



What role for academic libraries in Open Science?

Julien ROCHE, LIBER President

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Tiedon tähden – Knowledge first seminar

Helsinki, 14 March 2024



420
libraries

**DEVOTED TO
OPEN SCIENCE**

Policies, tools and infrastructures - reshaping research processes and mindsets in favour of Open.

ONE
mission

**ENABLE WORLD-CLASS
RESEARCH**

Knowledge and training so that libraries can support outstanding research and – by extension – the growth and sharing of knowledge.



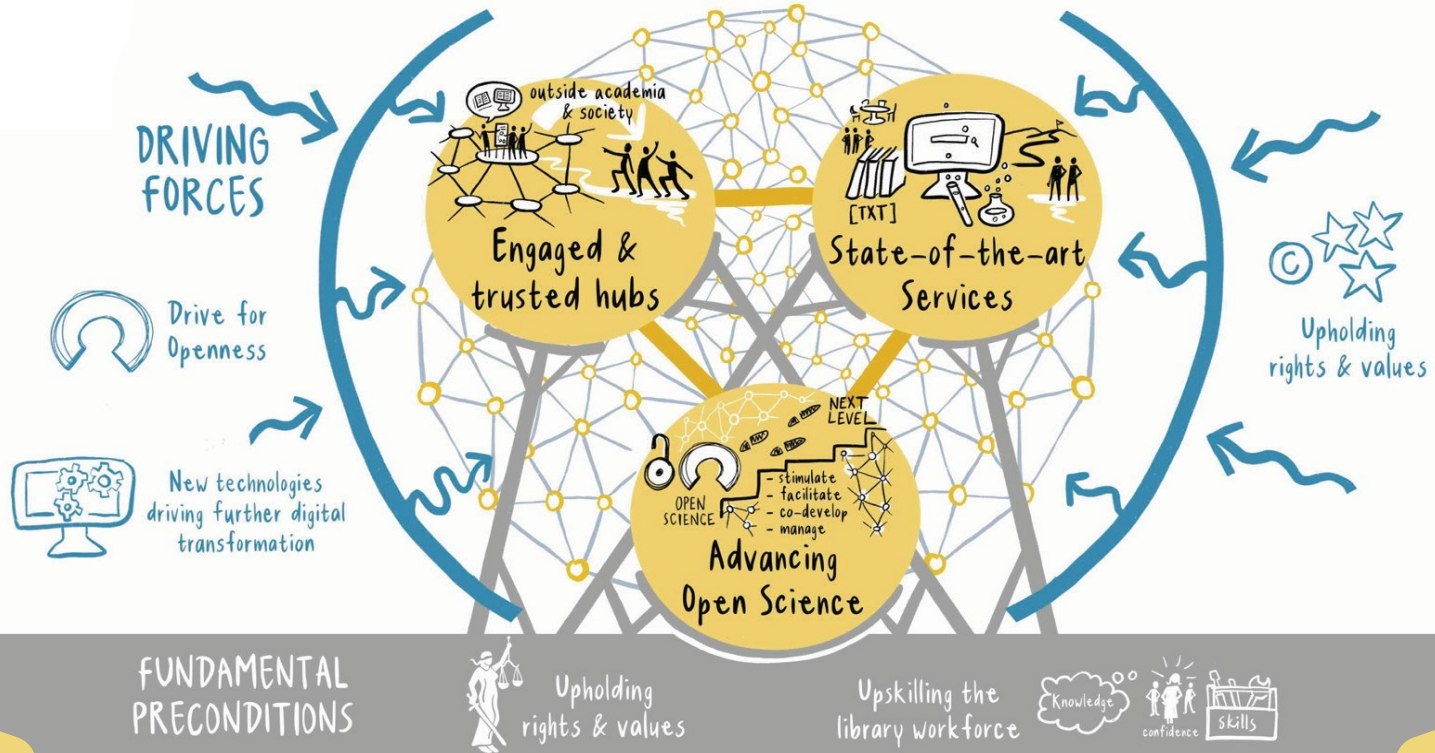


LIBER

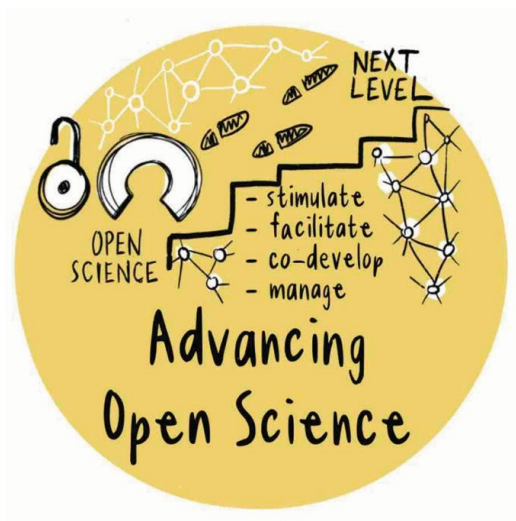
New Strategy 2023-2027



LIBER'S VISION FOR RESEARCH LIBRARIES IN 2027



C. ADVANCING OPEN SCIENCE



By 2027, in collaboration with researchers, research libraries stimulate, facilitate, co-develop and manage infrastructures and practices designed to take Open Science to the next level.

LIBER's priorities to achieve this vision are :

1. INNOVATIVE ROADS TO OPEN ACCESS

Facilitating multiple, innovative roads to Open Access that establish a default setting of diverse, inclusive, and sustainable access to scholarship and research communication.

2. FAIR RESEARCH DATA BY DESIGN

Supporting and advocating the collaborative development and management of FAIR research data.

3. SHAPING AND SUPPORTING OPEN SCIENCE POLICIES AND PRACTICES

Transforming good practices into policies and policies into good practices.

4. OPENING UP ACCESS TO EDUCATIONAL RESOURCES

Supporting the creation, access, and usage of Open Educational Resources.

5. RESEARCH ASSESSMENT

Partnering with academia to advance, adopt and implement responsible frameworks for research assessment.

What role for academic libraries in Open Science?

A library perspective

Fully achieving Open Science (OS) will be a **long and tricky journey**

