EPFL

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Bottom-up Open Science shift for data and code

The case for a **Data Champions community**

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RDM directions

Top-down approach

Institutional data policies

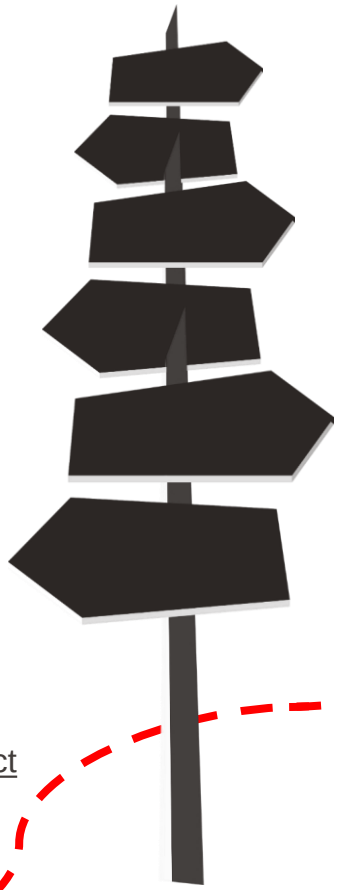
- MIT
- UNIGE
- TU Delft
- University of Oxford
- University of Edinburgh
- University of Cambridge
- Humboldt-Universität zu Berlin
- …

General data guidelines

- SNSF Open Research Data policies
- EC Data Management manual for Horizon 2020
- Digital Lifecycle Management (DLCM) Swiss National Project
- …

EPFL compliance guide (p.30)

but **no official Data Policy**, yet!



Images: pixabay.com/fr/users/kmicican-2305081

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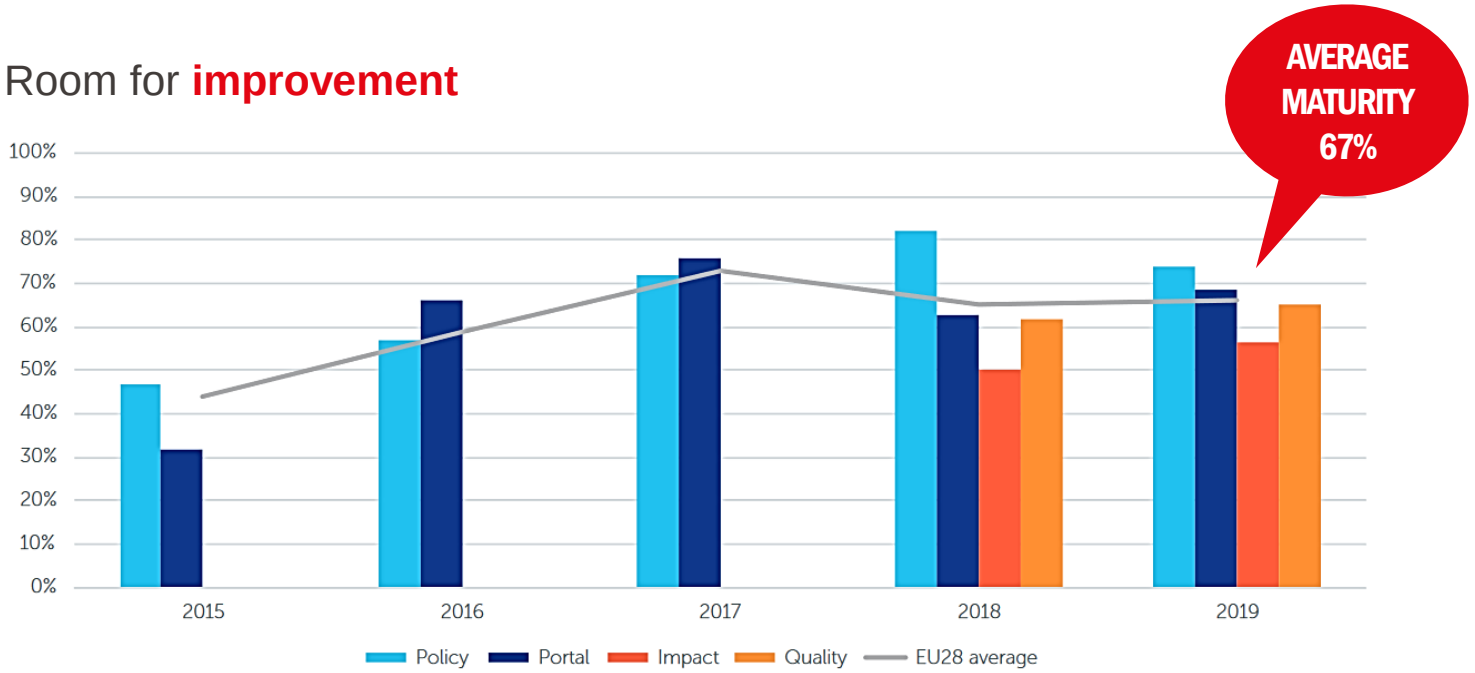
RDM directions

