

open

ZBW Highlights from 2021

Federated
Research Data
Infrastructures
for Europe
p. 18



Leibniz-Informationszentrum
Wirtschaft
Leibniz Information Centre
for Economics

ZBW

The ZBW in 2021:

Open Access Transformation: Practical engagement, page 20

Research: New digital change expert in der ZBW, page 24

Organised Knowledge: Dovetailing intellect and machine, page 40

Dear readers,

For the ZBW, 2021 has been a year whose effects will become visible in the years to come: the new ZBW strategy 2022-2026 has been developed in an intensive participatory process and adopted by the ZBW's bodies. The new strategy lays the foundation for the ZBW's continuing transformation into a digital information infrastructure. It orients the ZBW's future along the four strategic priorities of *Contextualising digitisation*, *Researching digitisation*, *Shaping digitisation* and *Qualifying for digitisation*. Digitisation in this strategy is understood as the digital transformation, creation, and provision of scientific information as well as of digital services for delivering such information.

The strategy also served as the basis for the audit held in autumn 2021, in which the Advisory Board reviewed the working methods and future orientation of the ZBW. The highly positive and encouraging feedback confirms the ZBW in consistently following its chosen path.

This includes the important contributions of the ZBW to the Open Access transformation in the publishing market, always with a firm focus on economics. The ZBW's collaboration in three consortia for building the National Research Data Infrastructure clears the path for offering novel services in research data management in the future. It is also gratifying that



Thorsten Meyer



Klaus Tochtermann

Axinia Braunisch

the ZBW has been able to appoint two more professors, so that four out of five professorships are filled with high-calibre experts who will raise the innovativeness of the ZBW yet again. Digitisation, however, is not confined to external offers. In 2021, remarkable success has been achieved in the digitisation of the ZBW administration.

We are very grateful to the ZBW Foundation Council for its continuous support in the evolvement of the ZBW. Constructive and critical suggestions from the Advisory Board, particularly in the context of the audit mentioned above, always provide us with a quality-assuring external view of the work of the ZBW.

Finally we want to thank ZBW staff who, even in the second year of the Covid-19 pandemic and under the associated restrictions, have contributed in a highly motivated and committed manner to bringing the ZBW a great deal closer to its vision of setting national and international standards for modern information provision in economics.

We hope you enjoy reading this annual report, and about the exciting endeavours from the year 2021 presented therein!

Klaus Tochtermann, Thorsten Meyer,
Axinia Braunisch

Digitisation

for me is a kind of translation, because there are seldom fitting words for the transition from analogue to digital. You need to interpret, paraphrase, be creative, find new paths.

YES

Jochen Bast

Project Manager YES! –
Young Economic Summit

Content

Vision & Mission
page 6-7

ZBW 2021 in figures
page 8

ZBW news in brief
page 10

ZBW strategy 2022–2026
page 14

RESEARCH DATA MANAGEMENT

Federated research data
infrastructures for Europe
page 16

OPEN ACCESS TRANSFORMATION

How does the publishing market
in economics work?
page 18

Practical engagement for the
Open Access transformation
page 20

RESEARCH

Digital change expert Professor
Marianne Saam comes on board
page 24

AI expert Ralf Krestel accepts
professorship for Information
Profiling and Retrieval
page 25

History critically reviewed
Page 26

INTERNATIONAL

Promoting scientific dialogue
between researchers worldwide
page 30

KNOWLEDGE TRANSFER

New Open Science Guide
of the ZBW
page 32

HYBRID LEARNING SPACE

Libraries as urban living spaces
page 34

INFOGRAPHIC

Downloads of digital full-texts
page 38

ORGANISED KNOWLEDGE

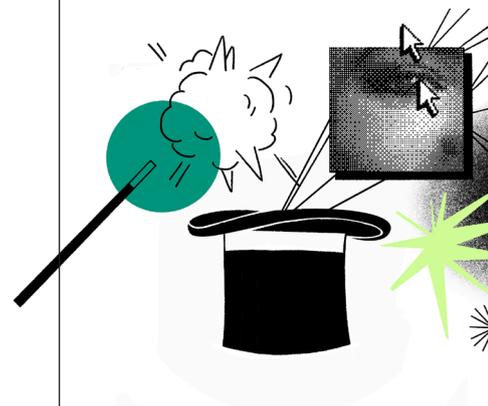
From applied research to
productive application
page 40

HUMAN RESOURCE DEVELOPMENT

Remote together – linked better
and closer
page 84

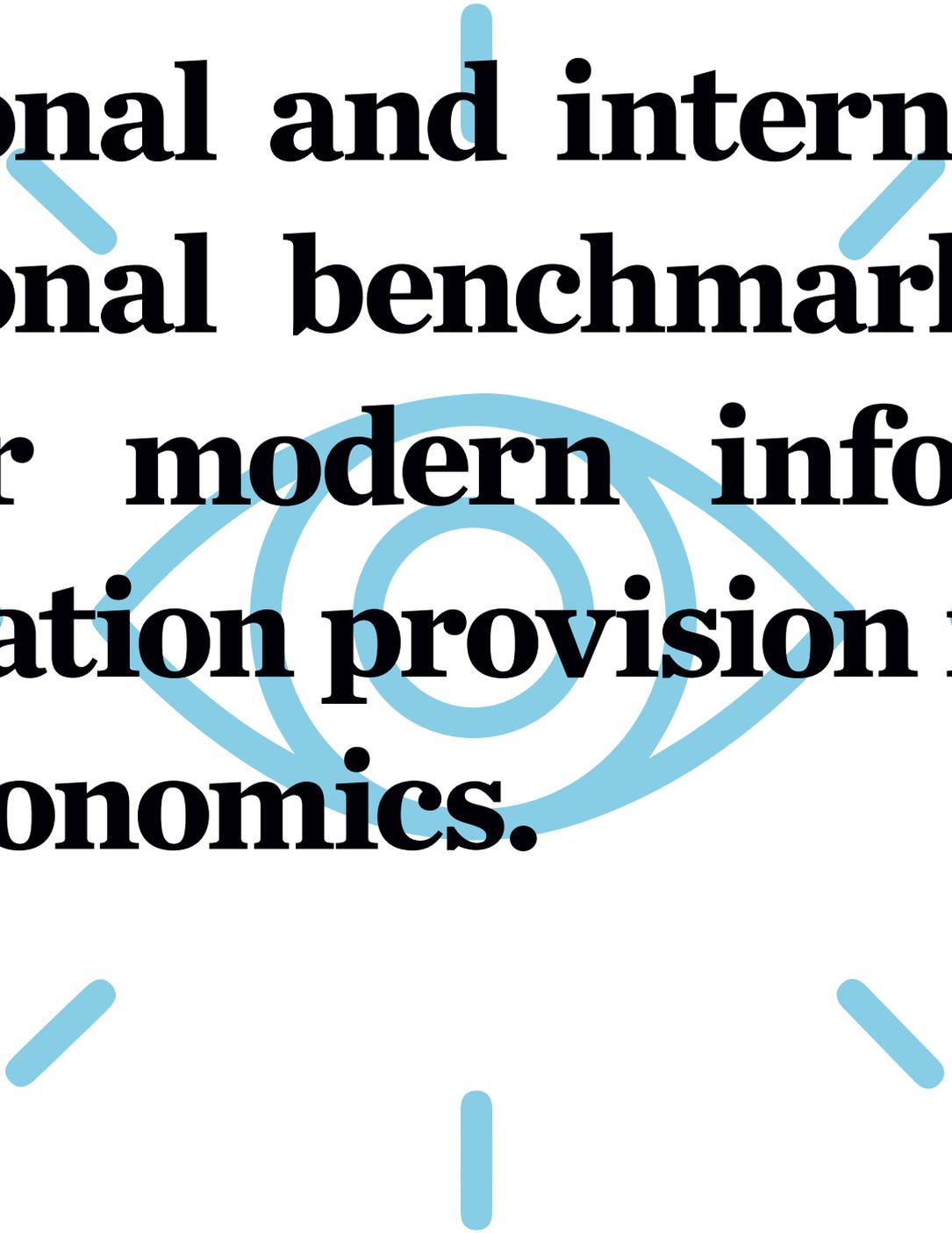


40 Claudia Liebetruhl, multiplier for the Digital Assistant: *“In all, the introduction of the Digital Assistant can be seen as a great success and adding value for the colleagues.”*



16 The ZBW actively engages in the European Open Science Cloud Association and helps shape European science policy..

The ZBW sets national and international benchmarks for modern information provision in economics.



MISSION

The ZBW collects and indexes economic literature that has been published internationally. It offers comprehensive services that enable the efficient, effective and sustainable use of specialist economic information. It is a user-oriented scientific information infrastructure that is committed to providing information in a modern and innovative manner.

264 employees from 10 r
downloaded digital full-t
preserved media 16,474 r
2,898 cooperations with
tional universities and r
presentations at nationa
ferences 22 ongoing thir
21 supervised final thes
subscriptions 5,467,294
social media views

nations 17,563,060
texts 447,748 **digitally**
retrodigitised volumes
national and interna-
research institutions 80
al and international con-
d-party funded projects
es 24,822 **active journal**
virtual visitors 937,789

Promoting reproducible research

The German Reproducibility Network was founded in January 2021. The members aim to strengthen trust in science and to increase the robustness of research. They support researchers and institutions in the implementation of Open Science practices.

Virtual Barcamp is possible, just a little different

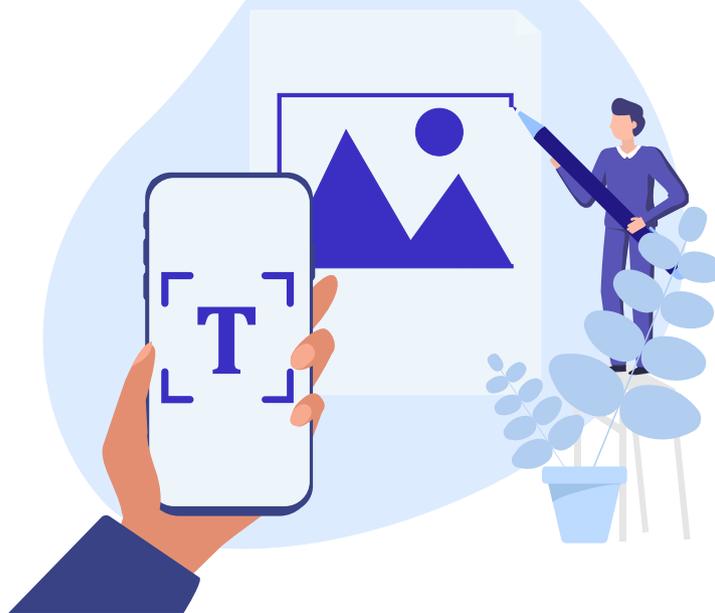
The appeal of a barcamp lies in its intensive exchange and the spontaneous agenda-setting. Both can only be partially transferred to the virtual world, so the Barcamp Open Science held on 16 February 2021 required a lot more preparation than its predecessors. It was hosted by the ZBW – Leibniz Information Centre for Economics and the Leibniz Research Alliance Open Science. Participants nevertheless were mostly satisfied as they describe in their report. <https://zbw.to/5zHX8>

Young people build bridges



With its project **YES!BRIDGE**, the ZBW school competition extends its activities to the UK and the USA. The YES! team received the “Raising the Profile of Education and Science Diplomacy” award of the Federal Ministry for Education and Research for its concept. The award was handed over on 1 June 2021 at an online event. YES!BRIDGE also won the audience poll and received an additional 25,000 Euros in prize money. The additional funding will help create a digital “region” in the competition and further develop its digital learning environments.

Automatic character recognition in retrodigitisation



Computer-assisted analyses of texts in the humanities and social sciences are only possible if documents have been faultlessly indexed with so-called Optical Character Recognition (OCR). Latest developments in the technology were discussed at the 3rd workshop on retrodigitisation which the ZBW hosted jointly with TIB – Leibniz Information Centre for Science and Technology, ZB MED – Information Centre for Life Sciences and the Berlin State Library – Prussian Cultural Heritage on 1 March 2021. 135 people attended.

Simplifying the Open Access transformation

Since March 2021, the publication server EconStor has been receiving all journal articles published by Wiley via the data hub Deep Green. With the help of this tool, articles are transferred automatically into the ZBW repository after the embargo period has ended. This increases the share of freely available articles in their discipline for EconStor users.

Bookbinding becomes immaterial cultural heritage

The Federal Association of German Bookbinders (BDBI) submitted an application for recognition of the craft as an immaterial cultural heritage to the German UNESCO Commission. It aims to showcase and keep in mind the essential share that bookbinding has in books as a cultu-

ral asset. Recognition was granted in April. Master bookbinder Elke Schnee (ZBW) helped prepare the successful application. The Association hopes the recognition will help passing on a centuries-old tradition. The change from analogue to digital reading is unstoppable, in scholarly literature even more than in so-called belles lettres. But for both the design plays an important role, for one thing to keep them durable and usable, but also as an expression of artistic and aesthetic appreciation.



Inspiring girls for computer science



The ZBW regularly participates in Girls' Day. On 22 April 2021 the motto was "A lively introduction to computer science and modern libraries – Meet role models!" The young participants experienced first hand how much the profession has changed and that no library today can function without information technology.

