

# Open Science

“The University Rectorate intends to adopt a very clear promotion policy in favor of accessibility of both publications (Open Access) and research data (Open Data).”

“Plan d’intentions” of the University of Lausanne, 2017-2021

## Why Open Science ?

Open Science is a global movement that strives to make scientific research transparent and accessible. It allows both researchers and citizens to seize this “common good” in order to expand knowledge.

The free dissemination of data, publications and research results is not sufficient; the entire research process –peer review, methodologies, codes, software, tools, procedures, etc. – must be accessible to all, ensuring ethical, honest and high-quality research.



**Public funding, public good**  
Much like knowledge, data, publications and research results are a public good; society must have free and open access to them.



**Impact and new discoveries**  
The citation rate increases with ease of accessibility and visibility. The circulation of knowledge is also increased, thus promoting the development of new knowledge.



**Transparency and visibility**  
Open Science is synonymous with responsible and reproducible research. Its visibility is increased as open data and publications are more read and shared.



**Democratization of knowledge**  
Access to knowledge is a universal right. Open Science promotes free and open access to this knowledge, which in turn reduces the gaps between states, institutions and citizens.

# Open Access

“The time has come to make a full transition to open access to research publications, for knowledge should belong to those who produced or financed it.”

Angelika Kalt, Director of the Swiss National Science Foundation (SNSF), 2018

## The two ways of Open Access

### The gold road (Gold OA)

The gold road refers to articles that are freely accessible upon publication. These works are often protected by a “Creative Commons” license.

#### Publication costs

The gold road shifts the costs from the reader to the author, sometimes involving the payment of publication fees. In the hybrid approach, subscription journals offer authors the opportunity to open their articles for a fee.



**Funding agencies**  
The SNSF and the European Commission reimburse Gold OA publication costs (but not hybrid for the SNSF). The SNSF aims to achieve 100% OA by 2020 and swissuniversities aims to achieve the same goal by 2024.

### The green road (Green OA)

The green road is the –often delayed– parallel self-archiving of a version of the manuscript in an open repository. SERVAL is UNIL’s institutional repository.

#### Versions of the manuscript

Publishers often allow the self-archiving of the manuscript accepted for publication after peer-review and before any page layout by the editor (post-print).



**SERVAL**  
SERVAL aims at gathering and preserving all of UNIL’s academic production and to maximize the visibility of researchers by enabling them to follow the green road.

# Open research Data

“Publicly funded research results represent a common good. The population, the economy and the scientific community must have access to it free of charge and without restriction.”

Matthias Egger, President of the National Research Council of FNS, 2019

## The four steps of data management

### In practice

Collected and produced during the scientific process, research data are considered necessary to validate the obtained results. Data management, preservation and sharing meet the challenges of ethics, reproducibility, quality and visibility of science in the 21st century.

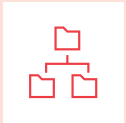
Research communities and citizens can harness the full potential of research data when they are Findable, Accessible, Interoperable and Reusable (FAIR Data principles).



**Data management plan**  
Defining how data is generated, collected, documented, shared and preserved helps manage its life cycle.



**Storage and security**  
Using UNIL’s secure servers ensures the protection of your data.



**Data organization**  
Organizing folders and using naming rules allows researchers to properly manage their data during the project.



**Archiving and sharing**  
Data archiving in open repositories provides accessibility, preservation and sharing opportunities.



## Our services

We run workshops and courses as well as awareness and training days. We also provide UNIL researchers and doctoral students with personalized advice in the following areas:

### Open Access

- 1 Customized Open Access publishing strategy
- 2 Funders' mandates
- 3 ORCID profile creation and connection with SERVAL
- 4 Use of SERVAL
- 5 Basic concepts of copyright

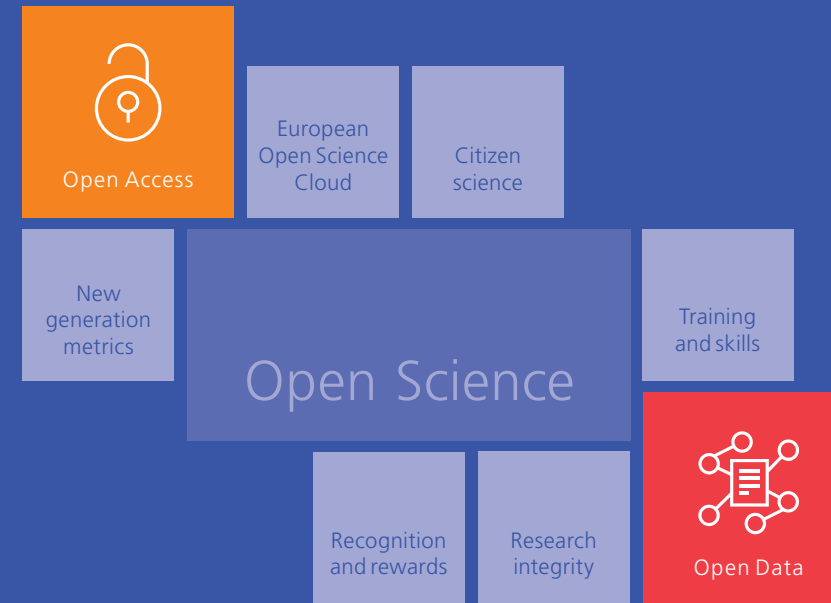


### Open research Data

- 1 Data Management Plan (DMP)
- 2 Search and reuse of existing data
- 3 Data documentation, organization and storage
- 4 Data protection and security
- 5 Data publication, sharing, archiving and long-term preservation



## The eight pillars of Open Science



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