Open Science at the VU

DR SANDER BOSCH

WHO AM I?

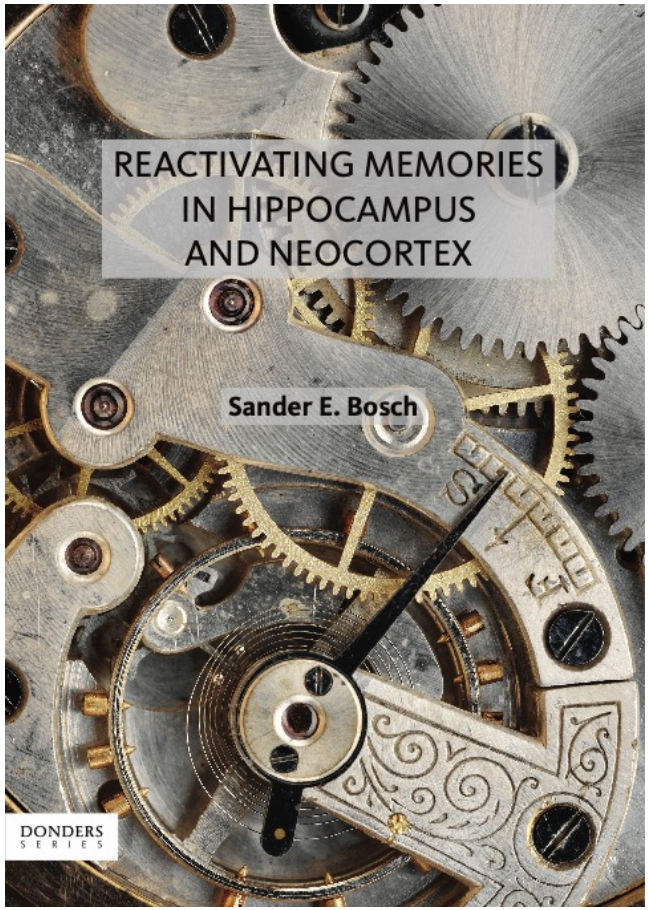
Sander Bosch

2011-2015	PhD in cognitive neuroscience
2015-2018	Postdoc in artificial intelligence
2019-2020	Project manager VU Research Support
2020-present	VU Open Science Coordinator

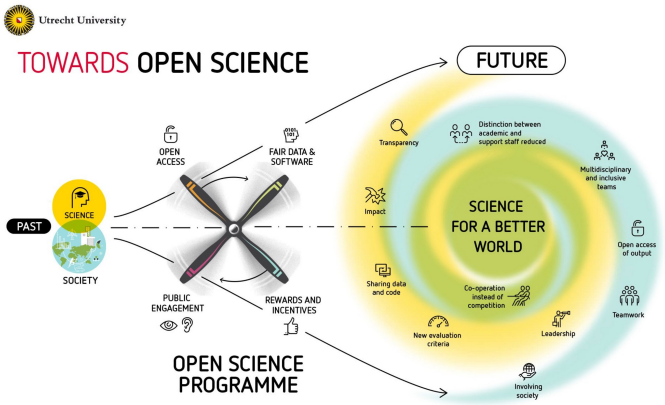
Member of the Accelerate Open Science-team (NPOS Project H)

Member of the VU Committee for Recognition & Rewards

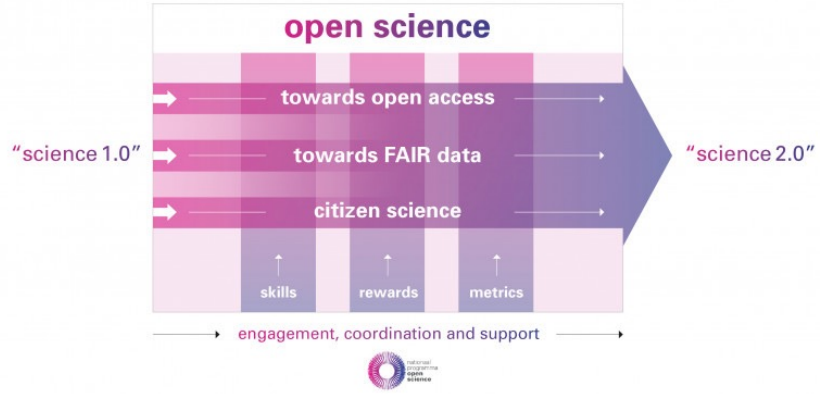
Member of Young Science in Transition



WHAT IS OPEN SCIENCE?



