SMALL STREAMS MAKE BIG RIVERS
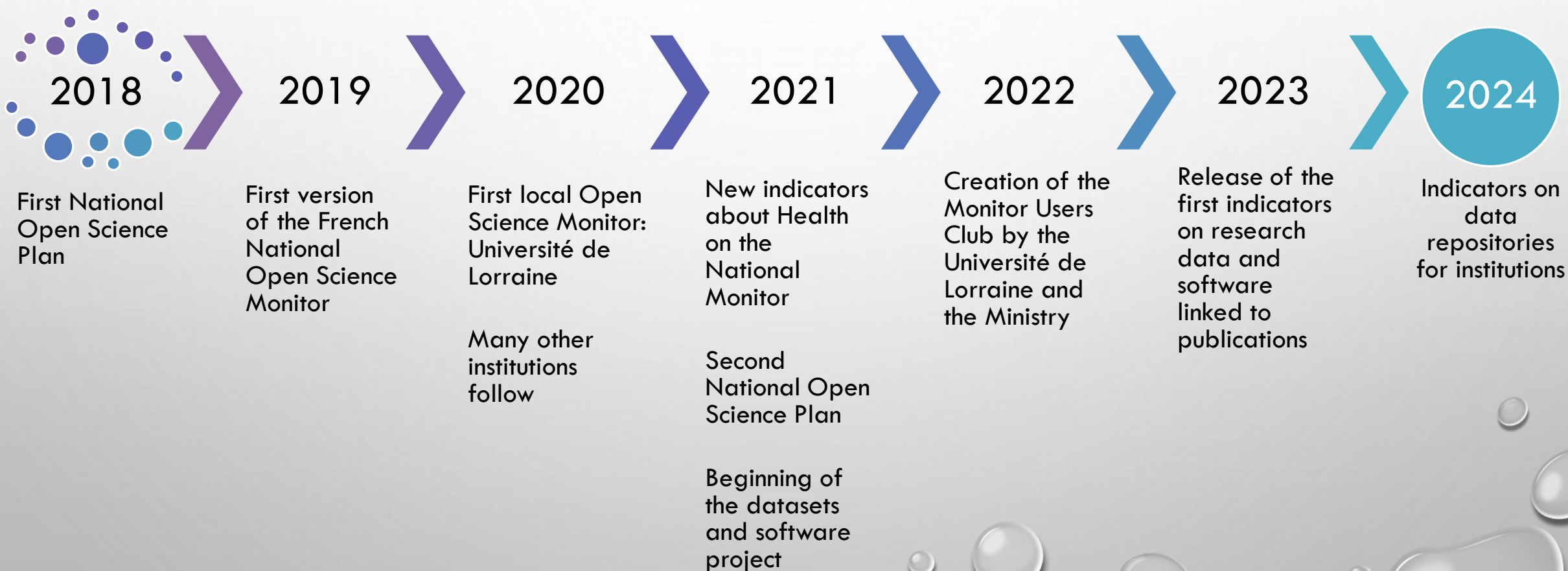
MONITORING OPEN SCIENCE LOCALLY

LAETITIA BRACCO – UNIVERSITÉ DE LORRAINE

LIBER CONFERENCE 2024

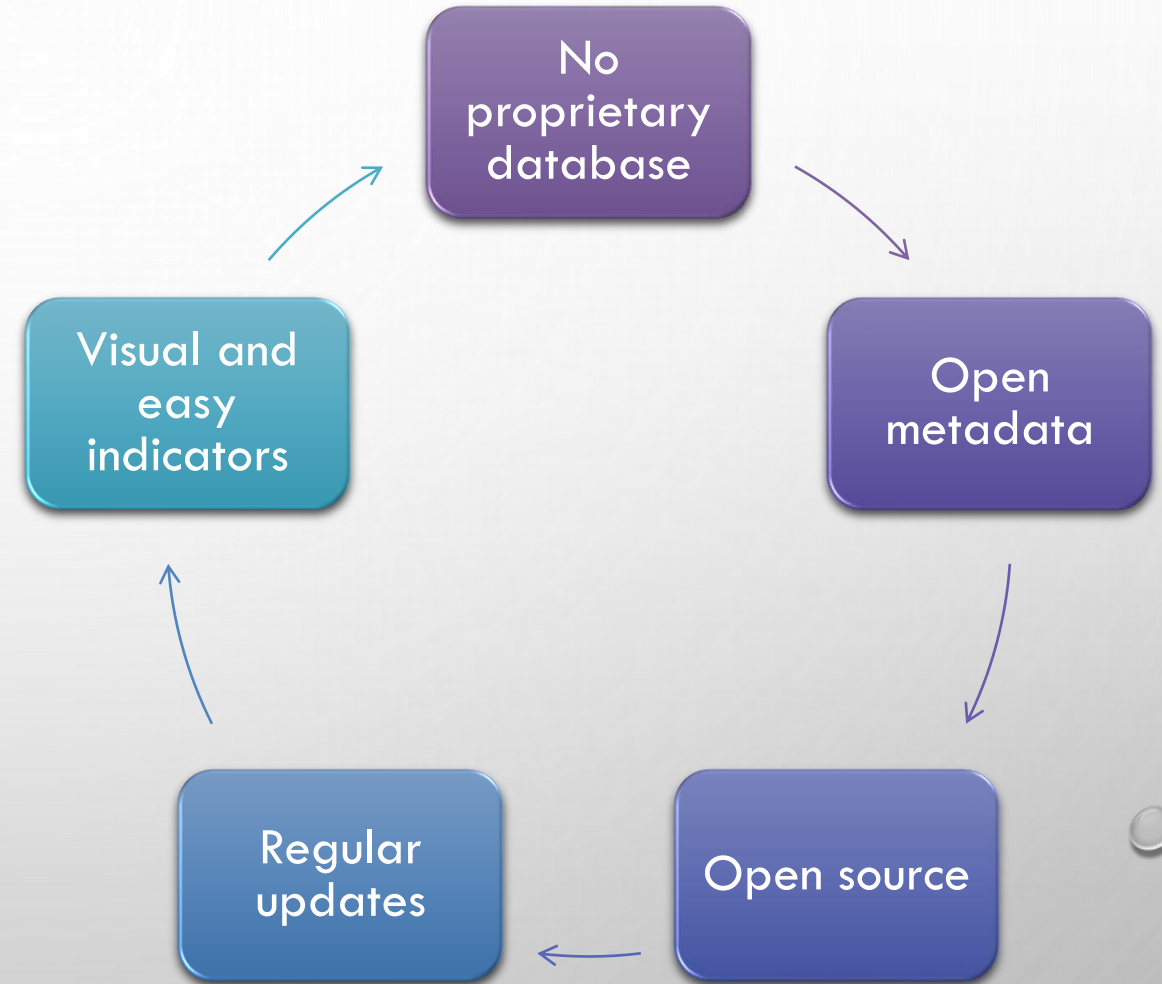# THE SOURCE: A FAVOURABLE NATIONAL CONTEXT

