

Strategies for research libraries of the future

Co-creating the future for libraries

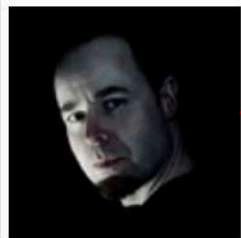
Library Director Bertil F. Dorch, Ph.D. (astrophysics)

President of the Danish Research Library Association

Board member of LIBER

Member of IFLA's Standing Committee on ARL



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Overview Network Research Output (96) ...**Personal profile****Education/Academic qualification**

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President, Danske Fag-, Forsknings- og Uddannelsesbiblioteker

**RESEARCH ARTICLE****Open Access****Poisonous books: analyses of four sixteenth and seventeenth century book bindings covered with arsenic rich green paint**Thomas Delbey¹, Jakob Povl Holck², Bjarke Jørgensen³, Alexandra Alvis⁴, Vanessa Haight Smith⁵, Gwénaëlle M. Kavich⁶, Kimberly A. Harmon⁷, Bertil Fabricius Dorch² and Kaare Lund Rasmussen^{1*}**Abstract**

Efforts to read medieval manuscript waste recycled as bookbinding material in the sixteenth and seventeenth centuries have resulted in the chemical analysis of four books housed at the University Library of Southern Denmark and the Smithsonian Libraries in Washington DC. Four green coloured book bindings have been investigated by optical microscopy, micro X-ray fluorescence, X-ray diffraction, Raman spectroscopy, mass spectroscopy, and laser ablation inductively coupled plasma mass spectrometry. The results show that the green pigments used to obscure the manuscript waste in all four cases contain orpiment (As_2S_3) and indigo ($\text{C}_{16}\text{H}_{11}\text{N}_2\text{O}_2$). Although the books were printed in diverse places in Europe—Basel, Bologna, and Lübeck—the styles of their bindings indicate that they were likely bound in the same region in the same period. It is further likely that they acquired their arsenic-rich paint as part of the bookbinding process. Issues concerning the toxicity, health issues for library staff, conservators and researchers handling the books are also addressed.

Keywords: Rare books, Arsenic, Bookbinding, Handling of hazardous material, MS, LA-ICP-MS, μXRF , XRD, Raman, Book conservation

Introduction

Initially, three sixteenth and seventeenth century books were identified in the Herlufsholm Special Collection of the University Library of Southern Denmark, the bindings of which were partly decorated with green paint found to contain arsenic. This was reported in Denmark [1] and projected to the public, internationally, via The Conversation [2]. The matter received considerable public attention due to the apparent resemblance of the three green books to the deadly book of Aristotle that plays a vital part in the plot of Umberto Eco's 1980 novel *The Name of the Rose*. This media coverage precipitated the discovery of another book of the same period, also with green paint at the Smithsonian Libraries in Washington

DC, USA. It became clear very quickly using portable X-ray fluorescence (XRF) that the latter also contained arsenic. Originally, relying only on $\mu\text{-XRF}$ in Denmark it was speculated that the paint could perhaps be Emerald Green ($\text{Cu}(\text{CH}_3\text{COO})_2 \cdot 3\text{Cu}(\text{AsO}_2)_2$), which the present work shows is not the case. This seems to be the first report on poisonous green book bindings in the scientific literature. The question of the nature of the green colour, its original purpose, its chemistry, the particular history of the physical objects, as well as issues related to the handling and keeping of the particular books—and of similar painted works—is of potential importance to academic and national libraries, archives, museums, collectors, as well as to historical chemistry and physics.

The results of the present work are contextualized with a brief discussion of the materials used to create the paint, as well as sixteenth and seventeenth century binding practice. Finally, this paper addresses what the University of Southern Denmark and the Smithsonian

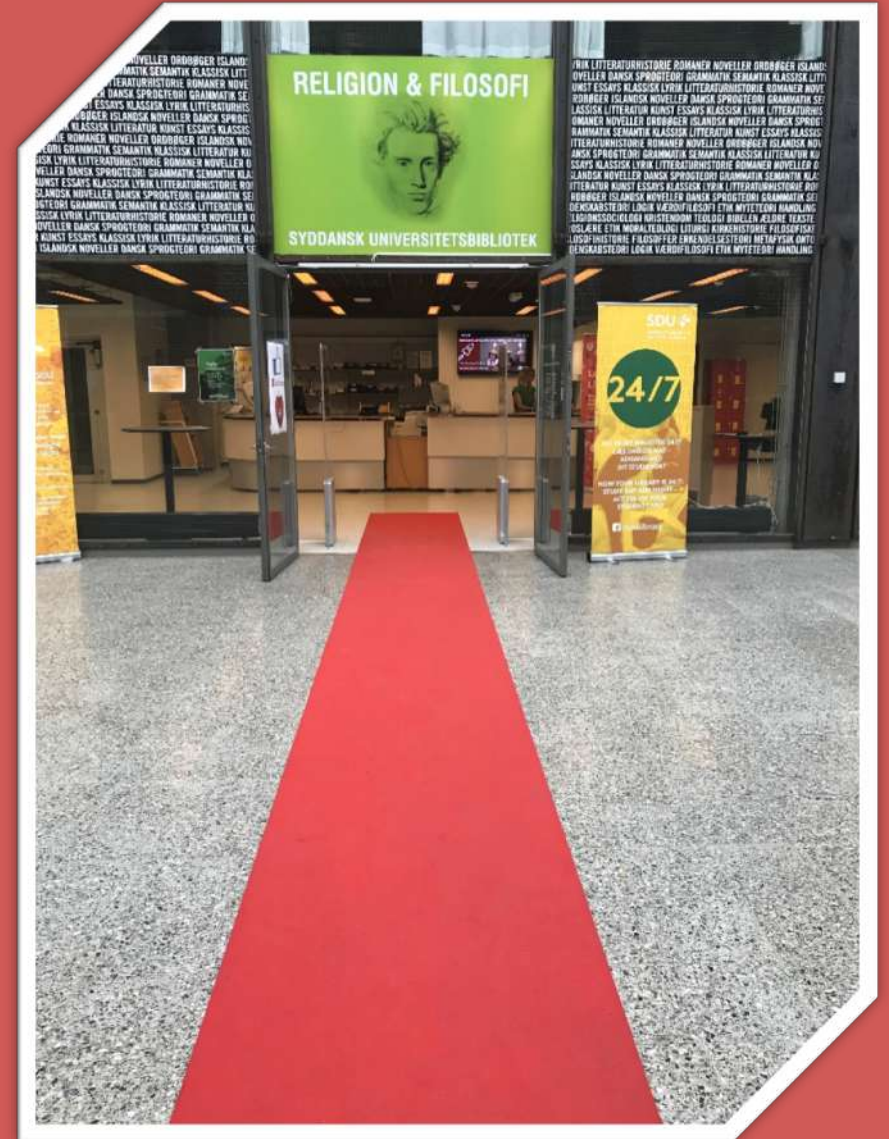
*Correspondence: khr@sdu.dk¹ Cultural Heritage and Archaeometric Research Team (CHART), Department of Physics, Chemistry and Pharmacy, University of Southern Denmark, Campusvej 55, 5230 Odense M, Denmark
Full list of author information is available at the end of the article

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Content

Three topics

1. Current challenges for all
2. A strategical concept for research libraries
3. A strategy for an association 😊



1. Current challenges for all

For libraries and for academia...

Current challenges for all

Libraries and academia... The burning platform for any strategy!

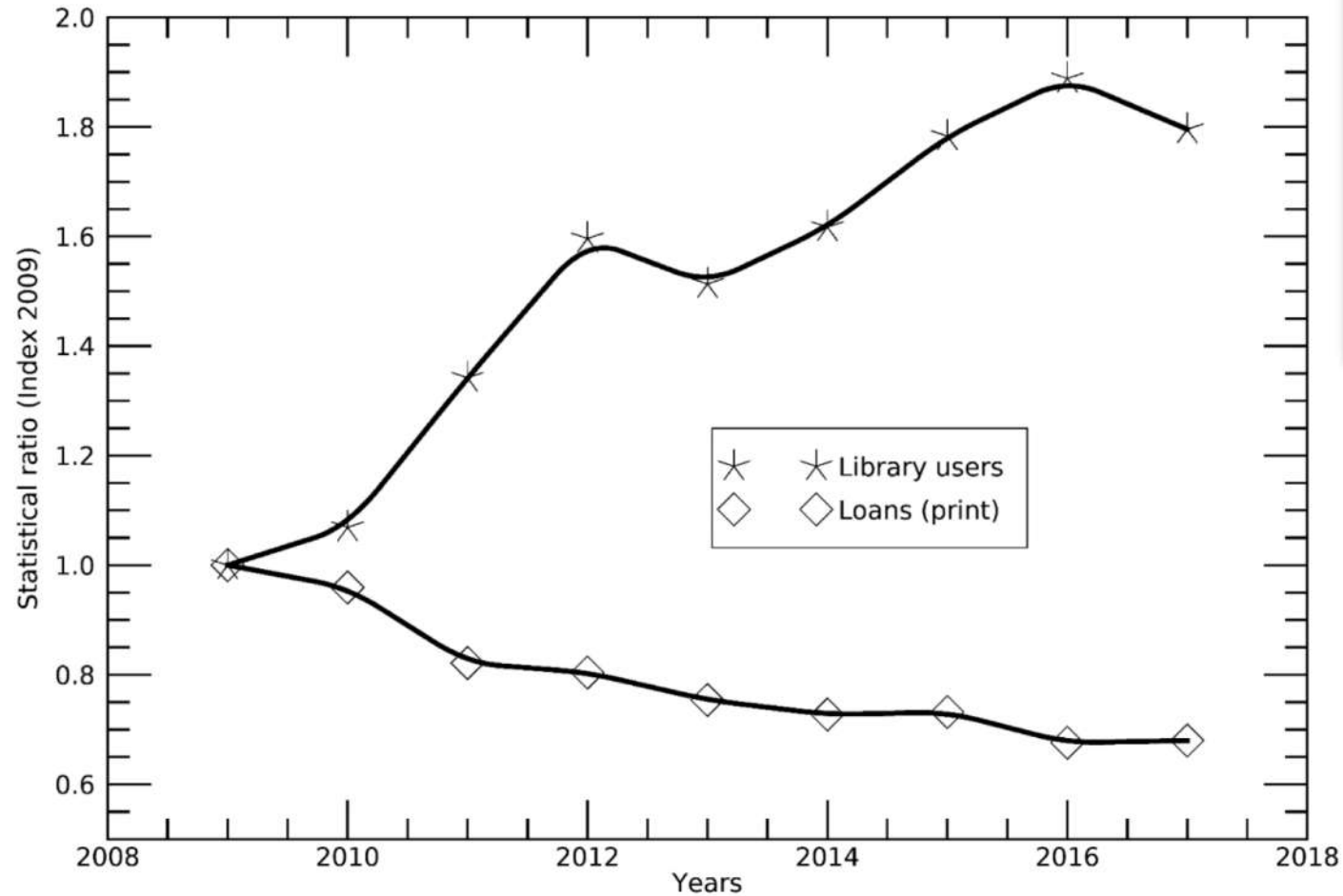
- A. Change management
- B. Predators and misconduct
- C. Para-academic industries
- D. Facilitating an Open world.