- Future of Scholarly Communication
- EOSC (European Open Science Cloud)
- FAIR Data
- Skills
- Research Integrity
- Rewards
- Altmetrics
- Citizen Science



https://www.uu.nl/onderzoek/open-science
https://www.tudelft.nl/library/tu-delft-open-science/about-the-programme
https://nl.wikipedia.org/wiki/Open_science
https://ec.europa.eu/info/research-and-innovation/strategy/strategy-2020-2024/our-digital-future/open-science_en#8-ambitions-of-the-eus-open-science-policy
https://www.openscience.nl/

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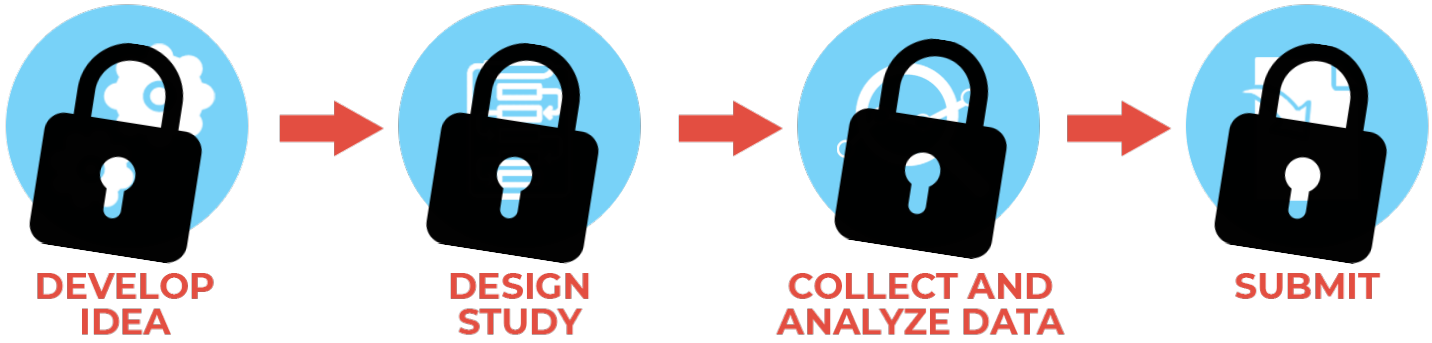
WHAT IS THE GOAL OF OPEN SCIENCE?

Open Science aims to

- “make scientific knowledge openly available, accessible and reusable for everyone
- increase scientific collaborations and sharing of information for the benefits of science and society
- open the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community”

https://en.unesco.org/science-sustainable-future/open-science/recommendation

WHY OPEN SCIENCE?



Transparency about the scientific process and its outputs

Quality and integrity	FAIR, reproducibility, scrutiny
Collective benefit	Academic sovereignty, sustainability
Diversity and equity	Collaboration and participation

FAIR RESEARCH

Preregistration

Initiation

Public Engagement/

Citizen Science

Outreach &

valorisation

Planning

RDM/ FAIR Data

& Software

Evaluation

Open Evaluation

Data acquisition,

analysis &

documentation

Publication

Open Access

THE SCOPE OF OPEN SCIENCE

FAIR & Responsible Research	Public Engagement & Valorisation	FAIR Education
Open Access	Science Communication	Open Educational Resources
FAIR Data & Software	Citizen Science	Open Science mindset/training*
Open Evaluation	Community Service Learning	

*Reshaping the Academic Self: Connecting Education & Open Science - https://zenodo.org/record/5345573

