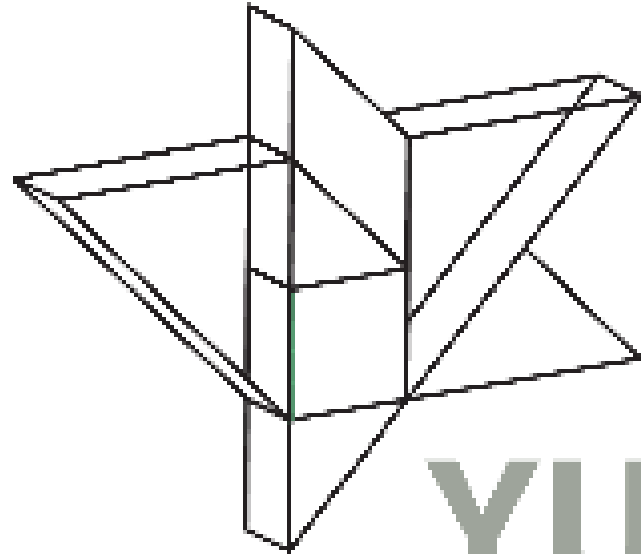


# Open Science Assessment and Incentives at the YUFE Alliance

---

STI Conference 2022  
Granada, Spain



# YUFERING

TRANSFORMING R&I THROUGH  
EUROPE-WIDE KNOWLEDGE TRANSFER

**Contributors:** Maria Pietilä and Katri Rintamäki (UEF), Raúl Aguilera, Belén Fernández del Pino, Eva Méndez, and Núria Bautista-Puig (UC3M)

# Research assessment under change

- Open science (OS) a key priority in European science policy, a target also in many countries, universities, and among research communities
- Universities' research assessment systems as incentives for researchers to prioritise their work; signaling what kinds of activities and outputs are considered *recognised* and *unrecognised*
- Dominant research assessment systems criticised because they are one-sided and because they apply inappropriate metrics
- OS achievements not currently being rewarded (Rice et al., 2020; Saenen et al. 2019)
- Need for different kinds of incentives at universities; need for quantitative and qualitative criteria and indicators, which identify researchers' achievements and activity in OS

# YUFERING project

- YUFERING a three-year project of the YUFE university alliance
  - Maastricht University, Carlos III Univ of Madrid, Nicolaus Copernicus Univ of Torún, Univ of Antwerp, Univ of Bremen, Univ of Cyprus, Univ of Eastern Finland, Univ of Essex, Univ of Rijeka, Univ of Rome Tor Vergata
- Universities may use different policy instruments to encourage a change in behaviour
  - Two initiatives: incorporating open science achievements in research assessment; Full Open Science initiative at the research group level

# Background

- Differences btw universities' recognition and reward systems; influence by national funding systems and other national steering (cf. Kivistö et al. 2017)
- Decision-making processes in recognition and reward systems typically involve a myriad of actors (e.g., institutional leaders, collegial bodies, peer reviewers) with multiple interests
- Varying support structures for open science
- **How can university alliances encourage a change?**
- **How can open science be integrated in universities' reward and recognition structures?**

# Initiatives

## **Assessing OS performance: OS indicator toolkit**

- Testing indicators for open science performance/evaluation
- Broadening the knowledge base in academic recruitment -> putting open science achievements up front in academic recruitment

## **Open Science bottom-up implementation: Full Open Science (FOS) Pilot**

- Fostering a cultural change from below: FOS research teams as role models and ambassadors within the YUFE institutions
- Helping the groups hand by hand to achieve their goals in open science, connected to their specific work and ambitions

# Method and data

- Recommendations/declarations on responsible research assessment (e.g., DORA Declaration, the Hong Kong Principles for assessing researchers)
- Practical tools and reports on research assessment (e.g., Wouters et al. 2019; Open Science Career Assessment Matrix OS-CAM; NOR-CAM)
- Examples of narrative CVs (ACUMEN Portfolio, Résumé for Researchers)
- Examples from the YUFE universities, esp. the Maastricht University, and from the Recognition and Rewards programme in the NL
- Research interviews (academic leaders, researchers at different disciplinary fields and career stages)
- Validation of open science indicators with experts at YUFE university libraries

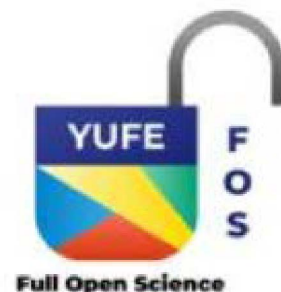
# Assessing OS performance: OS indicator toolkit

- Integrating an OS perspective into the academic recruitment process
- OS indicators related to
  - research,
  - teaching,
  - community engagement and societal outreach,
  - teamwork, management, and leadership
- Indicators incorporated in *an impact portfolio*, which aims to capture a broad(er) set of researchers' merits and achievements, and to make researchers' OS merits visible in the academic recruitment process (portfolio filled by researchers who apply for an academic position)
- Focus on researchers' qualitative achievements and the impact of the achievements

Dimensions	Indicators
<b>Research</b>	Open access (OA) publications OA research data Open software/code Open research methods Pre-registration of studies
<b>Teaching</b>	Open online courses/MOOCs Courses/lectures in open science (OS) Public lectures Use of open learning materials Incorporation of OS principles and methods in the content of teaching
<b>Community engagement and societal outreach</b>	Popularised publications (publications for the wider audience) Engagement with non-academic actors in one's research Organising events for the general audience Expert tasks in companies, public, or third sector organisations Policy documents citing one's research Utilisation of research outputs resulting from private sector collaboration as openly as possible Television or radio appearances Magazine or news articles based on one's research Number of mentions related to one's research in blogs Twitter discussions based on one's research Encyclopedia articles produced (e.g., Wikipedia) Encyclopedia articles (e.g., Wikipedia) citing one's research
<b>Teamwork, management, and leadership</b>	Open peer reviewing (as author/reviewer) Working as editor in OA scholarly journals Voluntary work in OA repositories (e.g., ArXiv, BioRxiv) OS awards received Incentivising open science behaviour (e.g., assessment criteria, acknowledgments, or rewards) as a leader



**Encouraging OS at research group level: Full Open Science (FOS) initiative**



30 research groups to aim for an OS badge by 2023

Goal to meet two compulsory criteria and at least two optional criteria

Dimensions	Criteria
<b>General</b>	All the researchers have an ORCID [compulsory] PhD Theses in Open Access [optional] Using open licences [optional]
<b>Open publishing</b>	Publications: at least 60 % in OA [compulsory]
<b>Open data</b>	Research data: at least 50 % in OA [optional] Following FAIR data principles [optional]
<b>Open research process</b>	Preregistrations [optional] Open notebooks/software/code [optional] Open peer review (as author or reviewer) [optional]
<b>Teaching</b>	Sharing Open Educational Resources (OER) [optional]
<b>Community engagement and outreach</b>	OS dissemination (through events, training activities, networks... [optional] Citizen Science initiatives [optional]

# Conclusions and next steps

- Few examples how universities could embed OS into their incentivisation structures; a gap the project aims to cover
- Policy instruments that deal with different kinds of incentives
  - An OS indicator toolkit for evaluating researchers' achievements in OS (recruitment processes; tangible rewards)
  - Using the portfolio (incl. the OS indicators) in the selection of MSCA post-doctoral researchers
  - An incentivisation initiative to foster open science at the research group level (advocating OS by showing off institutional forerunner research groups; symbolic rewards)
- How to move from project-based initiatives to changes in the organizational structures?