A. Change management

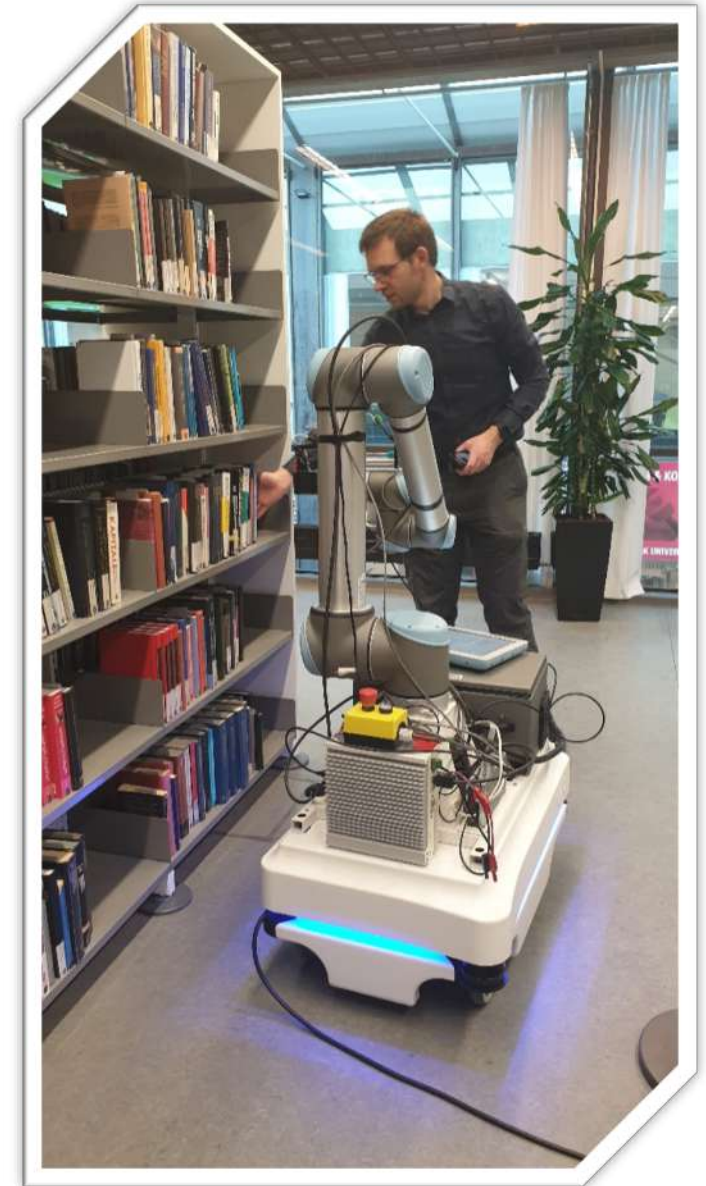
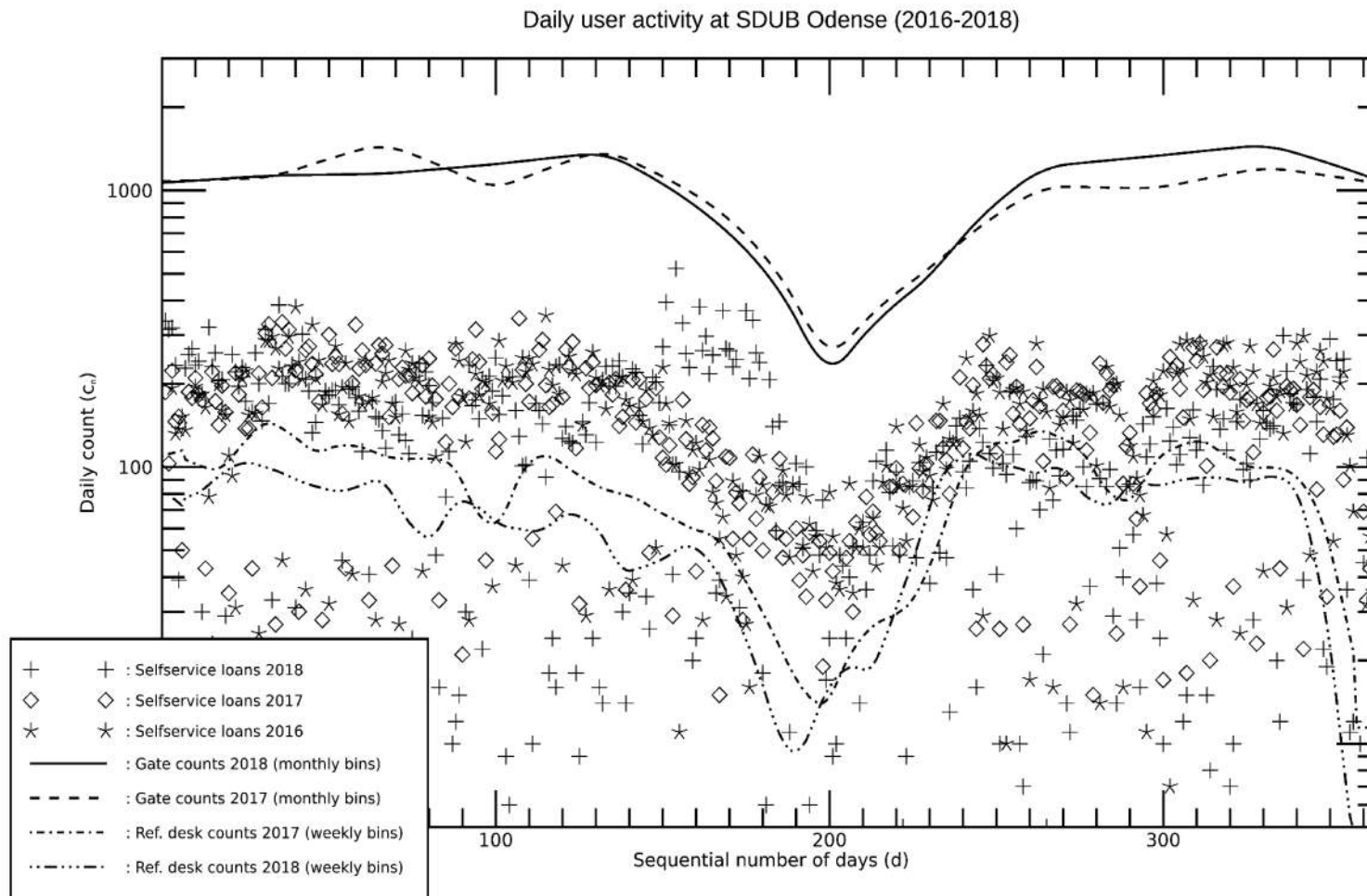
Library use and library users change...

Changing library use

Change in library usage 2009 - 2017



Keeping track of users

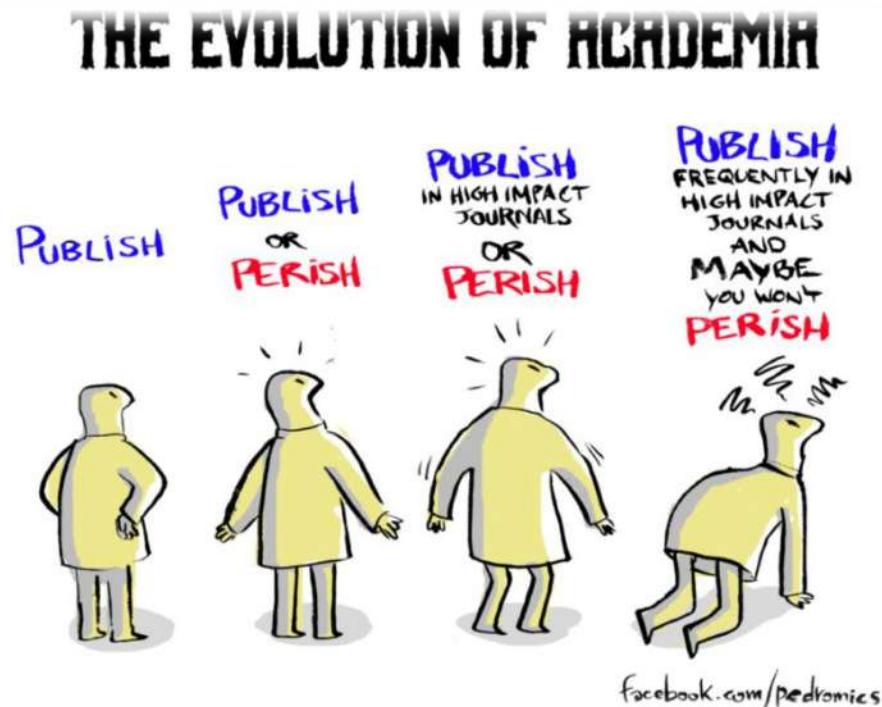


B. Predators and misconduct

Haunting academia and research institutions...

Be aware of the predators

- Predatory journals and conferences
- Feeding on perverse incentives for researchers
- Some authors are willing prey / game!



Mathematics and Computer Science

(ISSN Print: 2575-6036 ISSN Online: 2575-6028)

✓ Open Access Policy (OA) ✓ Peer-reviewing Policy ✓ Fast Publication within 90 Days



Dear Wien, C; Dorch, BF; Larsen, AV

Greetings from the assistant editor!

We have learnt about your published precious paper in *SCIENTOMETRICS* titled *Contradicting incentives for research collaboration*, and the topic of the paper has impressed us a lot.

Researchers in the field of Reward systems; Denmark; Incentives effects; Case study have showed interests in your paper.

Contributing Your Research Paper

Aiming at promoting communications within scientific community, *Mathematics and Computer Science* provides specialists in various areas with good access to the latest scientific researches. Due to the novelty, advance, and potential wide applications of your innovation, we sincerely invite you to submit other unpublished manuscripts of related fields to the *journal*. Your latest research of this article is also welcomed.