- Libraries have been early adopters of Open Access, managing the first repositories
- Libraries have been pushy for DMP mandates in universities for research projects
- Libraries advocate for the development of FAIR data
- Libraries support the ambition of a global policies in universities (OA, data...)

LIÈGE université

LOGIN EN

ORBi

GIVE US FEEDBACK EXPLORE STATISTICS NEWS HELP ABOUT

Welcome to ORBi, the institutional repository of the University of Liège

All | Example: "Cognitive architectures" | 🔍

📄 Items 213647	🔓 Open Access Items 83776	👤 Our Authors 13377	📁 Document types 43	🎓 Classifications 113	📅 Recently added
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CONTACT ORBI

https://orbi.uliege.be/tools/login

*Policy makers need to build **consistent strategies and action plans over decades**, libraries are key for this continuity*

To achieve OS, we need a global monitoring of the publication paths

- Subscriptions and other traditional publishing models – role of libraries in consortia
- Green – repositories are usually managed by libraries
- APCs – when monitored, done frequently by libraries
- Institutional OA publishing models – see the DIAMAS project, libraries on board
- Local publishing platforms for journal – role of libraries
- Academic presses – UCL for instance

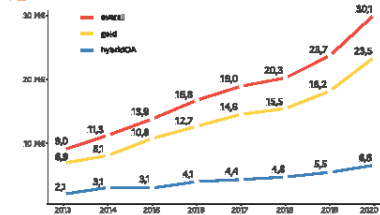
Retrospective and prospective study
of the evolution of APC costs
for French institutions

Antoine Blanchard
Diane Thierry
Maurits van der Graaf
Full report:
doi:10.52849/28

2013-2020 Threefold increase to 30 M€ APC

16 %
of all articles by French
institutions have APC
25 % in 2020

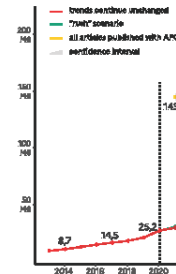
49 %
of articles with APC were
paid by French Institutions



Data: 1 032 517 articles from SSC enriched with OpenAlex, Web of science, Couperin, QOAR

The reconstructed cost of APC paid by French institutions is estimated at 30 M€ in 2020.