EU28 open data maturity development 2015-2019

Room for **improvement**



But good practices **already exist** in academic research!

Source: www.europeandataportal.eu/sites/default/files/open_data_maturity_report_2019.pdf

RDM expertise(s)

No unique profile

Data Visualization	Digital Humanities	Bioinformatics	Data Analysis	Scientific Information Management	Data Protection	Statistical Physics
Urban Data Science	Molecular Dynamics Simulations	Data Reduction	3D Modelling	Data Science	Genetic Algorithms	Health Data Science
Computational Mechanics	Transcripts	Data Curation	Big Data	Digital Musicology	Aerospace Design	Research Indicators
Machine Learning	Computational Social Science	Reproducible Research	Bibliometrics	Qualitative Analysis	Computational Physics	… etc.

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EPFL & Cultural shifts

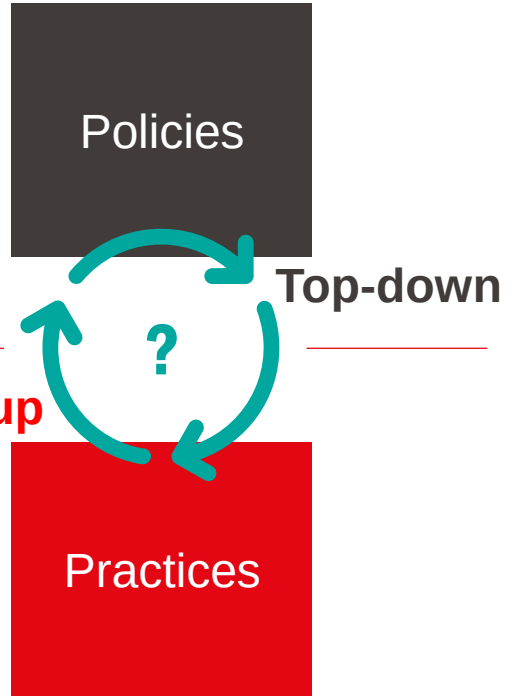
No unique approach

STRUCTURE

- 2 **Colleges**
- 5 **Schools**
- > 15 interdisciplinary **centers**
- 26 **Institutes**
- > 370 **laboratories** and research groups

PEOPLE

- > 8,800 **students**
- ~2,200 **PhD** students
- > 3,500 **staff**
- > 340 **professors**



Data source: www.epfl.ch/about/overview *Images: pixabay.com/fr/users/kmicican-2305081*

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Data Champions community

A possible approach

Examples

- Cambridge Univ.
- TU Delft
- …

Volunteering

- Expertise
- Availability

Library

- Support
- Collaboration

Webpage

- Contacts
- Field

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Data Champions @ EPFL

A possible approach

What / Who

- **Interdisciplinary** community
- Good data practices **advocates**
- **Both** researchers and staff

