

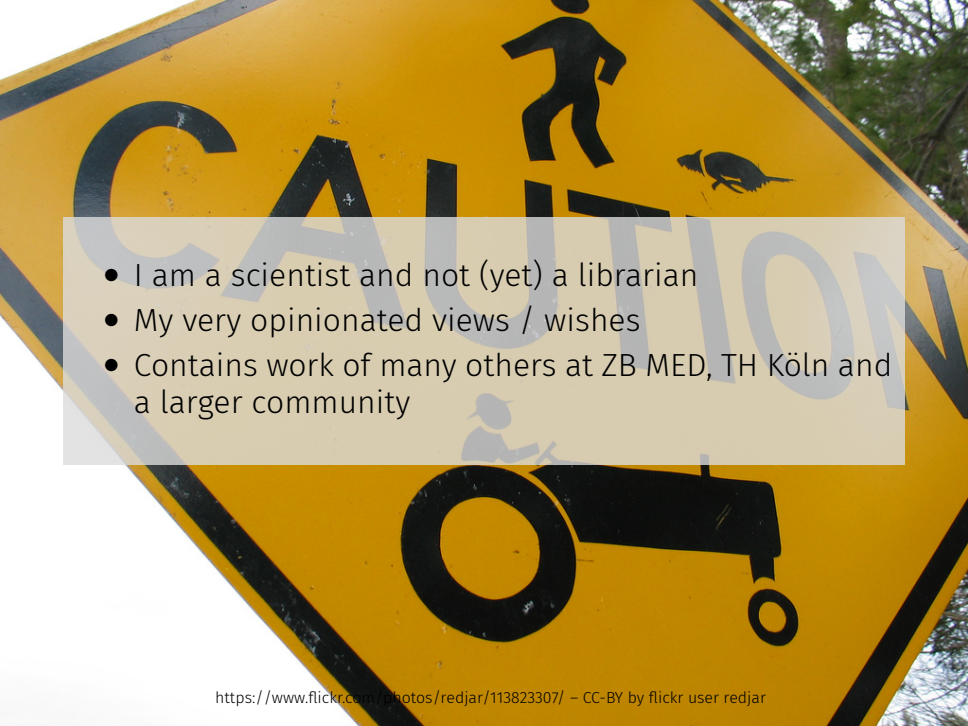
The scientific library in transition – future tasks, challenges and opportunities


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TH Köln, Cologne Germany

Sep. 11th, 2018, ICSTI's Conference, London



- 
- I am a scientist and not (yet) a librarian
 - My very opinionated views / wishes
 - Contains work of many others at ZB MED, TH Köln and a larger community

The background of the slide is a close-up photograph of a blue-painted metal surface, possibly a door or a large container. The paint is worn and chipped in several places, revealing a rusty, brownish metal underneath. A large, rusty padlock is attached to the surface, and a keyhole is visible nearby. The padlock has the word "STERLING" and a logo on it. The overall image has a gritty, industrial feel.

The good news:

Open Access is on its way to become the
default publishing mode.



cOAlition S

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(04/09/18) Science without publication paywalls: cOAlition S for the realisation of full and immediate Open Access... [read more](#)

(11/07/2018) Research funders making Open Access a reality by 2020... [read more](#)


[Documents](#)

Science Without Publication Paywalls: cOAlition S for the Realisation of Full and Immediate Open Access... [read more](#)

What is cOAlition S?


On 4 September 2018, 11 national research funding organisations, with the support of the European Commission including the European Research Council (ERC), announced the launch of cOAlition S, an initiative to make full and immediate Open Access to research publications a reality. It is built around Plan S, which consists of one target and 10 principles.

cOAlition S signals the commitment to implement, by 1 January 2020, the necessary measures to fulfil its main principle: "By 2020 scientific publications that result from research funded by public grants provided by participating national and European research councils and funding bodies, must be published in compliant Open Access Journals or on compliant Open Access Platforms."

The background of the slide is a close-up photograph of a blue-painted metal surface, likely a door or a heavy box. The paint is chipped and worn, revealing a rusty metal underneath. A large, rusty metal latch is broken and bent. A brass padlock is attached to the latch mechanism. The padlock has the word "STERLING" and a logo of a bird with spread wings embossed on it. The text is overlaid on a semi-transparent white rectangular box in the center of the image.

The bad news (for libraries):


This means scientific libraries
are not needed anymore.

The background of the slide is a close-up photograph of a blue-painted metal surface, likely a door or a heavy cabinet. A rusty, brown metal lock mechanism is visible in the upper center. A yellow padlock is attached to the mechanism, hanging down. The blue paint is worn and chipped, revealing the underlying metal. The text is overlaid on a semi-transparent white rectangular area in the center of the image.