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On behalf of the Editorial Board of the *journal*, we hope you can grant us the honor to invite you to join our team as the editorial board member/reviewer of *Mathematics and Computer Science*. Considering your academic background and rich experience in this field, the Board believe that you may be the most suitable person for this position. We believe that this opportunity will promote international academic collaborations in the future.

You can refer to the following link to learn more information:

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Bad science

Fanelli (2009)

- 1 percent admitted FFP
- 34 percent admitted QRP
- 14 percent colleagues guilty of FFP
- 72 percent colleagues guilty of QRP.

Basic psychology:

- 40 % are completely honest
- 60 % will cheat if little chance of getting caught

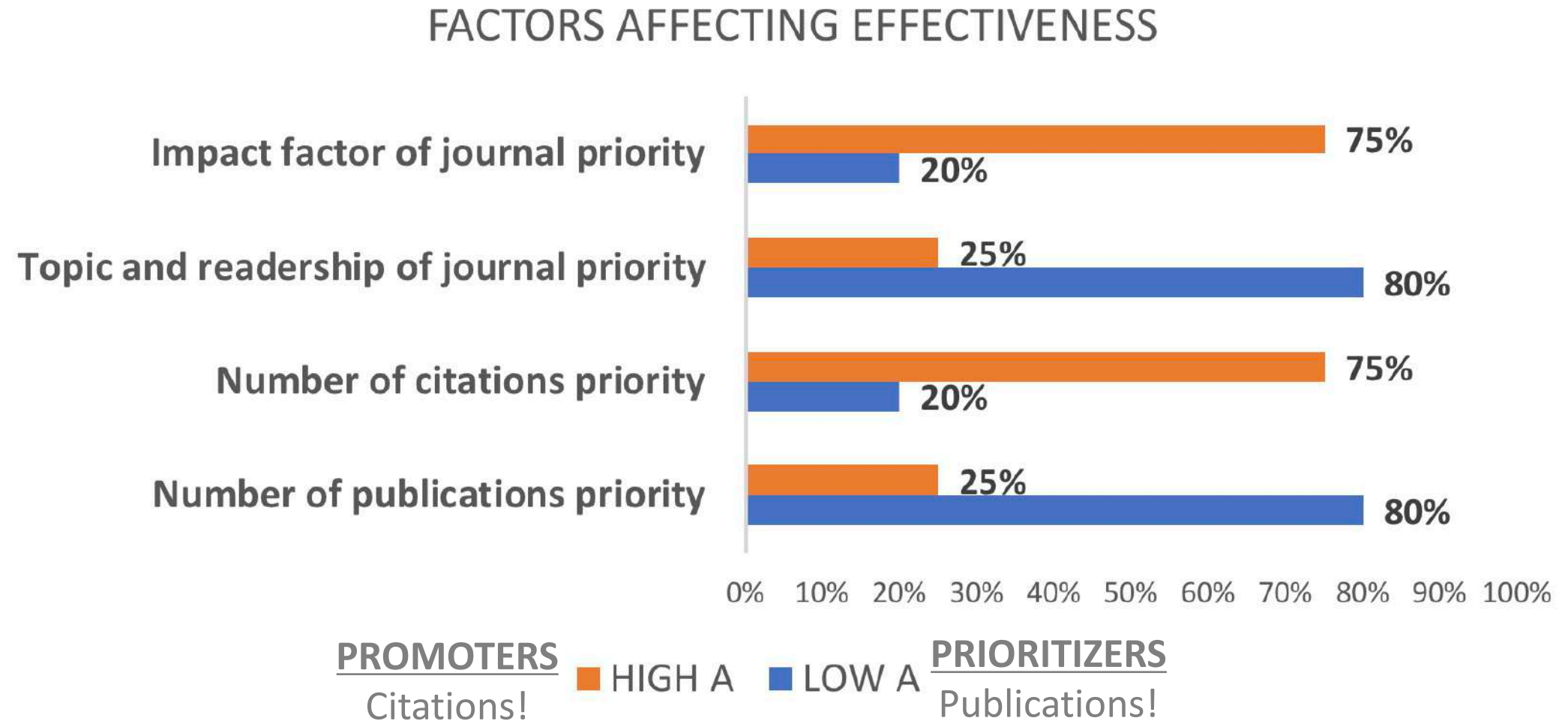
Explosion in number of authors per journal article

- 1998: First article with more than 500 authors
- 2000: First article with more than 2000 authors
- 2015: Nature reports on an article with 5154

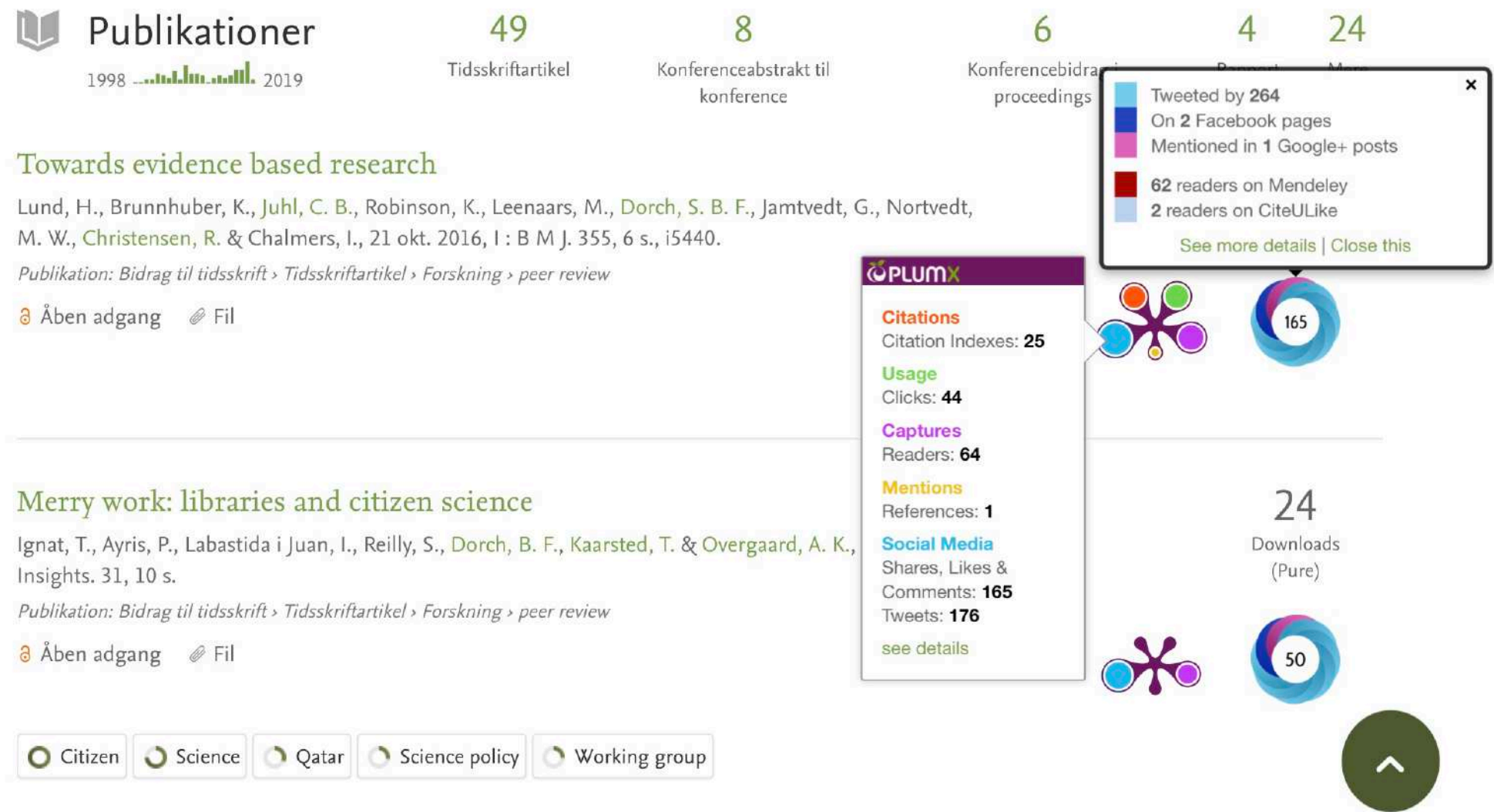


Optimizing the h-index

Wien et al. (2017), *Scientometrics* 112, 903
Dorch et al. (2018), LIBER Annual Conf. 2018, Lille.
Deutz et al. (2019) submitted to *PLOS One*.



New metrics to game?



