

Towards wide-scale adoption of open science practices: meta-research paves the way, open science communities walk the walk

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Towards wide-scale adoption of open science practices: meta-research paves the way, open science communities walk the walk

Towards wide-scale adoption of open science practices: The role of open science communities

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Science and Public Policy, scab039, <https://doi.org/10.1093/scipol/scab039>

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Outline

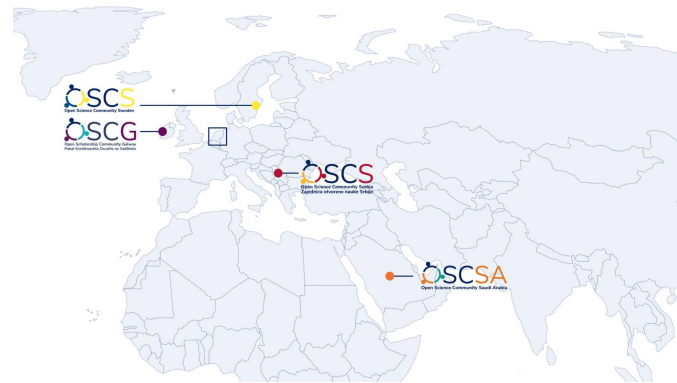
1. **Open Science Communities: a key player in large-scale transition to OS**
2. **Meta-research: steers the course of action**
3. **OSCs: platform to disseminate meta-research findings**

The problem

Despite the increasing availability of Open Science (OS) infrastructure and the rise in policies to change behaviour, **OS practices are not yet the norm.**

Open Science Communities (OSCs)

“... **learning groups** of scholars that **facilitate effective adoption**, and thus normalization, of **policy changes** and **technological innovation** in contemporary science.”



The what and why of Open Science

“Open Science represents a new approach to the scientific process based on **cooperative work** and new ways of diffusing knowledge by using **digital technologies** and new **collaborative tools**.”

The what and why of Open Science

To improve the X of science, with X being:

- reliability
- accountability
- accessibility
- transparency
- interoperability
- efficiency
- ...

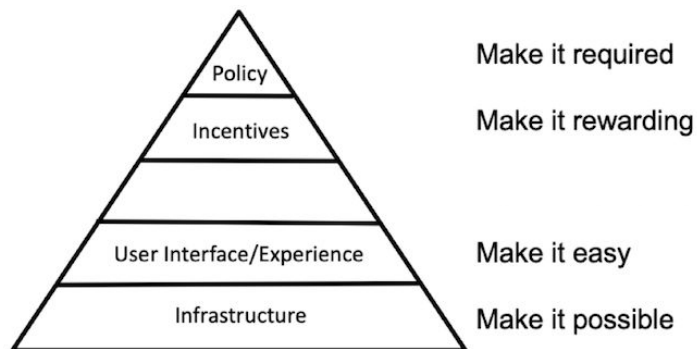
maintain/increase trust in science

Culture change: top-down and bottom-up

Strategy for Culture Change

June 11th, 2019, Brian Nosek

Posted in: [Reproducibility](#), [Open Science](#), [Culture Change](#), [Behavior Change](#)



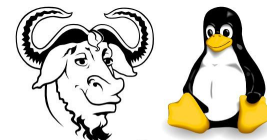
Open science infrastructure & initiatives



PsyArXiv Blog
Open-access preprint service for
psychology.



Framework for
Open and
Reproducible
Research
Training



GNU/Linux

Policy changes



<https://www.openscience.nl>



PERSPECTIVE article

Front. Big Data, 10 December 2019 | <https://doi.org/10.3389/fdata.2019.00043>



Open Science, Open Data, and Open Scholarship: European Policies to Make Science Fit for the Twenty-First Century

 Jean-Claude Burgelman*,  Corina Pascu*,  Katarzyna Szkuta,  Rene Von Schomberg,  Athanasios Karalopoulos,  Konstantinos Repanas and  Michel Schouppe