From the European to the Global Open Science Cloud

The Plenary Assembly of the Research Data Alliance (RDA) was held on several days in April 2021. On 23 April, a parallel workshop was held where the European Open Science Cloud presented the latest developments on the path towards implementation, among them the Research and Innovation Agenda of the European Open Science Cloud (EOSC). It is intended to link European efforts with international movements. "Open, trusted and digitally enabled science for an International Community" was the title of the workshop. Professor Klaus Tochtermann, a member of the EOSC Association Board of Directors, took part in a panel discussion which addressed the future collaboration of EOSC and RDA.

FAIR Data Spaces plans to link Gaia-X and NFDI

Science and business having access to a joint closed data space – that is the goal of FAIR Data Spaces. The FAIR Data Spaces project was initiated in May 2021 and wants to link National Research Data Infrastructure (NFDI) with Gaia-X by means of an exemplary domain in order to create a pilot for a data space for business and research while observing the FAIR principles. FAIR means that data and objects are findable, accessible, interoperable, reusable.

Virtual visits to the ZBW

Digital Day on 18 June 2021 offered an ideal opportunity for a first video tour around the ZBW. Nicole Clasen, head of User Services, presented the analogue and digital options for literature search and working available to students, researchers and other users.

International FAIR Festival for FAIR science



Active engagement in National Research Data Infrastruktur (NFDI)



In 2021, two more consortia with ZBW engagement have submitted successful proposals. Both the funding of BERD@NFDI and of NFDI4Science have been granted by the Joint Science Conference in July. BERD stands for Business Economic and Related Data and plans to develop a cloud-based platform for complex analysis procedure in business studies. NFDI4Science positions itself as a research data infrastructure for data science and Artificial Intelligence.

Publishing behaviour during the Covid-19 shock

On 14 September, the ZBW hosted a virtual workshop which asked if the conditions of working from home have changed the publishing behaviour of economists. The topic met with great

After three years' groundwork, the GO FAIR Initiative organised a three-day festival where old and new members could meet. Now that the original funding by the research ministries of France, Germany and the Netherland has ended, the organisation has restructured and regrouped to include many new actors from all over the world. The joint goal remains to make research data as open as possible.

interest from the 50 participants. A summary drawn from seven preliminary studies showed that it will probably prove to be a transient phenomenon. ZBW Mediatalk presented the discussion and studies in detail. <https://zbw.to/TmGeX>

YES! becomes international



In 2021, schools from Hong Kong, Switzerland, the USA and the UK participated for the first time in the competition where students find solutions for social, economic and environmental challenges. This year's winners hailed from the Max-Planck-Gymnasium in Gelsenkirchen. At the finals on 22–24 September they presented an app that allows employees to rate the family-friendliness of companies.

Showing presence at the German Economic Association

The ZBW also hoisted its flag at the 2021 Annual Meeting of the German Economic Association. It organised a panel discussion on “Expectations of and solution options for content-driven research data management in KonsortSWD” on 28 September.

Family-friendliness confirmed again

On 30 September 2021, the ZBW received the certificate for the strategic design of its family- and life-phase-oriented human resources management, audit berufundfamilie, for the second time. It is a seal of approval for work-life balance policies and is valid for three years.

Blogging for economics

#openeconomicsguide

Open Economics Guide now Available in English

Support for Your Open
Science Practice



On 1 November 2021, Open Economics Guide started its blog which presents hands-on tips about tools for economists to help them simplify, disseminate and share their own scholarly work.

Networking in Northern Germany for research data

In cooperation with the Ministry of Education, Science and Culture of the State of Mecklenburg-Vorpommern, the ZBW organised a workshop on “Jointly shaping research data management at North German universities and research institutions” which also aimed to increase networking among the North German university landscape. 200 participants met virtually on 15 October and nearly everyone wished for more workshops. A summary report has been published on ZBW Mediatalk.

YES! starts a prototype in Schleswig-Holstein with YES!MINT

YES! MINT

The newly established YES! spin-off organised its first competition in 2021. It addresses students in the grades 7 to 9 in MINT subjects (mathematics, information technology, natural sciences, technology) and connects MINT with business.

Collaborating scientific institutions suggest a number of open questions for which the teams develop solutions with support from scientists. On 20 December 2021, the Ricarda-Huch-School won the race. The project has prototype funding from the Federal Ministry of Education and Research for three years.

Successful audit

As a member of the Leibniz Association, the ZBW – Leibniz Information Centre for Economics is evaluated on a regular basis. A first intermediary step is the audit which is held halfway between two evaluations. The Advisory Board and other experts review how far recommendations from the previous evaluation have been implemented and if the ZBW is future-oriented in all its fields of activity. This audit could take place in presence on 3 and 4 November 2021 in Hamburg. Several teams presented their projects and activities at 15 booths. The auditors were impressed with the engagement and professionalism that marks working and researching at the ZBW.

Testing new business models

In cooperation with the academic publisher Duncker & Humblot, the ZBW is testing the business model “Subscribe

to open” with two journals, “Credit and Capital Markets – Kredit und Kapital” and “Journal of Contextual Economics – Schmollers Jahrbuch” which are thus made available in Open Access.

Winning staff with work-life balance



In times when skilled labour is scarce, it is more important than ever for libraries to present themselves as attractive employers. In an extensive process, the Human Resources Management has created a new career website where all information about job offers and application procedures at the ZBW is bundled. The ZBW also uses this space to showcase its comprehensive activities for equal opportunities, diversity, health management and family-friendliness. <https://careers.zbw.eu/en/>

ZBW offers Dual Study programme



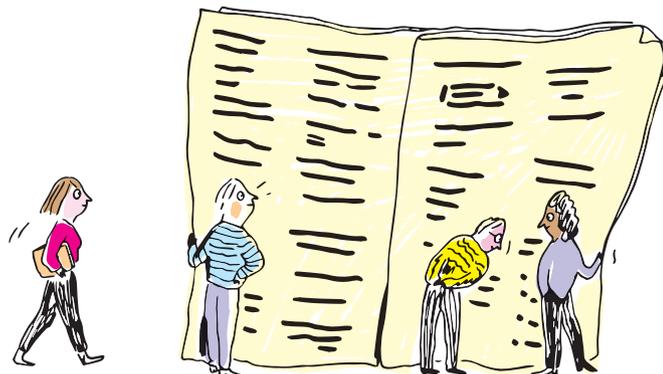
In 2021, the ZBW and the University for Applied Sciences in Hamburg have taken first steps for a new kind of co-operation. From 2022, they will offer jointly a degree course “Applied Computer Science B. Sc.” anchored in the dual system of training in Germany. The course comprises seven semesters, six at the university and an integrated practical semester at the ZBW. The basics of computer science are taught in the course and deepened with practical knowledge gained at the ZBW.

Creating a digital, modern administration



A major project of a special kind was launched in the financial administration in 2021. At the end of the year, the SAP system operated by the State of Schleswig-Holstein was replaced with a new accounting software system. The new application is state-of-the-art and offers the opportunity to combine the organisational structure and the financial accounting of the ZBW effectively and sensibly for an efficient and target-oriented management. For 2022, the introduction of an electronic invoicing workflow is planned.

Open Science Magazine shows Best Practice examples from economic research



The **Open Science Magazine** invites economists to take a fresh look at science in the digital age and to learn about the Open Science experience of their peers in individual stories. They get Best Practice experiences from other economists, worksheets with hands-on tips for Open Science in practice, background information about current Open Science developments in a podcast series, and interviews with inspirational ideas for transformation. At the end of 2021, 33 interviews with economists from Germany, Austria, Switzerland and the UK about personal Open Science experiences were available. More than 30,000 visits could be counted for the online magazine.

STRATEGY

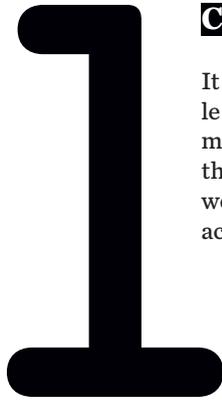
2022 – 2026

ZBW positions itself for the economics of the future with a new comprehensive strategy.

The digitisation of scholarly research and publishing processes is both an opportunity and a challenge for the science system. On the one hand it allows scientists to make all research findings from the scientific process openly accessible and reusable, and thus to improve their quality. On the other hand, all actors in the science system are facing new challenges. The business models of known actors in the market and of service providers are changing continually. On top of this, new markets are arising – for instance in the field of research data – and unknown actors are entering the market.

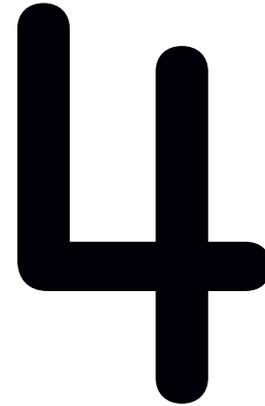
Against this background, the ZBW – Leibniz Information Centre for Economics has framed its “Strategy 2022 – 2026”. The aim is to be an active participant in the digitisation of research and publishing processes in economics, and to offer innovative services for information provision in economics.

The ZBW has set four closely-linked strategic priorities to achieve this goal:



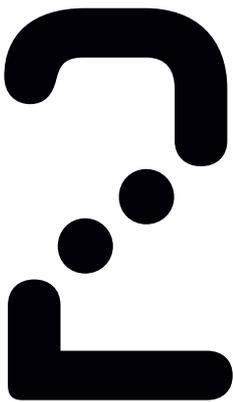
Contextualising digitisation

It is of the utmost importance to the ZBW to contextualise as best as possible the digitisation in economics, and its concomitant scientific processes, methods and tools, so it can fulfil its mission. This knowledge is the basis that enables the ZBW to align essential areas of activity in a world of hybrid working cultures. The “Strategy 2022 – 2026” defines areas of activity to achieve this deep understanding sustainably.



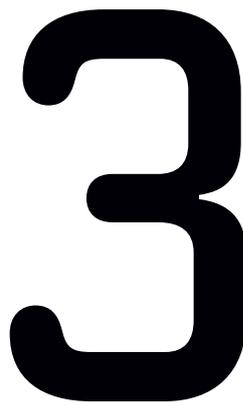
Qualifying for digitisation

User-oriented thinking and acting, understanding digital technologies and tools, and agile management skills are the basic requirements for a service-oriented information infrastructure such as the ZBW. For this reason, the ZBW lays great emphasis on a continuous human resources and organisational development. The “Strategy 2022 – 2026” documents how the ZBW plans to organise further education and training of staff, digital working environments, and human resources management in the coming years, and how it plans to share its own knowledge with interested parties. It is a matter of concern to the ZBW to transfer the knowledge of and experience with the digitisation of the science system. Therefore it actively supports its target groups in the further development of their digital skills.



Researching digitisation

Digitisation quickens the transformation of the science system towards more openness: Open Science. To be an active participant in the shaping of this transformation, the ZBW conducts multiperspectival research in the field of Open Science with five professorships. This application-oriented research aims to increase the innovativeness of present ZBW services and to develop new services. The “Strategy 2022 – 2026” outlines how multidisciplinary research and the research transfer into service development are organised in ways that enable the generation of excellent research findings and the (further) development of innovative services.

