# **OPEN SCIENCE Learning Gate**



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## Lack of tailored OPEN SCIENCE training for different stakeholders

• OS enables transparancy, accessibility, collaboration, knowledge circulation & valorisation and innovation. • Higher education lacks tailored OS training resources for various stakeholders of the scientific community.

## **OPEN SCIENCE Learning Gate** as a **sample collection**

Recognising that while openness is vital, only high-quality research output with legally and ethically justified openness is reliable and reasonable.





We reviewed literature, activated representatives for the OS learner groups and screened the **OS training resources** from the groups 1, 4 and 7.



We extracted **RI and RE principles** provided in these training resources.

We statuated umbrella concepts of OS training resources:

- RESEARCH INTEGRITY
- **RESEARCH ETHICS**
- ETHICS of AI operating with OS



NERQ's sample collection of OS training resources We created

- targeting specific learning groups
- promoting principles inevitable for current research



**Research Soft**ware Engineer OS Citizen target groups Policy Maker 50 Data Data Figure: Adapted from EOSC's definition of Actors in the EOSC Ecosystem (1)

#### in the OPEN SCIENCE **NERQ'S OS Principles** LEARNING GATE

**RESEARCH INTEGRITY RESEARCH ETHICS** 

# Features of the Open Science Learning Gate



Principles						
RESEARCHER		POLICY MAKER			OS EDUCATOR	
Accountability Awarene			ss Accountability		Accountability	
(Self-)Awar	(Self-)Awareness Collabora		orat	tion,		Awareness
Honesty, Equity & Fairness		Community building, Hollistic engagement			Honesty, Diversity & Inclusiveness	
Quality & Integrity		Ethics			Openness	
Reliability		Incentives, Recognition, Encouragement		Reliability (tools, infrastructures, actors)		
Respect		Data confidentiality		Respect		
Responsibility		Explainability		Responsibility		
Transparency		Traceability		Proceeding data collection (see QR-code)		
Educational Goals						
RESEARCHER			POLICY I	MAKER	OS EDUCATOR	
As open as possible - as closed as necessary			FAIR data & othe outputs		As open as possible - as closed as	
Data protectio	lectual prope	rty			necessary	
Open research: Data, Access, Code, OER, Source etc.			Monitoring & Evaluation		Reproducibility (data/ methodology etc. sharing)	
Reproducibility			Open science & inclusive infrastructures		Proceeding data collection	
ETHICS of AI operating with OS						
Accessibility	ibility Bias-free speech, data and outcom				nes	Fairness
Harm- monitoring	Guardrails to ensure Dat scientific values			ta confidentiality, quality		Privacy, Data & IP protection
Safety	Trans	sparency	Value-based algorithmic ecision-making		<i>Proceeding data collection (see QR-code)</i>	



# Join us in the OPEN SCIENCE LEARNING GATE

Help us to create an intersection of of high-quality and reliable **OS training using our questionnaire:** 

**SCREEN** your training resources on principles recommended by the research community using our questionnaire.

References: (1) European Commission, Directorate-General for Research and Innovation, Manola, N., Lazzeri, E., Barker, M. et al., Digital skills for FAIR and Open Science – Report from the EOSC Executive Board Skills and Training Working Group, Manola, N.(editor), Lazzeri, E.(editor), Barker, M.(editor), Kuchma, I.(editor), Gaillard, V.(editor), Stoy, L.(editor), Publications Office, 2021, https://data.europa.eu/doi/10.2777/59065, p.17; (2) UNESCO (2022), Open Science Capacity Building Index, https://www.unesco.org/en/open-science/capacity-building-index; (3) UNESCO (2021). UNESCO Recommendation on Open Science. United Nations Educational, Scientific and Cultural Organization. https://doi.org/10.5281/zenodo.5834767, p.19; (4) Hampson, G, M DeSart, J Steinhauer, EA Gadd, LJ Hinchliffe, M Vandegrift, C Erdmann, and R Johnson. 2020 (June). OSI Policy Perspective 3: Open science roadmap recommendations to UNESCO. Open Scholarship Initiative. doi 10.13021/ osi2020.2735; (5) European Commission, Directorate-General for Research and Innovation, (2024). Successful and timely uptake of artificial intelligence in science in the EU, Amt für Veröffentlichungen der Europäischen Union. https://data.europa.eu/doi/10.2777/08845

- **Z IDENTIFY** gaps or needs for further training and AMEND your resources. **J** Get your training resources **BADGED** if you meet at least 80% of the recommended principles.
- 4 **SUBMIT** your training resources to the **Open Science Learning Gate**.
- **D USE** the intersection for your training of specific stakeholders.



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