Shared principles

- **FAIR** data principles
- **Passion** for data ♥

Mission(s)

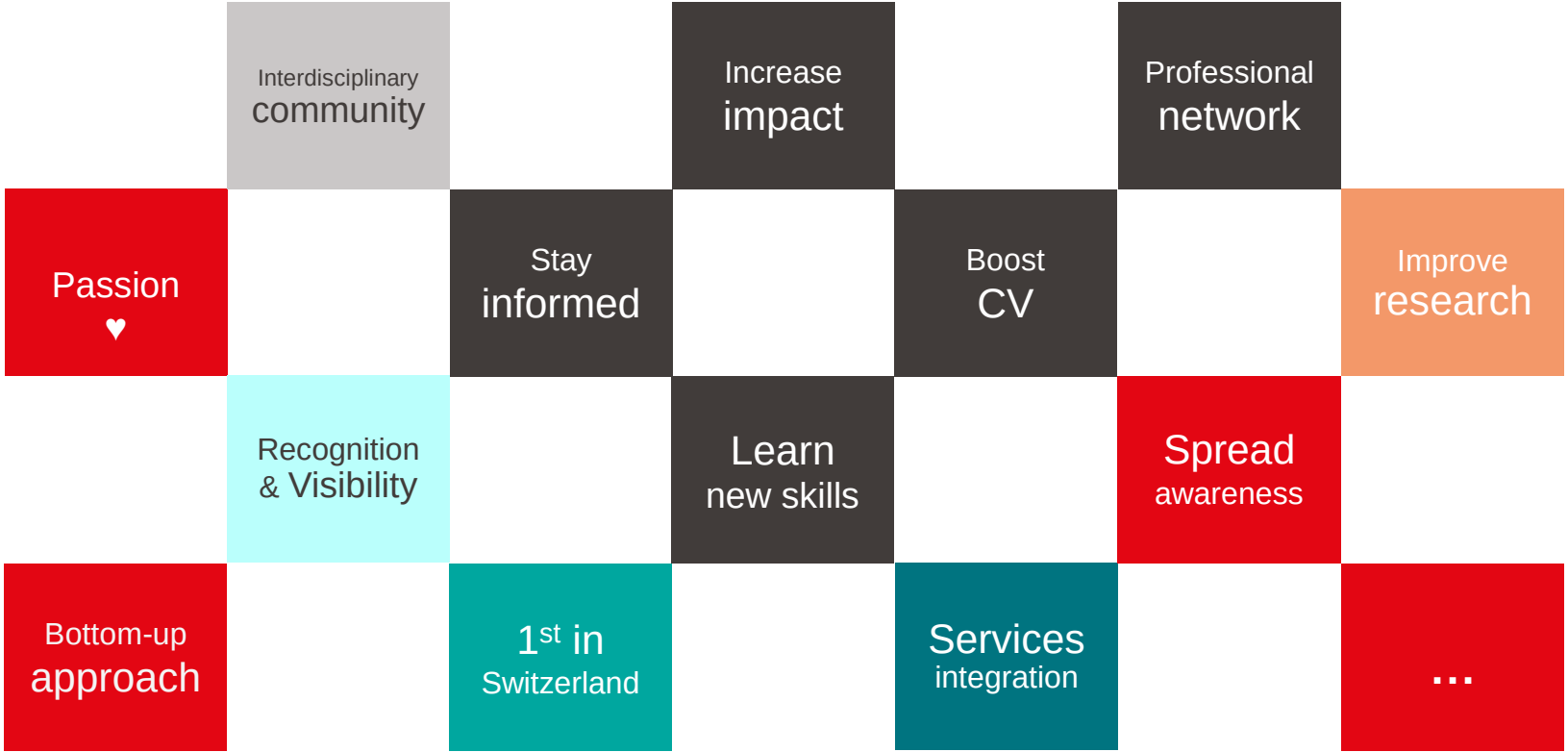
- **Advise** research community
- **Advocate** FAIR data principles
- **Promote** good data mgmt