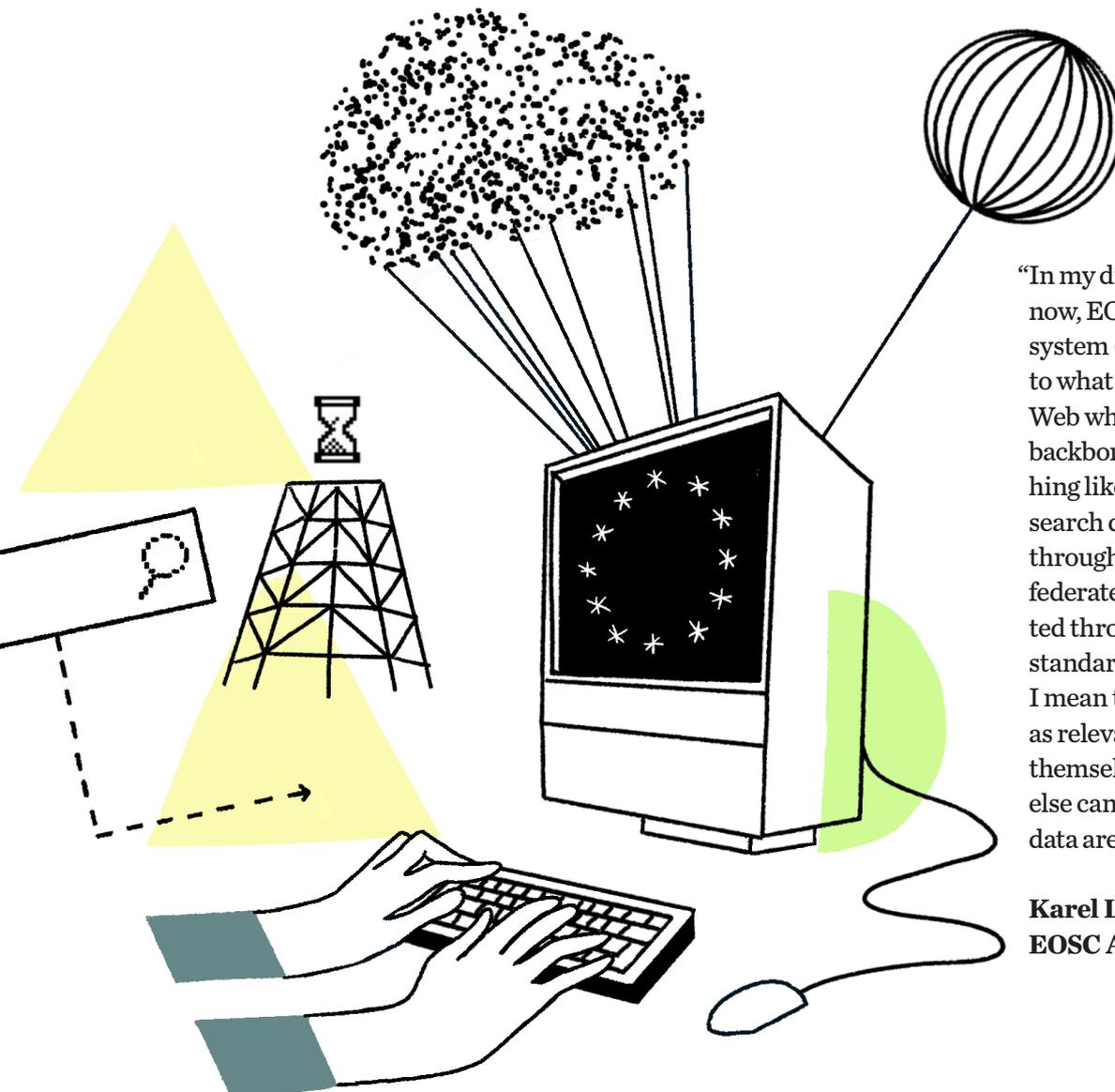


Shaping digitisation

The ZBW contextualises digital change and its effects on economics and adapts its services accordingly. But it doesn't stop here. The ZBW is pro-actively engaged in shaping the digital change, and particularly in the Open Access transformation of the market for scholarly economic publications. It promotes open and free access to publications, research data, Open Educational Resources, and research software in economics. The ZBW establishes services that enable it to position itself as an intermediary and curator of publishing processes. The ZBW also shares its experiences and research-based findings with its communities and actively puts them forth to national, European and international science policy. The “Strategy 2022 – 2026” arranges the areas of activity required for this.

Federated research data infrastructures for Europe

ZBW engages in the European Open Science Cloud Association



“In my dream, 20 years from now, EOSC has become a system (a commons) similar to what is now the World Wide Web where the Internet is the backbone. In this vision, something like 50% of the relevant research data would be available through these commons, this federated network to be created through the protocols and standards. And by relevant data I mean those data that are seen as relevant by the researchers themselves because someone else cannot determine what data are relevant.”

Karel Luyben,
EOSC Association President

The European Open Science Cloud (EOSC) was launched in 2015 with the aim of providing European researchers with a shared and open multidisciplinary environment in which they can publish, find and reuse data, tools and services for research purposes.

In 2020, the EOSC Association was founded (<https://eosc.eu/>). After extensive preparatory work and over 50 individual projects, the objective is now to bundle all activities and to be able to offer an EOSC operationally for the European science system.

The EOSC Association is a legal entity and a foundation under Belgian law. An Executive Board has been appointed to coordinate all activities. The board consists of its president, Karel Luyben, and eight other members, among them Professor Klaus Tochtermann, the director of the ZBW.

Adoption of the Strategic Research and Innovation Agenda

In February 2021, the Executive Board of the EOSC Association adopted the Strategic Research and Innovation Agenda (SRIA). All EOSC projects must be oriented along these SRIA guidelines from now on.

The Strategic Research and Innovation Agenda presents a roadmap with different stages of development and precisely defined schedules. Basic functionalities belong to the “EOSC Core” stage which is targeted to be accomplished in 2023. Here elements such as searching, saving and login functions are to be realised. The next stage is “EOSC Exchange” which addresses more complex functionalities and services for special data analyses of research datasets.

One billion Euros have been provided for the development of EOSC over the next ten years, half of it by the European Commission, the other half by the 27 member states of the EU. This was negotiated between the European Commission and the EOSC Association from December 2020 to July 2021 and laid down in a Memorandum of Understanding. The contributions from more than 200 members provide additional funding to the amount of 1.5 million Euros which is earmarked, among others, for staffing the secretariat. ■

Professor Klaus Tochtermann:

“I think it meaningful to be able to help shape developments for cross-disciplinary research data management in the coming years at the heart of Europe. It is highly important to promote dialogue between infrastructures and science and to show how national research data infrastructures such as the NFDI can interact with the EOSC.”



Where to find information about the EOSC

The EOSC Portal (<https://eosc-portal.eu/>) is a platform offering information about issues that will become relevant for the EOSC later. This includes services such as European research data repositories. A first starting point to get acquainted with the EOSC.



How to contribute to the development of the EOSC

Engagement for the EOSC is possible through the Advisory Groups. For now, five have been established which address topics such as curricula in research data, FAIR data or metadata standards. Interested institutions can apply to become members or observers at the EOSC Association: <https://zbw.to/RIYve>



Calls and grants of the EOSC

The website of the EOSC Association (<https://eosc.eu>) regularly publishes “Calls and Grants” or job vacancies. You can subscribe to a monthly newsletter if you want to keep up-to-date with the EOSC Association or become a follower on Twitter @eoscassociation.

How does the publishing market in economics work?

Elsevier, Springer and Wiley dominate the market

In economics, the most important publication format is the article in a journal. But not every scholarly journal is suitable for career planning and promoting your market opportunities. In appointment procedures you can only score if you have published in a Class A+ journal, or at least Class A. Articles in E journals are perceived as least valuable. This fixation on journal rankings is repeatedly criticised, and yet rankings such as the research monitoring of ETH Zurich for *Handelsblatt* and *WirtschaftsWoche* (<https://www.forschungsmonitoring.org/>) continue to enjoy high regard among German economists.

The most important publishers for economics journals in Germany are Elsevier (38 percent market share), Springer (21 percent market share) and Wiley (13 percent market share); see fig. 1 on p. 19. They constitute an oligopol for said high-ranking scholarly journals and mainly offer them as subscription-based or hybrid journals.

The buyers in the classic subscription-based financing model are the libraries of scientific institutions which fund and organise access for their researchers and students.

What are hybrid journals?

Hybrid journals are a particular form of subscription-based journals. They offer their authors the additional option of “ransoming” their own articles by paying an Open Access publication fee, the so-called Article Processing Charge (APC). After paying this “ransom”, everyone can read the article even if they do not have access to a well-stocked university library. This creates double payments of subscriptions and additional publishing fees to the academic publishers. These double payments are called “double dipping” and most science organisations either view them critically or do not support them financially. Authors should therefore verify beforehand if their scientific institution or the funder of their research project bears these costs.

There are also Open Access journals whose contributions are freely available to everyone right from the start. These journals are either funded through APCs or the publishing costs are borne by a science institution or a learned society. In economics (in contrast to the natural or life sciences) there has been little disposition so far to pay individual APCs. Hence the share of Open Access journals is smaller and depends on the engagement of individual institutions or associations.

“Read and Publish” agreements

Over the last few years, large publishers and science institutions have switched to national agreements which regulate payment both for the access to scholarly journals and the publication therein (so-called “Read and Publish” agreements). These agreements are also called transformation agreements, as they offer a chance for a large-scale Open Access transformation of the market for journals. In Germany, the DEAL agreements with Springer and Wiley are worthy of particular mention which are also relevant for economics. ■

→ Market share of publishers

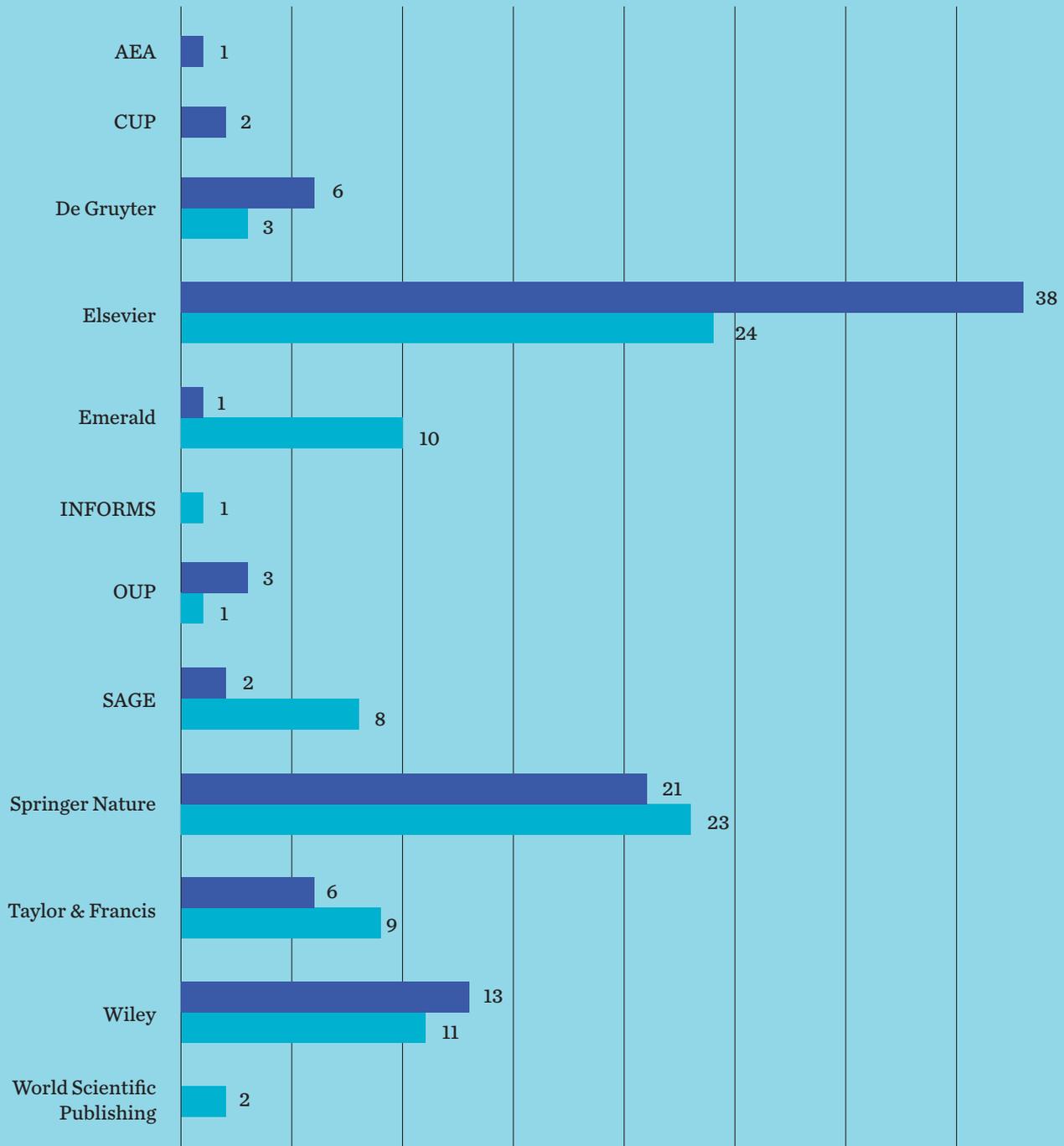


Fig. 1: Market share of publishers (in percent), with regard to articles published by German economic researchers.

Practical engagement for the Open Access transformation

The ZBW engages proactively for the Open Access transformation of the academic publishing market in economics. Free and open access to economics-related information is highly important. Essential foundations have been laid in 2021.

The foundations for the operative Open Access transformation

The ZBW engages actively on various levels for the implementation of the Open Access transformation in Germany.

At the core stands concrete practical engagement.

1. The ZBW carries out comprehensive market analyses for an in-depth watch of the market for publications in economics. These market analyses are the basis for operative activities. In order to be able to negotiate Open Access transformation agreements with the relevant publishers, the ZBW produced a publication analysis looking at the Open Access publishing in German economic research. Against the background of negotiations about Open Access transformation agreements, the analysis identified how the share of Open Access among papers in economics has evolved in the years 2010–2020. [Poster by Ralf Toepfer: <https://zbw.to/EOelc4>]
2. The discipline-related measures of the ZBW start with a 360-degree strategy (see fig. 1, p. 31).
a) Agreements with publishers regarding Open Access

The ZBW negotiated on behalf of the Leibniz Association “Publish and Read” agreements in 2021, among others with the academic publishers Taylor & Francis, DeGruyter and Emerald Publishing.

Under the umbrella of these agreements, authors from the Leibniz Association can now publish without costs in the journals of these publishers. More than 100 articles have been accessible without paywall in 2021. Besides publishing, provision has been widened, i.e. access to scientifically relevant journals.

The ZBW is active in national initiatives such as Forum 13+, where representatives of negotiating institutions and various associations and projects work with publishers on the implementation of the Open Access transformation.

In this framework, the ZBW heads a negotiating project with other participating consortia whose goal is a nationwide transformation agreement with Taylor & Francis. Negotiations for a similar agreement with Emerald Publishing are under way.

The ZBW also negotiated Open Access solutions for serials and individual journals with smaller publishers. The ZBW has developed the Open Access business model “Subscribe to Open” with the renowned academic publisher Duncker & Humblot which will be tested on the economics journals “Credit and Capital Markets – Kredit und Kapital” and “Journal of Contextual Economics – Schmollers Jahrbuch”. In addition, the cooperation partners will digitise archived volumes and make them available in Open Access.