REQUIREMENTS FOR OPEN SCIENCE

Make it rewarding

Make it mandatory

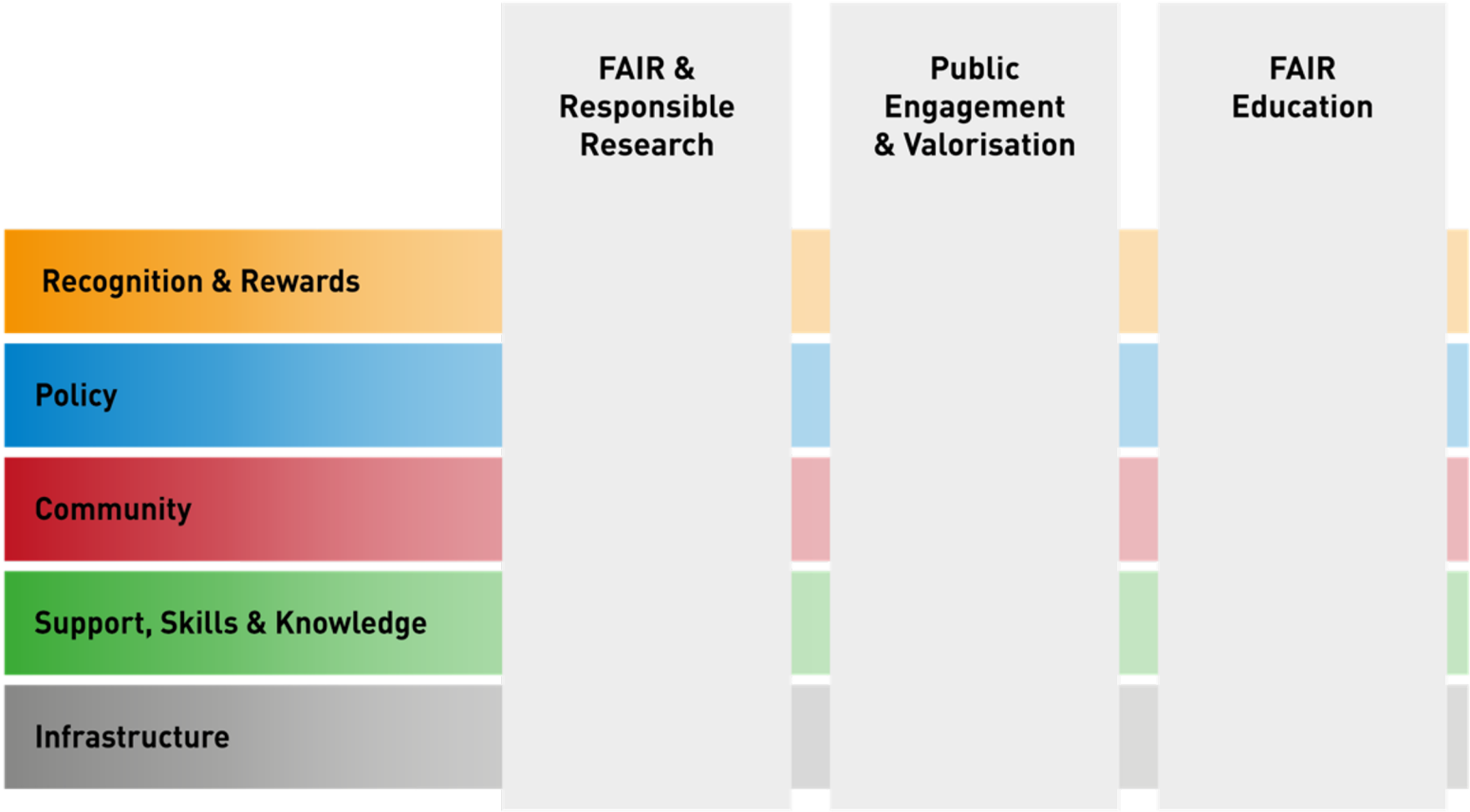
Make it normative

Make it easy

Make it possible

Adapted from: https://www.cos.io/blog/strategy-for-culture-change

VU OPEN SCIENCE PROGRAMME



INFRASTRUCTURE

Infrastructure @VU:	**Programme Research Data Support**
DMPonline	data management planning
ResearchDrive/YoDa	storage
Dataverse/YoDa	archiving
Security decision tool	security of sensitive data
OSF	research management, possible integration to other services
Containerization	software management
Metadata standard	research documentation
RDM Support Desk	advice
edusources	national platform for open educational resources
Supporting innovation	alternative routes to Open Access, innovations in scholarly communication

