
 - <https://www.force11.org/>
- SHARC-IG at RDA Plenary 9:
 - <https://www.rd-alliance.org/how-give-credit-scientists-their-involvement-making-data-samples-available-sharing-rda-9th-plenary>
- SHARC-IG at RDA Plenary 11:
 - <https://www.rd-alliance.org/group/sharing-rewards-and-credit-sharc-ig/post/rda-p11-sharc-session-slides>
- SHARC-IG at ESOF 2018:
 - <https://www.rd-alliance.org/group/sharing-rewards-and-credit-sharc-ig/post/rda-sharc-esof-2018>
- European Commission Directorate-General for Research and Innovation report: Evaluation of Research Careers fully acknowledging Open Science Practices; Rewards, incentives and/or recognition for researchers practicing Open Science. 2017:
 - https://ec.europa.eu/research/openscience/pdf/os_rewards_wgreport_final.pdf