Jens Lazarus, ZBW

“The DEAL agreements with Wiley and Springer Nature have established Open Access publications as the standard in Germany. Starting negotiations with other publishers is a big challenge. I am happy that we can head an experienced team of negotiators at the ZBW. We aim to finalise an agreement with Taylor & Francis and to establish a nationwide consortium. This would be another giant step for the Open Access transformation.”

b) Supporting external publication infrastructures

The ZBW supports various Open Access infrastructures (e.g. with membership models). These include RePEc, LeibnizOpen, Sherpa RoMEO, DSpace, Directory of Open Access Books oder DOAJ – Directory of Open Access Journals. The ZBW thus actively commits to non-commercial infrastructures as part of the Open Access transformation.

c) Using ZBW's own publication infrastructures

The ZBW repository for economics, EconStor, has been well established in economic research for years. It stores more than 200,000 publications from more than 600 institutions around the world. In 2021, the ZBW has broadened its workflows to include publications from the Open Access transformation, some of them resulting from ZBW activities, others from externally generated Open Access content from DEAL.

A new cooperation between DeepGreen and the ZBW delivers economics papers from Wiley automatically into the EconStor repository for secondary

publication. Since January 2021, 585 papers have been successfully delivered to EconStor. Only relevant papers from selected journals from the Wiley-DEAL agreement are included in this process.

This cooperation offers benefits to all parties: publishers gain more reach for their publications, authors gain more visibility, and users gain access to more freely available papers in their discipline.

Olaf Siegert, ZBW:

“Now relevant articles from the Wiley-DEAL agreement will be available on EconStor. This highlights the role of repositories as publishing spaces of science institutions for ensuring the Open Access transformation. With the EconStor repository we have strong links into economic research and it is used by many institutions and authors for disseminating their research output. Articles from transformation agreements are an important building block for further developments. We are happy that DeepGreen actively supports us in this.”

d) Supporting scholar-led publications

Since 2021, the ZBW has been supporting scholar-led journals in economics under the label “Open Library Economics”. It offers funding, consulting and hosting to scholar-led journals that wish to act independently of publishers. The ZBW supports them in the changeover to an Open Access business model without author fees, so-called Diamond Open Access. Scientific research output is to remain in scientists’ hands on a non-commercial platform.

Open Library Economics offers transitional funding and support for building sustainable alternate funding within consortia. Open Library Economics also offers comprehensive consultation for the changeover to Diamond Open Access and the option of hosting journals in cooperation with TIB Open Publishing.

LINK TIP:

More about OLEcon:
<https://zbw.to/m2ddF>

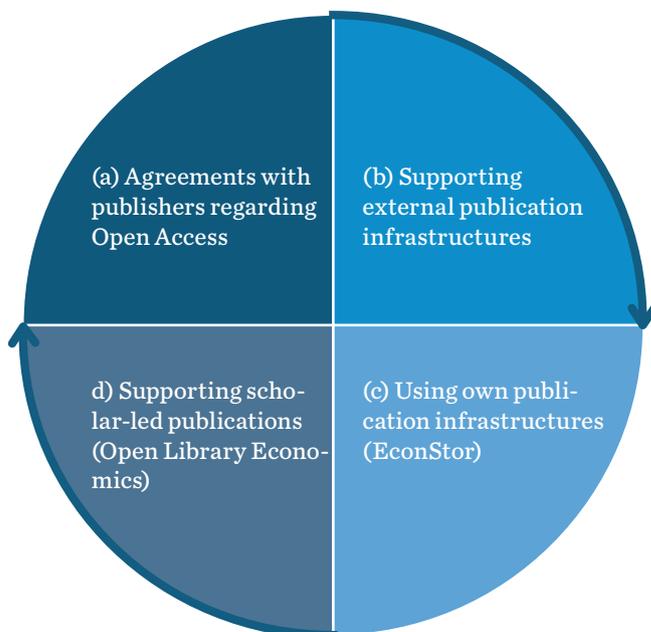


Fig. 1: 360-degree strategy

Dr Juliane Finger, ZBW:

“The Open Access transformation can no longer be stopped because science policy demands and supports it. The big research funders require Open Access from their grant recipients, i.e. the researchers whose projects are financed by the funders. Of course this creates pressure to transition to Open Access, also for big academic publishers. [...] Elena Šimukovič once phrased it in a talk like this, which I thought was great, now it’s no longer pay to read but pay to say. If you want to have a voice and want to be heard, you need money behind you.”

The ZBW builds (inter)national networks. This networking brings important impulses for practical engagement.

1. It engages proactively in various bodies at national and international level:
 - Alliance of German Science Organisations
 - GASCO (German, Austrian and Swiss Consortia Organisation)
 - LIBER (Ligue des Bibliothèques Européennes de Recherche – Association of European Research Libraries)
 - Leibniz Association

2. The ZBW is an active part of national and international developments. In the international sphere, important bodies are the global **OA2020 Initiative**, initiated by Max Planck Digital Library, and **eOAlition S (Plan S)**. Plan S is supported by 18 national and international research funders, the European Commission and the European Research Council. Major national developments are the Alliance Strategy 2021–2025, DEAL and Forum 13+.

Effects of the Open Access transformation

Fig. 2 (below) shows how Open Access is evolving in economic research. Whereas Gold Open Access journals grow only slowly in importance, a strong growth has been observed for Hybrid Open Access since 2019. The so-called “DEAL effect” becomes apparent.

What does this mean?

Open Access still plays a subordinate role in economics (see fig. 2). The share of Gold Open Access journals has risen proportionally over the last years but still remains in single-digit percentages compared to all other journals. There are many reasons for this:

1. Rankings which prefer established subscription-based journals play an important role and act as gatekeepers.

2. The historically grown preprint culture in economics appears to offer a sufficient practice regarding transparency – there is a “perceived” Open Access culture.
3. There is no clear disposition among economists to pay so-called Article Processing Charges (APCs) or to request them from their library or learned society. Only 7 percent of articles in economics journals could be transferred to Open Access with Article Processing Charges in 2020.

The Open Access transformation with combined Read and Publish models already shows perceptible effects (DEAL effect). This should be supported further with transformative agreements with publishers, support of scholar-led publishing models and the shaping of sustainable and cooperative funding structures. ■

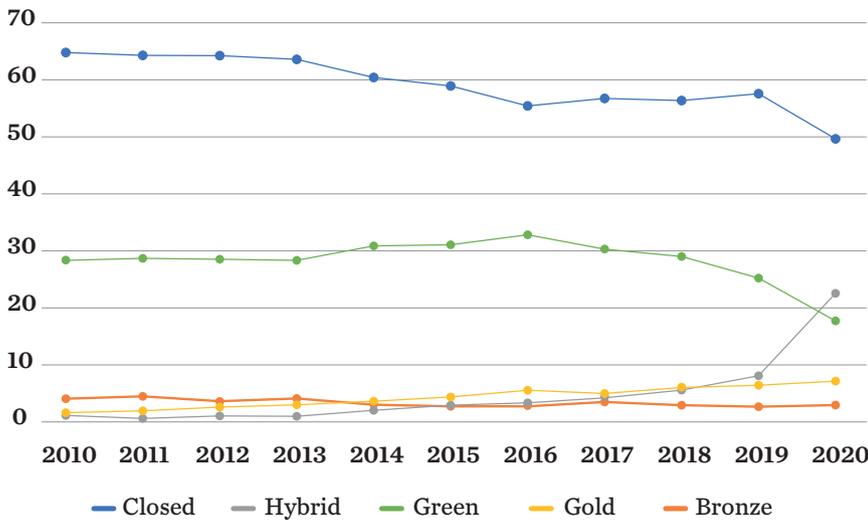


Fig. 2: Shares of Open Access types in economic research (in percent). Source: Dimensions; own computations (years 2010–2020)

Digitisation

brings science so much closer to us and ensures that we can learn from each other every day. It thrills me so much that I'm on fire for my work every day.



Ahmed Saleh
Research Assistant

IDEAS

A portrait of Professor Marianne Saam, a woman with short grey hair and glasses, wearing a dark blazer over a white collared shirt. She is smiling and has her arms crossed. The background is a blurred office setting with a window and some equipment.

Digital change expert *Professor Marianne Saam* comes on board

Shaping open economics for societal transformation

On 1 September, Professor Marianne Saam assumed the chair of Digital Economics jointly established by the ZBW – Leibniz Information Centre for Economics and the University of Hamburg. She also heads the programme division “Economic Research Interface” at the ZBW. The focus of her research at the ZBW is on the processes of digital further education around economic topics.

The ZBW – Leibniz Information Centre for Economics is an information infrastructure for economic research which has been doing active research for more than ten years through joint appointments with universities. The multidisciplinary research groups with five professors create application-oriented digital services for the ZBW. The common thread is Open Science.

With economist Marianne Saam, the research group acquired an expert for

digital transformation who studies, inter alia, the role of digital media and information infrastructures for knowledge creation processes in economics. She studies the effects of digital transformation on innovation and sustainable growth, and also the use of digital technologies in knowledge creation processes around economic topics.

Professor Marianne Saam

about her goals at the ZBW:

“I am interested in how differing economic points of view can be integrated into a certain kind of consensus without which policy consultancy can be difficult. In this context it is exciting to see how scientists, but also users of economic information, handle dissent in research, depending on their use of information and communication media. I want to participate in the creation of open economics for societal transformation.”

Marianne Saam studied at Goethe University in Frankfurt on Main, Paris and Louisiana and gained her PhD in Frankfurt. “Digital Economics” has also been the focus of her activities at ZEW – Leibniz Centre for European Economic Research in Mannheim. She qualified as a professor in Frankfurt in 2014 and worked as professor for Innovation Economics and Policy at Ruhr University Bochum, before she joined the University of Hamburg and the ZBW. ■

AI expert Ralf Krestel accepts professorship for Information Profiling and Retrieval

A portrait of Professor Ralf Krestel, a man with short dark hair and a beard, wearing a grey blazer over a pink shirt. He is leaning on a yellow handrail and smiling at the camera.

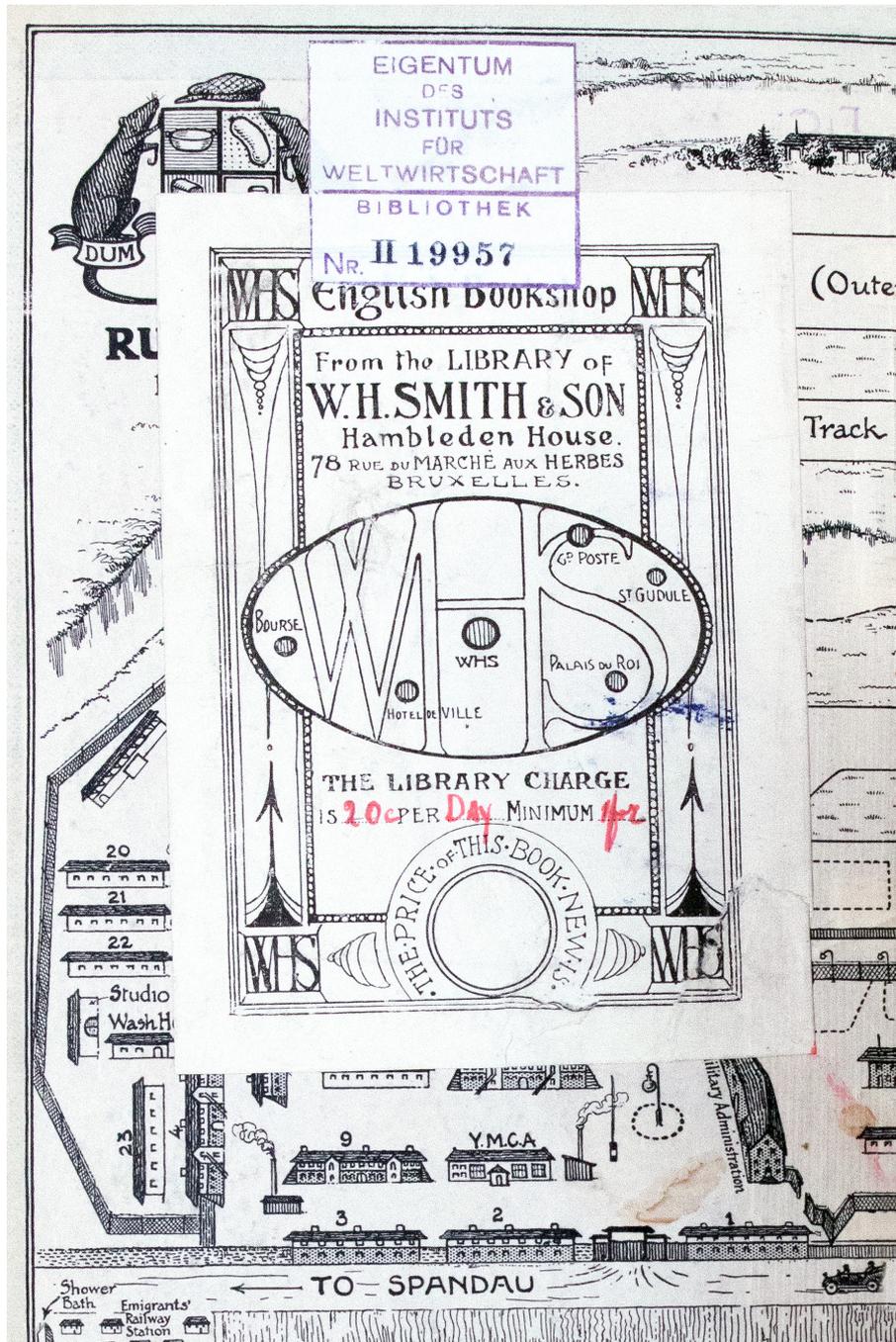
Professor Ralf Krestel
about his goal:

“I want to improve the information retrieval in ZBW products by means of AI methods. AI methods can lead users of ZBW services faster to better results. Intelligent search tools are indispensable for working on economic problems. Recommender systems and personalised searches can show connections that would remain undiscovered otherwise. Innovative visualisations of information can give an overview of large amounts of data and can thus render relevant information more easily accessible.”