Platform(s)

- Webpage (Library + VPR)
- Google Drive
- Email + Slack

Why (top → bottom)

EPFL Data Champions



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Why (top ← bottom)

EPFL Data Champions

To share my skills and gain new ideas

data sharing is essential to combat the reproducibility crisis

I am passionate about rigorous methods and the inductive / abductive process of analyzing qualitative data

I would like to help fellow researchers with managing, acquiring, producing and analyzing their data

Wish to help / encourage others in the community for a cultural shift

Since similar challenges can be expected to reoccur in different labs, it seems natural and beneficial to build a community and share experience

I am very much committed to revolutionize the scientific community to become truly collective

I think it is important to share information about data management within the School, and train each other

I would love to explore new data formats, analysis techniques, software, best practices

I became a scientist to help society by creatively solving hard problems [...] joining a collective, global effort to do so

I am big advocate of data sharing and effective data visualization as I believe it makes science better and more accessible

keen to help people understanding the legal framework

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EPFL DCs

Some numbers

NEW CALL

Meeting #1
Nov. 2019

24

(**5** ♀ + **19** ♂)

Scientists
PhD Students
Specialists

12

Schools
Institutes
Services

Meeting #2
March 2020

33

(**10**♀ + **23**♂)

Scientists
PhD Students
Specialists

20

Schools
Institutes
Services

Meeting #3
August 2020

33

(**12** + **21**)

Scientists
PhD Students
Specialists

23

Schools
Institutes
Services

Meeting #4
Nov. 2020

??

(**??**♀ + **??**♂)

Scientists
PhD Students
Specialists

??

Schools
Institutes
Services

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New DCs community 101

1 - Essential steps to build one

Before

- **Draft** the roles and responsibilities
- **Ask** permissions
- **Collect** opinions in focus groups
- **Prepare** webpage and communication

Call

- **Invite**
- **Leverage** on other DC communities
- **Leverage** on interested people
- **First meeting**: let them do the talk

After

- **Officialize** a community coordinator
- **Organize** also informal meetings
- **Cure** webpage / tools / communication
- **Adapt** & Repeat

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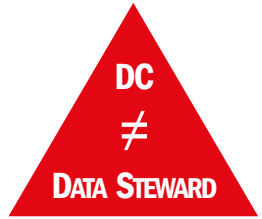
New DCs community 101

2 - Pros & Cons

		
INSTITUTION	▪ Leverage on **motivated** persons ▪ Direct **influence** on practices ▪ Fastlane to **support** scholars	▪ Need **official** acknowledgment ▪ Need (small) dedicated **HR** ▪ Need **visibility**
DATA CHAMPIONS	▪ Broader **overview** on practices ▪ Boost **CV** of individuals ▪ Professional **network** ▪ Improve **research** ▪ Stay **informed**	▪ Need some (little) **availability** ▪ Difficult to **measure** an impact