2021-2030 Trend leading to 50M€ APC in 2030



50 M€ in 2030...
current trend of APC
paid by French institutions

...up to 68 M€...
paid by French institutions
in an alternative scenario

...at most 168 M€
paid by French institutions if all articles
(except 10% diamond) had APC

Subscription expenditures: 875 M€ in 2020, going up to 975 M€ in 2030

APC: Article processing charges
SSC: Baromètre de la recherche ouverte
QOAR: Quality of Open Access Metrics
Hybrid/OA: open access article in subscription journal
Gold: article in fully open access journal with APC
Diamond: article in fully OA journal without APC

Ouvrir la science! CC BY 09/2022

Libraries are involved in all these publication paths, they already are / should be deeply involved in this monitoring process

OS has to be addressed in a **larger perspective** – the example of the data life cycle

- Some science will remain closed, temporarily or over the longer term,
- Therefore the whole data life cycle needs to be monitored
- Given their role, the libraries are the natural partners of research teams in order to manage the life cycle of their publications and data
 - ...
 - And given their role, the libraries also have an important role to help the decision makers, in universities and beyond, drawing this larger perspective

*If not done yet, universities and research institutions urgently need to **define a global strategy, from openness to closeness, for the research community and beyond, with input from libraries***

News › Digital Competence Centers at knowledge institutions forging ahead

Digital Competence Centers at knowledge institutions forging ahead

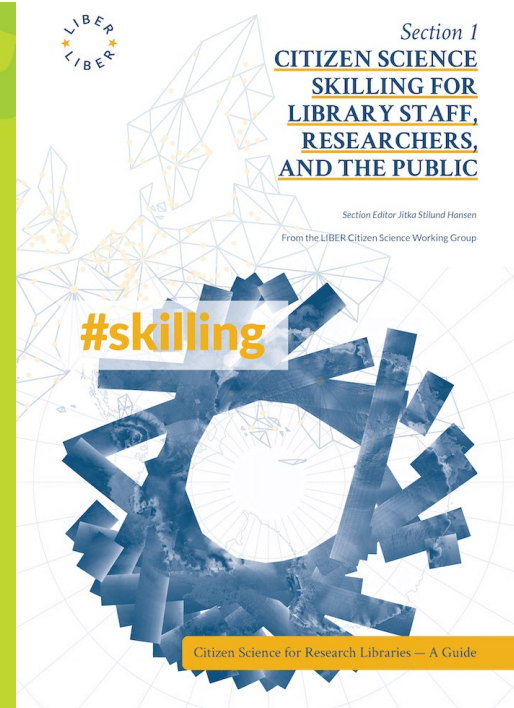
29 June 2022

The Digital Competence Centers (DCCs) are still relatively unknown among researchers within universities and research institutions, even though many of them receive requests for support in the area of data, software and computing. This is why, two years ago, NWO organised a funding round for local DCCs. What have the 22 institutions awarded funding achieved so far? Researchers are benefitting from the DCCs: 'Drawing up a data management plan was quite a challenge, but our FAIR data steward really helped us along.' The national coordination point LCRDM knows more about the overall progress.



A major cultural change through massive advocacy and training is expected

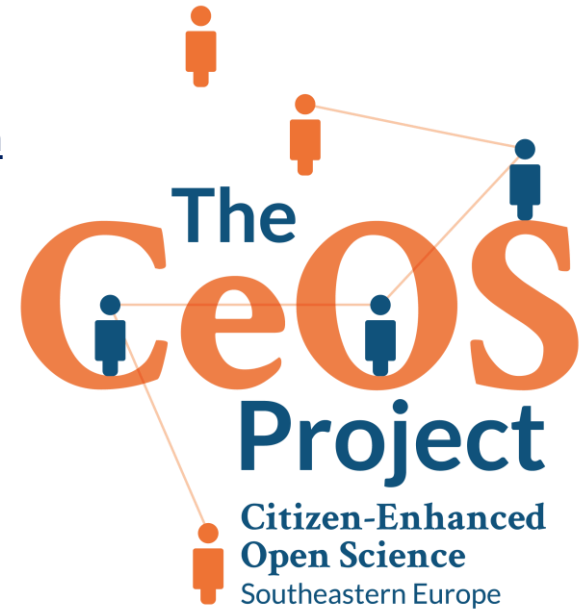
- Some years ago, only a minority was convinced and active in research institutions and universities, among which librarians
- Situation has improved, but the shift is still ahead
- Advocacy and training are key
- To achieve that, libraries are central for students, decision makers and other stakeholders outside the academic world



Libraries have become years ago important trainers, teaching “library and information science”, and OS is in the portfolio

Upskilling the workforce in libraries is essential to support OS

- Competencies have been hugely updated the past 20 years, in order to make OA happen
- Still, there is a lot more to do in new areas such as Data, OERs, citizen science, Software and source code
- In many libraries, there are now OA units, but challenges are :
 - There is a need for continuous training,
 - Specific courses need to be developed in universities, and we are late
 - There is an urgent need for new positions, such as OERs/data librarians/stewards, community engagement officers...