Latest AI methods to find their way into ZBW products

With computer scientist Ralf Krestel, the ZBW research group gained an expert for Artificial Intelligence and Deep Learning who specialises in the application of recommender systems, intelligent user interfaces, and knowledge graphs. On 1 September 2021, Ralf Krestel was appointed professor of Information Profiling and Retrieval at Christian Albrecht University of Kiel. Ralf Krestel and his working group will address the development and testing of the latest AI methods to find and interconnect information in better ways.

Professor Ralf Krestel studied computer science in Karlsruhe and Montreal and gained his PhD in Hanover in 2012. He spent two years as a Post Doc at the University of California in Irvine. In Germany, he worked first as an intern at Hasso Plattner Institute in Potsdam and later headed a research group on text mining. In 2019/2020, Ralf Krestel was a locum professor for intelligent systems at Passau University. ■



History critically reviewed

Results of provenance research at the ZBW 2018–2021

On 1 February 2019, the ZBW – Leibniz Information Centre for Economics celebrated its centenary and looked back on 100 years of library history. A library which has lived through most of the 20th century must critically examine its own history, especially the period of National Socialism.

Provenance research at the ZBW

In a provenance research project lasting from December 2018 to the end of 2021, the ZBW made a systematic study of the origins of those objects that entered the ZBW's collections during the National Socialist era. The title of the project was "Provenance research for literature acquired in the years 1933–1945 for the present ZBW – Leibniz Information Centre for Economics", funded since 2018 by the German Lost Art Foundation in Magdeburg. In this research project, the ZBW examined its holdings to establish if they contain books which were seized from their former owners as the result of National Socialist persecution. The objective is to retribute these works to the owners or their heirs. The ZBW first financed a preliminary study which analysed accession records for the years 1933–1945.

The result: Restitutions have been initiated and resulted in first contacts despite the pandemic. Ten objects, for which there is reasonable suspicion of having been looted, have been entered into the Lost Art database, which is the central internet platform for documenting lost and found cultural assets. 1,334 titles, which are suspected to have been looted or must be seen critically, have been entered into the cooperative provenance database Looted Cultural Assets.

A library with a particular history

The ZBW – Leibniz Information Centre for Economics was founded in 1919 as a department of the Royal Institute for Maritime Transport and the World Economy in Kiel. Today it is the world's largest special library for literature in economics. Two particularities in its history have led to this exceptional international status. On the one hand there have been no ideologically motivated cullings from the holdings under the NS regime because the NS government needed the literature for its own purposes. On the other hand, library staff were able to transfer the holdings to Ratzeburg Cathedral where they could be saved intact during the war.

The library of the Hamburg Institute of International Economics (HWWA), which was amalgamated with the ZBW in Kiel in 2007, suffered a completely different fate. The HWWA came under National Socialist control in 1933, its holdings were examined for "undesirable ideas" and everything not corresponding to the reigning ideology was discarded. Another third of its holdings was lost to looting and confiscation after 1945. The North Sea flood of 1962 also caused heavy losses.

A puzzle with many missing pieces

The provenance research project took place under very difficult conditions. It was advanced detective work. Although all accession books for the library of the Institute for the World Economy have survived, the number of administrative documents is minuscule. In Hamburg also few internal documents have been preserved. For the time of the NS regime, only one accession book and an incomplete accession card index have survived. The reasons for this unsatisfactory situation remain unknown.

In addition, only a very few identifiable provenance marks could be found. Matching a delivery to the supplier could often only be achieved if the accession number in a volume or on an index card was congruent with the access books (in Kiel) or the accession file (in Hamburg).

Nevertheless, documents could be identified which led to suspicious items. One lucky find was a comprehensive report which Wilhelm Gülich, director of the Kiel library at the time, wrote in 1940 about a trip to Belgium and the Netherlands. It provides important information about the conditions in which the material was acquired.

Comprehensive autopsy

During the duration of the project, 20,322 objects (books, periodicals, maps etc.) have been analysed which are divided between the library's branches as seen below:

- **Kiel:** 19,898 objects (17,732 unsuspecting; 653 not unequivocally uncritical; 1,213 critical; and 10 unequivocally seized objects; 290 lost or missing objects)
- **Hamburg:** 424 volumes (211 uncritical, 124 not unequivocally uncritical, 3 critical objects; 86 missing or lost objects)

↖ **Fig. pp. 50+53:** Provenance marks of the English book-trader Smith & Son in Brussels. The images show two ex libris used by the bookshop

What are the results of the research?

Wilhelm Gülich, director of the library in Kiel, acquired between 2,000 and 2,500 items during a trip to Belgium and the Netherlands in 1940. Some of them came from the English booktrader Smith & Son in Brussels and must be considered as suspicious. Only for two items could seizure as the result of National Socialist persecution be confirmed. Gülich also brought 147 maps from Brussels that must also be seen as problematical but cannot be identified beyond doubt as loot because they lack provenance information.

During a second official trip to Paris and Brussels in 1941, Gülich received 214 volumes as a gift. Two books contain provenance information identifying them as belonging to the Alliance Israélite Universelle (Paris), an institution that had been looted before.

Other suspicious items entered the library in Kiel through the “Wehrwirtschaftsamt”. This agency had planned a research troop with the goal of systematically searching libraries and scientific institutions in the occupied Eastern European areas for scientifically useful materials. Wilhelm Gülich and Leo Hausleiter, director of the HWWA, attended the preparatory talks. Between 1942 and 1943, the research troop collected scientific material in the Soviet Union which subsequently was made available to German institutions. In 1942, an item bearing property marks of a library in the Ukraine was delivered to the Kiel Institute. It originates from the State Scientific Library V. H. Korolenko in Charkiw and is unequivocally to be regarded as loot. In Hamburg no deliveries from the lootings of the research troop could be found.

From March 1938 onwards, suspicious gifts of maps, books and journals made by Dr Rudolf Heberle (1896-1991, private lecturer at Kiel University 1929-1937) appear in the accession books in Kiel. The circumstances of the donation could not be verified for 256 volumes. Some of the volumes show property marks of Ferdinand Tönnies, who was Heberle’s father-in-law. Heberle had to emigrate to the USA in 1938 because his great-grandfather was Jewish and he was no longer allowed to work in Germany.

Four other unequivocally looted books reached the library in Kiel through an exchange of duplicates. One of them bears the property marks of the University library in Poznań and of the library of Bernard Chrzanowski (1861-1944, legal scholar, 1935 Senator of the Republic of Poland, expelled from Poznań by the Germans). It was impossible to verify if he donated his library to the University library in Poznań, or if the collection entered the library through the German occupiers.

During the project, 9,604 volumes were autopsied which came to the library through the “Reichstauschstelle” (Reich exchange agency). Two volumes could be matched to Charlotte Leubuscher (1888-1961, associate professor for economics at Berlin University). She also had to emigrate to England because she suffered persecution for being Jewish. How the Reichstauschstelle laid hands on the items is unknown.

The Gestapo delivered 264 volumes to the library which must be regarded as critical. One of the items could be matched to the booktrader Smith & Son in Paris. This firm was owned by English nationals and was confiscated.

Only one item in the HWWA library could be identified as looted. Eduard Wolff, a Jewish citizen of Hamburg and Consul for Turkey, donated seven volumes to the HWWA. It is unknown if this was a voluntary donation.

Thorsten Meyer

Library Director of the ZBW:

“Provenance research is an exciting, but also time-consuming endeavour. Coming to terms with the injustices of the NS era is a continuous ethical duty that we are committed to.”

Norman Köhler

Provenance Researcher, ZBW:

“The objective of provenance research and restitution is not to make pecuniary amends, but to set a mark. It is about creating an awareness of how comprehensive the looting was, how comprehensive the marginalisation and intolerance towards other groups in the population were. If provenance research succeeds in making someone think about this for a moment, it immediately affects our democracy today.” ■■

W·H·SMITH & SON'S
CIRCULATING
❖ LIBRARY ❖

ILLUSTRATED
ⓂⓂ BOOKS ⓂⓂ

The Manager is required
to see that this book is
issued to and received,
from the Subscribers with
the Illustrations or Maps
perfect in number & condition

Head Office

186, STRAND, LONDON, W.C.
& at BOOKSTALLS & BOOKSHOPS

Promoting scientific dialogue between researchers worldwide

The Journal of Comments and Replications in Economics (JCRE)

The best way to start a conversation about common research interests with other scientists is to replicate or comment their work. It is well-known that it is easy to become familiar with the empirical methods of peers through a replication. In economics, however, comments also play an important role. Comments, like replications, represent a critical discussion and a scientific discourse with published results. In contrast to replications, which aim to repeat empirical analyses, comments can discuss the other elements of the research process, such as the fundamental question, theoretical methodology and interpretation of the results. Comments and replications thus promote a transparent and scholarly discourse of published research output.

However, many journals are still reluctant to publish comments and replications. That is why the Journal of Comments and Replications in Economics (JCRE) was launched in 2021 as a successor to the International Journal for Re-views in Empirical Economics (IREE).

JCRE provides an outlet for research that explores whether published results are correct, robust, and/or generalisable. In doing so, Journal of Comments and Replications in Economics seeks to increase scientific dialogue between researchers and to increase the overall credibility and transparency of research in economics.

Parallel to the launch of Journal of Comments and Replications in Economics, changes were made in the Editing Board in 2021.

After Professor Joachim Wagner and Professor Christian Pfeifer (both from Leuphana University of Lüneburg) resigned as editors in mid-2021, two high-ranking economists could be won as new editors: Professor David A. Jaeger (University of St Andrews, UK) and Professor W. Robert Reed (University of Canterbury, New Zealand). Together with Professor Maren Duvendack (University of East Anglia, UK) and Dr Martina Grunow (ZBW – Leibniz Information Centre for Economics) they spearhead the new journal as highly motivated Editorial Team which is excellently networked internationally.

The internationality shows not only in the fact that JCRE is the only replication journal to be listed with the “Institute for Replication (I4R)”. All editors have also been accepted as members of the “Institute for Replication (I4R)” (see i4replication.org/people.html) and have committed to the journal for five years.

Professor David A. Jaeger
University of St Andrews, UK

“The Journal of Comments and Replications in Economics (JCRE) aims to be the premier outlet for articles that comment on or replicate previously published articles in economics and closely related disciplines. [...] In doing so, JCRE seeks to increase scientific dialog between researchers and to increase the overall credibility and transparency of research in economics.”

Dr Martina Grunow
ZBW – Leibniz Information Centre for Economics

“The idea behind JCRE is that we wanted to provide an even more comprehensive platform for discussing scholarly papers. That’s why we included comments.”



About the Journal of Comments and Replications in Economics

Status

JCRE is a digital Open Access journal. Every section of a publication (article, data and code) has a separate DOI assigned.

Reliability

Data and code are stored persistently in the JCRE data archive.

Costs

JCRE charges no author fees at any time in the submission and publication process.

Funding

JCRE is being funded jointly by the ZBW and the Joachim Herz Foundation from 2018 until (provisionally) mid-2024.

Standout feature

JCRE is the only replication journal to be listed with “Institute for Replication (I4R)” (I4R) (URL: <https://i4replication.org/>).

Initial funding

The predecessor journal IREE was funded from November 2016 until April 2018 by the German Research Foundation (DFG).

Advisory Board

Richard A. Easterlin, University of Southern California, USA
Jeffrey M. Wooldridge, Michigan State University, USA

Associate Editors:

- Luca De Benedictis, University of Macerata & University Roma Tre, Italy
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GLOSSARY:

What is a replication?

Replication is understood to be any study that directly addresses the reliability of a particular claim from a previously published study, e.g. replications, robustness analyses, generalisations and a variety of other types of analyses used to assess the trustworthiness of a previously published finding.

FURTHER READING:

“Replications are the most direct way to join a discourse,” says PhD candidate Martin Sievert who gained an unexpected research visit in the USA from a replication. Read more in Open Science Magazine: <https://zbw.to/t8DDb>



New Open Science Guide of the ZBW

Practical tips, methods and tools for economists

The ZBW is particularly concerned to pass on its findings in the field of Open Science to economic researchers and thus to support the Open Science transformation in economics. Therefore the ZBW launched a comprehensive information platform for economic researchers in 2021 – the Open Economics Guide. Its slogan: “Discover Openness – Boost Your Research”.

Open Science enables a higher quality of scholarly work and serves the reliability and credibility of research findings. It also creates new impulses for research and knowledge transfer, including in the direction of politics, business and society. The framework conditions of science policy are changing in favour of Open Science.

