

# open

*ZBW Highlights from 2022*

Topic:  
**New Work**  
Challenges for a  
modern organisation  
page 32

Leibniz-Informationszentrum  
Wirtschaft  
Leibniz Information Centre  
for Economics

**ZBW**

## **The ZBW in 2022:**

**Open Access Transformation:** ZBW puts new strings to its bow. Page 12

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# Dear readers,

The year 2022 has been a year of change and innovation for the ZBW – Leibniz Information Centre for Economics. As a modern employer, we have addressed the changing challenges of the working world and looked closely at New Work. After two years of the Covid pandemic and the restriction of personal contacts, we have found new ways to give our employees more freedom and flexibility in how they organise their work. The essential key to this is trust and smooth communication.

As a modern employer, we are proud to have focused not only on New Work in 2022, but to have also driven other important initiatives. One of these is the Diversity Audit which helps us to take targeted measures for an even more creative working environment. We are convinced that a diverse staff can lead to better decisions, higher innovative strength and more creative solutions.

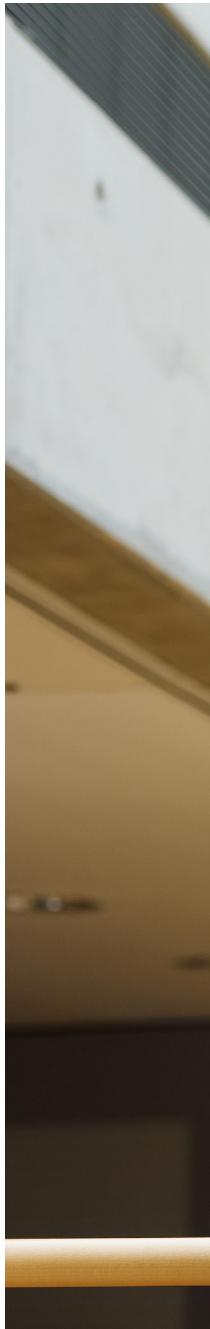
We need such creative solutions for our Open Access transformation so that we can follow the new paths toward free access to scientific information. Our special pride is the OLEcon project which drives innovative models of Open Access transformation. Read more about this in our focus topic.

We are very grateful for the continued support of our Foundation Council in developing the ZBW. Constructive and critical advice from our Advisory Board always provides us with a quality-assuring external view of the work of the ZBW.

Finally we want to thank the staff of the ZBW. Their highly motivated and dedicated contribution ensures that the ZBW comes a good deal closer to achieving its vision of setting standards for modern information provision in economics, nationally and internationally.

We hope this annual report gives you an overview of our activities in 2022, showing how we continually evolve as a modern employer and meet the challenges of our time. Have a good time reading about the exciting endeavours of the year 2022 presented in this report!