~~The bad news for libraries:~~

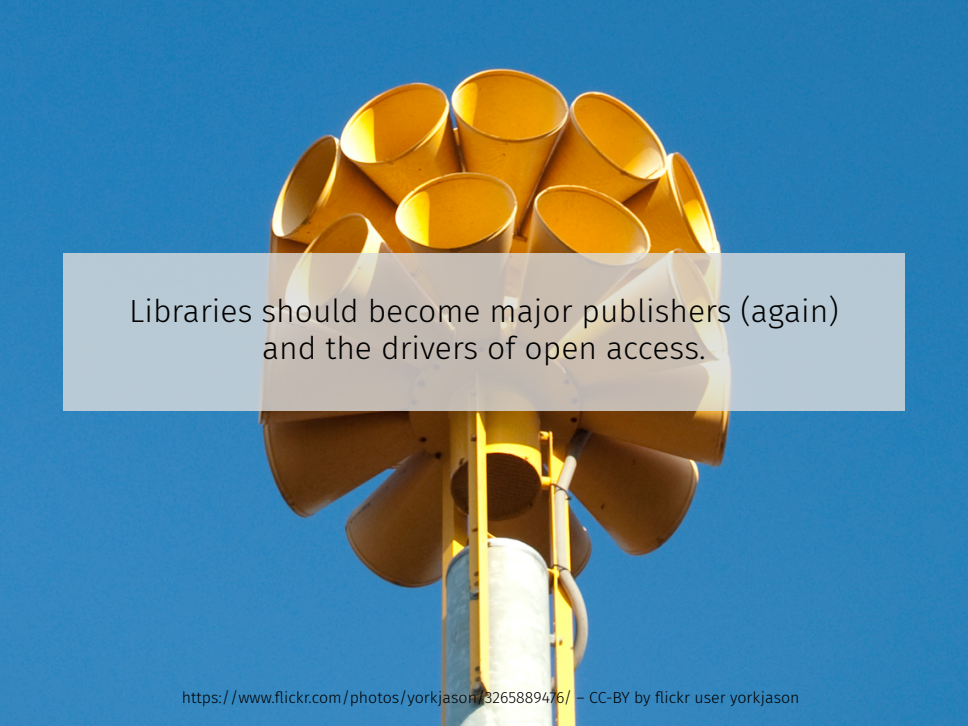
~~This means scientific libraries
are not needed anymore.~~

Scientific libraries have new tasks.

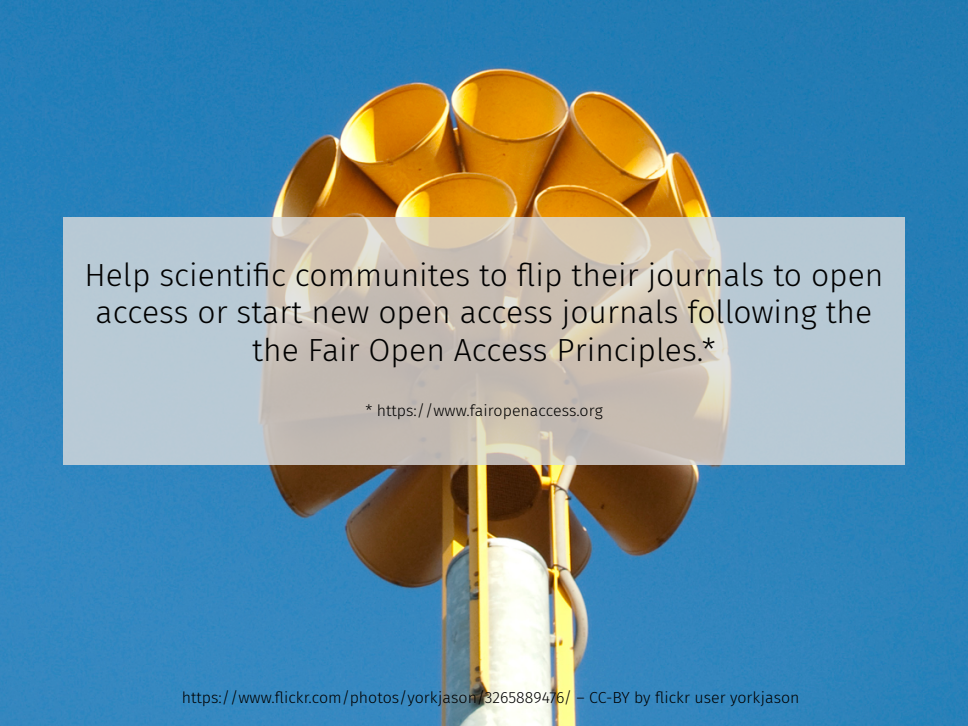


The mission remains the same:

Scientific libraries must preserve research output
and provide access to it.



Libraries should become major publishers (again)
and the drivers of open access.