But it is still a challenge for economic researchers to implement Open Science in practice. Lack of time and support are the top obstacles preventing economists from practising Open Science. This is shown in the ZBW study “The role of Open Science in economics” (see <https://zbw.to/os-study>). According to this study, economists in Germany want more support, preferably as a central web portal for Open Science platforms, tools and applications as well as online materials.

Discover Openness – Boost Your Research

As a reaction to these needs, the ZBW launched the new Open Economics Guide (openeconomics.zbw.eu) on 1 September 2021. The Open Economics Guide aims to become the tailor-made contact point for Open Science in economics. The information portal focuses on concrete added values for researchers that can be implemented easily and quickly and that promote their work and careers. The Open Economics Guide supports economists with practical tips, methods and tools in practising Open Science independently and successfully.

Support for Open Science practice

The Open Economics Guide is geared to the perspective and the needs of economists. Since many economists named lack of time as one of the key obstacles for Open Science, the texts in the guide are concise and clear. The Open Economics Guide recommends first steps for starting with Open Science that can be applied easily and quickly and that are tailored precisely for economics.

Quick starts, tool overviews and knowledge database

The Open Economics Guide supports economic researchers with practical tips, methods and tools for practising Open

Open Science THE ADVANTAGES



Science independently and successfully and thus promoting their scientific careers. For this, the guide contains:

- an easy-to-understand **quick entry** into Open Science topics (currently Open Science, Open Access, Open Data and Open Tools),
- a comprehensive **tool overview** for more than 70 applications geared to the phases of the scientific workflow,
- a growing **knowledge database** with currently 100 entries on comprehensive background information and practical tips for the approach,
- a concise **glossary** which explains the most important terms around open research,
- a **blog** with practical news, tool descriptions and step-by-step manuals.

Contents under open licence and further evolvment

The contents of the Open Economics Guide are offered under an open licence. It can be reused in other contexts in the sense of Open Science, for example by other libraries for their researchers.

The Open Economics Guide will be expanded continuously and extended into other areas, such as Open Educational Resources and Open Research Software. It hopes for a close exchange and collaboration with economic researchers to jointly develop new contents. In the near future the guide will be offered in English to address an international target group. ■

Open Data THE ADVANTAGE

Benefits for Researchers

- Verified Increase of Citation rates
- Provides Important Recognition for the Research Career
- Leads to New Cooperation Opportunities

Benefits for the Science Community

- Simplifies Access to Useful Data
- Enables More Efficient Research and Teaching
- Archives Data and Preserves them for Future Use

Benefits for the Public

- Creates Opportunities for Citizen Science
- Brings Economic Benefits for the Corporate Sector
- Promotes Public Trust in Science

Open Access THE ADVANTAGES

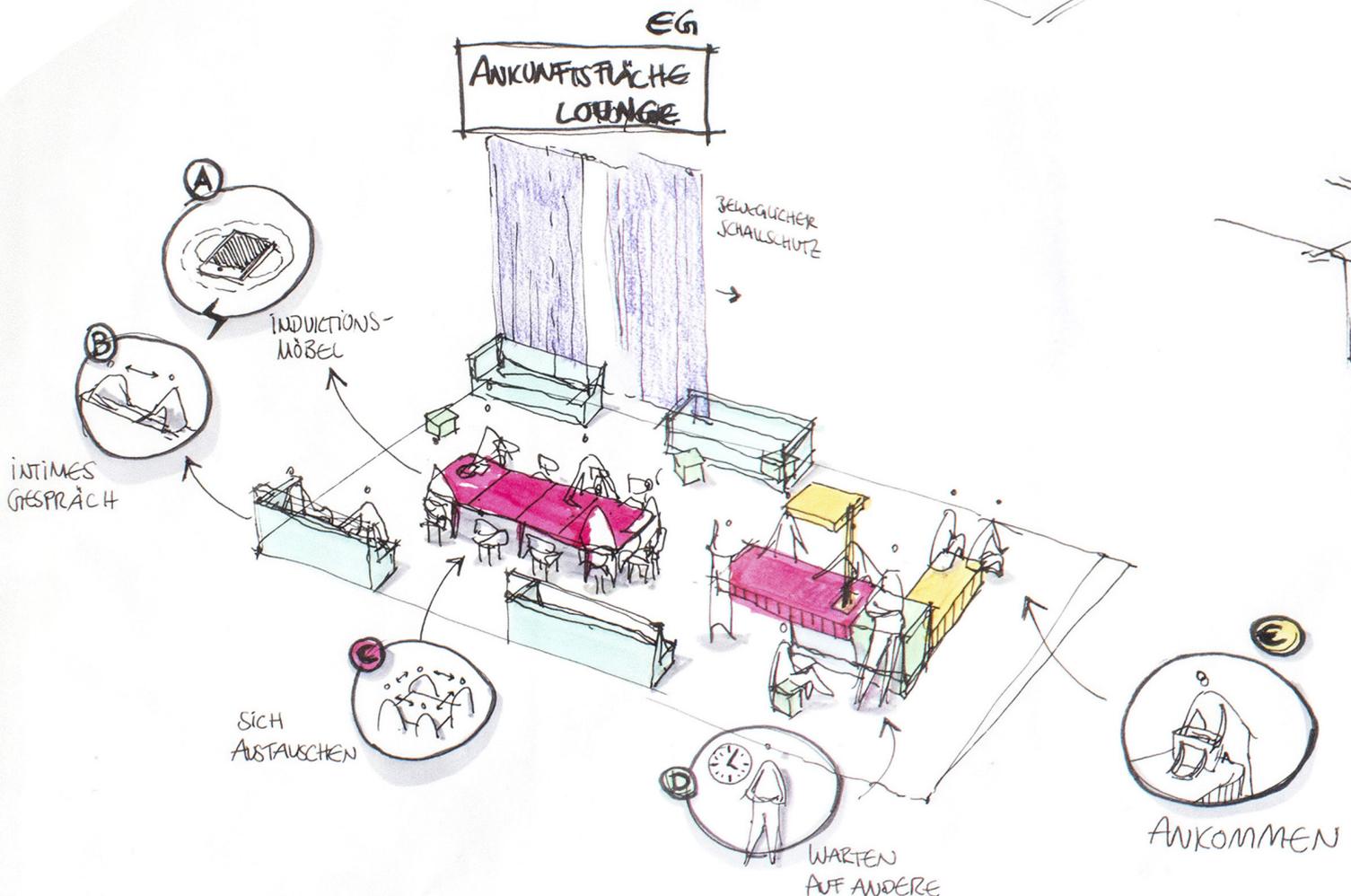


- 1 Promotes Visibility for Research
- 2 Raise Citation Rates
- 3 Ensures Greater Societal Impact
- 4 Allows Faster, Qualified Feedback
- 5 Supports Good Scientific Practice
- 6 Leads to Compliance with Funding Guidelines
- 7 Increases the Benefits of Research

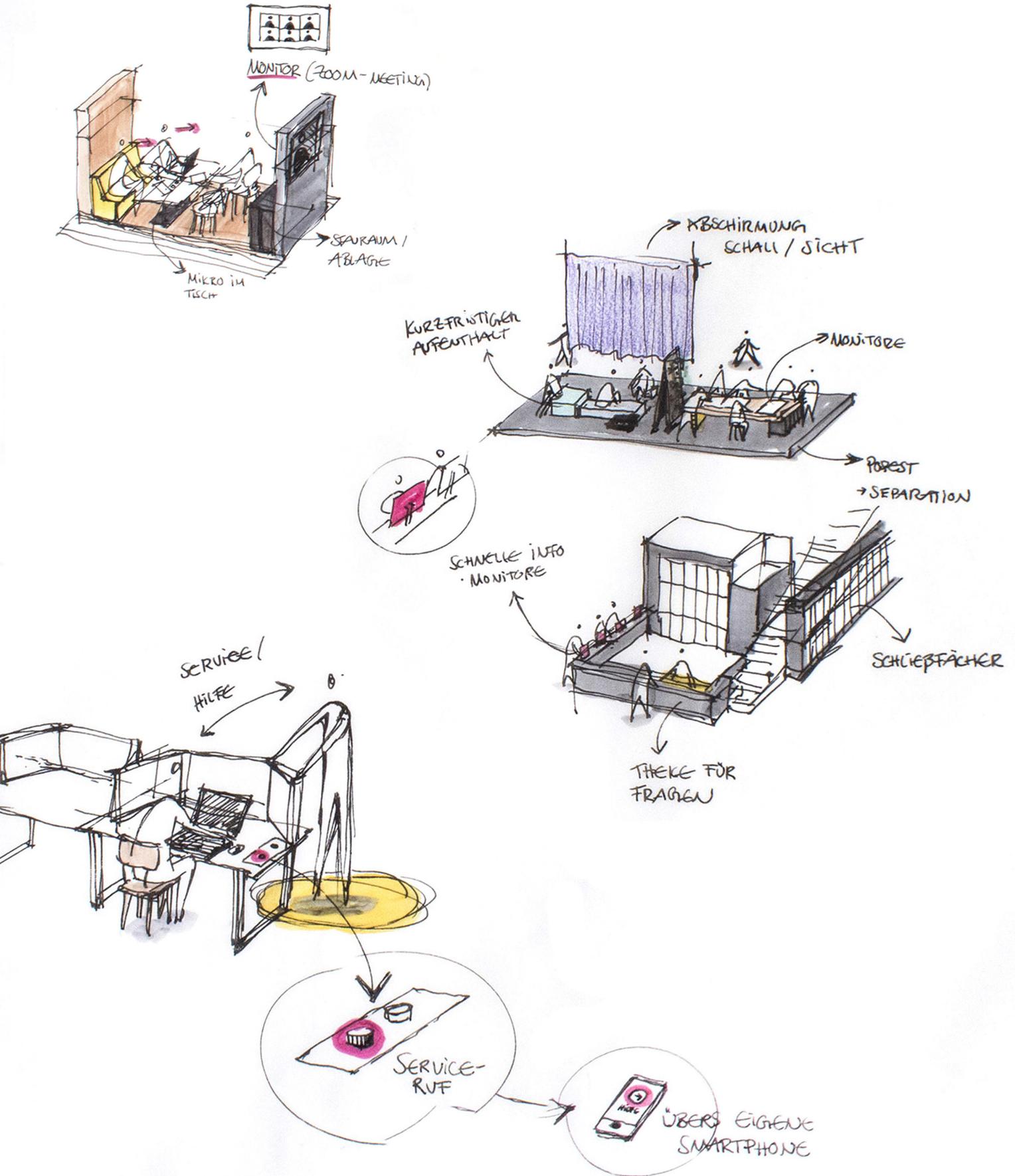
Libraries as urban living spaces

How the ZBW plans participation for the library at its Hamburg location

Academic libraries are more and more taking on the role of service buildings in our society. They are social living spaces where students and other learners can spend the whole day. They can read a book, work on a project with their co-students, watch learn videos or listen to music while looking out of the window. Library users can decide for themselves the degree of involvedness, they can withdraw or get into the hub of things. And: there's no need to consume anything.



HYBRID LEARNING SPACE



We have asked Nicole Clasen who the international trend-setters are and how these developments will be integrated in the new library building of the ZBW in Hamburg. She heads the User Services department and has been entrusted with the planning of the ZBW library in the Campus Schlüterstraße since 2020.

Nicole Clasen, where are the most interesting libraries of the present?

NC: New interesting libraries that meet the new social tasks can be found primarily in Northern Europe. Well-known examples are Oodi in Helsinki, Dokk1 in Aarhus, Tingbjerg Library in Copenhagen and Deichmann Library in Oslo. They are not only places whose interior designs are innovative and varied, they are also an integral part of their neighbourhood. From the Deichmann Library you can look out on the modern Oslo opera, whereas Tingbjerg is located in a social flashpoint. But however differently they are aligned, the common factor is that they reduce thresholds. Buildings for science usually have rather high thresholds. Residents or passers-by will probably rarely visit the Institute of Theoretical Physics or Art History. It's different with these libraries.

How can library planners ensure that users really spend the entire day at the library?