Klaus Tochtermann, Thorsten Meyer,  
Axinia Braunisch

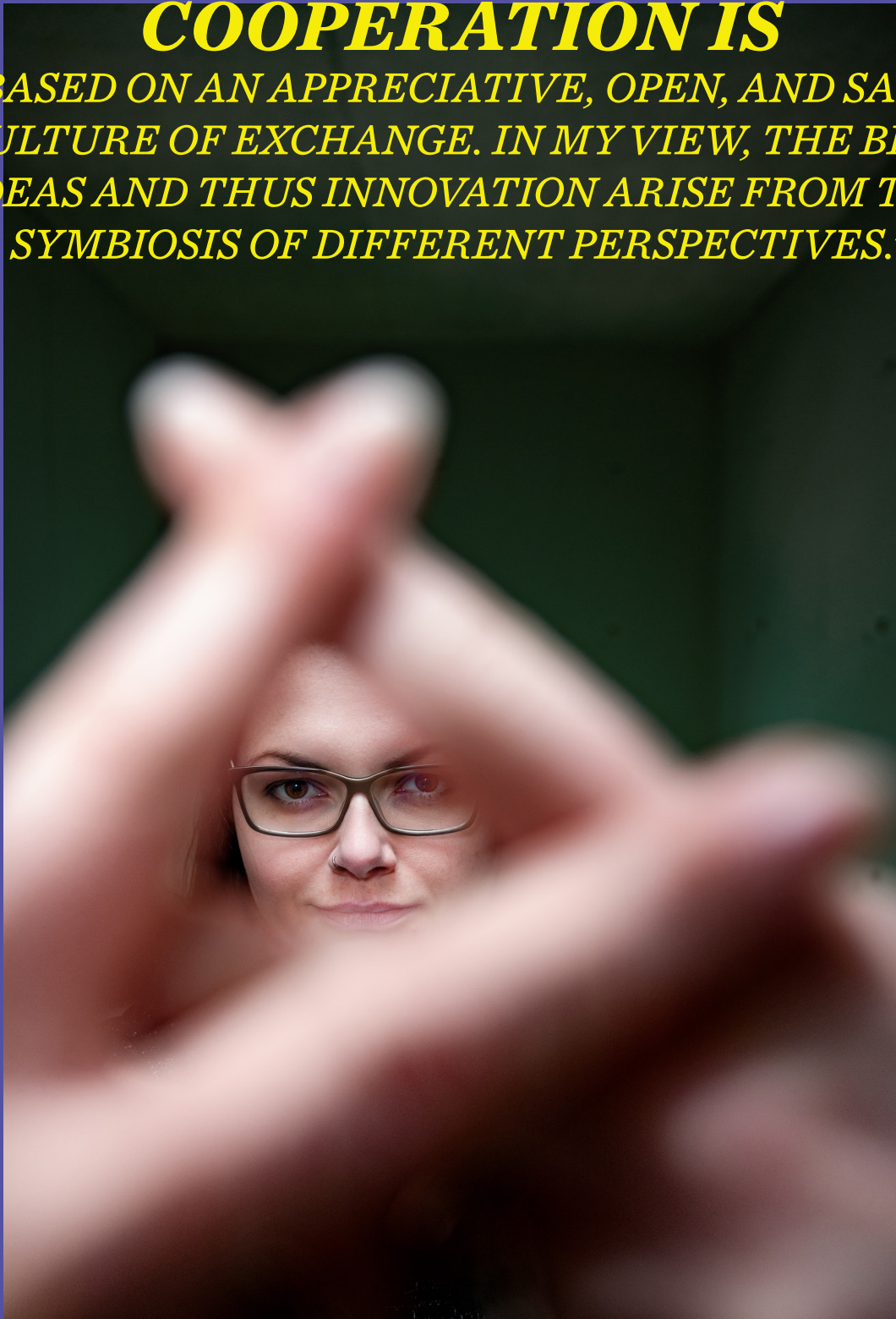


PREFACE



# **“FOR ME, GOOD COOPERATION IS**

***BASED ON AN APPRECIATIVE, OPEN, AND SAFE  
CULTURE OF EXCHANGE. IN MY VIEW, THE BEST  
IDEAS AND THUS INNOVATION ARISE FROM THE  
SYMBIOSIS OF DIFFERENT PERSPECTIVES.”***



**AGNES GRÜTZNER**

*Academic Librarian for Indexation  
and Knowledge Organisation*

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## **NEW WORK**

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**16** “With OLEcon we enable editors to regain or to keep the decision-making authority for academic journals.”



**22** “Innovative in BERD is the platform and especially the ways and means in which it tries to connect resources in new or novel ways.”

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

## MISSION

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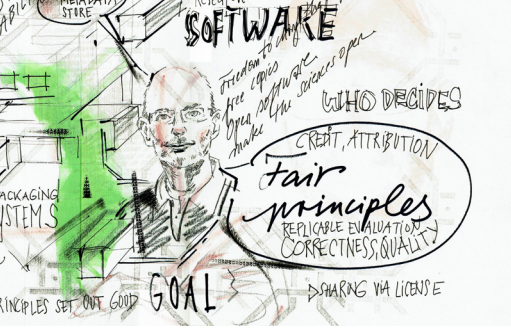
**The ZBW collects and indexes economic literature that has been published internationally. It offers comprehensive services that enable the efficient, effective and sustainable use of specialist economic information. It is a user-oriented scientific information infrastructure that is committed to providing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

**270 employees from 12 nations**  
**digital full-texts 471,980 digital**  
**21,595 retrodigitised volumes**  
**with national and international**  
**research institutions 100 projects**  
**and international conferences**  
**funded projects 33 supervisory**  
**active journal subscriptions**  
**930,044 social media views**  
**with international universities**



**ons 14,206,146 downloaded**  
**digitally preserved media**  
**es 3,031 cooperations**  
**onal universities and**  
**resentations at national**  
**ces 20 ongoing third-party**  
**sed final theses 25,107**  
**s 6,260,691 virtual visitors**  
**s 43 events 170 cooperations**  
**ties**

ZBW 2022 in figures



# SCIENCE COMMUNICATION for the region

## UNESCO is a guest at the Open Science Conference

The UNESCO Recommendation on Open Science which was adopted in November 2021 was discussed at the panel debate of the Open Science Conference on 10 March 2022. A workshop followed which addressed the questions of how to ensure that the Global South, and Africa in particular, can establish and maintain links to open research and science. Inclusion, diversity and justice were the key concepts of the debate.