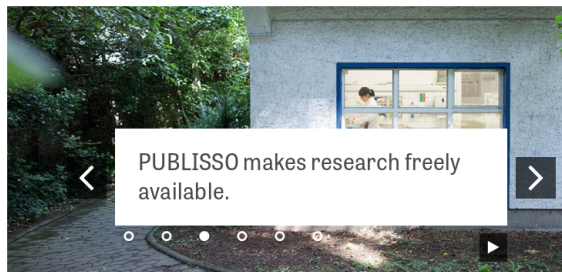
Help scientific communities to flip their journals to open access or start new open access journals following the the Fair Open Access Principles.*

* <https://www.fairopenaccess.org>

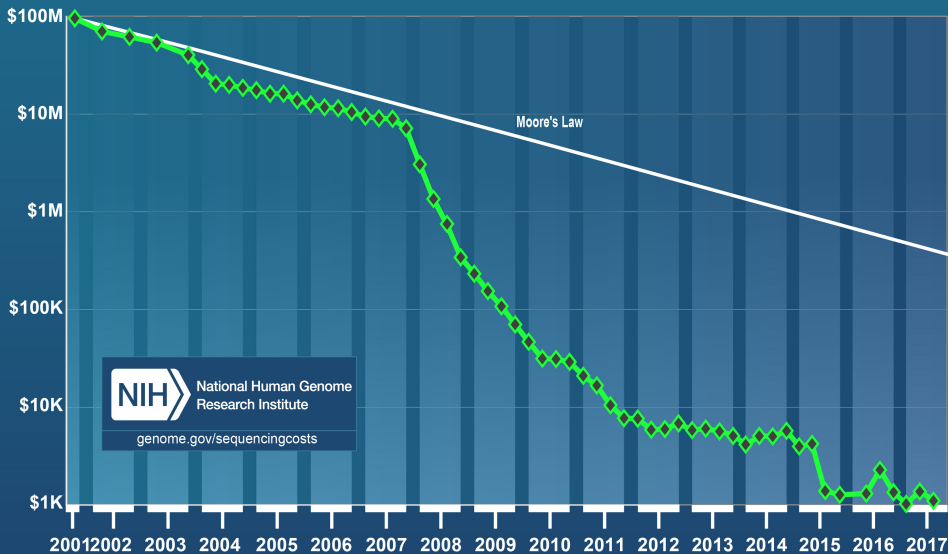


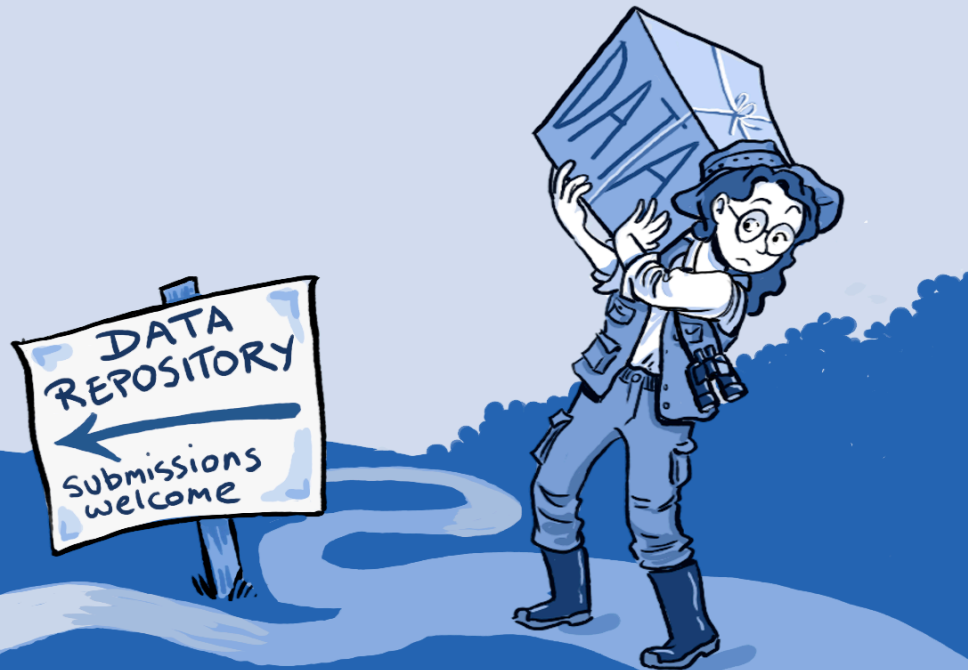
PUBLISSO is an open access publishing platform for life sciences.