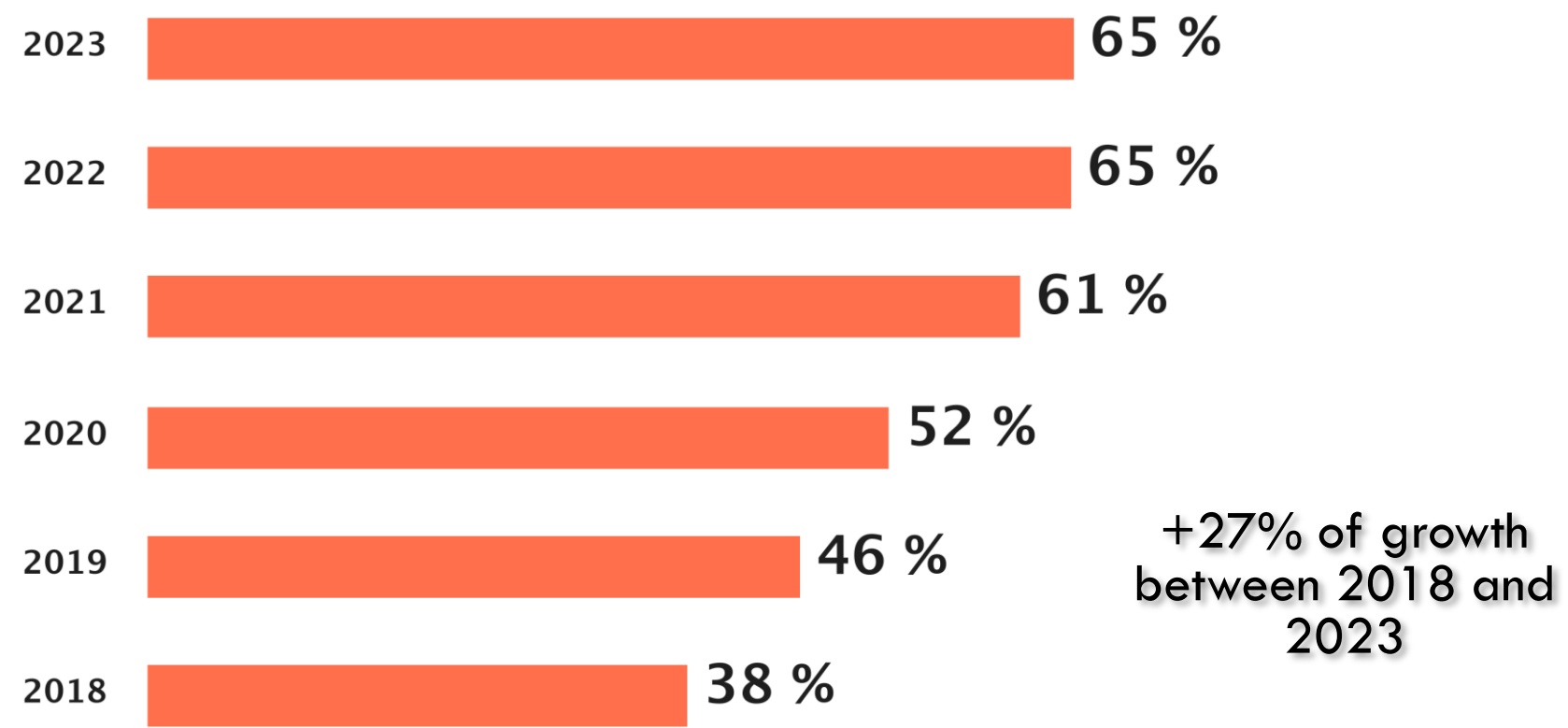# OS MONITORING: WHAT HAPPENED IN FRANCE THESE LAST 6 YEARS?