A note on quantum mechanics

$$|\psi\rangle = \sum_i c_i |\phi_i\rangle$$

Any state is a super-position of possible states

$$i\hbar \frac{d}{dt} |\Psi(t)\rangle = \hat{H} |\Psi(t)\rangle$$

A measurement collapses the possibilities to just one state



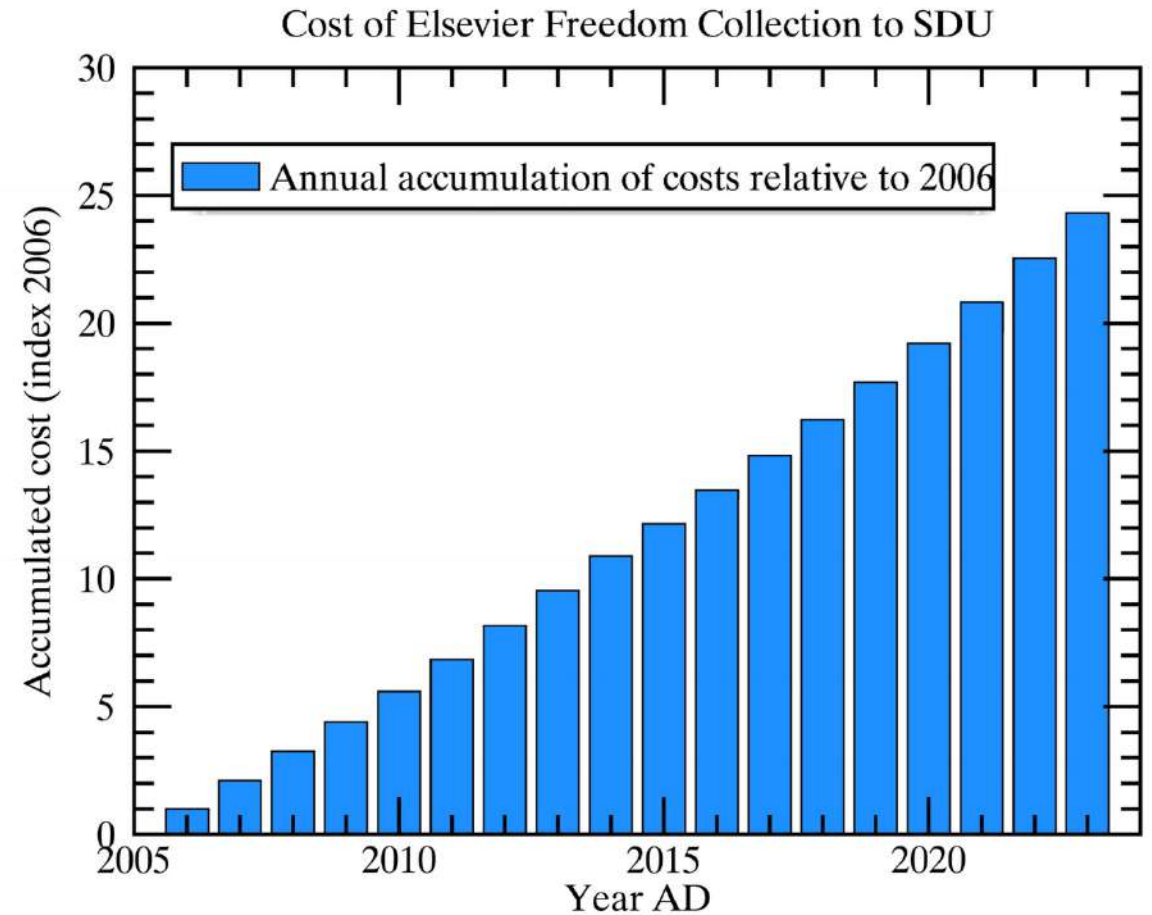
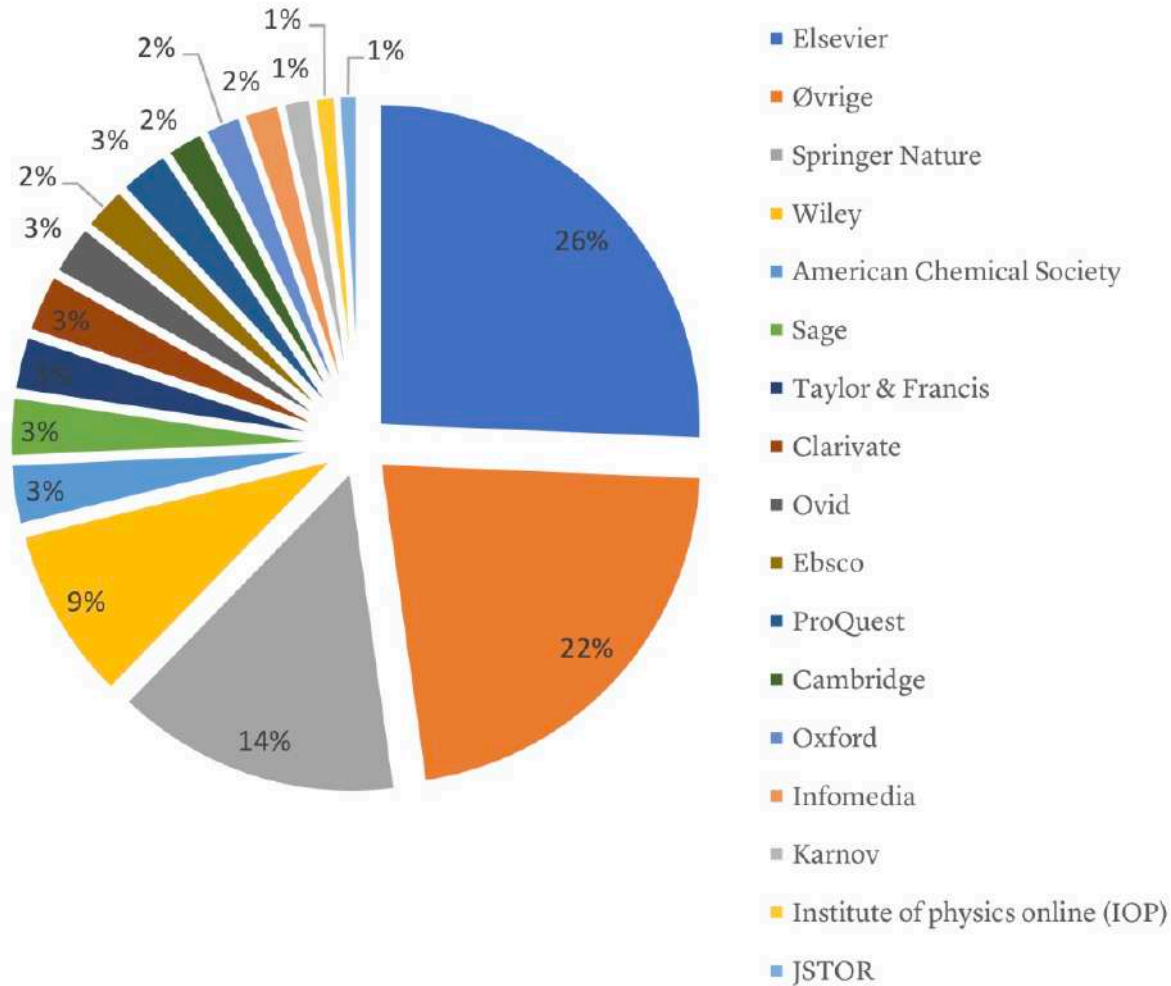
Is the researcher dead or alive in the box (Ocelot in Paay).

C. Para-academic industries

... and in darkness binds us!

The ever increasing cost

SDUB's udgifter til e-ressourcer fordelt
på forlag i 2018: 32.347.558 kr.



Doing the hard work and buying it back

The screenshot shows the BMJ article page for 'Towards evidence based research'. The article is from BMJ 2016; 355, doi: https://doi.org/10.1136/bmj.i5440 (Published 21 October 2016). The article is available on SoundCloud and can be played in the browser. The article is categorized under 'Article', 'Related content', 'Metrics', and 'Responses'. The author affiliations are listed, and the correspondence to H Lund is provided. The article is also featured in the BMJ Live event, which includes a careers fair, clinical updates, career advice, live jobs board, and professional development. The event is scheduled for 4-5 October 2019 in Olympia, London.

To avoid waste of research, no new studies should be done without a systematic review of existing evidence, argue **Hans Lund and colleagues**

Whether or not today's medical researchers, like Isaac Newton, see themselves as "standing on the shoulders of giants," they might still be expected to build systematically on previous research when planning new studies. Even though this issue was highlighted as early as 2005,^{1 2} numerous studies indicate that researchers do not use a systematic methodology to identify and refer to earlier research when justifying,

The screenshot shows the BMJ article page with a login and subscription section. The login section includes a 'Log in' button, a 'BMA Member Log In' button, and a 'Forgot your log in details?' link. The subscription section includes a 'Subscribe from £138 *' button, a 'Subscribe' button, and a 'Buy this article' button. A red circle highlights the text 'Access this article for 1 day for: £23 / \$37 / €30 (inc. VAT)'. The page also features a 'View Full Text' link and an 'Archive' link.

The banner for the BMJ Live event, scheduled for 4-5 October 2019 in Olympia, London. The event includes a BMJ Careers Fair, Clinical Updates, Career Advice, Live Jobs Board, and Professional Development. A link to learn more is provided: live.bmj.com.

The Altmetric logo, which consists of a colorful circular icon and the text 'Altmetric'. Below the logo is the text 'Who is talking about this article?'.

Para-academic industries



Complete the ring that binds us



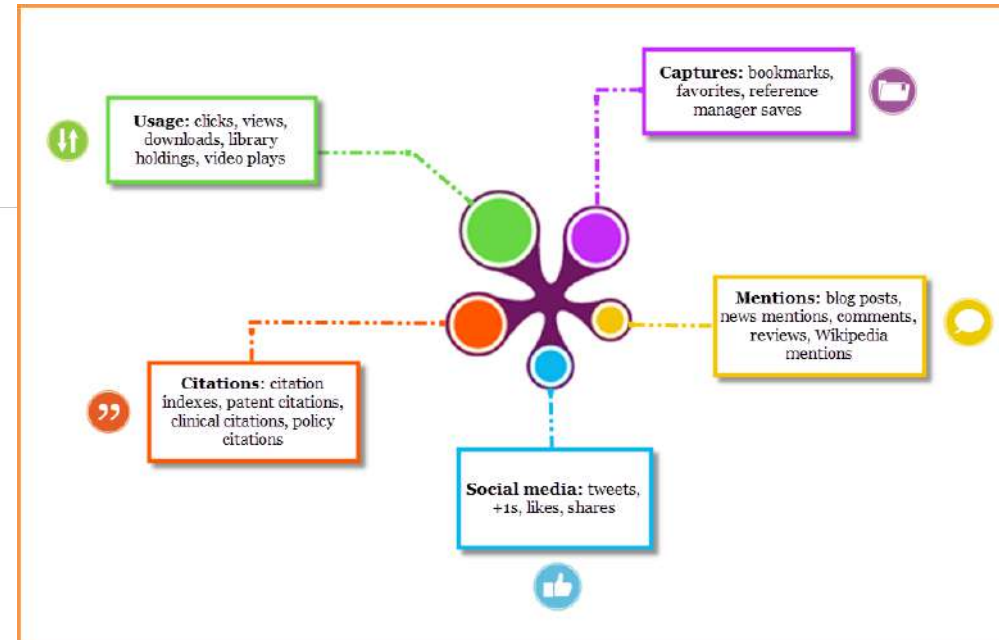
Close x

Tweeted by 597
Blogged by 22
On 20 Facebook pages
Mentioned in 16 Google+ posts
Picked up by 8 news outlets
228 readers on Mendeley
4 readers on CiteULike
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PLoS - PDF Views: 226
PLoS - HTML Views: 1291
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Scopus - Cited by: 15
PubMed - Cited by: 11
CrossRef - Cited by: 7

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Charlotte Wien
cand.mag. MLS, ph.d.
Syddansk Universitetsbibliotek, Odense, Forsknings- og Analysesektionen - Open - Odense Patient data Explorative Network
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[Oversigt](#) [Fingertryk](#) [Netværk](#) [Publikation \(111\)](#) [Presse/media \(19\)](#) [Lignende profiler \(2\)](#)

Applying Bourdieu's Field Theory to MLS Curricula Development
Wien, C. & Dorch, B. F. 2017
Publikation: Bidrag til konference » Konferencesats til konference » Forskning » peer review

Contradicting incentives for research collaboration
Wien, C., Dorch, B. F. & Larsen, A. V. 2017 I : Scientometrics, 112, 2, s. 903-915
Publikation: Bidrag til tidsskrift » Tidsskriftartikel » Forskning » peer review

D. Facilitating an Open world

Will they come if we build it?