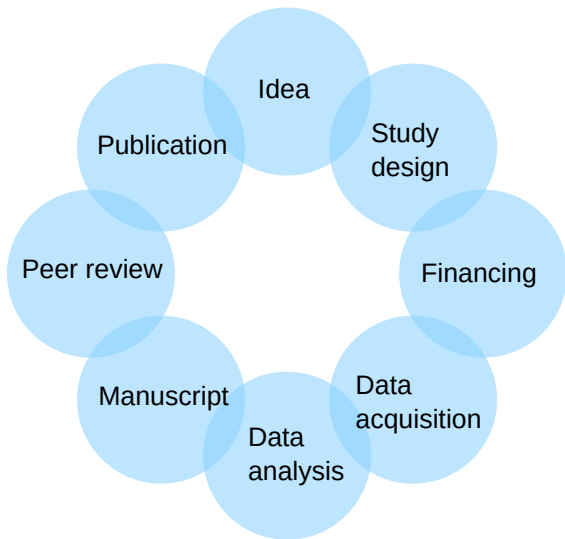
The website is aimed at all researchers working in the field of life sciences who wish to make their work and research data freely accessible through open access publishing. It also caters to anyone working in the field of information science. We offer advice and workshops on all aspects of open access (OA).

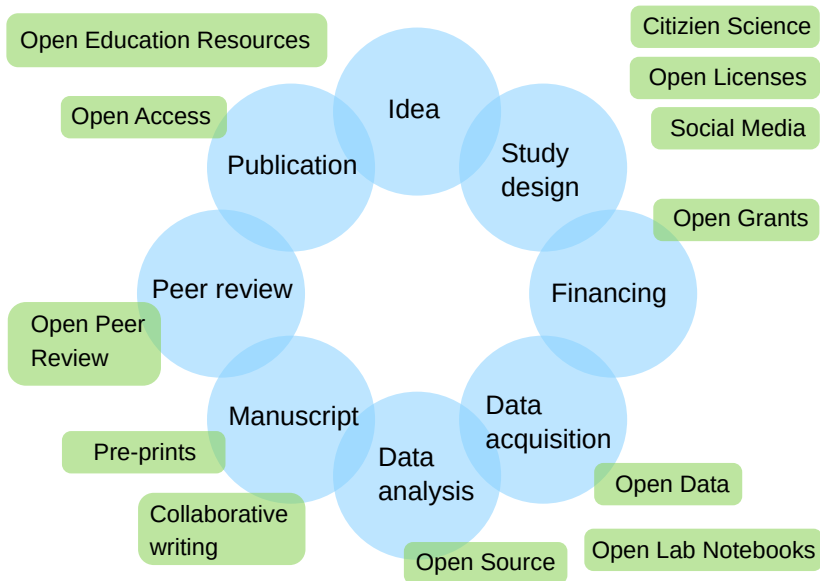



Cost per Genome









A photograph of a spice market stall. Numerous metal containers are filled with different types of spices, including ground powders and whole seeds. Each container has a small label with the name of the spice. The spices vary in color, from bright red to earthy browns and greens. The labels are white with colored text, and some have a small red or green tab. The background is slightly blurred, showing more of the stall and other people.

Not trivial!

Numerous different file formats, licences, privacy issues, legal requirements, provenance and interaction between different items ...


Currently my favorite example ...