2018

First National Open Science Plan

2019

First version of the French National Open Science Monitor

2020

First local Open Science Monitor: Université de Lorraine

Many other institutions follow

2021

New indicators about Health on the National Monitor

Second National Open Science Plan

Beginning of the datasets and software project

2022

Creation of the Monitor Users Club by the Université de Lorraine and the Ministry

2023

Release of the first indicators on research data and software linked to publications

2024

Indicators on data repositories for institutions

THE FRENCH OPEN SCIENCE MONITOR

- A need for a national open science monitor with open indicators

- What were the requirements?

No proprietary database

Open metadata

Open source

Regular updates
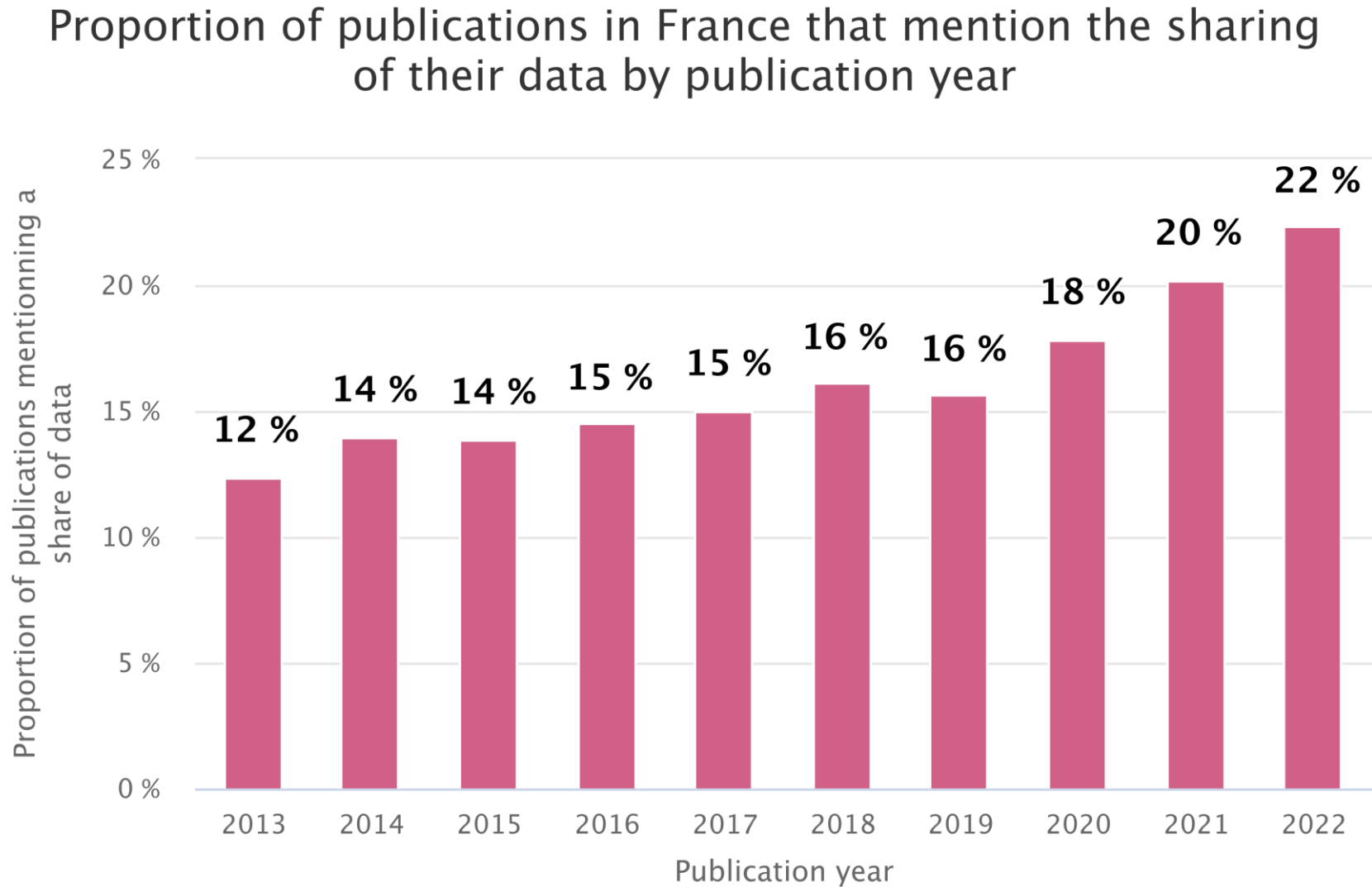
Visual and easy indicators