Continuous upskilling and workforce development are on the way, but there is a need to speed up and extend beyond libraries themselves

To achieve this shift to OS, we **need to be fairly ambitious and systematic** in universities and research institutions

- Advising decision makers, supporting research teams, training students and researchers are heavily time-consuming
- Libraries are on the way to massively shift their workforce to OS support
- OS services / missions / support units have been created and are growing inside the library team
- When OS is fully part of the roadmap of the university, means are usually given to libraries to embrace new key missions

BerlinUP

Berlin Universities Publishing ist ein Open-Access-Verlag in einer nichtkommerziellen, wissenschaftseigenen Infrastruktur und mit einer allgemeinen, verlagsunabhängigen Publikationsberatung.

BerlinUP wird gefördert von der Berlin University Alliance und gemeinschaftlich getragen von den Bibliotheken der Freien Universität Berlin, der Humboldt-Universität zu Berlin, der Technischen Universität Berlin und der Charité – Universitätsmedizin Berlin.



BerlinUP Books

Wir publizieren Monografien, Sammelbände und Schriftenreihen für Angehörige der Berlin University Alliance.



BerlinUP Journals

Wir publizieren Open-Access-Zeitschriften für Angehörige der Berlin University Alliance.



BerlinUP Beratung

Wir unterstützen Angehörige der Berlin University Alliance bei allen Fragen zum Open-Access-Publizieren, auch unabhängig von den Publikationsangeboten in BerlinUP.

*Where systematic and comprehensive changes towards OS are happening, **libraries are part of this shift**, when they are not, the shift is limited and slower*

Academic and **national** libraries need to combine their efforts for the benefits of Open Science and their users

- Digitised and born-digital cultural heritage is a common public good
- Open and linked data are essential
- Interoperable infrastructures have to be developed and maintained, locally, nationally, internationally
- Multilingualism for scientific content is key (for some countries)
- Long term preservation has to be tackled
- Digital humanities need strong support
- Machine learning and AI need to be addressed

CENL News
24th May 2021

The National Library of Finland' 2021-2030 Strategy

The National Library's strategy for 2021-2030 strongly supports the Ministry of Education and Culture's goal of serving individuals and society through education, competence, science and technology. Our collective memory as a nation is a resource upon which we build.

The National Library has impact on society and research through its unique collections and online services.

[Openness increases equality](#)

The main duty of the National Library is to preserve printed publications and increasingly also electronic materials. The new strategy period will see the National Library increase its efforts to promote equality in Finland by enhancing its services. We support lifelong learning and Bildung by being actively involved in creating a digital culture of openness and by promoting open science.

"We promote open science and the openness of materials and services. Openness should be prioritised when aiming to reduce inequality in society. These are all ways of strengthening learning and Bildung in addition to science," says National Librarian, Professor [Cecilia of Forsell](#) at the National Library of Finland. "We learn all our lives. Our hobbies also create a constant need for knowledge and discovering new things. Our central goal at the National Library is to strengthen the knowledge base of Finnish society. Our contribution to learning, research, citizen science and the availability of information is significant."

A good coordination between academic and national libraries is needed because the challenges are tough

Researchers and research communities face many **tricky issues on the way to OS**

- Researchers need support from experts regarding the publication process – libraries are there to help in the conversation with publishers, especially regarding APCs
- The legal context is very complex, researchers need from their institution simple guidelines and a safe environment – see the *Rights Retention Strategy*
- To tackle many issues, a one stop-shop is probably the best solution – libraries are usually this one-stop shop, bringing the expertise needed to the researchers, from inside and outside the library