Science \Leftrightarrow Technology

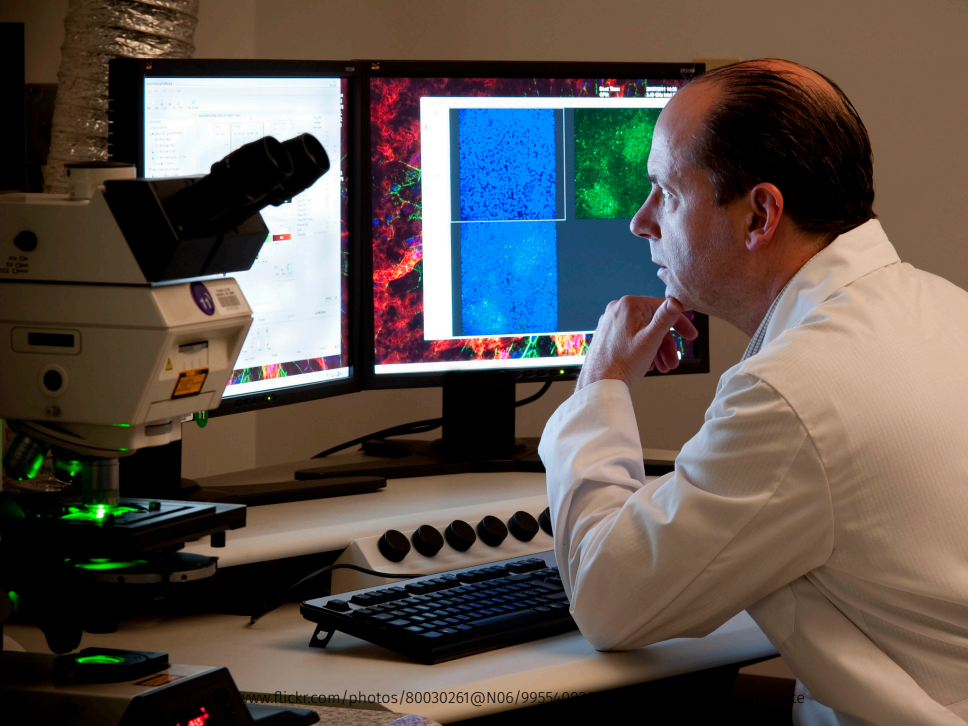






A collection of vintage hand tools is arranged on a dark, vertically-grained wooden surface. The tools include a claw hammer, a hand saw, a double-bitted axe, a pair of large pliers, a pair of yellow leather work gloves, a metal cup, a small metal bell, a tape measure, and a small metal container. The scene is lit from the left, creating a strong shadow and highlighting the textures of the wood and the tools.

Software
- an ubiquitous research tool



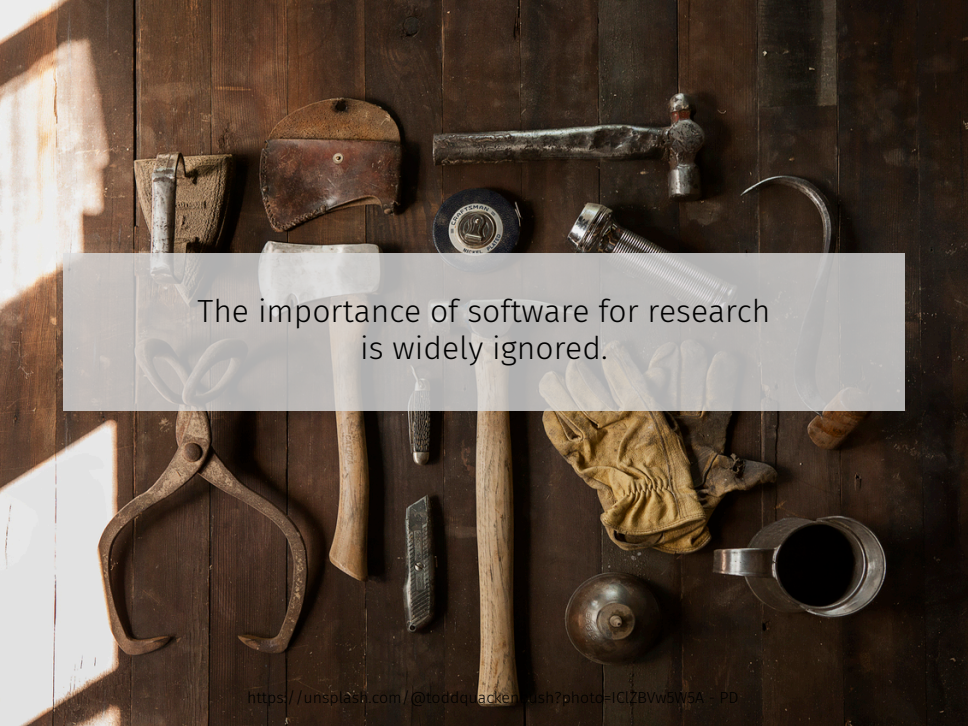


It is unquestionable that there is a strong and growing dependency of research on software.



Software is also a result of
scientific work.

Quality, accessibility, citability, etc.
have to be ensured.

A collection of vintage hand tools is arranged on a dark wooden surface. The tools include a hammer, a saw, a wrench, a pair of pliers, a pair of gloves, a metal cup, and various other smaller tools. The tools are arranged in a way that suggests they are being used for a task. A semi-transparent white box is overlaid on the center of the image, containing the text "The importance of software for research is widely ignored.".


The importance of software for research
is widely ignored.

A decorative border composed of a grid of squares in various shades of green, blue, and cyan, surrounding the central text area.