Open Science = good science

The key principles of the Singapore Statement are:

- *Honesty* in all aspects of research
- *Accountability* in the conduct of research
- *Professional courtesy and fairness* in working with others
- *Good stewardship* of research on behalf of others.

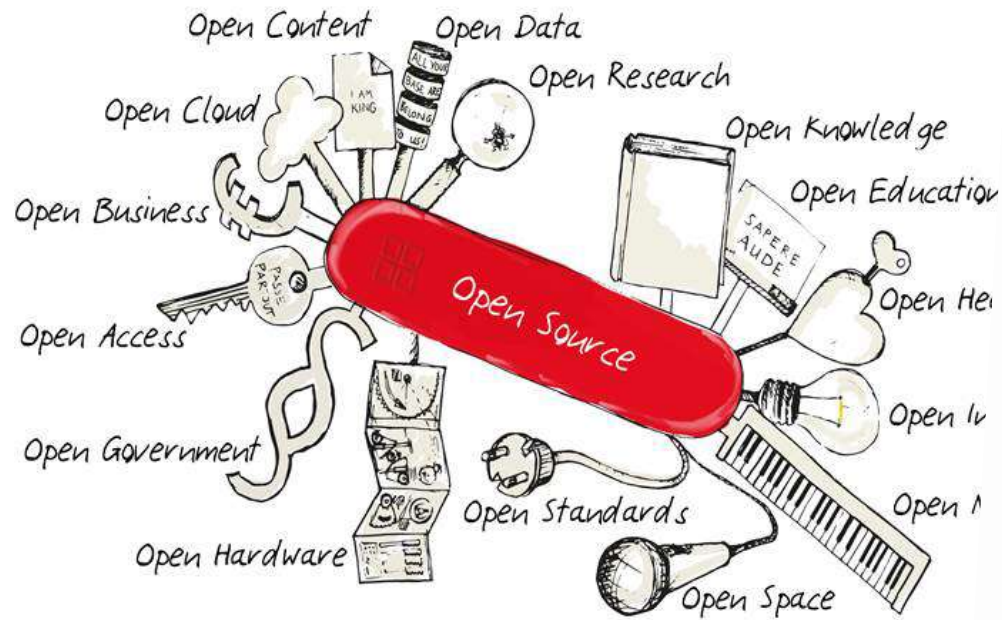
The overall purpose of the Danish Code is to ensure and strengthen high quality research, and as integrity should pervade all research phases the code establishes three key principles of research integrity:

- Honesty – to ensure the trustworthiness of research
- Transparency – to ensure the credibility of scientific reasoning
- Accountability – to ensure the reliability of research.

Open Science is closely related to

- RCR: Research integrity and responsibility
- Metrics / rewards: How to report “Open” (if at all)
- RDM: Handling and keeping of research data (FAIR).





SDU Open Science Policy

1. Preamble

The University of Southern Denmark (SDU) is known and respected globally as a university producing excellent research meeting the highest quality standards. This implies that all research associated with SDU must strive for trustworthiness and high integrity; this includes honesty, transparency and accountability.

The contribution of researchers and participants to the collection and creation of primary materials and data is of great importance to SDU. Research data is recognised as supporting research findings, contributing to further research and discussion, and enabling public trust in research.

Responsible conduct of research includes proper management of research data, ensuring credible and transparent research and findable, accessible, interoperable and re-usable research data. Hence, proper research data management enables research to be more efficient and open. SDU encourages that research data and research publications are made freely accessible, except when this is in conflict with legal or contractual obligations or current regulations on for example ethical, confidentiality or privacy matters or intellectual property rights.

Access to research data and research publications is thus recognized to enhance the potential impact of the research at SDU on research communities and society as a whole.

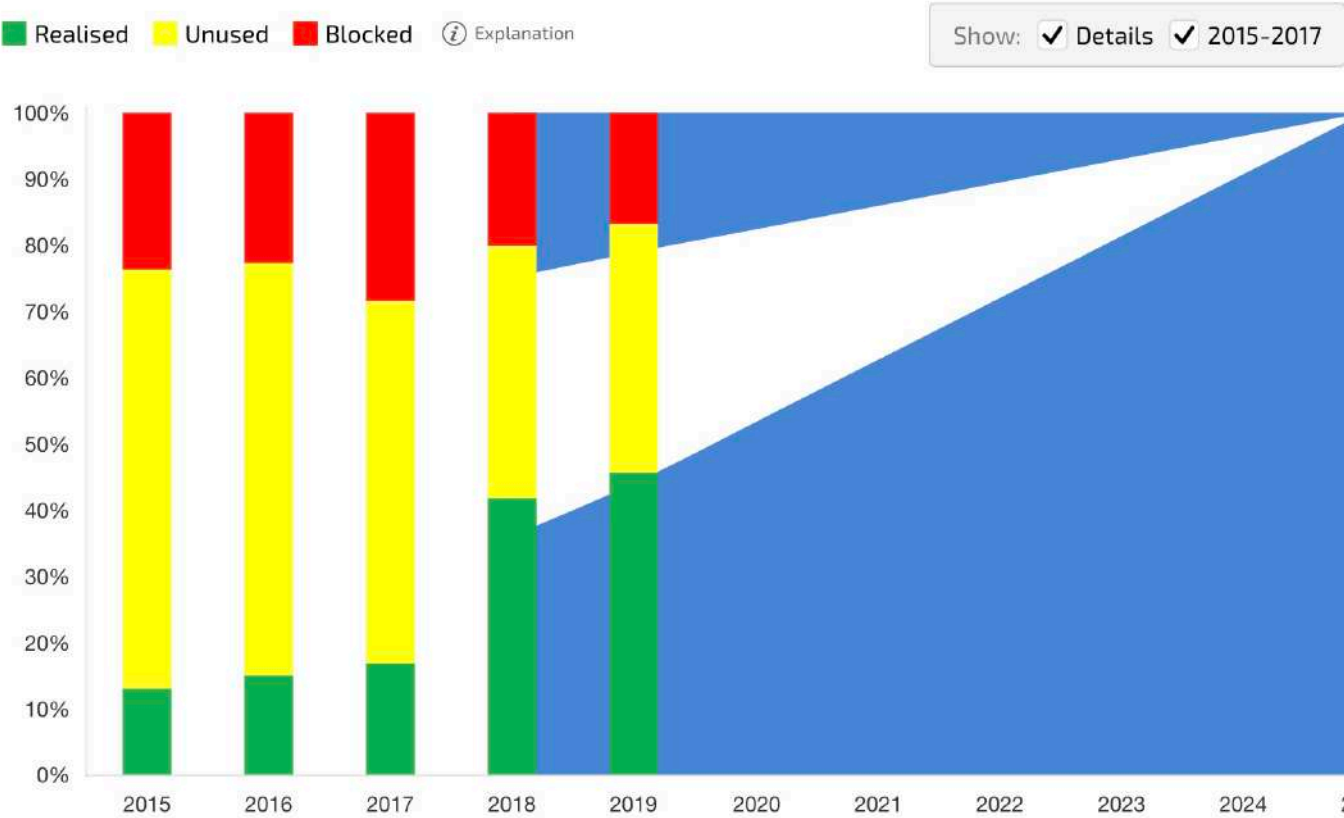
Purpose

The intention of the policy is to support departments, researchers and research support staff by outlining how research data are managed at SDU from planning, during and beyond the life of the research project to:

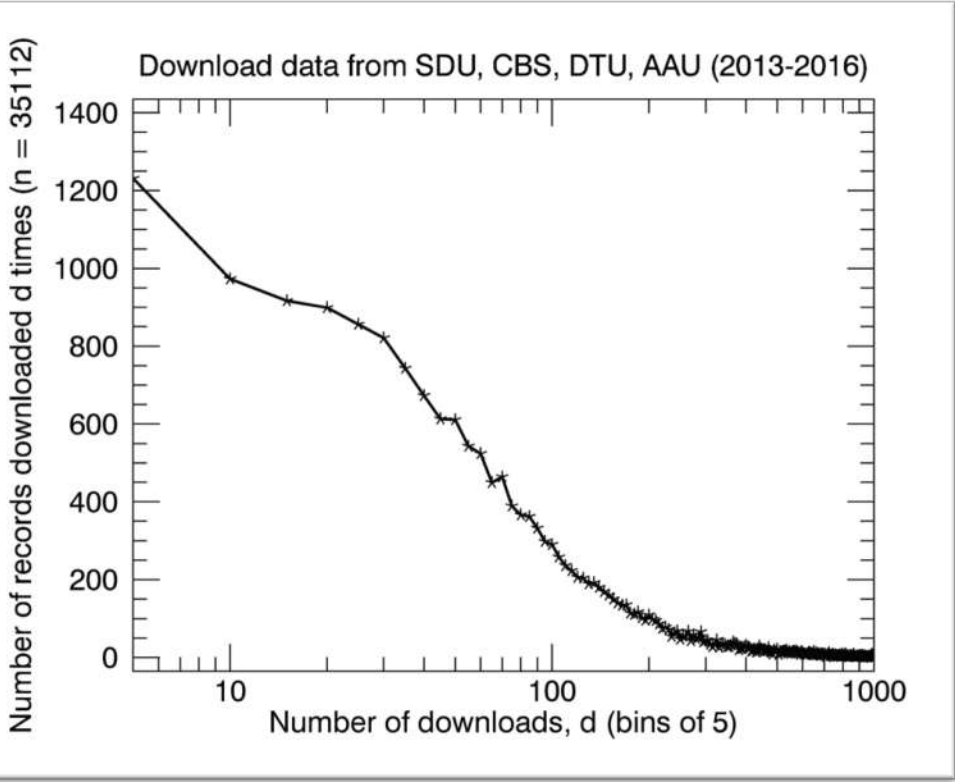
Open Access means publishing research with **immediate, free online access** to the publication and/or the publication itself, as defined in the Berlin declaration⁵. The Danish government encourages the so-called **“green”** mode of Open Access, or **self-archiving**. Self-archiving means publishing in a journal which is not Open Access and at the same time or after an embargo depositing a copy of the publication in a **subject or institutional repository**.

