



## **Analysis and Benchmarking: Self-assessment *Questionnaire***

Created by Centre de Recerca per a l'Educació Científica i Matemàtica (CRECIM) of the Universitat Autònoma de Barcelona (UAB) with contributions of other ORION partners.



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# What do you think about Open Science?

## 10 questions about your views on Open Science

There are multiple definitions of Open Science:

- "Open science is the idea that scientific knowledge of all kinds should be openly shared as early as is practical in the discovery process." Michael Nielsen (2011).

- "Open science commonly refers to efforts to make the output of publicly funded research more widely accessible in digital format to the scientific community, the business sector, or society more generally ... to promote long-term research as well as innovation." OECD (2015).

Open Science is an umbrella term encompassing a multitude of aspects: open access to publications, open research data, reproducibility and research integrity, research evaluation and public engagement among others. What do you think?

### 1. In your opinion, to whom should science be opened?

For each item, rank it from 1 to 5, 1=should not be opened, 5= should be very opened

	1	2	3	4	5
Open to scientists from the same area / discipline.					
Open to scientists from other disciplines					
Open to all citizens					
Open to civil and social organisations					
Open to specially concerned groups (e.g. patients)					
Open to funders and policy makers					
Open to industry and companies					

### 2. In your opinion, how open do you think the different aspects of the scientific process should be to the scientific community (all scientists)?

For each item, rank it from 1 to 5, 1=should not be opened, 5= should be very opened

	1	2	3	4	5
<b>The research priorities</b> (what topics, how much funding...)					
<b>The design of the research</b> (what methodologies, what ethical considerations...)					
<b>The research process</b> (data gathering, data management, replicability ...)					
<b>The research results</b> (knowledge, publications, patents...)					
<b>The research outcomes</b> (design of final products for end users...)					



### 3. In your opinion, how open do you think the different aspects of the scientific process should be to society (all citizens)?

For each item, rank it from 1 to 5, 1=should not be opened, 5= should be very opened

	1	2	3	4	5
<b>The research priorities</b> (what topics, how much funding...)					
<b>The design of the research</b> (what methodologies, what ethical considerations...)					
<b>The research process</b> (data gathering, data management, replicability ...)					
<b>The research results</b> (knowledge, publications, patents...)					
<b>The research outcomes</b> (design of final products for end users...)					

### 4. In your opinion, how open do you think the different aspects of the scientific process to funders and policy makers?

For each item, rank it from 1 to 5, 1=should not be opened, 5= should be very opened

	1	2	3	4	5
<b>The research priorities</b> (what topics, how much funding...)					
<b>The design of the research</b> (what methodologies, what ethical considerations...)					
<b>The research process</b> (data gathering, data management, replicability ...)					
<b>The research results</b> (knowledge, publications, patents...)					
<b>The research outcomes</b> (design of final products for end users...)					

### 5. In your opinion why should science be open?

	Not a reason for Open Science	A relatively important reason	An important reason	The most important reason for Open Science	I don't know it / I don't have enough information
<b>Diversity:</b> incorporation of underrepresented groups in science (gender, races, cultures, etc.).					
<b>New and innovative economic possibilities:</b> crowdfunding, new types of founders, etc.					
<b>Efficiency:</b> sharing of data, procedures					



and/or to optimize science.					
<b>Equity:</b> access for all to scientific results, methods, software, etc., regardless of economic capacity or institutional affiliation.					
<b>Ethics:</b> Open Science is aligned with principles of research integrity.					
<b>Fairness:</b> Science is often funded by society, so all results from the research should be available to society.					
<b>Impact:</b> To outperform traditional metrics for scientific impact: larger audience, higher engagement, etc.					
<b>Rigour:</b> Open access, open data and/or open replicability make science easier to review.					

## Others

### 6. In your opinion why should science NOT be open?

	<b>Not a reason against Open Science</b>	<b>A relatively important reason against</b>	<b>An important reason against</b>	<b>The most important reason against Open Science</b>	<b>I don't know it / I don't have enough information</b>
<b>Not a priority now.</b> Currently, there are higher priorities in the scientific community					



<p><b>Public's lack of understanding.</b> Society cannot make decisions or have a useful input without an understanding of science/the scientific process.</p>					
<p><b>Public is not ready now.</b> Society is not ready for participation in science (lack of skills, tools, etc).</p>					
<p><b>Risk to fundamental research.</b> Open Science would only benefit applied science and be detrimental to fundamental research.</p>					
<p><b>Low quality.</b> By releasing publications prior to classical peer-review, the veracity of papers will be difficult to assess by individual researchers Quality is not guaranteed by preprint servers.</p>					
<p><b>Danger and potential misuse.</b> Open Science may interfere with research integrity (ex: release of medical personal data). It could also facilitate misuse of research results (e.g. biological weapons).</p>					
<p><b>Lack of incentives.</b> Open data / publication runs counter "meritocracy" and individual effort, and</p>					



they are not captured and rewarded through traditional metrics.					
<b>Unfairness.</b> If a research group generates knowledge with own resources, it could be unfair if others use this knowledge to get economic benefits for themselves					

## Others

7. Imagine in your everyday work at your institution you decide to embrace (or you already have embraced) an Open Science perspective. What do you think (or know) are the most important barriers you will be facing?