THE NATIONAL RESULTS OF THE LATEST RELEASE: PUBLICATIONS

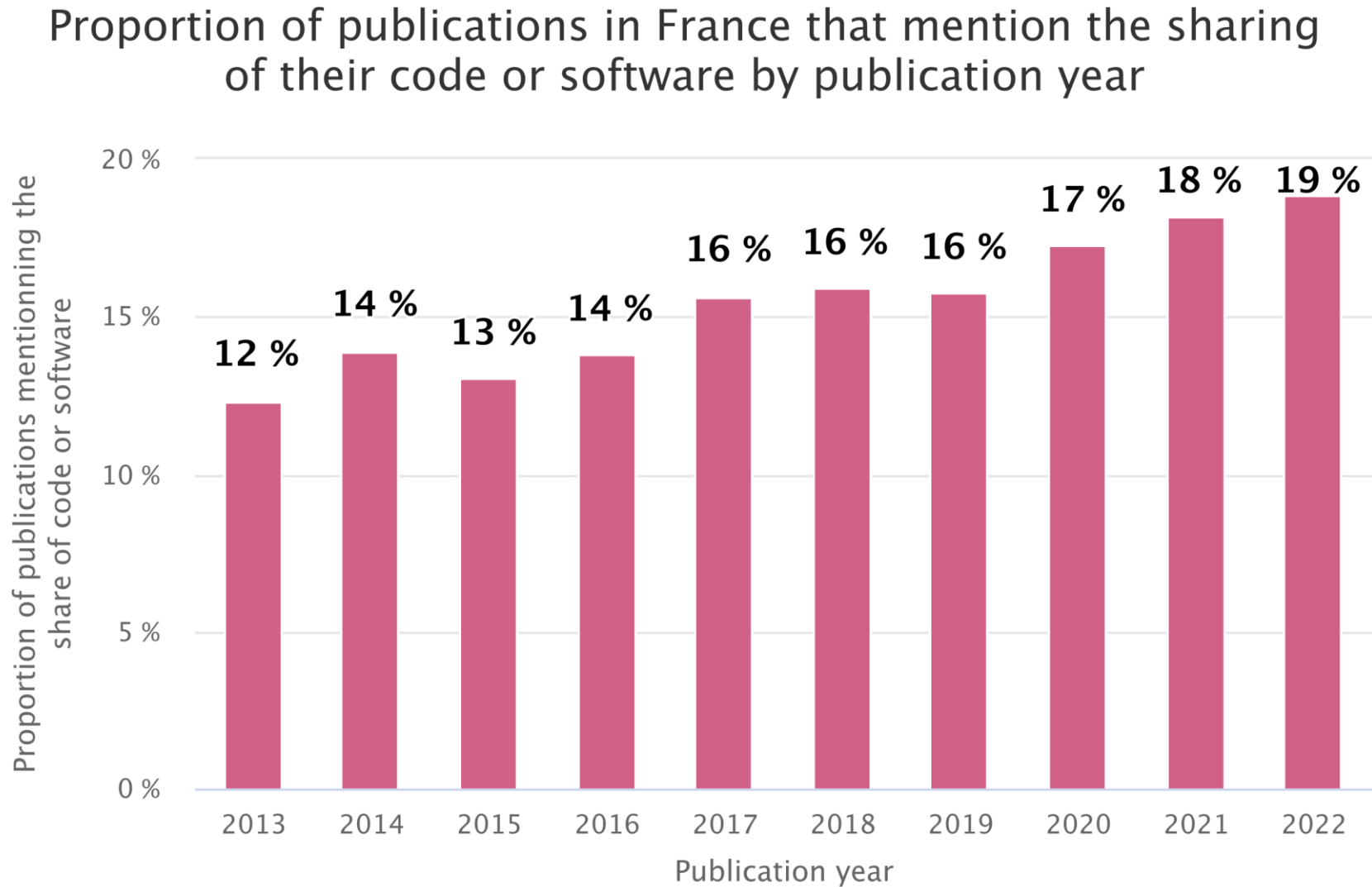Open access rate of scientific publications in France, with a Crossref DOI, published during the previous year by observation year

Year	Rate
2023	65 %
2022	65 %
2021	61 %
2020	52 %
2019	46 %
2018	38 %

+27% of growth between 2018 and 2023

French Open Science Monitor, Sources : Unpaywall, HAL, MESR,

THE NATIONAL RESULTS OF THE LATEST RELEASE: DATASETS

Proportion of publications in France that mention the sharing of their data by publication year

French Open Science Monitor, Sources : MESR,

THE NATIONAL RESULTS OF THE LATEST RELEASE: SOFTWARE

Proportion of publications in France that mention the sharing of their code or software by publication year

French Open Science Monitor, Sources : MESR,

A SMALL STREAM: THE FIRST LOCAL MONITOR

BACK TO THE FUTURE: 2020

- Strong interest for the French Open Science Monitor (OSM) in the Université de Lorraine

- Within the university libraries, a starting point: how to get similar indicators at the local level?