It is not enough to just build it!

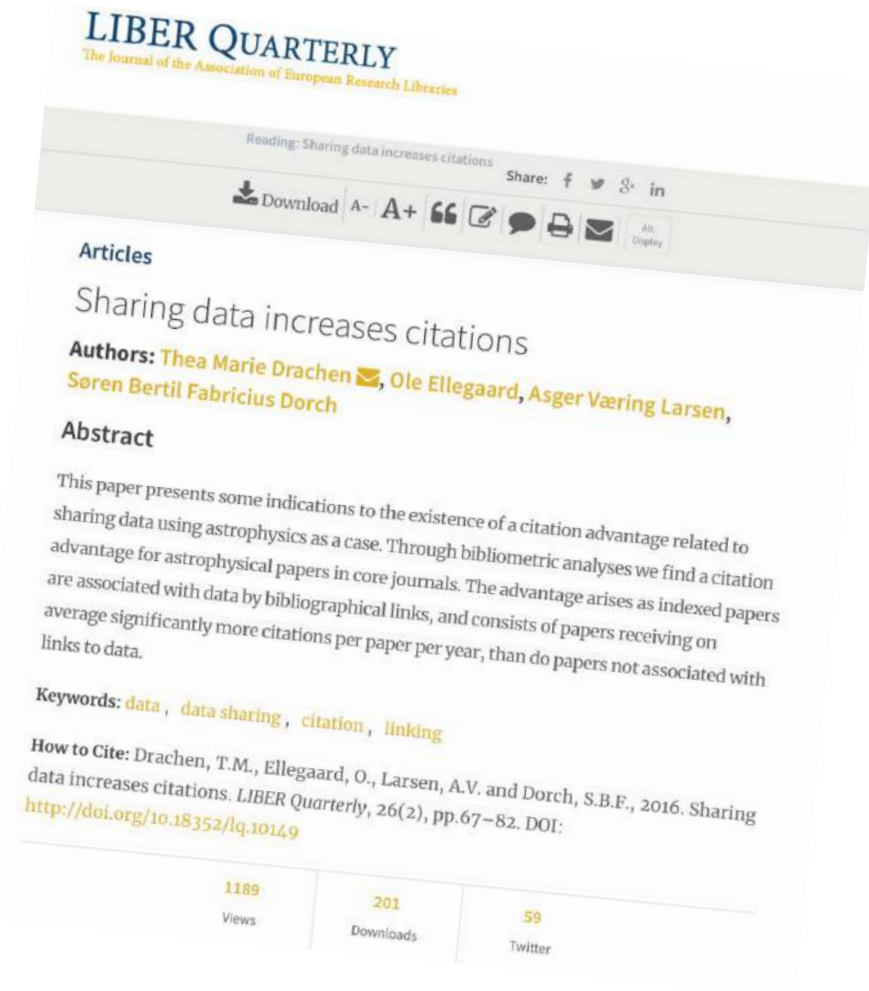
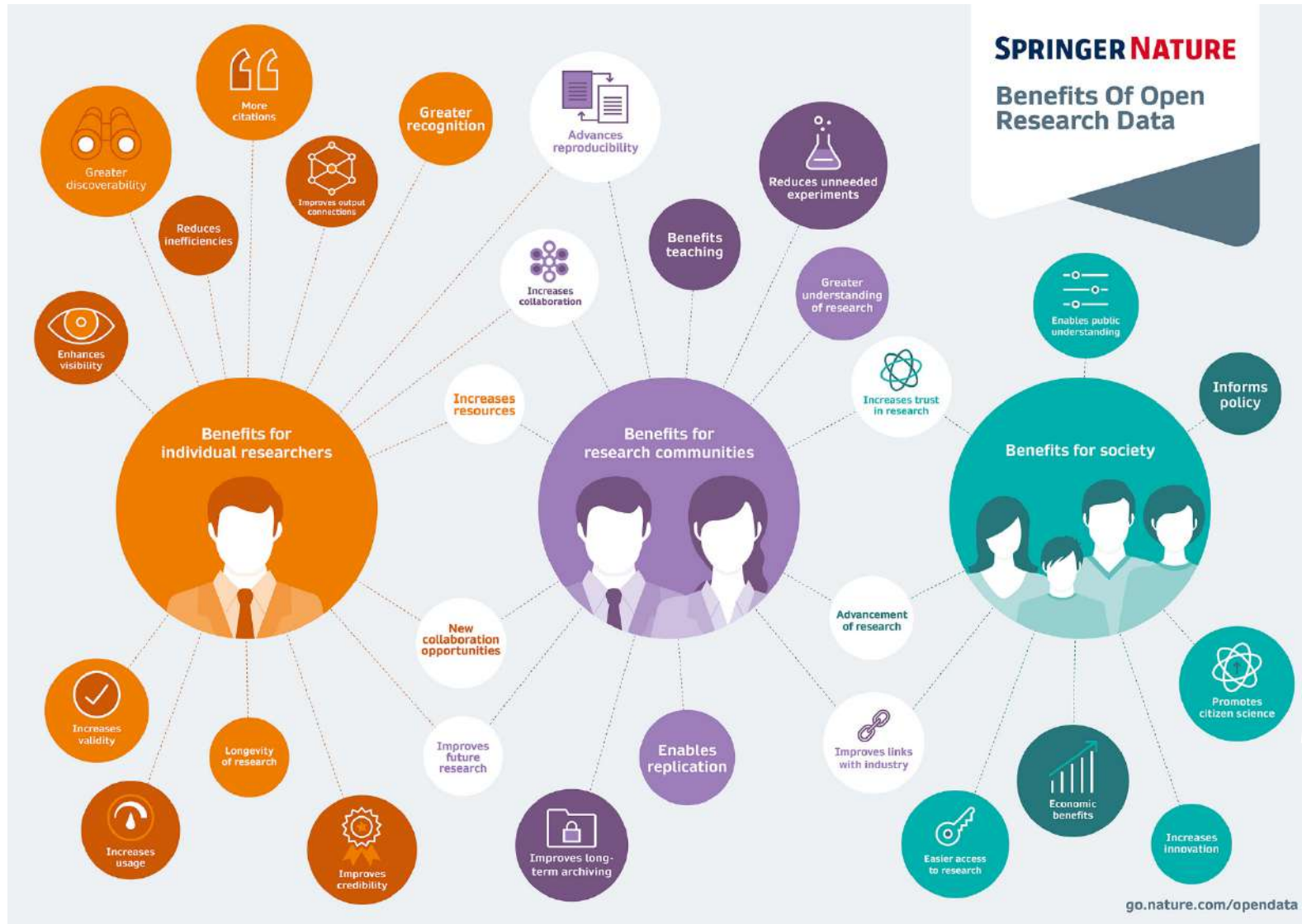
University of Southern Denmark (SDU)



The data behind this visualization can be downloaded from the [DATA page](#)



Can we realize the potential of Open?



Can we Open up research to the World?



2. A strategical concept for research libraries

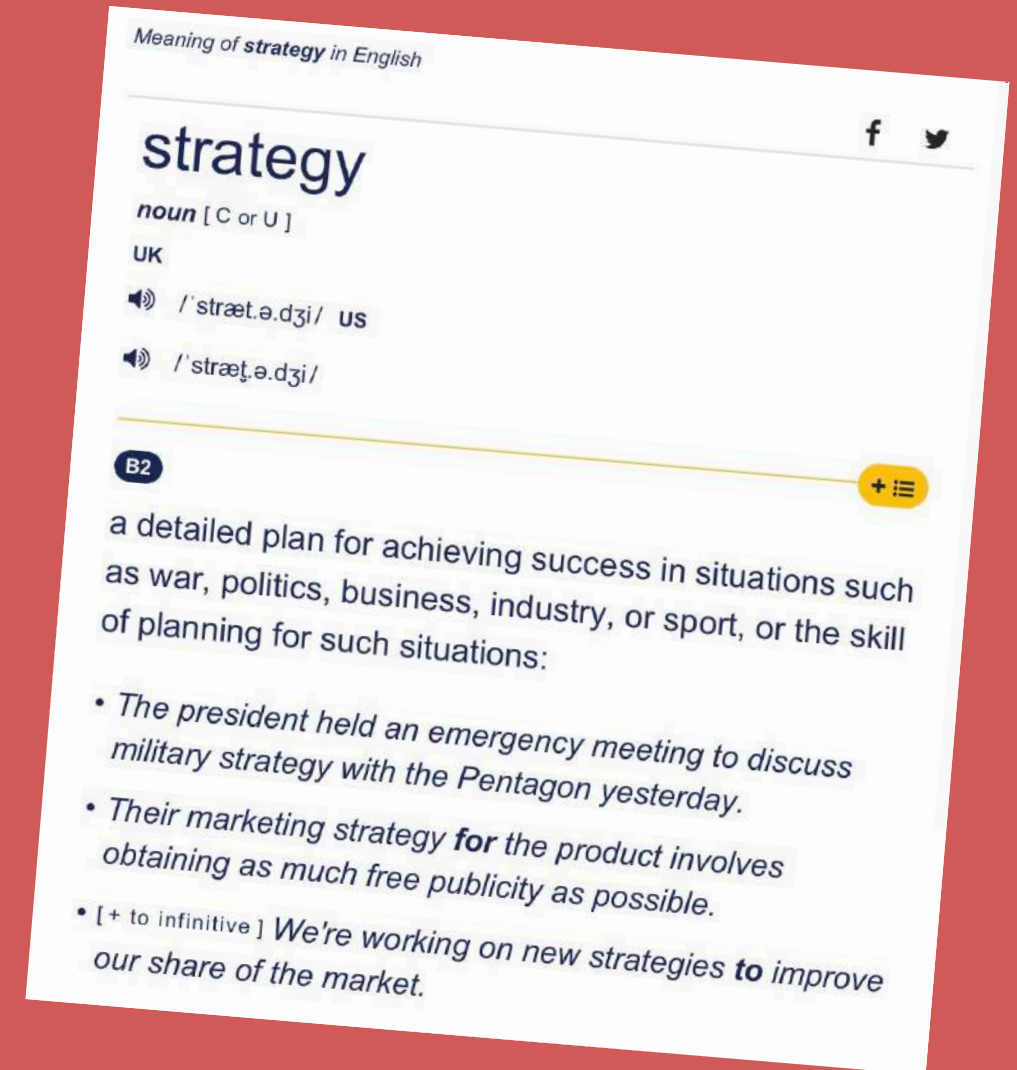
A concept of balanced scales...