	<b>Very important barrier</b>	<b>Important barrier</b>	<b>Low barrier</b>	<b>Not a barrier at all</b>	<b>I don't know it / I don't have enough information</b>
<b>Lack of proper infrastructure.</b> How/where do I store open data?					
<b>Lack of clear steps to follow.</b> How do I begin? How do I proceed?					
<b>Authentic public engagement.</b> How do I achieve representative samples of citizens (motivate people other than already concerned groups)?					
<b>Budget and funding constraints.</b> How do I find the funding to ensure open data and open publications?					
<b>Time constraints.</b> I don't have time to practice Open Science, it is too time-consuming.					



<b>Fears and uncertainties for career development.</b> Will my Open Science practice be valued at institutional level or during my career? Does it mean I will receive more funding or merit?					

**Others**

**8. Do you already participate in any Open Science activity/action?**

	<b>Regularly</b>	<b>Sporadically</b>	<b>Maybe in the near future</b>	<b>Not at all</b>	<b>I don't know it / I don't have enough information</b>
<b>Collaborations across institutions and disciplines</b> (interdisciplinary groups, projects or meetings, collaborative initiatives, etc.)					
<b>Dissemination to the public and outreach</b> (social networks, articles or talks to the lay public, relationship with the media, etc.)					
<b>Dissemination to scientists</b> (conferences and seminars, courses, articles, etc.)					
<b>Ethical aspects of science and research integrity</b> (participation in ethics committees, bioethical research, training, awareness activities, etc.)					
<b>Gender equality</b> (gender or sex is taken into account in your research, promotion of women visibility in science, training, mentoring, etc.)					
<b>Open Access publication</b> (open access journals, economic support to publish in open access, open peer review, etc.)					



<b>Open Data</b> (use of public data infrastructure to deposit and/or access data, participation in open data management, training, etc.)					
<b>Participation of the public and/or different stakeholders to your research</b> (dialogues with the public, science cafes, citizen science initiatives, collaborations with NGOs, patient associations, etc.)					
<b>Collaboration with industry</b> (joint events, joint projects, partnerships, etc.)					
<b>Collaboration with funders</b> (participation in open science calls, efforts to incorporate the vision of open calls in research, etc.)					
<b>Science education</b> (school-research partnerships, role model activities, non-formal education activities, etc.)					

## Others

### 9. Do you receive training from your institution related to Open Science?

	<b>I receive adequate training</b>	<b>I need more training</b>	<b>These topics are not relevant for my specific professional tasks</b>	<b>I don't know it / I don't have enough information</b>
<b>Research and data management</b> (Data storage, sharing, FAIR - "Findable, Accessible, Interoperable, and Reusable" - approaches)				
<b>Research integrity</b> (Animal Research, data analysis and interpretation, research with human samples, good practice in the lab, etc.)				





<b>Research publishing and dissemination</b> (Open Access, pre-prints, peer review)				
<b>Collaborating and networking</b> (How to improve collaboration through Open Science)				
<b>Communicating science to the general public</b> (Different audiences, practical guides to getting started, online and offline options)				
<b>Involving the general public in research</b> (Citizen science: data gathering, data analysis, use of results)				
<b>Evaluation of research projects and researchers</b>				
<b>Assessment of the impact of initiatives in public</b>				

## 10. Do you receive support or incentives from your institution related to Open Science?

	<b>I receive adequate support or incentives from my institution</b>	<b>I would like to receive more support or incentives enough</b>	<b>These kind of support or incentives are not relevant for my specific professional tasks</b>	<b>I don't know it / I don't have enough information</b>
<b>Written guidelines</b> (webpage/leaflet/videos), policies, recommendations				
<b>Technical infrastructure</b> (templates, software, storage, databases, publication and/or data repositories, etc.)				
<b>Specialist support</b> (experts on different aspects of Open Science, research data)				



committees, courses, workshops, etc.)				
<b>Financial support and rewards</b>				
<b>Careers perspectives and recognition</b>				

**Overall, if you had to summarise your view on Open Science, what would you say?**

- Open Science is an exciting opportunity for Science, mostly with benefits
- Open Science is an opportunity for Science, with the benefits overcoming the drawbacks
- Open Science is mostly positive for Science, it has benefits but also important drawbacks
- Open Science is an unimportant bureaucratic burden for Science
- Open Science is a worrying new perspective for Science
- Open Science is a real threat to Science

**Thank you very much for your valuable answers! Before completing, could you help by defining your profile?**

**Your position in the institution:**

- Profile A. Principal Investigators (PIs)
- Profile B. Senior researchers (staff scientists, etc.)
- Profile C. Postdocs
- Profile D. PhD students
- Profile E. Technicians
- Profile F. Staff at Core Facilities
- Profile G. Science communication / Outreach officers
- Profile H: Management and administrative staff
- Profile I: Funding programme manager

**Your gender:**

- Female
- Male
- Others

**Your professional experience in your current institution:**

- Less than 1 year
- 1 to 5 years
- More than 5 years





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