- Creation of an [open-source code](#) to replicate the national indicators with local data, based on the French OSM open-source code

- First release in June 2020

- Soon, many other institutions applied the same method

- For the Université de Lorraine: many hours of trainings, webinars, support for colleagues across the country, mostly from libraries

2021: A NEW ADVENTURE BEGINS WITH DATASETS AND SOFTWARE

- In 2021, gathering of a threefold and complementary team: French Ministry of Higher Education and Research, Université de Lorraine, Inria

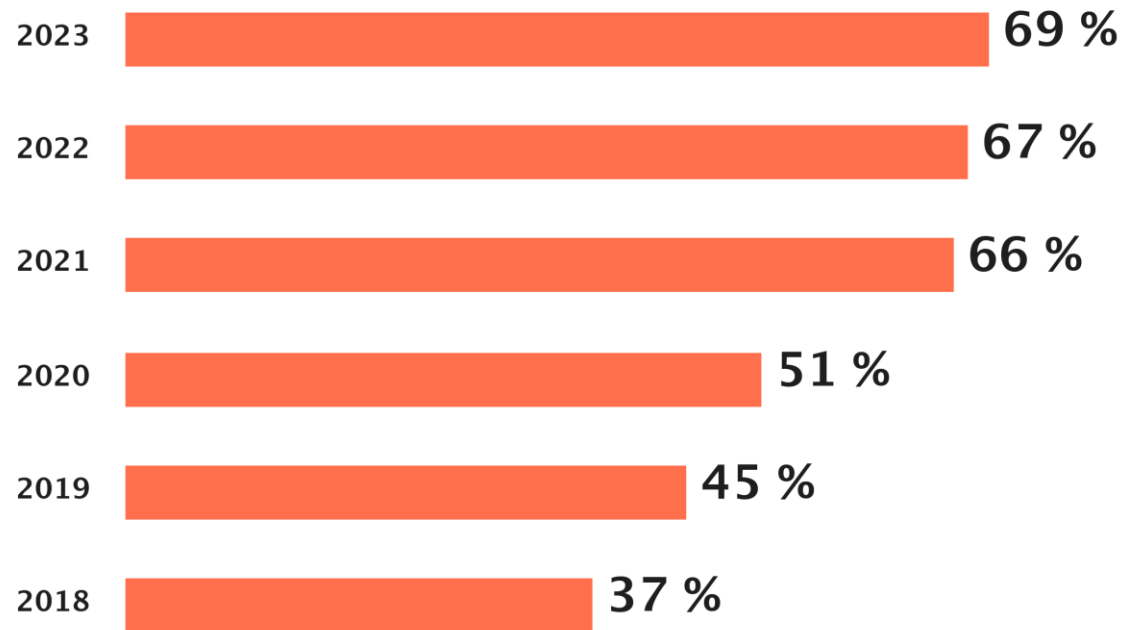- Winner of a 357k € funding from the European recovery plan

- Goals:

  - producing indicators on datasets and software related to French publications, using AI to detect in full-texts: datasets (with DataStet) and software (with Softcite)