New DCs community 101

3 - Synergy with central services

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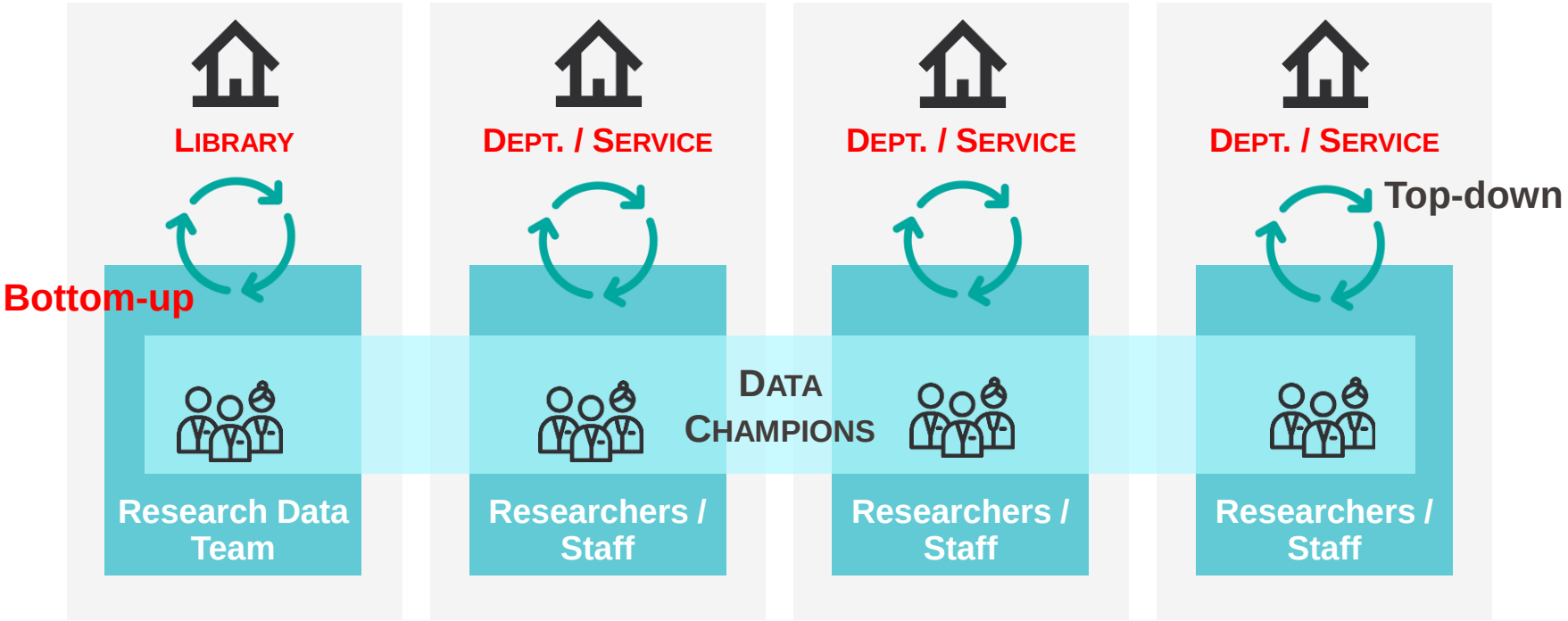
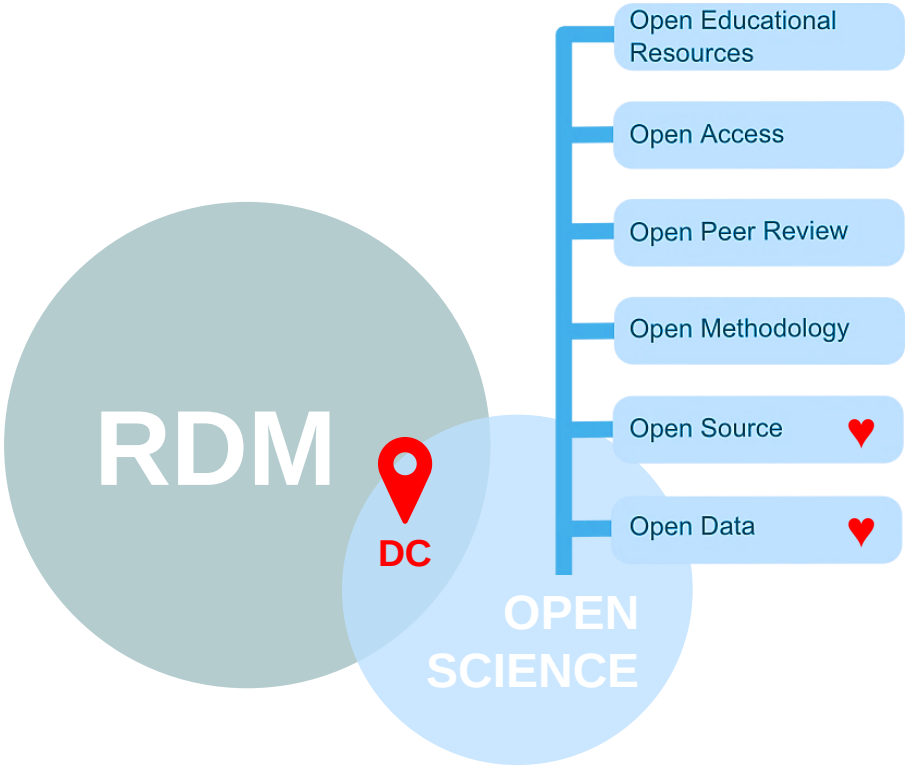