A strategical concept

How do we deal with the challenges?

- A. Strategy requires vision
- B. Nature of research libraries
- C. Balanced scales
- D. Research-based strategy



Strategical vision for research libraries

1. Prerequisite

Strategy is grounded in a vision / idea



Strategical vision for research libraries

1. Prerequisite

Strategy is founded in a vision

2. Mission of research libraries

Ansatz: Emergent academic bridge
to support the practice of good research



HE & RI

Service & infrastructure

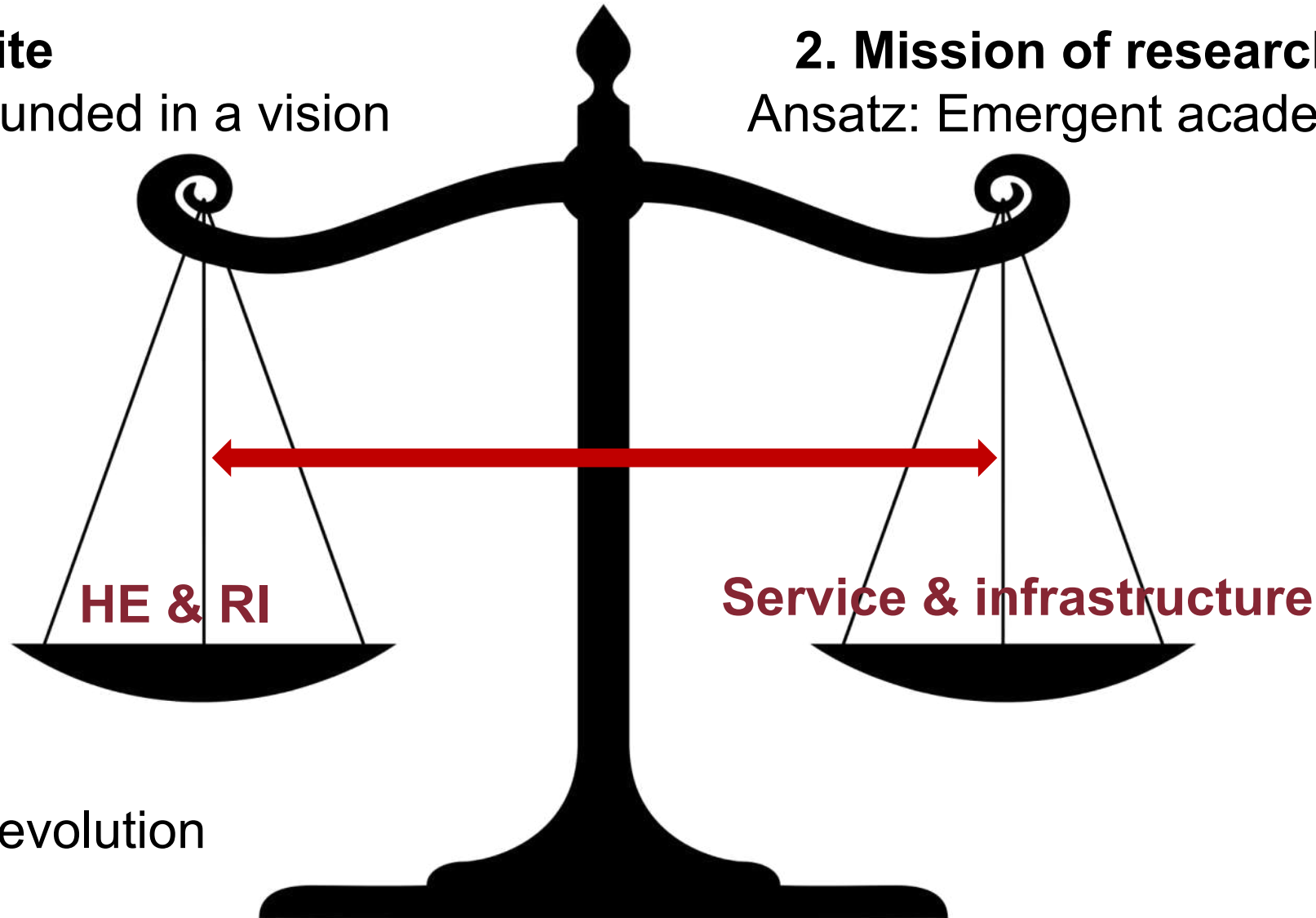
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1. Prerequisite

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3. Vision

Balanced co-evolution

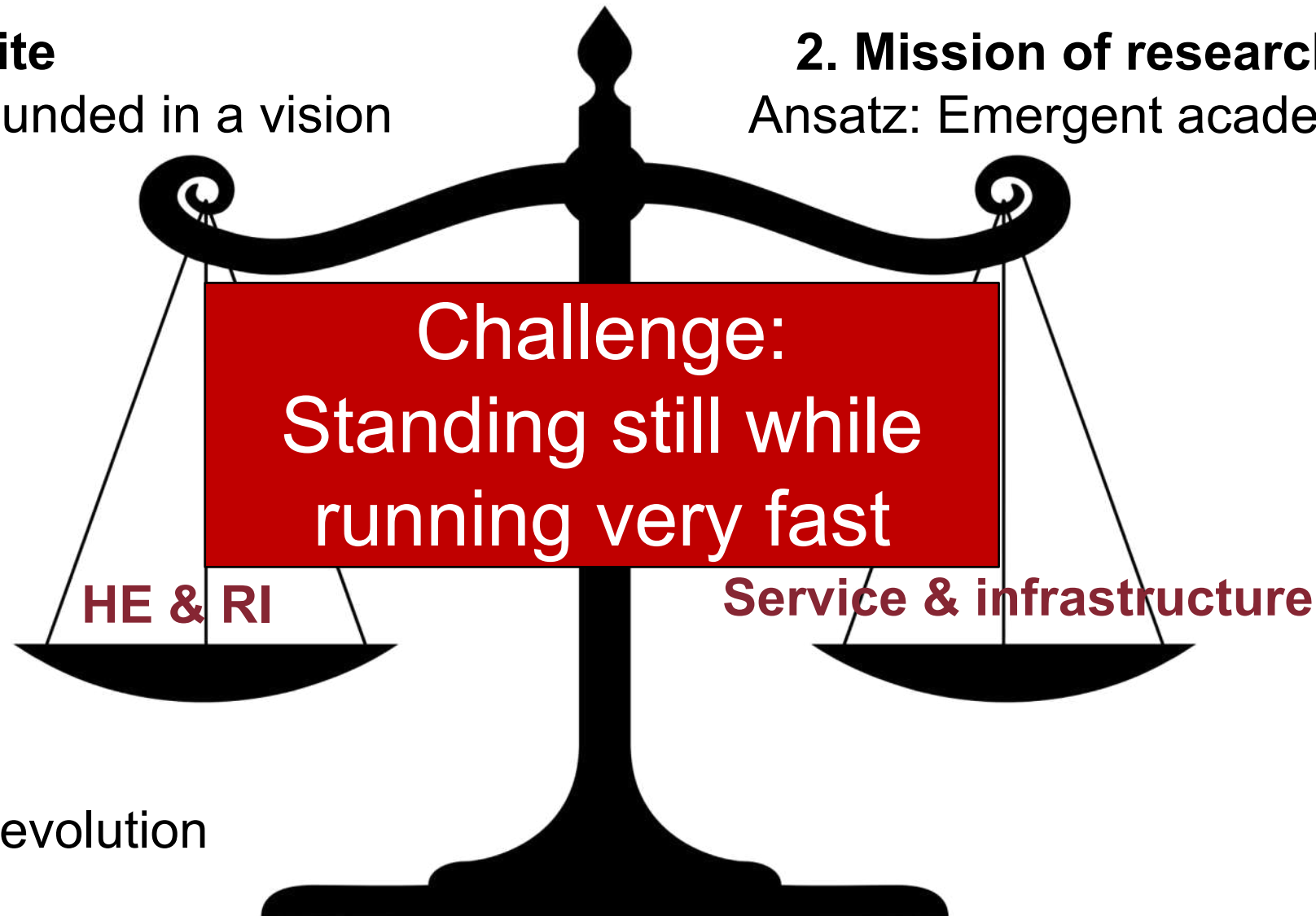
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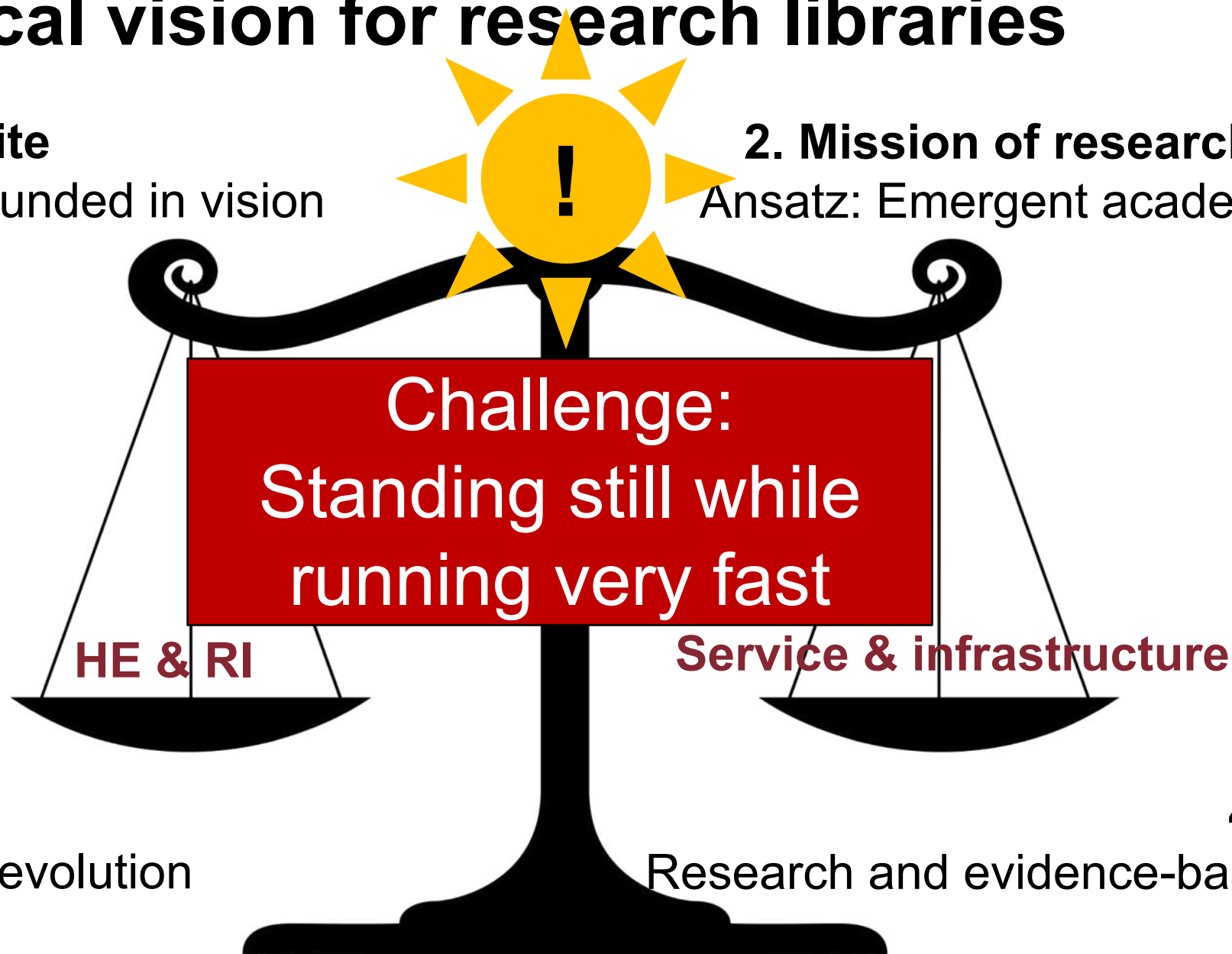
Strategical vision for research libraries