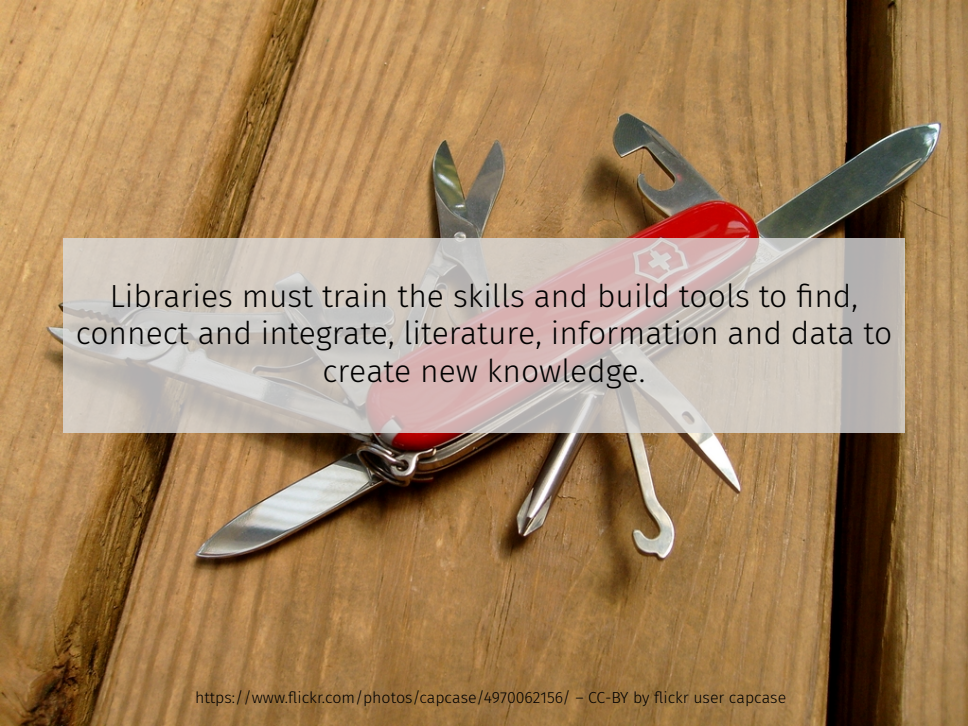
Recommendations on the

Development, Use and Provision of Research Software

Research Software Working Group
in the Priority Initiative Digital Information
of the Alliance of German Science Organisations



Ultimate access creates new problems:
Increased effort to find and process information.

A red Swiss Army knife is shown with several of its tools extended, including a large blade, a pair of pliers, a corkscrew, and a saw. The knife is resting on a wooden surface. A semi-transparent white box is overlaid on the image, containing text.

Libraries must train the skills and build tools to find, connect and integrate, literature, information and data to create new knowledge.



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Bookmarks  My account

Enter your search terms here



▼ Advanced search

LIVIVO The Search Portal for Life Sciences

Animal Protection **Biodiversity** Bioenergy Breast Cancer Carcinogenes Climate Change Colony Collapse Disorder
Crispr Cas **Dementia** Ecosystem Services Food Allergy Glyphosate Hospital Hygiene **HPV Vaccination** Influenza
Interleukin-33 Jumping Gene Malaria Microplastics Nanomaterial **Nuclear Disaster** Nutrigenomics Oncogene
Organ Donation Organic Farming Pesticide Residues **RuBisCo** Trade Impacts Vegan Diet **Zika** Zoonosis **Zoster**

About LIVIVO

Publications and Downloads

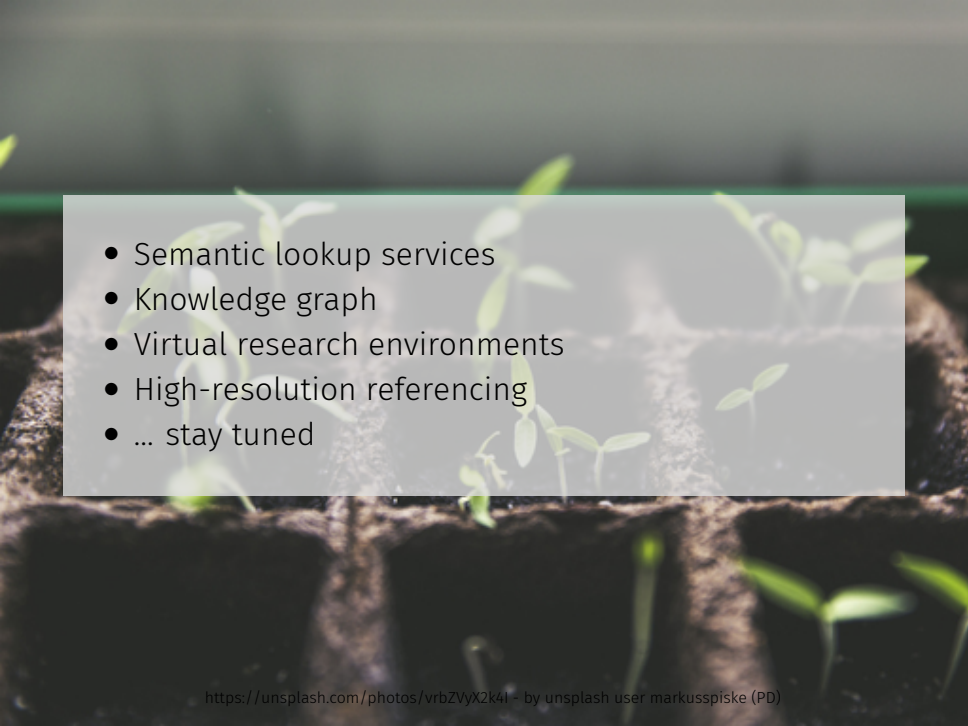
Imprint


Disclaimer

Privacy


v. 4.4



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- A background image showing several small green seedlings with two leaves each, growing out of a dark brown, textured seedling tray. The lighting is soft, highlighting the vibrant green of the plants against the dark soil.
- Semantic lookup services
 - Knowledge graph
 - Virtual research environments
 - High-resolution referencing
 - ... stay tuned