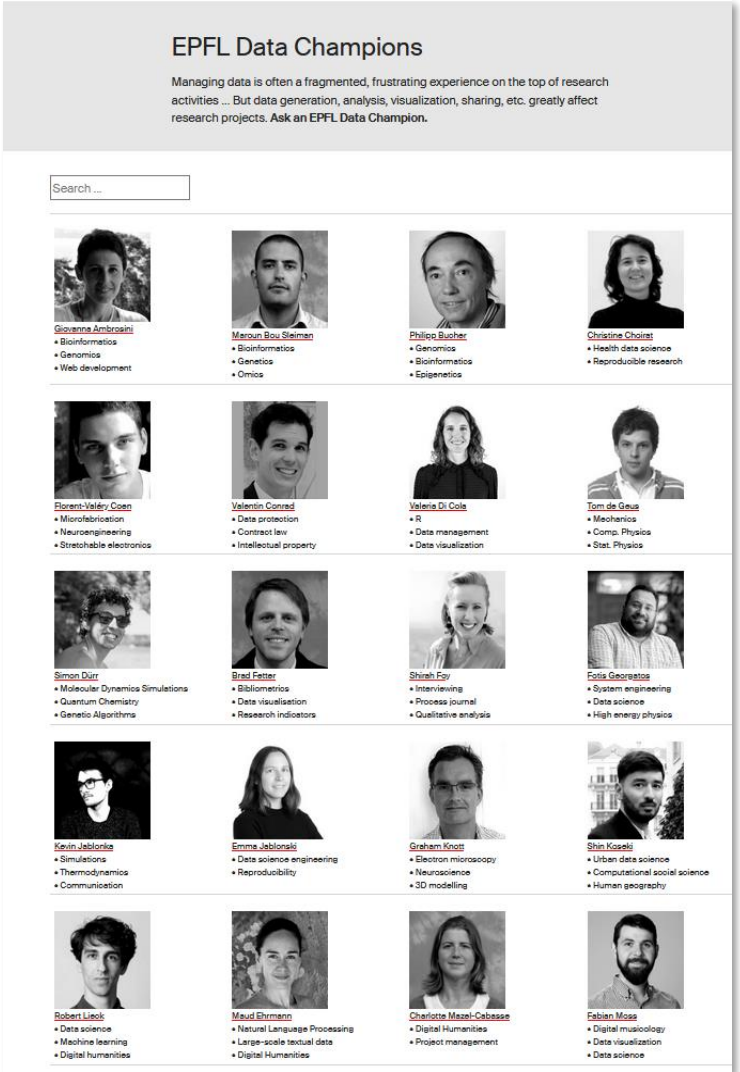
Ex. RDM @ Library | Law compliance @ Research Office | Testing @ IT | …

New DCs community 101

4 - Potential in boosting Open Science



Sources: de.wikipedia.org/wiki/Offene_Wissenschaft, go.epfl.ch/datachampions



Bibliothèque

École polytechnique fédérale de Lausanne

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