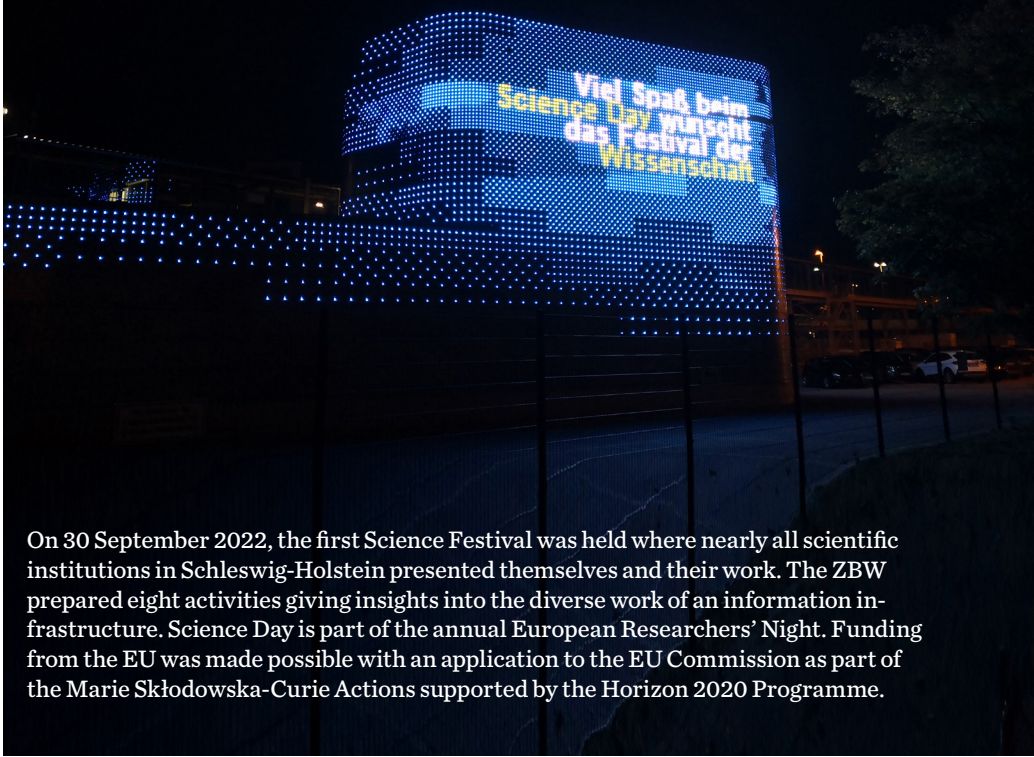
## ZBW heads the board of subito



The general assembly 2022 of “subito. Documents from libraries” elected Nicole Clasen, head of User Services at the ZBW, as president of the board for the years 2023/24. Document delivery to private users and other libraries remains an essential service offered by academic libraries.

## DIY or hire experts?

On 21 and 22 March 2022, the 4th workshop on retrodigitisation was held. The ZBW organises this workshop series jointly with the Berlin State Library, TIB – Leibniz Information Centre for Science and Technology, and ZB MED – Information Centre for Life Sciences. Almost 230 experts in the field of retrodigitisation participated. At this meeting, the focus was laid on collaboration with external service providers: what can be performed



On 30 September 2022, the first Science Festival was held where nearly all scientific institutions in Schleswig-Holstein presented themselves and their work. The ZBW prepared eight activities giving insights into the diverse work of an information infrastructure. Science Day is part of the annual European Researchers’ Night. Funding from the EU was made possible with an application to the EU Commission as part of the Marie Skłodowska-Curie Actions supported by the Horizon 2020 Programme.

inhouse, when is it better to contract out? Which criteria are needed for a decision? A summary of the talks can be accessed at ZBW MediaTalk: <https://zbw.to/QaFL1/>

## Virtual courses for the world

During the pandemic, the regular trainings for EconBiz have been adapted to a virtual format which has proven very popular, far beyond the circle of local users for whom they were designed. During the summer semester of 2022, the ZBW offered these courses on how to search for scholarly economics literature for the first time in English. Nearly 120 participants from 25 countries from Albania to Nigeria and Japan availed themselves of the opportunity which could be widely promoted thanks to the EconBiz Partner Network.