(Inter)national collaboration

EOSC	European Open Science Cloud – infrastructure gateway
SURF	e.g. Research Access Management, ResearchDrive, YoDa, edusources
(Dutch OKB)	Open database for research metadata

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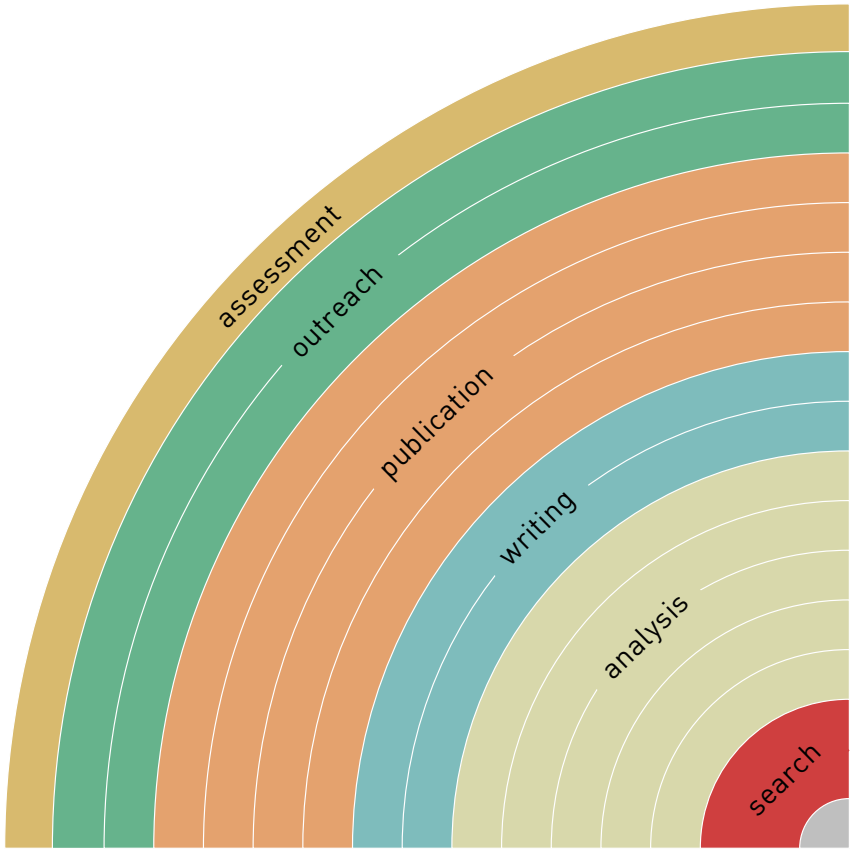
FULLY OPEN WORKFLOW?



adding alternative evaluation, e.g. with altmetrics
communicating through social media, e.g. Twitter
sharing posters & presentations, e.g. at FigShare
using open licenses, e.g. CC0 or CC-BY
publishing open access, 'green' or 'gold'
using open peer review, e.g. at journals or PubPeer
sharing preprints, e.g. at OSF, arXiv or bioRxiv
using actionable formats, e.g. with Jupyter or CoCalc
open XML-drafting, e.g. at Overleaf or Authorea
sharing protocols & workfl., e.g. at Protocols.io
sharing notebooks, e.g. at OpenNotebookScience
sharing code, e.g. at GitHub with GNU/MIT license
sharing data, e.g. at Dryad, Zenodo or Dataverse
pre-registering, e.g. at OSF or AsPredicted
commenting openly, e.g. with Hypothes.is
using shared reference libraries, e.g. with Zotero
sharing (grant) proposals, e.g. at RIO