NC: The classics are light, air and sun which have always played an enormous role for libraries. Now there's also power, WiFi and zoning. Zoning means that there are spaces where I can talk

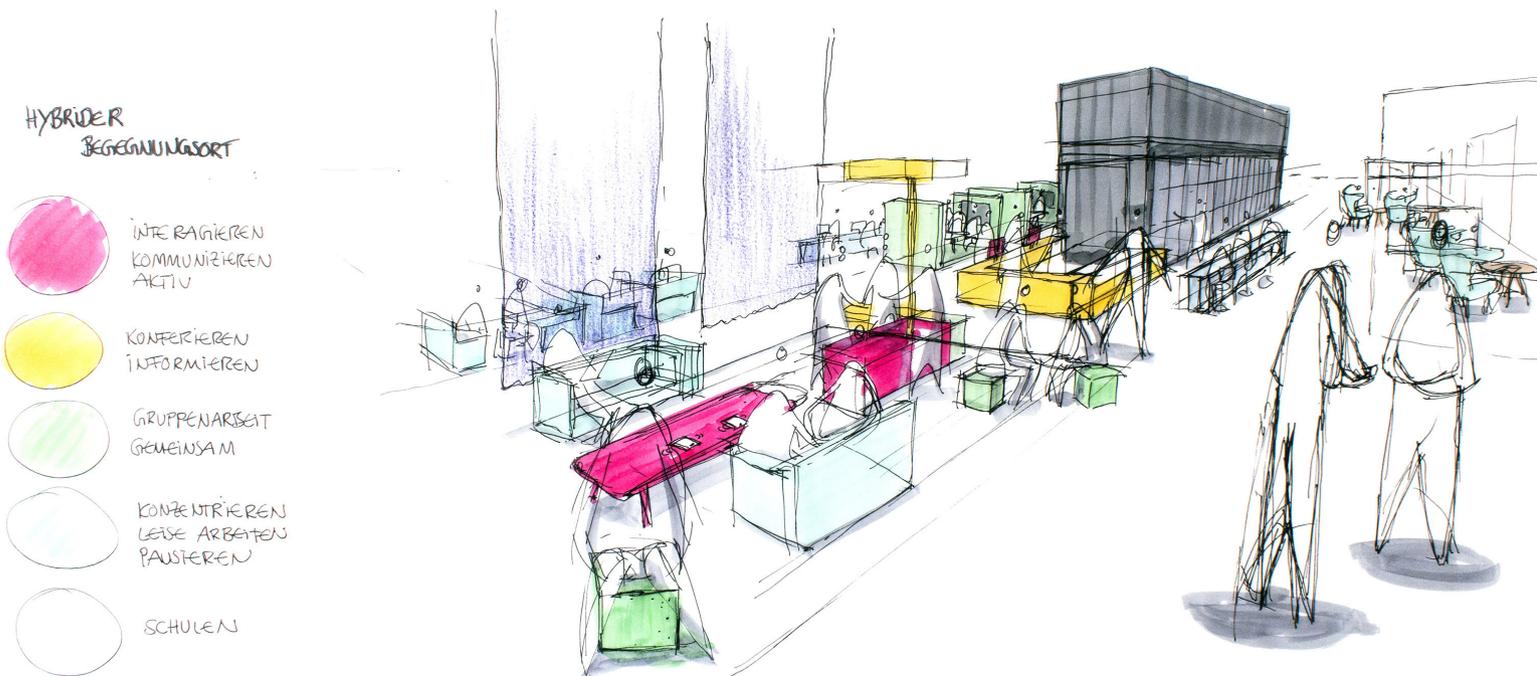
loudly and laugh and which gradually pass into zones of absolute quiet. But it's no longer enough nowadays to have great architecture designed by architecture firms. The participation of the potential users plays a large role.

How can users of academic libraries be best involved? Do you know good methods?

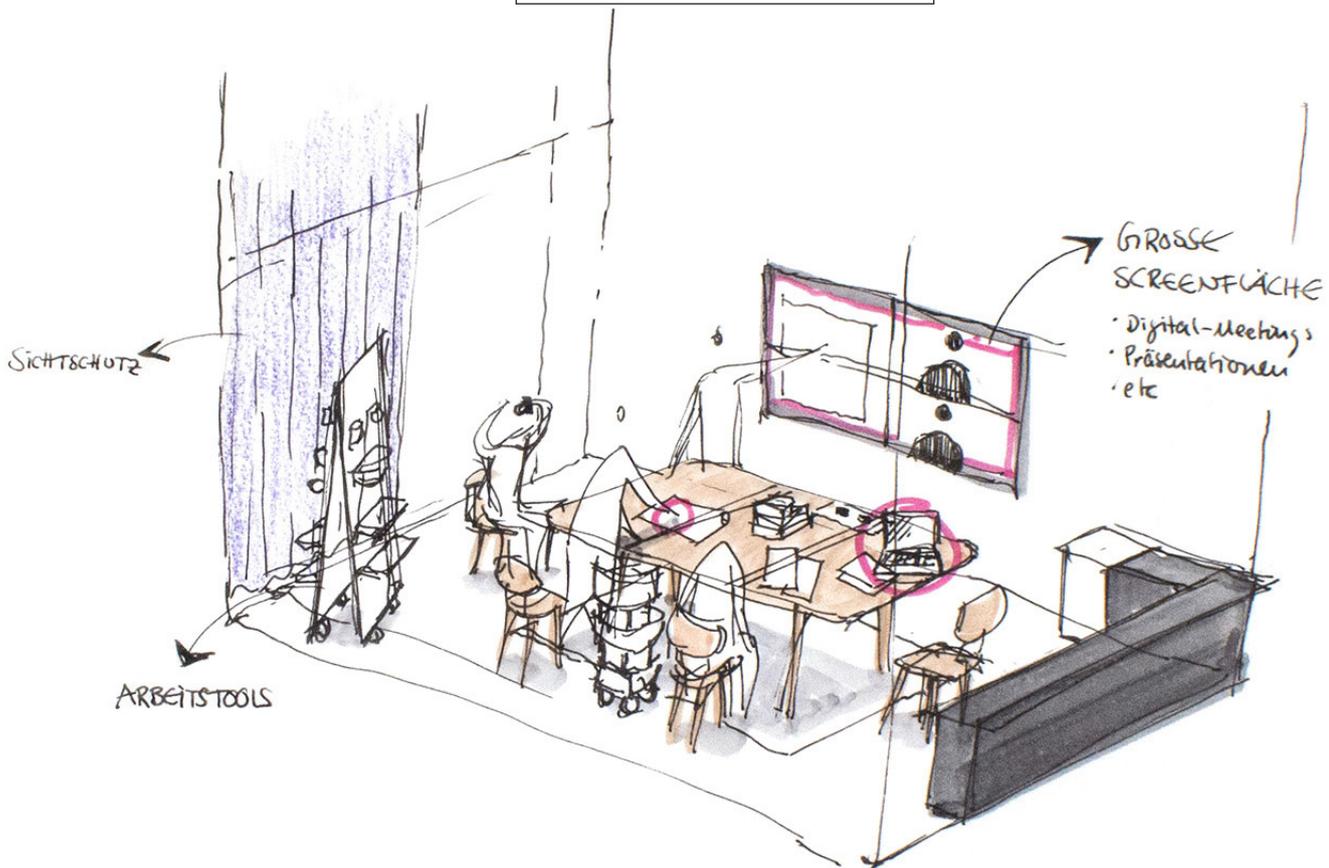
NC: We have had good experiences with so-called touchstone tours where users show us their favourite spaces, their preferred routes and their favourite applications. Cognitive mapping experiments are also very exciting. Users draw what their perfect learning space or group work area would look like and how these two areas are linked in the whole learning landscape. Besides observations and contextual interviews, we also have experience with design sprints. It is important to me that user experience research must be seen holistically, It is not simply about making literature search easy and providing comfortable chairs in the reading room. You must also think about signposting systems, the accessibility of our service desk and much more.

What is being planned to ensure that the ZBW library in Hamburg is a place where students can stay a long time?

NC: The ZBW library in Hamburg is planned as a hybrid meeting place, i.e. a place that can be used in many different situations, where you can combine many things and which is alive. Basically, we have four different zones with different volumes. There's the arrival area for communication and lively exchange, group study rooms where visitors can write a report,



HYBRID LEARNING SPACE



discuss projects or talk with virtual guests. We also have the training rooms and finally the individual workplaces where it is really quiet, where visitors can think, relax or concentrate on their work. Catering will be done around the clock by the Studentenwerk, where you can get a double espresso in the evening if your term paper must still be finished. Especially in the context of hybrid teaching, where students change between analogue and virtual classes, they need a place directly on campus where this is possible. They won't have to return to their shared flats just to attend an online lecture. Our recent photo survey for instance showed that only a little more than half of our users have a proper desk at home for attending online lectures. They will be able to do that comfortably on our premises.

How is the cooperation with other users of the building?

NC: Such a campus is not like a shopping mall where you have a bakery next to a shoestore and both have nothing to do with each other. The campus is more like an ensemble for scholarly exchange and for science meeting society. In Helsinki, for example, the mayor holds his meetings in the Oodi café. Generally things are networked and open in North European libraries. Openness and knowledge transfer are also the basic idea for our new location.

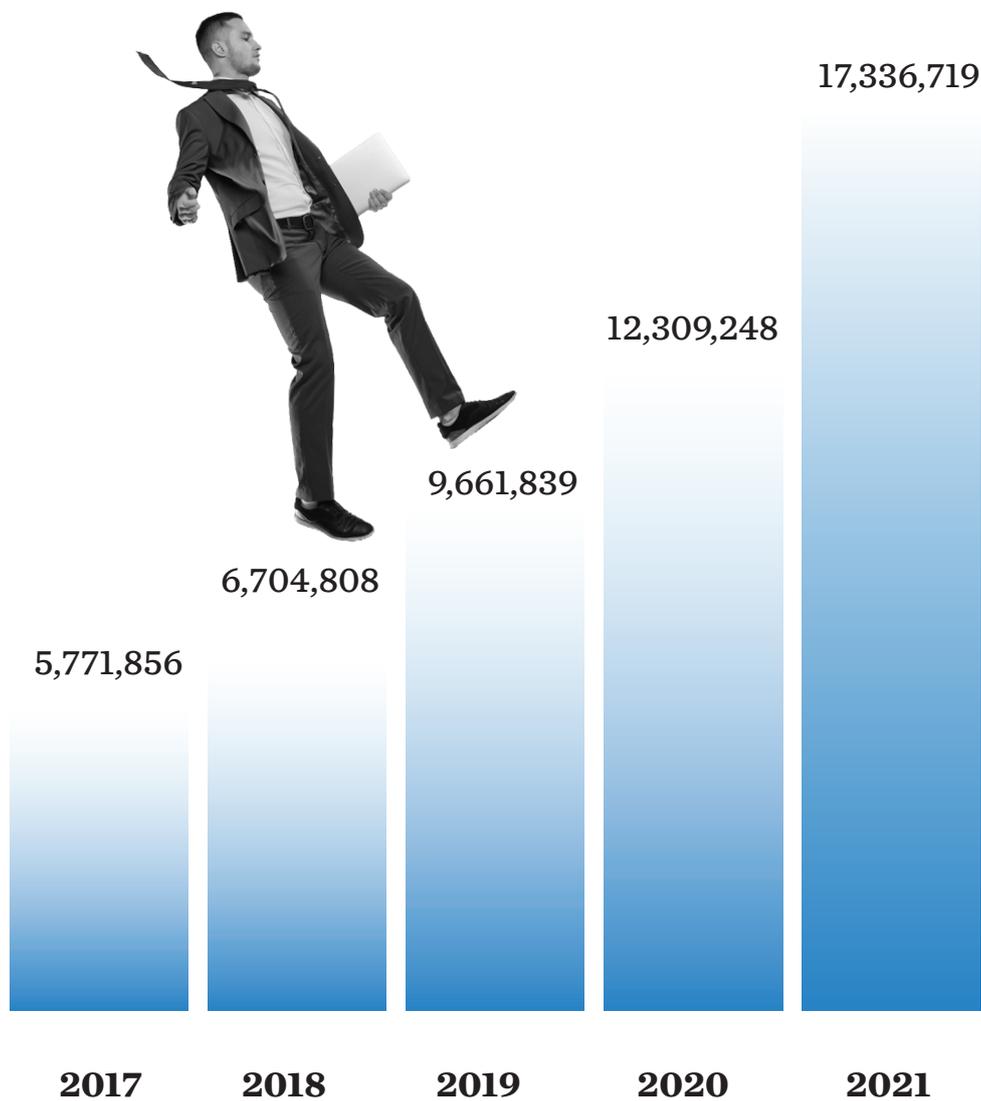
At universities and research institutions analogue, digital and hybrid formats are equally important. How will this variety affect communication formats at the campus library in Hamburg?

NC: A survey among students made by Freier Zusammenschluss Student:innenschaften (fsz) in January 2022 showed that many students value digital teaching less than teaching in presence and suffer a lot from the present conditions. Well designed hybrid teaching is therefore enormously important because it allows flexibility and enables all students to attend teaching events. Hybrid study requires hybrid learning spaces and libraries. We have therefore consistently planned for the combination of digital and analogue in the ZBW Library Hamburg. The idea is to be digital in an analogue space because I can consume learning material very well in digital form. There's little difference between seeing a teacher at the lectern or on my screen. What is hard to transfer to digital is the exchange, the constructive dispute over arguments. We offer the space to do both. We also have reorganised our information literacy trainings to hybrid formats. The provision of information is digital, but learning is analogue

Thank you! —

Downloads of digital full-texts

Development over the last five years





Digitisation

in my area of work means that the ZBW's mandate for archiving also applies to licensed digital media.



Luisa Kramer-Ibig
Project coordinator for Project SAVE
(Systematic Archiving of E-Media)
and Metadata Manager

From applied research to **productive application**

Automated indexing – dovetailing intellect and machine

2021 has been a year which for most people meant exception rather than rule. For Dr Anna Kasprzik and her Automatic Indexing (AutoSE) team it has been just the other way around. 2021 has been the year which saw the calendar marked “regular operation starts”. All preliminary work for automatic indexing had been concluded in the previous year, both regarding hard- and software and the necessary skills. Now textual resources are consistently machine-indexed in large quantities and intellectually reviewed during ongoing operation at the ZBW. A dialogue between human and machine.

Knowledge organisation and quality assurance in regular operation

Automatically created keywords appear in two different destinations – the Digital Assistant and the EconBiz databasis.