Open Science, DG Research and Innovation, European Commission, Brussels, Belgium

Challenges to widespread adoption of OS

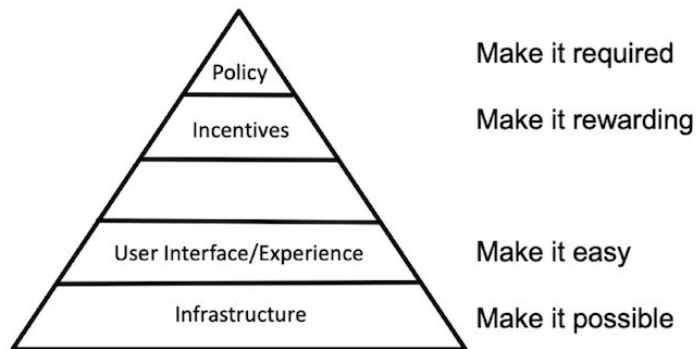
1. reaching the critical mass OSC give voice to the scholars themselves
2. inertia (perceived costs of change) a low-threshold exchange of knowledge
3. interdisciplinary differences university-wide involvement

Culture change

Strategy for Culture Change

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risk of ineffectiveness



Open Science Communities

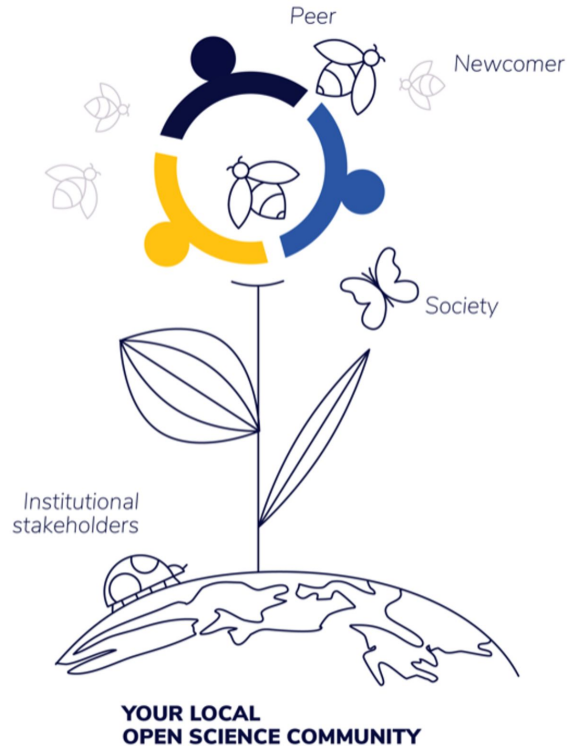


risk of limited impact

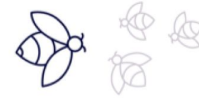
Why Open Science Communities?

- advocating for open science (especially within the “early majority”)
- increase visibility of OS practices
- learning communities
- ease the barrier of entry
- advocating for change with local policy-makers
- collaborative working / working open
- promote diversity, equity, and inclusion (code of conduct)

The how of OSCs



LEGEND



NEWCOMERS LEARN FROM EXPERIENCED **PEERS**



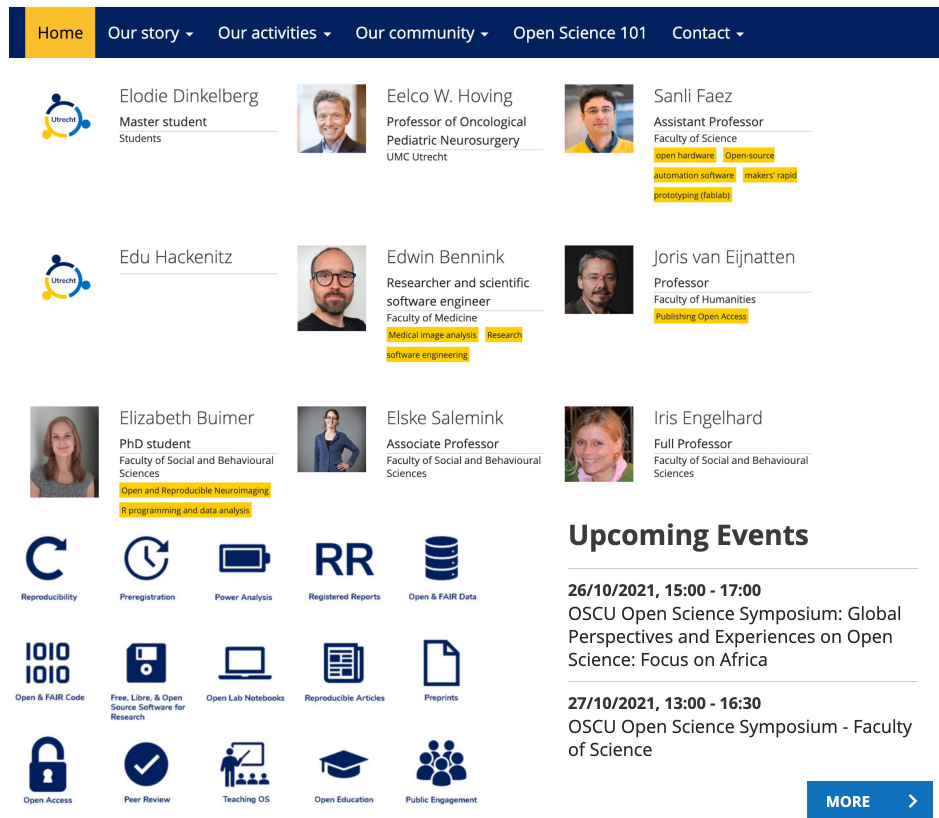
OSCS INTERACT WITH
INSTITUTIONAL STAKEHOLDERS ON
POLICY, INFRASTRUCTURE AND SUPPORT