Bianca Kramer & Jeroen Bosman https://101innovations.wordpress.com
DOI: 10.5281/zenodo.1147025

RDM SUPPORT

Data stewards

Research software engineers

Privacy officers

Ethical committee

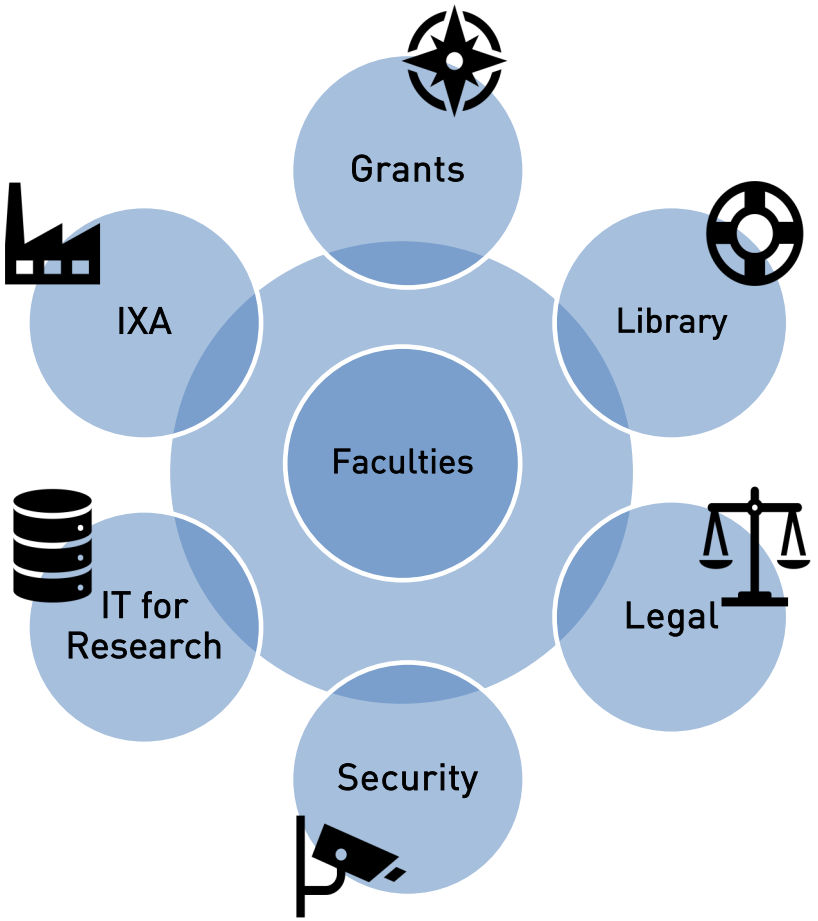
Librarians

Policy officers

IT

Grant advisors

IP experts



One RDM Support Desk: rdm@vu.nl

SUPPORT & TRAINING

Support & Training @VU

Network RDS	Strengthening support network at the VU
Green Open Access	Project to scale up support for green OA
OER Support	Creation of an OER Support Desk
OS/RDM Courses	Creation of new OS/RDM modules
OS/RDM toolkit	Toolkit with OS/RDM resources for Ba/Ma students
Carpentries workshops	Start of a Carpentries community at the VU
openresearch	Support for knowledge platform *openresearch.amsterdam*

(Inter)national collaboration

Training network	National collaboration/ framework for OS/RDM training
DCC network	Collaboration on data/software stewardship
AURORA SWAFS	International consortium grant *Science With and for Society*
The Carpentries	International community for software and data science training

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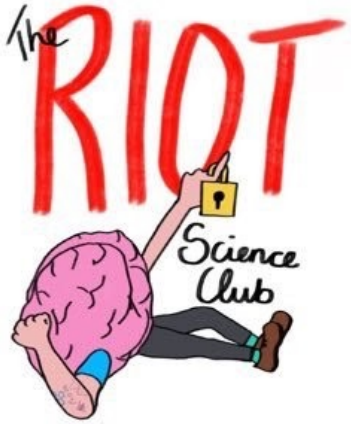
COMMUNITIES

