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The future of Open Science asks for a common understanding

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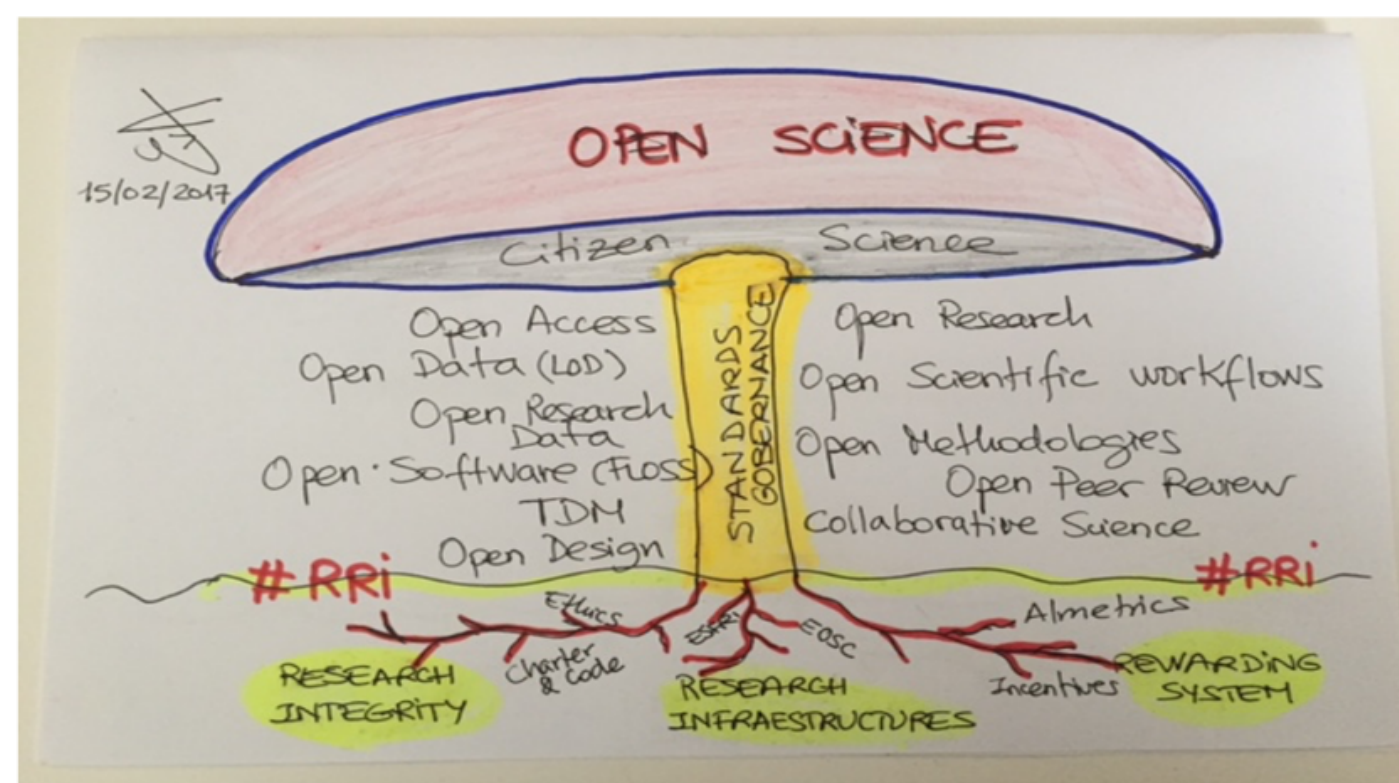
A definition is missing

Definition [of Open Science] remains vague, probably because objectives are vague... (Aspesi, COASP 2014)

... there is no single, accepted, unified definition or vision of 'open science'... (Tennant, 2018)

... there is a lack of awareness about what Open Science is, mainly due to the fact that there is no formal definition of Open Science ... (Vicente-Saez & Martinez-Fuentes, 2018)

Recent, inclusive & complete visions



(Méndez 2021, Image: Méndez 2017, CC-BY)

For the purpose of this Recommendation, **Open Science** is defined as an inclusive construct [...] aiming to make scientific knowledge openly available, accessible and reusable for everyone, [...] it includes all scientific disciplines and aspects of scholarly practices, [...] it builds on the following key pillars: open access to scientific knowledge, open science infrastructures, ... (UNESCO, 2021)

Our contribution

Goal

To contribute to the adoption of a common, unified vision.

