

On the dissemination/evaluation loop for Research Software

Teresa Gomez-Diaz [*], Tomas Recio [**]

[*] CNRS - Laboratoire d'informatique Gaspard-Monge (Est of Paris)

[**] Universidad Antonio de Nebrija (Madrid)

This work is licensed under
Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License

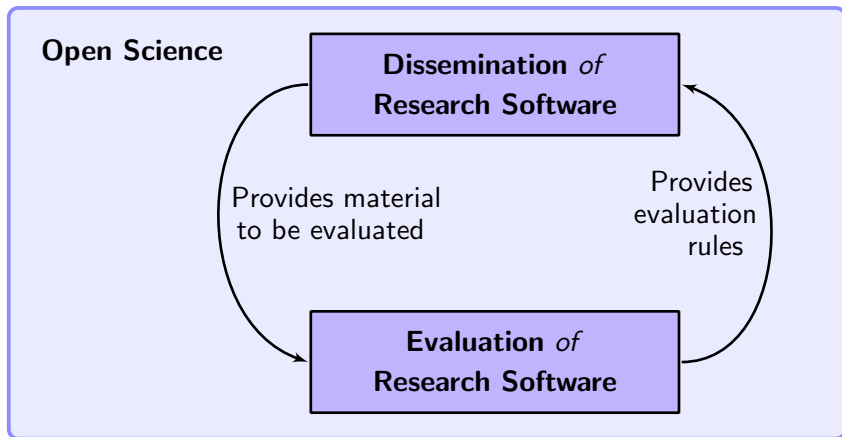
<http://creativecommons.org/licenses/by-nc-nd/4.0/>

Open Research Tools and Technologies, Policies panel

FOSDEM22, February 5th 2022



Goal of this talk : the dissemination/evaluation loop



Research software (RS) definition

(2007) TGD : Autour de la valorisation de logiciels développés dans un laboratoire de recherche

(2009) TGD : Guide laboratoire pour recenser ses développements logiciels

(2011, 2015) TGD : Article vs. Logiciel : questions juridiques et de politique scientifique dans la production de logiciels

*Un logiciel du laboratoire est un programme utile pour faire avancer la recherche qui a été produit avec la participation d'un membre du laboratoire.
Il arrive souvent que des publications de recherche soient associées.*

- goal : research
- a member of the lab participates on the code writing (as in a publication)
- the important production are publications : RS as an associated object

(2019) TGD, T. Recio : On the evaluation of research software : the CDUR procedure

(2021) TGD, T. Recio : Open comments on the Task Force SIRS report : Scholarly Infrastructures for Research Software ...

***Research software (RS)** is a well identified set of code that has been written by a well identified research team. It is software that has been built and used to produce a result published or disseminated in some article or scientific contribution.*

Each RS encloses a set of files containing the source code and the compiled code. It can also include other elements as the documentation, specifications, use cases...

Protocol(s) CDUR for RS evaluation

Designed to help evaluated researchers, evaluation committees, decision makers.

- (C) Citation** measure if RS is well identified as a research output :
good citation form, but also metadata, best citation practices...
legal point : authors, affiliations, participation %
- (D) Dissemination** best dissemination practices, in agreement with
the scientific policy of the evaluation context
[14] (2014) TGD : Free software, Open source software, licenses...
policy point : Open Science, **legal point** : licenses
- (U) Use** “software” aspects **of RS** : correct results, facilitate reuse, good softw.
practices : doc, test, install, up to read the code, launch RS...
point reproducibility : validation of scientific results
- (R) Research** “research aspects” : quality of the scientific work, proposed and
coded algorithms & data structures, related publications,
collaborations...
point research : impact

Flexibility of application : each decision maker or evaluation committee
sets its own CDUR protocol adapted to the evaluation context and goals.