A photograph of a meeting in progress. Several people are seated around a wooden table. In the foreground, a white laptop is open. Next to it is a white coffee cup on a saucer. There are several spiral-bound notebooks and pens on the table. A woman with long blonde hair, wearing a blue shirt, is visible on the right side of the frame, looking down at a notebook. The background is slightly blurred, showing more of the meeting environment.

To find solutions librarians and scientist have
to talk more to each other.



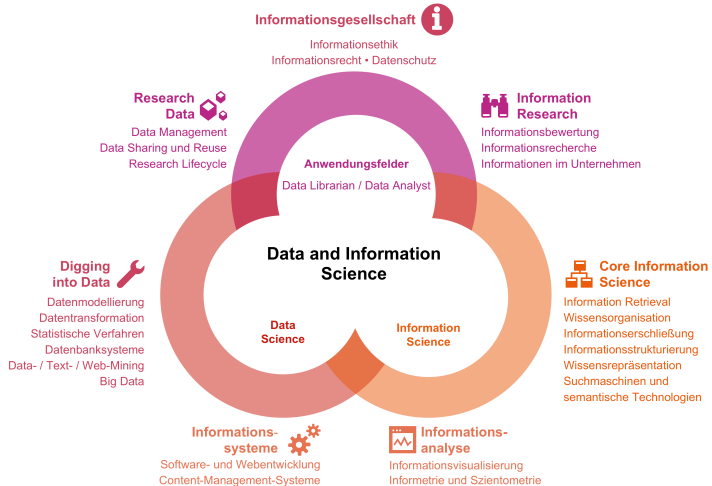
We are facing a huge skill gap.




Shifting to Data Savvy: The Future of Data Science In Libraries

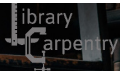
Burton, Matt and Lyon, Liz and Erdmann, Chris and Tijerina, Bonnie (2018)
Shifting to Data Savvy: The Future of Data Science In Libraries. Project Report.
University of Pittsburgh, Pittsburgh, PA; <https://d-scholarship.pitt.edu/id/eprint/33891>

New Bachelor at TH Köln: *Data and Information Science*



A welder wearing a dark, protective suit and a helmet with a visor is working on a large, horizontal metal pipe. The welder's hands are visible, holding a welding torch. The background is dark and industrial. A semi-transparent white box is overlaid on the center of the image, containing text.

Currently under contruction at the ZBIW of the TH Köln:
Certificate course *Data Librarian*



WHAT WE DO ABOUT LESSONS LESSON DEV SUPPORTERS PEOPLE CONTACT BLOG

Software and data skills for library professionals

WELCOME TO LIBRARY CARPENTRY

LEARN MORE

WHAT WE DO



Lessons



Workshops



Community

<https://librarycarpentry.org/>



Data intro for librarians

An introduction to data structures, regular expressions, and computing terms



Unix Shell

An introduction to command line interfaces and task automation using the Unix shell



OpenRefine

An introduction to cleaning up and enhancing a dataset using OpenRefine



Git Intro for Librarians

An introduction to version control using Git and GitHub for collaboration



SQL for Librarians

An introduction to relational database management using the SQLite tool



Webscraping

An introduction to extracting structured data from websites using a range of tools



Tidy data for librarians

An introduction to good data organisation, which is the foundation of much of our day-to-day work in libraries.