ReproducibiliTea

SIOS
Student Initiative for Open Science



YOUNG SCIENCE in transition

https://www.openscience.nl/en/open-science-communities
https://reproducibilitea.org/
https://studentinitiativeopenscience.wordpress.com/
http://riotscience.co.uk/
https://scienceintransition.nl/

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COMMUNITY ENGAGEMENT

Community Engagement @VU

Community support	Community management for Open Science Community Amsterdam
Engagement campaign	Awareness and engagement campaign for OS/RDM/OER
OS symposium	In collaboration with VU Strategy team
OS ambassadors	Ambassadors with faculties/departments

(Inter)national collaboration

INOSC	International Network of Open Science Communities
NPOS	Engagement team (NPOS H: Accelerate Open Science)
Chiefs of Open Science	VSNU group of OS representatives from all universities

POLICY

Policy @VU

Open Access	Policy that steers towards a sustainable model for Open Access
Cost analysis OA/RDM	Current and expected costs for Open Science
Commitment	Continued commitment for (structural!) change
Open Education	Road map for embedding transparency in VU curriculum
Link to VU Strategy	Partnerships with Strategy Committees at the VU

(Inter)national collaboration

VSNU	Group of OS representatives from all universities, steering groups
NWO/ZonMw	Collaboration with funders on incentivizing OA/OS
NPOS	NPOS Multi-Annual Plan
Government	Collaboration with Ministry of OCW
EU	European Commission, European Research Council
UNESCO	Recommendation on OS

RECOGNITION & REWARDS

Diversification and vitalisation of career paths
Finding a balance between the individual and the collective
Focus on quality
Stimulating open science
Encouraging academic leadership

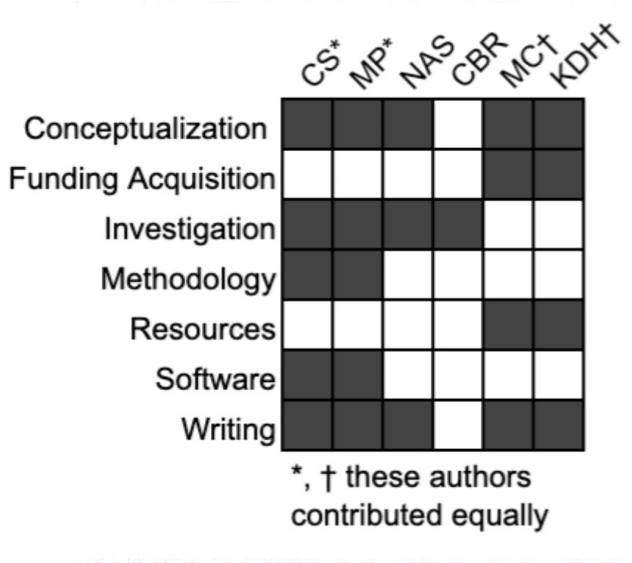
More focus on qualitative assessment
Broader definition of scientific output and success
Open Science as a pillar for assessment (e.g. Hong Kong Principles)

https://vsnu.nl/files/documenten/Domeinen/Onderzoek/Position%20paper%20Room%20for%20everyone%E2%80%99s%20talent.pdf
https://www.vsnu.nl/files/documenten/Domeinen/Onderzoek/SEP_2021-2027.pdf
https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000737

RECOGNITION & REWARDS

Recognition & Rewards @VU

Pilot CRediT	Dashboard for team contributions using CRediT taxonomy
Road show	Discussions within faculties/ services
Art of Engagement	Leadership/ team membership workshop
Tenure-track policy	Align tenure-track policy with R&R
Commitment	To R&R/ DORA/ Open Science



(Inter)national collaboration

YSiT/ PNN/ PostdocNL	R&R from perspective of early-career academics
VSNU	National R&R programme, international dialogue on R&R

VU OPEN SCIENCE PROGRAMME