  - and on data repositories

- Part one of the mission accomplished in 2023, part two currently developed

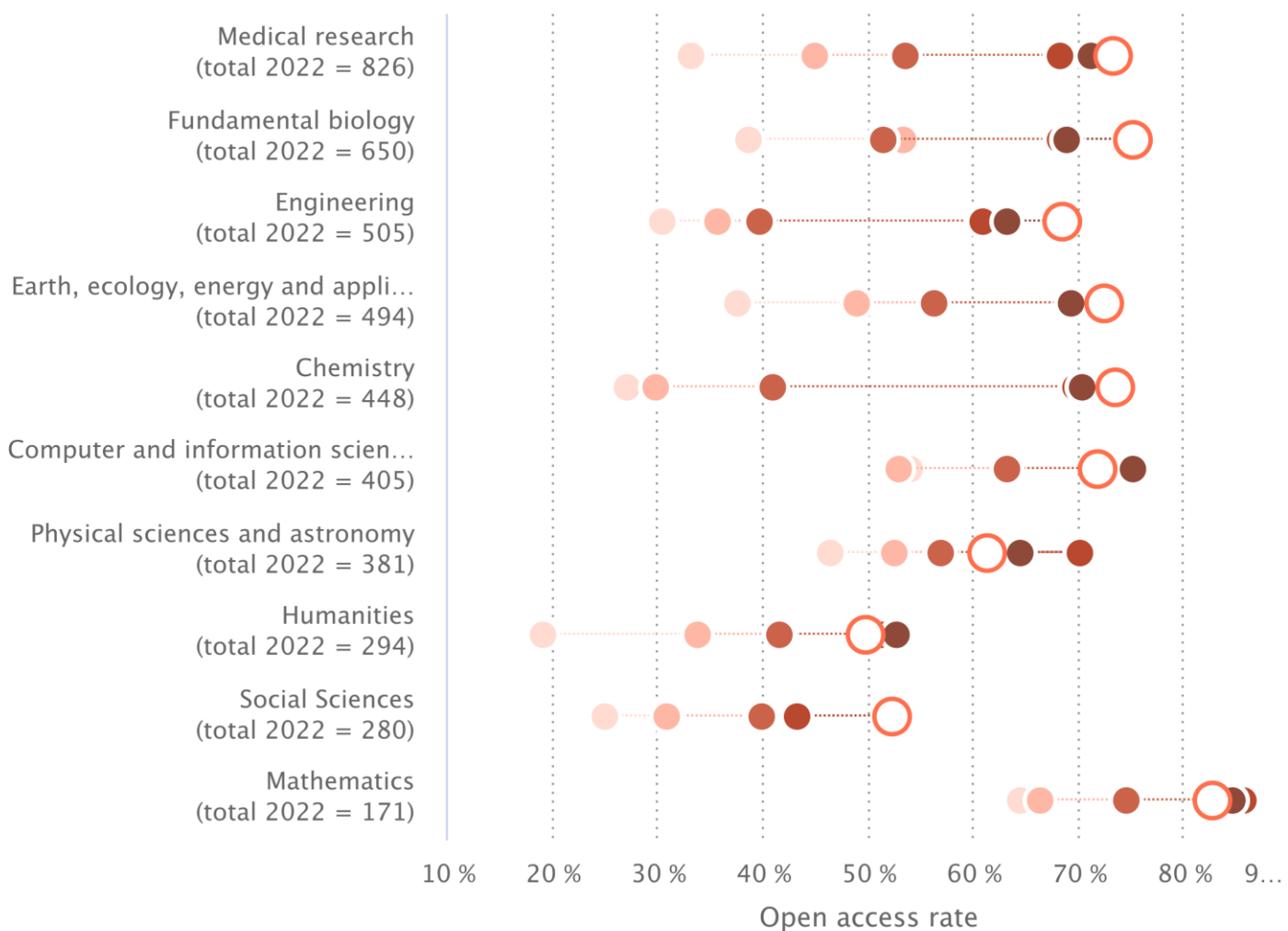# OUR CURRENT RESULTS FOR THE UNIVERSITÉ DE LORRAINE

Open access rate of scientific publications of the university of Lorraine, with a Crossref DOI, published during the previous year by observation year

Year	Open access rate
2023	69 %
2022	67 %
2021	66 %
2020	51 %
2019	45 %
2018	37 %

French Open Science Monitor, Sources : Unpaywall, HAL, MESR, Université de Lorraine (UL)

- Open access to publications: 69% (65% at the national level)