1. Prerequisite

Strategy is founded in vision

2. Mission of research libraries

Ansatz: Emergent academic bridge



3. Vision

Balanced co-evolution

4. Method

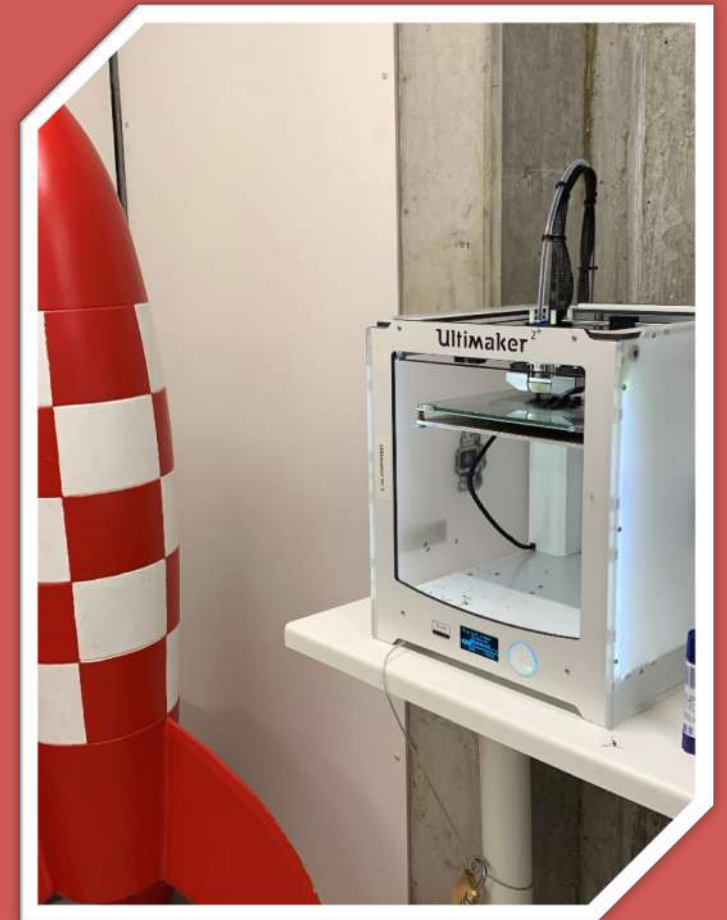
Research and evidence-based library

Library strategy at SDU

2013 – 2020

A research-based and co-evolving* multi-campus research library:

- Strategical management principles
- Thematic and strategical project portfolio
- Annual renewal of strategical fixpoints
- Strategical organizational change 2014
- Evaluation 2015.



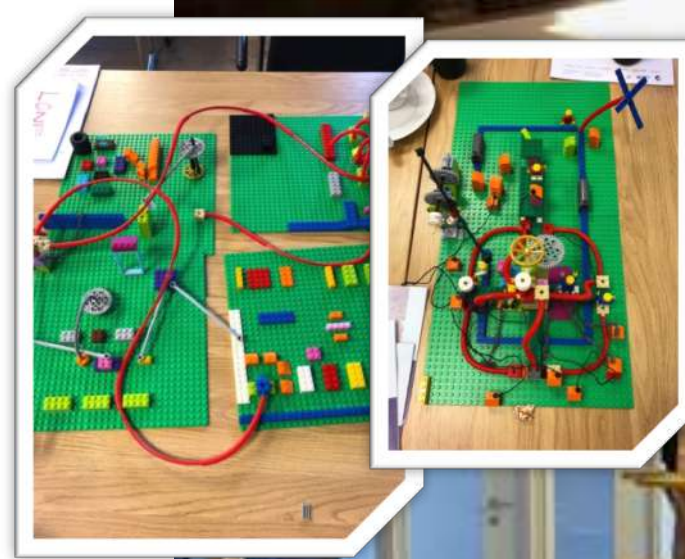
Strategy 2020ff

Mission – the long now

- ✓ The library is the university's library.
- ✓ The library builds a bridge to society – for research, education and learning to the highest standard.
- ✓ The library is a regional research and educational library that constantly co-evolves its physical services wrt. the production, archiving and dissemination of scientific knowledge for and with the university and its partners ...

Vision – the medium term

- The library is a research based library.
- The library aims to be the best research and educational library, and a democratic place for innovation, communication and learning across geography and subject, for researcher, students and citizens.
- The library puts its skills to play in transformative partnerships and adds integrity and evidences to society.
- The library is bold, responsible and a leader of change.



4. Strategy for an association

The Danish Research Library Association...



Strategy for an association

- A. The Danish Research Library Association
- B. Strategy process
- C. Result and implementation



Danish Research Library Association

Mission

- ✓ To promote initiatives that benefit research libraries and the overall library system
- ✓ To provide a forum for discussion of library academic and library policy topics
- ✓ To cooperate with other library organizations and related organizations at home and abroad.

Founded: 1978

Members: 55 institutions

Economy: Institutional memberships

Organization: Office, board and working groups

Events: Annual conf. / GA, midterm, seminars



Never had a strategy but a burning platform:
Report from Ministry of Culture – Quo Vadis??

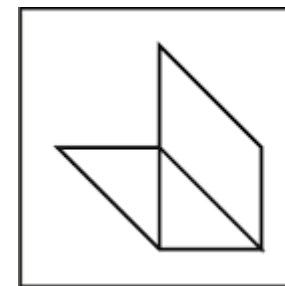


Strategy process during 2019

- Report 2018 from Ministry of Culture with recommendations included lots of literature 😊
- Broad strategy project steering committee
- Project managed by NGO Think Tank "Future Libraries"
- Micro funding from Ministry of Culture (agency shut down).
- Open, transparent and inclusive process: 13 interviews, 80 participants in four workshops
- Rapport recommended: **Skills, relations and visibility**
- Presented at Annual Conference 2019
- GA members vote "YES" on September 19!



Tænketanken
Fremtidens
Biblioteker



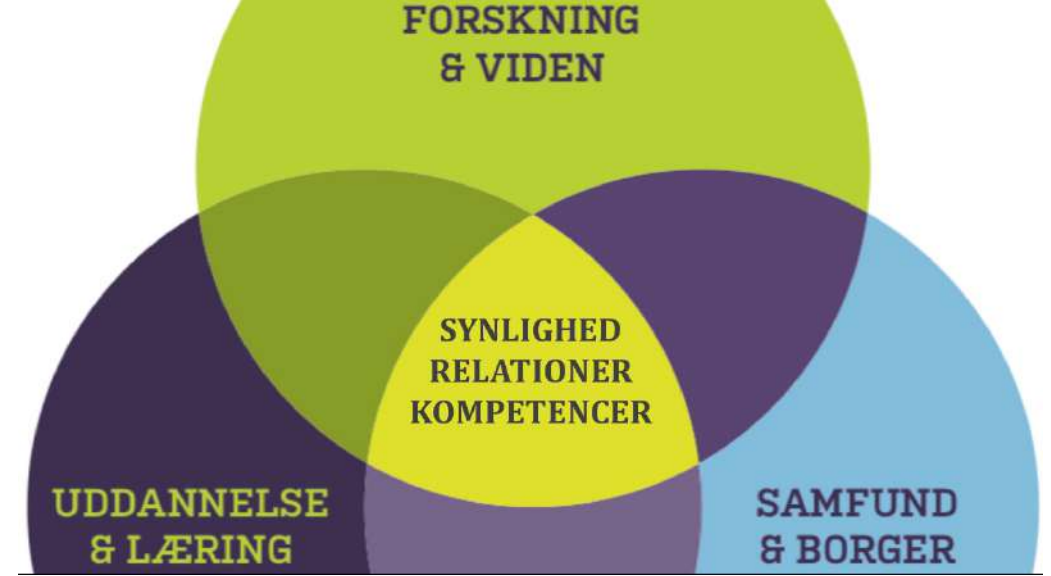
Bibliotekarforbundet
Forbundet for
informationsspecialister
og kulturformidlere



Resulting strategy

General vision frame

- ✓ The libraries are educational institutions that ensures visible, free and equal access to knowledge, information and culture, based on principles of quality, versatility, timeliness, independence and relationships.
- ✓ The library is the professional partner and fixing point for information delivery, education and support for research and teaching.
- ✓ The libraries support researchers and students throughout their research cycle and learning process.
- ✓ The library is the visible local meeting place that systematically works to create spaces for community, cooperation and relationships. The library's physical space is part of the parent's research and study environment.
- ✓ The libraries ensure - across organization and administrative boundaries - researchers and students' access to knowledge via a modern physical and digital infrastructure.



The implementation of the association's strategy will in the coming years be supported by strategic actions of four types of activity:

- Skills development
- Networking
- Common projects
- Representation and advocacy.



The END

And the beginning...



**“IN PREPARING FOR BATTLE I HAVE ALWAYS
FOUND THAT PLANS ARE USELESS, BUT
PLANNING IS INDISPENSABLE.”**

DWIGHT D. EISENHOWER

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