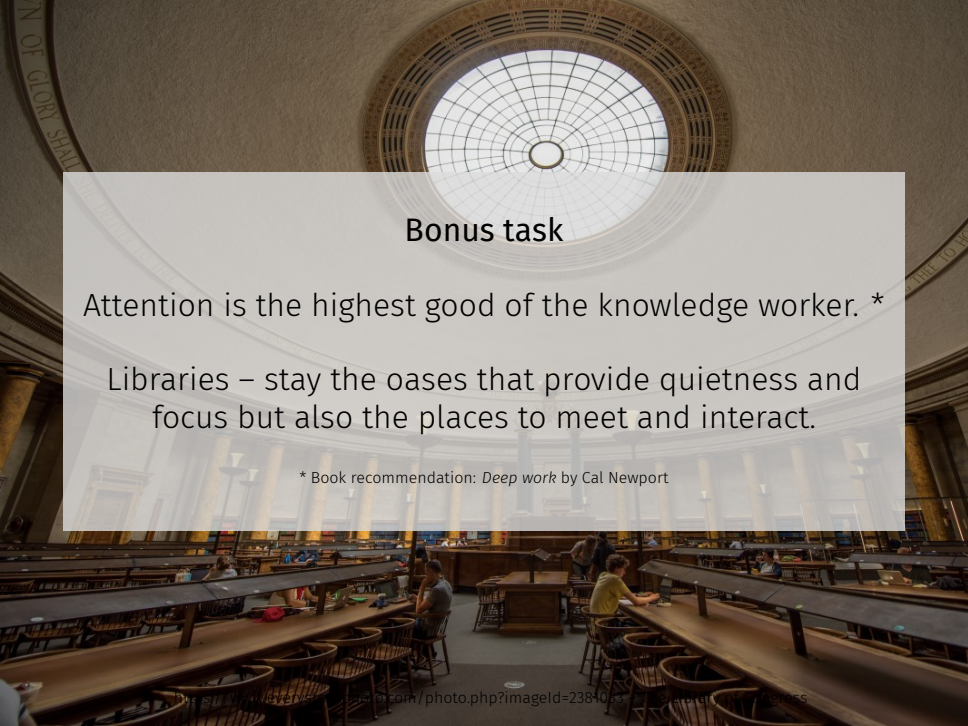
Introduction to Python

An introduction to Python, a general purpose programming language



Data Intro for Archivists

An introduction to data structures, regular expressions, and computing terms for archivists

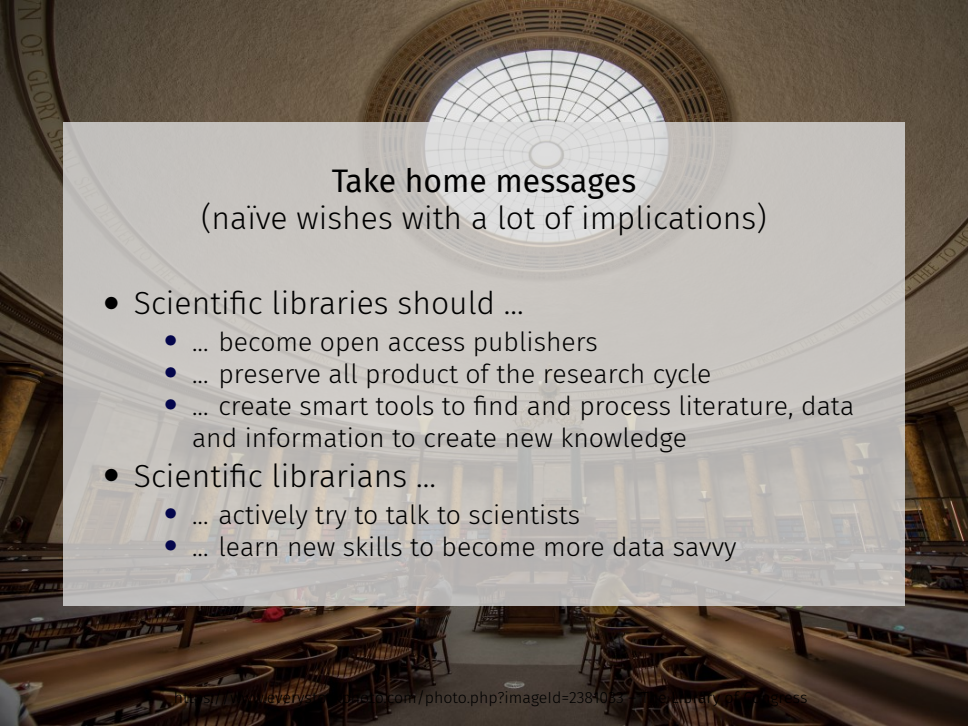
The background image shows the interior of a large, historic library. At the top, a massive circular skylight with a grid pattern allows natural light to fill the space. Below it, the ceiling is decorated with a circular band of text. The room is filled with long, dark wooden study tables and chairs. Several people are seated at the tables, working or reading. The architecture is grand, with high ceilings and classical columns visible in the background.

Bonus task

Attention is the highest good of the knowledge worker. *

Libraries – stay the oases that provide quietness and focus but also the places to meet and interact.

* Book recommendation: *Deep work* by Cal Newport



Take home messages (naïve wishes with a lot of implications)

- Scientific libraries should ...
 - ... become open access publishers
 - ... preserve all product of the research cycle
 - ... create smart tools to find and process literature, data and information to create new knowledge
- Scientific librarians ...
 - ... actively try to talk to scientists
 - ... learn new skills to become more data savvy

Acknowledgements

- Dietrich Rebholz-Schuhmann
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- Matthias Katerbow
- Georg Feulner
- Dietrich Nelle
- ... many more

What are your questions?

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