## Popular brochure wins award



The EconBiz team submitted a poster for its successful brochure “Write your best paper” to the Best Practice competition which is organised by the two German librarians’ associations dbv and VDB to promote information literacy campaigns. The team won second place in the competition. Dr Tamara Pianos accepted the award on 2 June 2022 at the Library Congress in Leipzig.

### What I have always wanted to ask

Knowledge transfer into society is repeatedly demanded of science. “Book a scientist” is the name of the format offered by the Leibniz Association in which researchers from different disciplines meet interested citizens in brief 25-minute face-to-face sessions and answer their questions. The conversations are later made available in podcasts. On 8 April 2022, Professor Ralf Krestel explained hate, fake news, trolls and bots, and how algorithms can improve the debating culture on the web.

### Promising career start



Lennart Perrey, PhD candidate at the ZBW, received one of two Best Student Paper Awards on 7 October 2022 in Düsseldorf. His topic was the project “DESIVE<sup>2</sup> – A better understanding of information behaviour: an app for information behaviour research” where he collaborates with Professor Isabella Peters and Dr Maria Henkel. The posters were selected by students presenting their work at the conference “Information science in transition. Scholarly Conference”.

### Investment into the future

The ZBW welcomed its first dual student at the beginning of the winter semester 2022/23. In cooperation with HAW Hamburg it offers a course of studies in Applied Computer Science, where theoretical concepts taught at university alternate with practical software development at the ZBW.

### Real humans instead of Zoom tiles

Four members of the ZBW research team Web Science presented papers and posters at the STI Conference in Granada from 7 to 9 September 2022. It was held in person for the first time after the Covid pandemic, and everyone counted it as the year’s highlight. Virtual meetings are efficient and convenient, but they cannot replace the creative energy of a direct exchange where networks are maintained and renewed.

### New life in old buildings



On 21 October 2022 the groundbreaking ceremony was held for the new location of the ZBW Hamburg. It will relocate to Schlüterstraße Campus together with Hamburg University and GIGA – German Institute for Global and Area Studies. The listed building of the former telecommunications office will be refurbished and remodelled extensively for a planned 30-year period of usage. It means that the ZBW will be located nearer its users at the faculty of economics and social sciences.

### More visibility for replications

The newly established Institute for Replications (I4R) aims to improve the reputation of replications and launched a Discussion Paper Series. The full-texts have been available exclusively on EconStor since October 2022. During the first three month of their accessibility they have already counted 937 downloads. <https://zbw.to/p2I9H>