Automatically created keywords are transferred into a Digital Assistant and offered as suggestions to the academic librarians of the department “Academic Services”. These suggestions must only be verified, amended if necessary, and in rare cases dismissed by the indexers. If an automatically created keyword is used, it serves as a quality indicator for the procedures in use and as valuable feedback to the AutoSE team. Dr Anna Kasprzik explains: “The F1 value over the last months has been 0.55 on average. In plain English: we are very satisfied with the feedback.” The team uses threshold values and filtering rules to ensure the quality of the output and constantly coordinates with the “Academic Service” team. Once a year the developers present random samples to the indexers for critical evaluation.

Automatically created keywords are also written into the EconBiz databasis. “Live indexing has been working since 6 July 2021, 1.05 p.m. That has been a milestone for which we have worked a long time and that really takes us forward. After a resource has been described formally, it takes only a few hours until its content is also indexed,” says Dr Anna Kasprzik.

Indexing large amounts quickly with automation

The progress for indexing can be seen in the numbers – the data volumes transferred have grown every year. The growth of automatically indexed documents in EconBiz is as follows: from 11,000 datasets in 2016 the number has risen to 500,000 datasets in 2020.

Improving productive workflows with new procedures or technologies

For the academic librarians, the character of their work in knowledge organisation is changing continually:

- The results of their intellectual indexing gain importance as training data for the automatic indexing to guarantee a high quality.
- They give detailed feedback on the output of the automatic indexing.
- They identify structural faults, i.e. they report in which contexts the algorithm draws the wrong conclusions and thus offer indications for rule-based control. The developers then adapt the algorithms based on the intellectual reviews.

Interdisciplinary teams improve the work results

Intellect and machine also work hand in hand for the evolution of the Standard Thesaurus for Economics (STW) and other knowledge organisation systems of the ZBW.

Automation benefits from the early provision of new relevant concepts in economics and the enrichment from additional synonyms. The experts of the AutoSE team closely collaborate with the department Academic Services, and in particular with the editing team of the Thesaurus and the indexers. This collaboration helps improve the methods and thus the results of automatic indexation.

Working with the Digital Assistant

In 2021, the team of academic librarians started working routinely with the Digital Assistant (DA-3). Its introduction in 2020 was accompanied by comprehensive group and individual trainings in the department Academic Services. Detailed handouts and a dynamic, wiki-based dictionary were added in 2021 which now offer a low-threshold approach to the new software.

The web-based tool developed by Eurospider Information Technology supports automatic indexing at libraries. The Digital Assistant is being developed continuously into a central and powerful service in cooperation with numerous academic user libraries.

The collaborative tool for computer-based indexing simplifies intellectual indexing on three levels:

1. Current indexation of other controlled vocabularies from numerous library catalogues is translated through mappings to the library’s own indexing vocabulary and shown as a suggestion. These suggestions can be adopted by cooperating libraries after intellectual verification and amended with other appropriate descriptors, if necessary.
2. The DA-3 has the additional benefit of showing the AutoSE as another source of suggestions. This is highly relevant at the ZBW since library catalogues rarely provide indexing for grey literature or journal articles. These types of literature and their cataloguing and indexing are a specialty of the ZBW.
3. A third benefit of the DA-3 compared to previous indexing interfaces is the user-friendly handling. Suggestions can be adopted with a click of the mouse, frequently used descriptors can be saved on a “notepad” and just clicked to add if needed. Various indexing categories (keywords for subjects, persons, corporations and time) are entered automatically into the correct database fields, avoiding typing errors. Annual corrections to ensure data quality are thus rendered unnecessary.

Tests at the State Library of Berlin have shown that workflows in the area of modern English-language research literature have been lightened and speeded up considerably through working with the DA-3.

Assigning keywords quicker and more easily

Claudia Liebetruh designed and implemented the testing, introductory and training phase of the Digital Assistant as internal multiplier for the ZBW.

An anonymised internal survey studied the effects of using the Digital Assistant on the work of the ZBW's indexers. The objective was to learn how the users accept the tool and what requests for adaptation there were. 81 percent of users participated in the survey.

The anonymous survey showed that 76 percent of respondents work exclusively with the Digital Assistant. The others still use additionally the cataloguing software WinIBW for functions going beyond classic indexation. Asked for a subjective impression, 76 percent of respondents said that using the Digital Assistant allowed them to work faster. The main reason given is that suggested terms can be adopted and the user interface is designed in a user-friendly way so that keywords can be entered more easily and quickly. This also explains why colleagues who prefer and exclusively use the Digital Assistant are the ones who have not had years of experience with the WinIBW system.

A large share of respondents (85 percent) would unreservedly recommend the tool to other colleagues. The other 15 percent also recommended it, but made some little reservations, for example because it lacks some functions for collection care.

Stefanie Falck

Indexer, Academic Services:

“I can work much faster and more efficiently with the DA-3. It is clearly structured, offers options for personalisation and you can quickly and easily select and arrange descriptors for indexing. What I find very practical is the info shown for the descriptors and the option to save frequently used descriptors in the scratchpad. The suggestions for descriptors offer a good introduction especially when you're new to the work. All in all, the DA-3 is very practical and I like using it.”

Joachim Michel

Indexer, Academic Services:

“I have been working at the ZBW for more than 20 years and I was very skeptical at the beginning because I was used to indexing directly in K10plus. But after a very short training period I already noticed that I would be much faster than previously. I can see immediately which descriptors are eligible and I can navigate the STW faster than previously. In addition I can use the suggestions of the “Automatic Subject Indexing” as a guideline. Overall I am very satisfied with this indexing tool.”

ZBW linked-up internationally within applied AI research

The ZBW is one of a few institutions of its kind in Germany who do their own research in the field of “Automating subject indexation in libraries.

The team uses the Open Source toolkit Annif for this and embeds it in its own developments. Annif offers a combination of tried tools in text analysis and novel machine learning procedures. The toolkit is provided by the Finnish National Library.

The AutoSE team contributes to the further development of this Open Source application in close collaboration with the Finnish National Library, for instance by offering its own algorithms for

integration into Annif. The implementation of Annif is supplemented with surrounding processes for data processing and optimisation of learning procedures.

Other institutions in Germany also work with Annif prototypes and discuss questions of its application. The ZBW talks with the German National Library on how to use this tool optimally in an appropriate architecture. Exchange also takes place with the TIB – Leibniz Information Centre for Science and Technology. The ZBW and the Finnish National Library cooperate at a strategic and a technical level and organise joint tutorials.

The heads behind AutoSE, the core team are:

- Moritz Fürneisen, Applied research
- Christopher Bartz, Software architecture
- Dr Anna Kasprzik, Head of Automated Subject Indexing



“

*In all, the introduction of the Digital Assistant can be seen as a great success and adding value for the colleagues. Concrete feedback flows into the further development of the tool. Working with the **Digital Assistant** not only aims to make subject indexing at the ZBW more efficient, but also to use the synergies of collaborative indexing output. The final goal is to build a broad, homogeneous database, indexed as best as possible, on which user-oriented library services can be based.*

Claudia Liebetruth

”



Remote together – *linked better and closer*

Developing digital skills



Digital skills play a large role in the working environment of the ZBW. In times where work is mobile, hybrid or done from home, an adept handling of software and tools is elementary. Just as indispensable are social and communicative skills, since collaboration in digital working environments requires more communication.

Today's modern working world with its fast technical developments and opportunities needs employees who remain curious, enjoy learning and trying out new ways, are networked well, and who ideally can self-organise.

We also need managers who support their staff in adapting to new technology and overcoming potential obstacles, who are open to new ideas and diversity, who trust their staff and offer them scope for independent work and trial and error. And we need managers who see themselves more as coaches than managers.

Open team and learning culture is the foundation

The foundation for this is an open team and learning culture in the ZBW where everyone treats, and communicates with, others respectfully. It depends to a great extent on the example given by managers. Employees who feel they are part of a team, identify themselves with their tasks and find them meaningful, are much better motivated, more creative and give better performances than those who feel isolated or unneeded. These factors influence the physical and psychological well-being of employees.

But how can you succeed with this when for the second year in succession personal meetings, exchange and spontaneous con-

versations in corridors or coffee rooms aren't happening because of the pandemic?

Challenges facing Human Resources and Organisational Development

What can the Human Resources and Organisational Development team do to support the ZBW and its employees in these challenges?

Sandra Behner

Head of Human Resources Development at the ZBW:

“Our concern is to take all employees with us. One of the keys for this is to professionalise managers in their core task, to provide them with tools and techniques, and to create a framework for social learning, exchange, best practice and impulse-giving.”

In the short to medium term, the Human Resources Development team set content-related priorities on its own initiative and in dialogue with the management. The team offered seven topics in 2021, e.g. “The manager as coach”, “Return from working at home – how to design the transition actively”, or “Best practice for working at home and virtual onboarding”. Other topics were compliance, health and safety duties, or co-determination.

New and tried formats in Human Resources Development

The Human Resources Development team also has offers open to all employees. The team explores what staff need and supports ZBW employees in their challenges with specific formats, trainings or individual further training consultations.

An e-learning platforms rounds off this offer. Besides the tried digital format “virtual impulse meeting and exchange”, the team has also launched redesigned and new formats that are explained below.

Onboarding: Remote or hybrid

Remote or hybrid onboarding and the integration of new employees into an existing team require much more communication than they do in presence. To make the start easier on the new colleagues, the team of Sandra Behner hosted the introductory day virtually and redesigned it for this format. The day offers an overview of the ZBW and an opportunity to meet other staff members and connect with them. The two half days met with great enthusiasm and pure exchange will be given even more room in future.

The team tried out a new, additional and low-threshold format with the virtual Get Together. New and old employees can meet (again), talking English or German. Once people have learned the faces belonging to the names and met them briefly, it makes future collaboration and networking easier. The meeting proved popular among the participants – 30 speaking German and two speaking English – and has thus gained a regular place in the programme of Human Resources Development, besides the Best Practice exchange.

Team workshop in presence is a highlight for all participants

Meetings and other formats in presence could partly take place again in 2021. A special highlight was the first team workshop held in presence after one and a half years of Covid-19, when the extended leadership team of programme division Collection Development and Metadata met. All participants were grateful and excited to meet again, even if it was exhausting to wear masks all day. Division head Karin Wortmann sums up: “We want to continue on the path of thinking about and addressing topics across departments, and a personal exchange is conducive to this. When sensitivities and changes of long-established practices must be addressed, misunderstandings can be cleared up much quicker face-to-face.”

Making digital collaboration easier with collaborative tools

In 2021 again, the staff section Human Resources Development tested and rolled out collaborative tools to make digital collaboration and processes easier and more efficient. The team supported the rollout in all stages, from the lightning trainings for complex tools to finding inhouse contact persons. Motivated and competent employees are the ZBW’s most valuable asset and essential for a continued successful digitisation.

Everything must be done for a good team culture, development perspectives, attractive conditions and modern workplaces to win staff for the ZBW and to keep them.

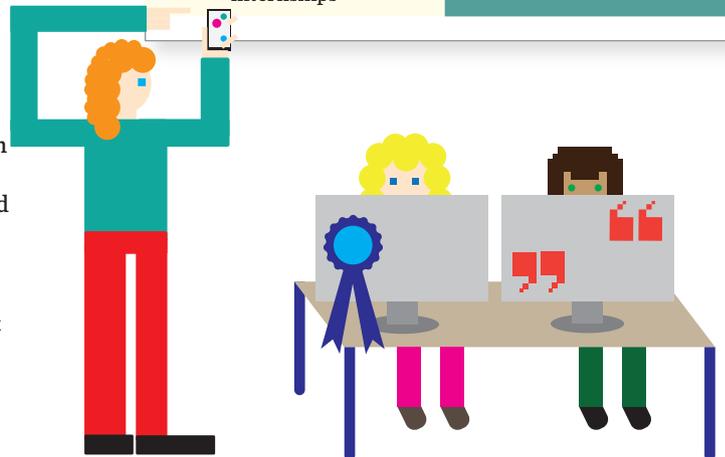
Staff retention already starts with recruitment when the teams phrase the requirements for a vacancy that must be filled. Simone Schulz, head of Human Resources Management at the ZBW, explains: “The short half-life of phrases in job descriptions clearly indicates how rapidly workflows and tasks are changing.”

Sandra Behner

Head of Human Resources Development at the ZBW:

“Digitisation offers many chances. Before the pandemic, teleworking was impossible in User Services, because everything was geared to local services at the branches. This has changed completely. Users and students now receive virtual advice independently of location, library guided tours are virtual, and questions can be answered much more quickly now they are processed by a team chat. We have achieved a lot to strengthen leadership, trust, communication, togetherness and networking in these fast digital times. The key is to keep it up. We have an exciting task. We are looking forward to it!”

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|--|---|
| Internal information events: | 25 events with 2,505 participants (in total) |
| Future café with the directors’ department | 9 with 992 participants, i.e. 110 guests per Future Café on average |
| Impulse talks for managers | 7 with 64 participants (in total) |
| Impulse talks for staff | 2 with 22 participants (in total) |
| Further education and training measures | 377 with 2,723 participants (in total) |
| *New: hybrid internships | 4 |



Digitisation

means for my work that I can preserve books not only by repairing them, but also by digitising them.



Martina Kirsch
Bookbinder

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