Plan S
Making full & immediate
Open Access a reality

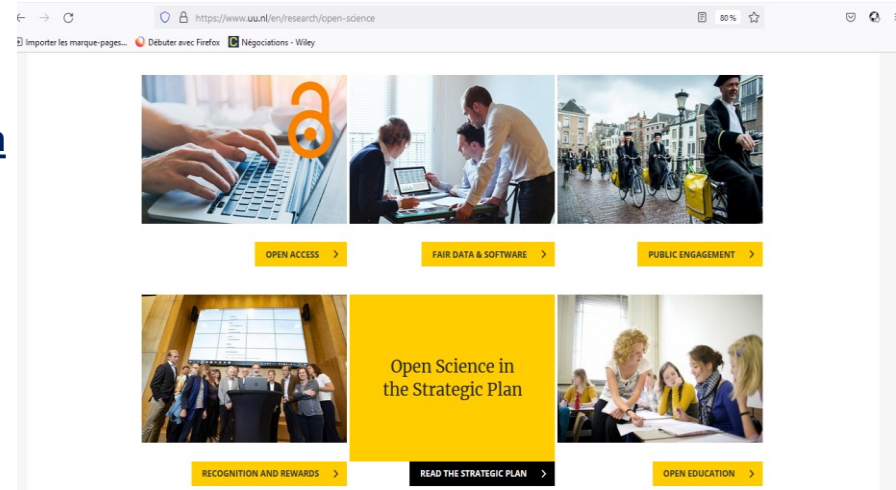
The Author's Rights Quiz
How well do you know your rights as an author?

Let's find out! press Enter ↵

*The more complex issues are, the simpler things have to be, so that researchers can concentrate on research. **Libraries are the effective interfaces for side-issues.***

To achieve OS, policies need to be transformed into practices, and the other way round

- Libraries are pro-active – see *Copyright Directive* in 2019
- Libraries are supportive – see the *Rights Retention Strategy* from Coalition S (again)
- Opportunities and proposals for OS-related policies often come from the libraries: OA mandates, roadmap for OS, data policies...
- Good practices are spread through universities and research institutions by libraries – see the OS barometer from the university of Lorraine
- From ideas to action - many universities and research institutions have roadmaps for OS, libraries play an important role there



Libraries have a key role to play in this virtuous circle in order to transform policies into practices, and the other way round.

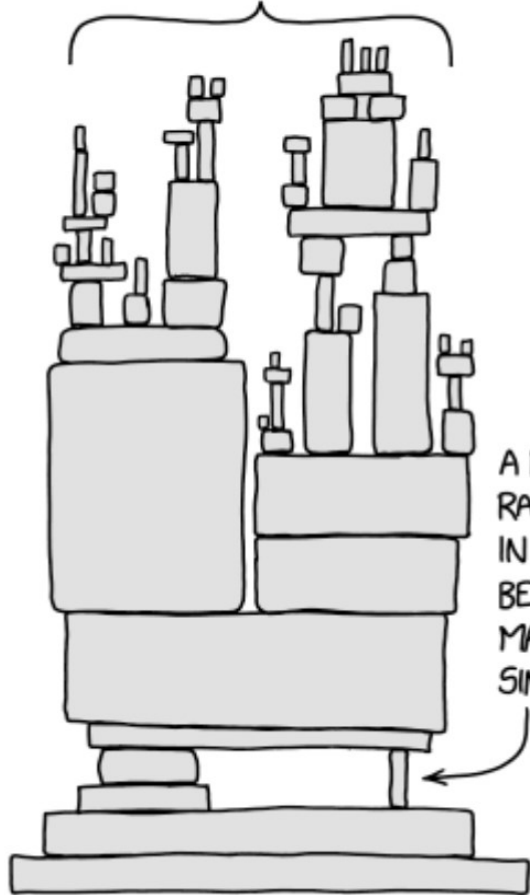
OS relies on a fragile and complex ecosystem

- Some initiatives are financially at threats or need money to support their development - *Redalyc/AmeliCA* for instance
- Some OS initiatives have been purchased by private (big) companies with their own (hidden) agenda - *Knowledge Unlatched* (Wiley)
- Some tools are just vital for OS, and need to be maintained over the long term - DOAJ, Dspace...
- Some emerging initiatives need to be sustained to grow until they become viable - *Peer Community In* for instance
- The system is highly interdependent (see next slide)
- Researchers usually do not know that, but some (big) private companies have control over the whole lifecycle of research (see following slide)