Definition proposal

Open Science is the political and legal framework where research outputs are shared and disseminated in order to be rendered visible, accessible and reusable (Gomez-Diaz & Recio, 2020-21).

Three steps supporting this proposal

I - Three selected pillars for a common understanding

II - Towards a political and legal framework

III - Enablers: three cornerstones to get to a working framework

I - Three selected pillars for a common understanding



Budapest Open Access Initiative, 2002

By "open access" to [peer-reviewed research literature], we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link...



Free Software Foundation, 1985

The free software definition presents the criteria for whether a particular software program qualifies as free software: the freedom to run the program as you wish, the freedom to study how the program works, and change it... + importance of licenses

Legal



Committee on Data for Sciences and Technology, 1966

CODATA est un Comité au niveau scientifique international le plus élevé [...] à cause de l'importance qui s'attache à l'évaluation des données...

II - Towards a political and legal framework



"Towards better access to scientific information: Boosting the benefits of public investments in research" (European Commission, 2012)

Policy

...sets out the action that intends to improve access to scientific information and to boost the benefits of public investment in research. [...] To improve access to scientific information, Member States, research funding bodies, researchers, scientific publishers, Universities and their libraries, innovative industries, and society at large need to work together [...] so that the 'fifth freedom' of the EU – the free circulation of knowledge – can become a reality.



BOE N. 131 de 2 de junio de 2011, Artículo 37

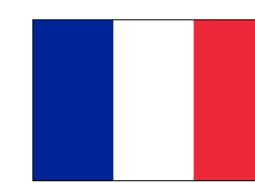
- Los agentes públicos impulsarán el desarrollo de repositorios de acceso abierto a las publicaciones...
- Los investigadores cuya actividad haya sido financiada mayoritariamente con los Presupuestos Generales del Estado están obligados a publicar en acceso abierto una versión electrónica de los contenidos aceptados para publicación...
- La versión electrónica pública podrá ser empleada en los procesos de evaluación.

Law

Estrategia Española de Ciencia, Tecnología e Innovación (EECTI) 2021-2027

La ciencia excelente y abierta constituye uno de los pilares del Objetivo 4 (Generación de conocimiento y liderazgo científico). El impulso a un modelo de Ciencia Abierta favorecerá la generación de conocimiento de alta calidad e impacto, así como su transmisión a la sociedad...

Policy



LOI du 7 octobre 2016 pour une République numérique, Article 30

- Lorsqu'un écrit scientifique issu d'une activité de recherche financée au moins pour moitié par des dotations publiques est publié, son auteur dispose, même après avoir accordé des droits exclusifs à un éditeur, du droit de mettre à disposition gratuitement...
- Dès lors que les données issues d'une activité de recherche financée au moins pour moitié par des dotations publiques [...] ont été rendues publiques, leur réutilisation est libre.

Plan national pour la Science Ouverte, Juillet 2018 & 2ième Plan, juillet 2021

- Rendre obligatoire la publication en accès ouvert des articles et livres issus de recherches financées par appel d'offres sur fonds publics.
- Rendre obligatoire la diffusion ouverte des données de recherche issues de programmes financés par appels à projets sur fonds publics.



Other Member States, see: *Open Science overview in Europe*, OpenAIRE, <https://www.openaire.eu/os-eu-countries>

III - Enablers: three cornerstones to get to a working framework

- **Institutional policies:** the required evolution of policies of Universities and RPOs.
- **Infrastructures:** the development of Open Science-oriented infrastructures and services.
- **Research evaluation:** the transformation of evaluation policies and practices.

Policy

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- More information and references at: Gomez-Diaz & Recio (2020-21).

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