A RS dissemination procedure

(2009) TGD : Guide laboratoire pour recenser ses développements logiciels

(2010) TGD : Diffuser un logiciel de laboratoire : recommandations juridiques et administratives

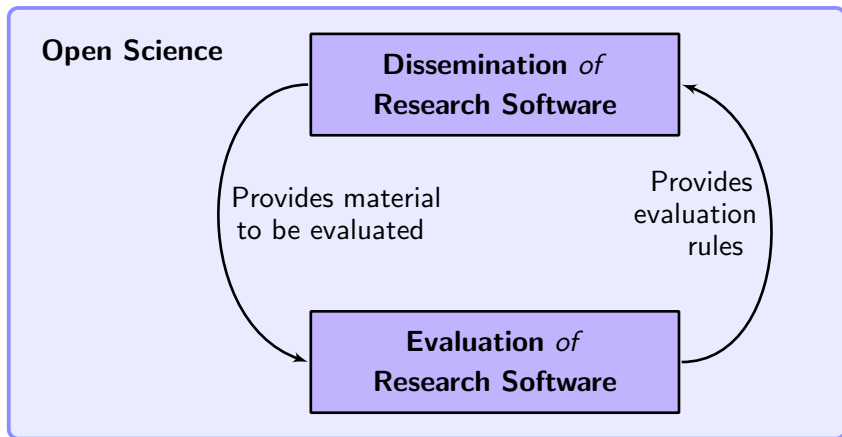
(2014) TGD : Free software, Open source software, licenses. A short presentation including a procedure for research software...

Flexible, to be adapted to different situations, also valid for Research Data.

- Choose a name, avoid trademarks and proprietary names; can be associated date, version...
- (*) Establish list of authors (with % of participation) and affiliations.
- (*) Establish the list of main functionalities.
- (*) Establish the list of included software & data components, their licences.
- Choose a license, have an agreement (signed) with rightholders and authors.
Beware of licence compatibility and inheritance issues.
- Choose a website, forge, deposit for dissemination, indicate licences and how to cite the work.
Use PIDs if possible.
- (*) Archive a tar.gz or similar regularly to keep track of added functionalities.
- Inform your laboratories and head institutions (if not done in the license step).
- Set and indicate clearly a contact address.
- Distribute the software or data component. Inform the target community.
Consider the publication of Software or Data papers...

(*) To review for each new RS version.

Conclusion : the dissemination/evaluation loop



References

- 2007 TGD : Autour de la valorisation de logiciels développés dans un laboratoire de recherche.
- 2009 TGD : Licence & copyright pour les développements de logiciels libres de laboratoires de recherche, PLUME, <https://projet-plume.org/fr/ressource/faq-licence-copyright>
- 2009 TGD : Guide laboratoire pour recenser ses développements logiciels, PLUME, <https://projet-plume.org/ressource/guide-laboratoire-recensement-developpements-logiciels>
- 2010 TGD : Diffuser un logiciel de laboratoire : recommandations juridiques et administratives, PLUME, <http://www.projet-plume.org/fr/ressource/diffuser-logiciel-recomm-juridiques-admin>
- 2011 TGD : Article vs. Logiciel : questions juridiques et de politique scientifique dans la production de logiciels, PLUME, <http://www.projet-plume.org/fr/ressource/article-vs-logiciel>
- 2014 TGD : Free software, Open source software, licenses. A short presentation including a procedure for research software and data dissemination, Zenodo, <https://zenodo.org/record/11709>
- 2015 TGD : Article vs. Logiciel : questions juridiques et de politique scientifique dans la production de logiciels, Société Informatique de France, <https://zenodo.org/record/18993>
- 2018 TGD, G. Romier : Research Software management Plan Template V3.2, Projet PRESOFT, Zenodo, <https://zenodo.org/record/1405614>. Voir aussi sur [DMP OPIDoR](#).
- 2019 TGD : Le Projet PLUME et le paysage actuel des logiciels de la recherche dans la science ouverte, Zenodo, <https://zenodo.org/record/2591474>
- 2019 TGD, T. Recio : On the evaluation of research software: the CDUR procedure, F1000Research, <https://doi.org/10.12688/f1000research.19994.2>
- 2020-1 TGD, T. Recio : Towards an Open Science definition as a political and legal framework: on the sharing and dissemination of research outputs, POLIS N. 19, 2020, http://uet.edu.al/polis/images/Teresa_Gomez-Diaz.pdf, Version 3 du 28/02/2021 : <https://zenodo.org/record/4577066>
- 2021 TGD, T. Recio : Open comments on the Task Force SIRS report: Scholarly Infrastructures for Research Software (EOSC Executive Board, EOSCArchitecture), RIO 7: e63872, <https://doi.org/10.3897/rio.7.e63872>