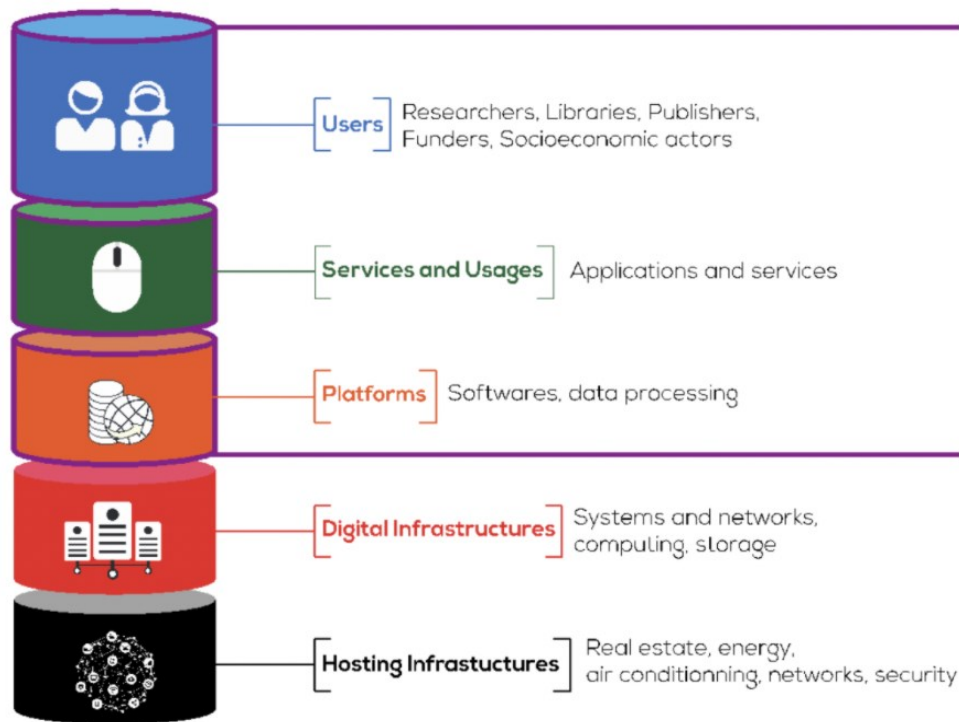


Libraries play an important role to monitor, sustain and develop this ecosystem, but they need help and support.

ALL MODERN DIGITAL INFRASTRUCTURE

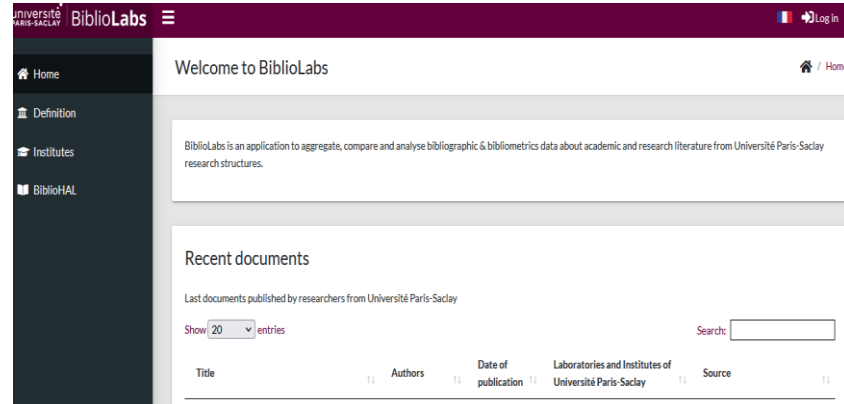


A PROJECT SOME
RANDOM PERSON
IN NEBRASKA HAS
BEEN THANKLESSLY
MAINTAINING
SINCE 2003



Research assessment needs a major reform

- We need a fair evaluation of research, (nearly) everyone is aware of that, but Impact factor has nothing to do with that
- Research assessment is facing many unsolved issues – an exhausting peer-reviewing system, a run for quantity versus quality, publication pressure enabling predatory journals, the urge to have positive results to publish versus negative ones, ...
- Libraries are surely not central there but they will certainly help / they manage most of the open access tools, they deliver bibliometric services to their institution, they have a transversal view on different situations among disciplines and know suitable solutions



*The reform of the evaluation system is research-driven,
but **libraries can bring useful support***



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Chief data officer
University of Lille

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college, French national Committee for Open
Science.**

<https://www.ouvrirlascience.fr>