- A dedicated webpage on the Université de Lorraine Open Science website

Trends of the evolution of the rate of open access publications of the university of Lorraine, with a Crossref DOI, for each discipline by observation year
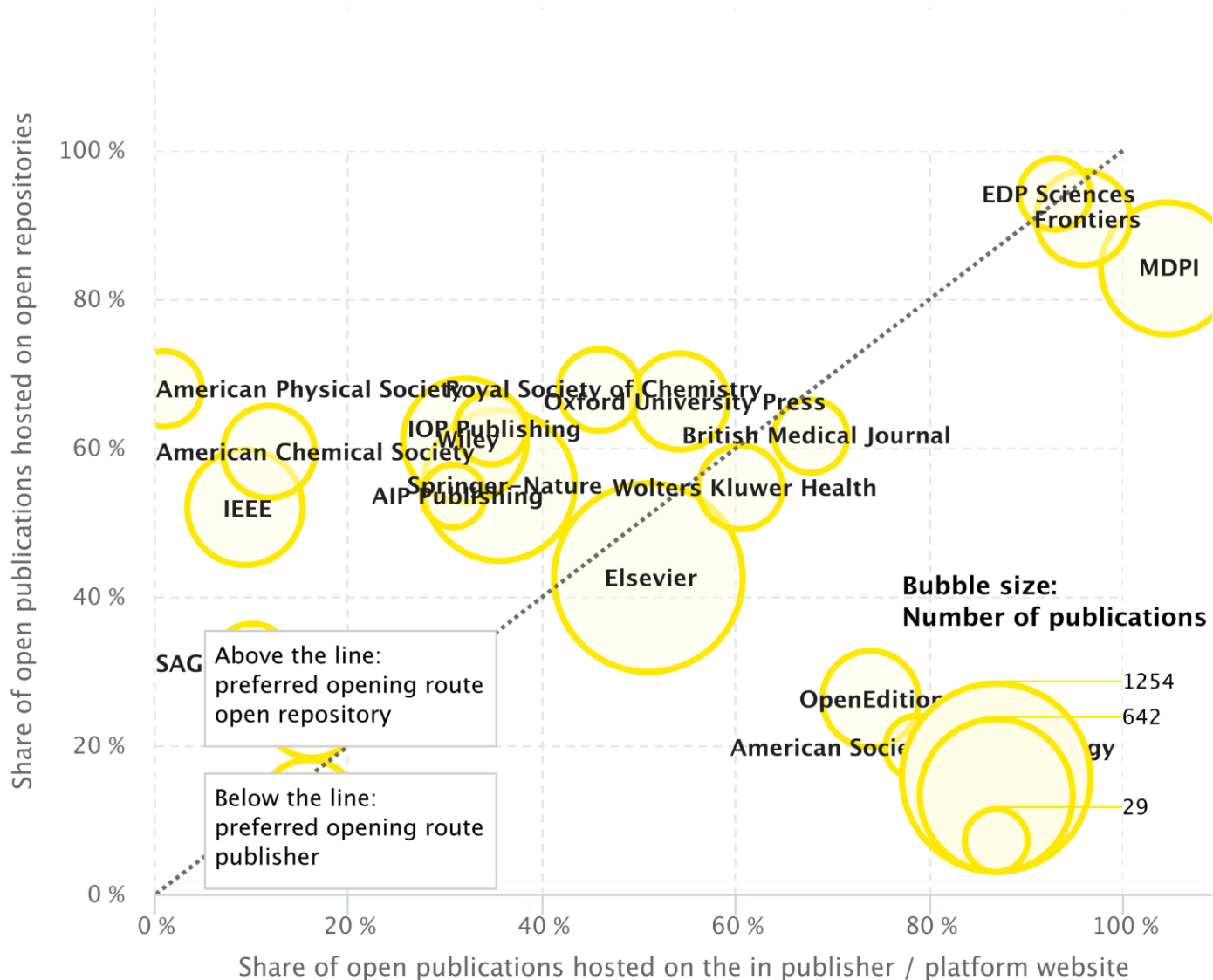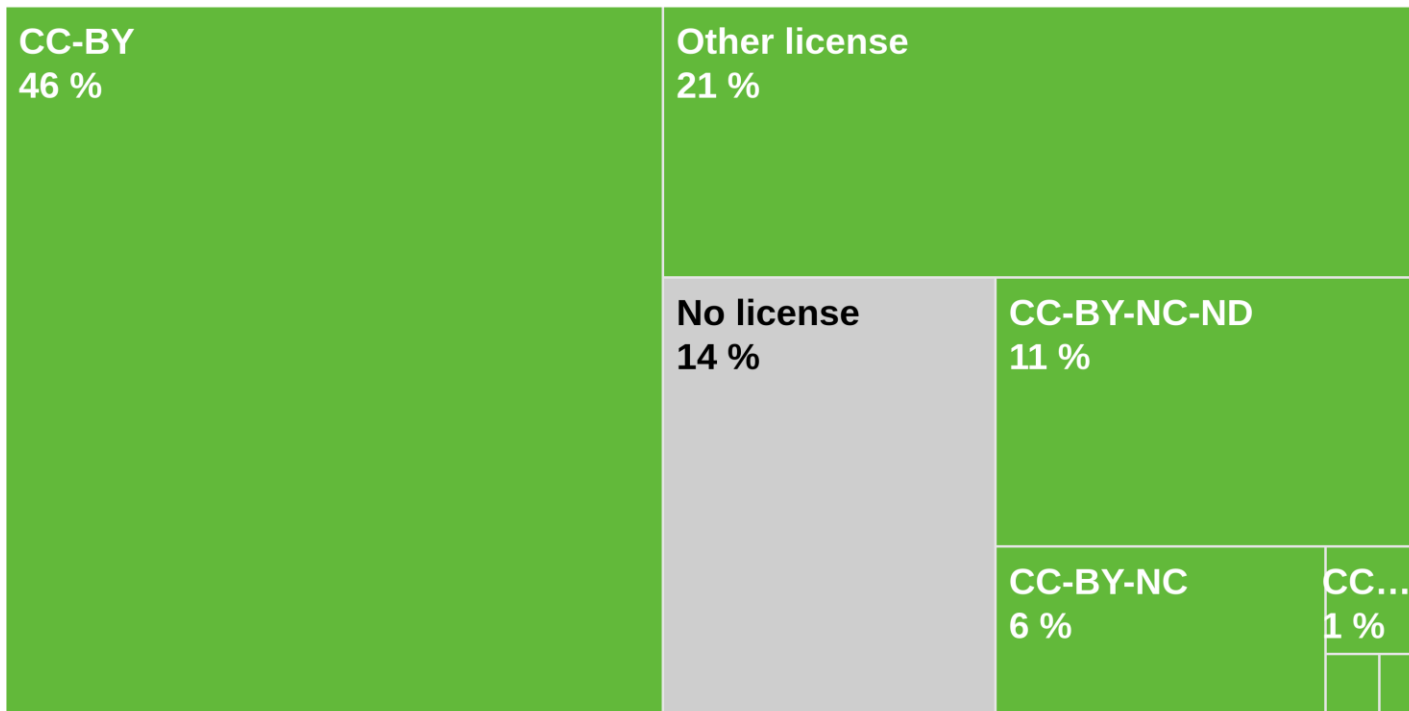
- A global view of our publications and their open access rate, by highest volume
- Strong differences between disciplines
- A strong progress for Chemistry (from 27% in 2018 to 73% today) or Social Sciences (from 25% to 52%)
- Progress is important! Understanding the context is paramount to support researchers

Positioning of publishers and publishing platforms according to the preferred route for opening up the publications of the university of Lorraine, with a Crossref DOI, they distribute (publications from 2022)

- A strong editorial concentration
- Four top publishers (big surprise!) : Elsevier, Springer-Nature, MDPI and Wiley
- Elsevier and MDPI are below the line: open access publications from these platforms are mostly accessible through their own platforms and are less deposited in institutional repositories
- A strong case for public repositories, which are persistent and open

Distribution of open scientific publications of the university of Lorraine, with a Crossref DOI, by type of license used among open access publications hosted by the publisher

CC-BY 46 %	Other license 21 %
No license 14 %	CC-BY-NC-ND 11 %
	CC-BY-NC 6 % / CC... 1 %

- More and more publications have an open license (86% for the publications from 2022, only 59% for the 2020 publications)
- The CC-BY license is strongly advised by Plan S
- It is mandatory for the publications of the French National Research Agency (ANR)

MANY MORE INDICATORS AVAILABLE

INDICATORS

▸ General indicators on publications

▸ Indicators by scientific field

▸ Indicators by editor

▸ Indicators by open archive

▸ Indicators on research data linked to publications

▸ Indicators on code and software linked to publications

▸ Indicators on thesis

▸ APC expenses

▴ Open Science trainings

The Documentation Direction provides Open Science training and support for all staff at the Université de Lorraine.