A PLACE WHERE ACADEMIA AND SOCIETY
MEET, INTERACT AND CO-CREATE

The how of OSCs

- Website with profile pages
- Open Science 101
- Workshops and symposia
- Slack community
- Newsletter



Home Our story ▾ Our activities ▾ Our community ▾ Open Science 101 Contact ▾

Elodie Dinkelberg
Master student
Students

Eelco W. Hoving
Professor of Oncological
Pediatric Neurosurgery
UMC Utrecht

Sanli Faez
Assistant Professor
Faculty of Science
open hardware open-source
automation software makers' rap
prototyping (fablab)

Edu Hackenitz

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Researcher and scientific
software engineer
Faculty of Medicine
Medical image analysis Research
software engineering

Joris van Eijnatten
Professor
Faculty of Humanities
Publishing Open Access

Elizabeth Buimer
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Faculty of Social and Behavioural
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Open and Reproducible Neuroimaging
R programming and data analysis

Elske Salemink
Associate Professor
Faculty of Social and Behavioural
Sciences

Iris Engelhard
Full Professor
Faculty of Social and Behavioural
Sciences

Upcoming Events

26/10/2021, 15:00 - 17:00
OSCU Open Science Symposium: Global Perspectives and Experiences on Open Science: Focus on Africa

27/10/2021, 13:00 - 16:30
OSCU Open Science Symposium - Faculty of Science

REPRODUCIBILITY **PREREGISTRATION** **POWER ANALYSIS** **REGISTERED REPORTS** **OPEN & FAIR DATA**

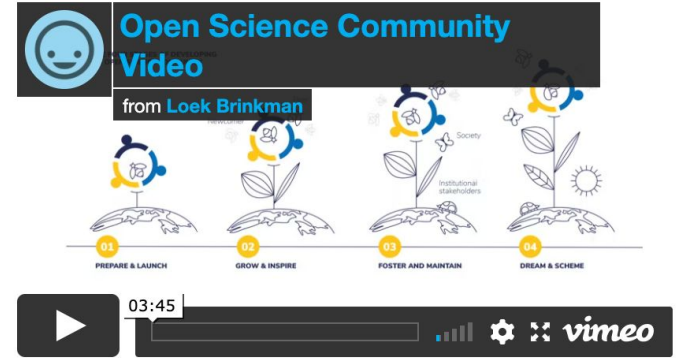
OPEN & FAIR CODE **FREE, LIBRE, & OPEN SOURCE SOFTWARE FOR RESEARCH** **OPEN LAB NOTEBOOKS** **REPRODUCIBLE ARTICLES** **PREPRINTS**

OPEN ACCESS **PEER REVIEW** **TEACHING OS** **OPEN EDUCATION** **PUBLIC ENGAGEMENT**

MORE ➤

Start your own Open Science community

- Starter Kit: www.StartYourOSC.com
- Connect with community coordinators
 - Sharing experiences and best practices
 - Slack channel
- Let meta-science shape the transition!



www.vimeo.com/510808878

Discussion

- How to showcase/quantify the impact of OCSs (via meta-research?)
- How can OSCs be more useful to meta-researchers?
- How do current efforts in the US compare to the format of OSCs?
- OSCs in the US?