OPEN SCIENCE TRAINING FOR PHD STUDENTS, BY DOCTORAL SCHOOL

In 2023, 291 doctoral students were trained in Open Science. A "trained person" is a single individual who has taken part in at least one training course in one of the "Open Science" modules in the Domptez la Doc catalogue. These courses can last from 1 to 3 hours.

- Main open archives hosting scientific publications of the Université de Lorraine (UL)

- Opening rate of doctoral theses

- Distribution of doctoral theses of the UL by discipline

- APC expenses

- Open science training…

- An annual report in the UL magazine

- An annual presentation to the open science board

GROWING BIGGER: A NATIONAL COMMUNITY

THE FRENCH OSM USER CLUB

- More and more institutions wanted to make their own monitor

- The Université de Lorraine could not be the only contact point > creation of a user club with the French Ministry of Higher Education and Research in 2022

- Goals: helping each other, sharing experiences, getting feedbacks from libraries

- Two or more webinars are organized each year

- As of today, nearly 250 individuals belong to the Club, mostly from libraries

AN ONLINE STUDIO TO GENERATE INDICATORS ON-THE-FLY

- Since 2022, the Ministry developed an online studio to easily generate local indicators online
- How does it work? Institutions provide the list of their publications, which is processed by the Ministry
- After one week, the enriched metadata is sent back with all possible graphs
- The indicators can be tested online via the studio
- Today: more than 200 local monitors were created
- The same Open Science indicators are used across France

WHAT IS THE ROLE OF UNIVERSITY LIBRARIES IN THE DEVELOPMENT OF OPEN SCIENCE INDICATORS?

- Libraries basically are the carpenters of bibliometrics

- Libraries are long-time supporters of open access

- Libraries have a clear mandate to support researchers

- Libraries DO NOT have any researcher assessment mission

For these reasons, it is easier for libraries to monitor open science so as to know where they should put their efforts in supporting scientific communities.

They are best placed to advocate for the use of open databases instead of proprietary databases.

WHAT EFFECTS DO LOCAL MONITORS HAVE ON RESEARCH SUPPORT ACTIVITIES? A FEW LOCAL EXAMPLES

Reliable indicators allow libraries to have a better understanding of the open science practices amongst scientific communities and to provide tailor-made support.

| Finding of great disparities between disciplines | Organisation of a deposit-a-thon of CC-BY manuscripts | Un-subscriptions from journals where our researchers do not publish | Awareness from research unit directors when provided their own Monitor | Identification of new data repositories used by our researchers |

HOW SHOULD LIBRARIES COMMUNICATE WITH RESEARCH COMMUNITIES ON THESE INDICATORS WITHOUT APPEARING TO EVALUATE RESEARCH UNITS?

To support the cultural change, libraries should move with pedagogy and diplomacy.

> *A research unit specialized in Law with a 40% open-access rate to their publications is already a good performance*

A new approach of the necessary dialogue between librarians and researchers:

- A bibliometric report is a good opportunity to underline strengths and weaknesses or bad habits

- These indicators might uncover some misunderstanding or lack or knowledge: researchers often overlook the support they can have from libraries

- It is paramount to avoid any individual indicator (unless asked for by the researcher himself/herself)

Let's say it again: libraries DO NOT have any researcher assessment mission!

HOW CAN WE BUILD A NATIONAL NETWORK OF LOCAL MONITORS WITHOUT FOSTERING COMPETITION BETWEEN UNIVERSITIES?

We managed to have the same indicators for every institution in France: creating new rankings is tempting! How to avoid it?

- Every institution is choosing the scope and key figures of its monitor: by design, no possible ranking

- Instead of open science rankings, let's have a community of practice through the user club

- Libraries are making these indicators and should keep track on how they are used; even if sometimes, politics will be politics

- Let's look at the bigger picture and understand that we have a common goal: to open science

PERSPECTIVE: AN INTERNATIONAL DEVELOPMENT

THE PRINCIPLES OF OPEN SCIENCE MONITORING AND OSMI

- Following the French Open Science Monitor on research data and software, many exchanges with other countries

- Many similar initiatives exist throughout the world, following more or less the same general Open Science guidelines

- But no common understanding on what should be monitored, how, or for whom

- The French Ministry of Higher Education and Research, the Université de Lorraine, Inria and Unesco organized a workshop on the subject in December 2023

- It led to a first draft for [Principles of Open Science Monitoring](#), currently reviewed internationally

- This is the starting point for OSMI, the [Open Science Monitoring Initiative](#)

THANK YOU FOR YOUR ATTENTION!

- Link to the [French Open Science Monitor](#)

- Link to the [Université de Lorraine Open Science Monitor](#)

- Link to the [OSMI](#) website

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