### Honorary professorship at TU Chemnitz

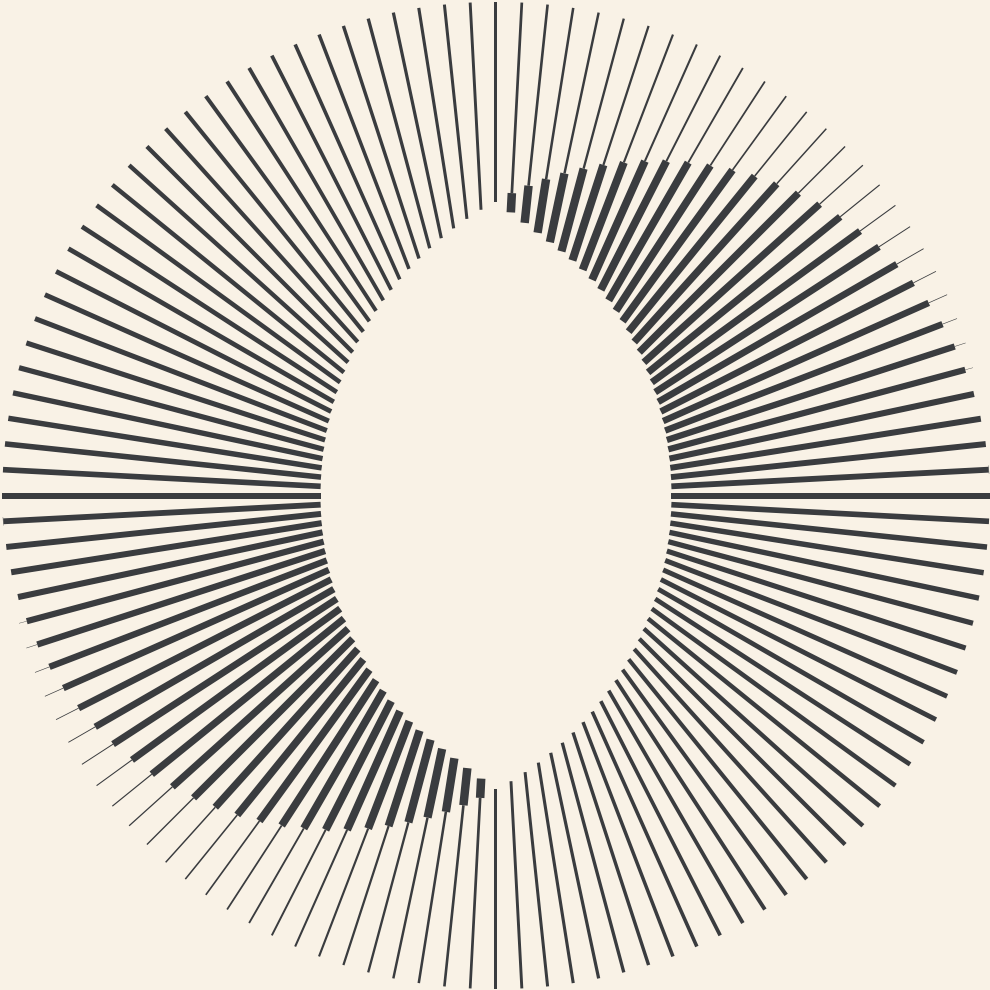


Dr Christian Breuer started his honorary professorship in financial economics in Chemnitz for the winter semester 2022/23. He is the editor-in-chief of the journals *Wirtschaftsdienst* and *Inter-economics*, published by the ZBW. He is confident that the intensive networking will prove advantageous for the journals and open up new aspects for readers interested in economic policy.

### Successful spin-off from school competition YES! – Young Economic Solutions



Heinrich-Heine-Schule in Heikendorf won the YES!MINT 2022 competition on 16 December. It is the second school competition organised by the ZBW and addresses students in the years 7–9. The teams had to solve problems in mathematics, natural sciences and technical subjects for which they received support from research institutions in Schleswig-Holstein.



# ZBW adds new *strings* to its bow

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*The instruments of Open Science transformation*

*The academic publishing system is in a major upheaval. It is to be transformed completely to Open Access. Free access to scientific research findings for everyone. Without barriers and free of costs for recipients. This is the political goal of the EU, the Federal Government, the State governments, the science organisations, and the funders. A big orchestra must come together to play Open Access transformation as a big symphony. Read here about the five instruments which the ZBW has played in 2022.*

The transformation process towards Open Access is dynamic and shaped by a number of different approaches and stakeholders. A big orchestra. Among the essential players are the academic libraries which have an important role in the support and funding of the Open Access transformation. As an information infrastructure institution, the ZBW actively accompanies and shapes this Open Access transformation for its community with a large instrument case.

# 1

## Instrument

*Negotiating transformative agreements for journal packets*

**Leibniz publications are made available on EconStor**

So-called transformative agreements play an ever larger role for scholarly journals. Such agreements between pu-

blishers and research institutions not only regulate digital access to the journals, but also a simultaneous option for participating researchers to publish in these journals in Open Access without fees. Besides publishing arrangements, the agreements usually include enlarged supply, i.e. access to the range of scientifically relevant journals.

The ZBW negotiates these agreements on behalf of the Leibniz Association with publishers such as Taylor & Francis, Emerald und DeGruyter. They enabled Leibniz researchers to publish more than 120 journal articles directly in Open Access. All these articles are also available on the disciplinary repository EconStor.

In 2023, the ZBW starts an agreement with Emerald publishers for a Germany-wide transformative agreement; something similar is planned for 2024 with Taylor & Francis. In addition, the ZBW is active in national initiatives such as Forum 13+, where representatives of negotiating institutions, various associations and projects collaborate with publishers on the implementation of Open Access transformation.



**Jens Lazarus**

Head of Licence Management at the ZBW

*“The Open Access transformation is changing access to scholarly publications as fundamentally as digitisation did previously.”*

## Instrument

# 2

*Providing infrastructures for transformative agreements*

**ZBW and its cooperation partners work for better data exchange in transformative agreements – Membership agreement with OA Switchboard**

Open Access transformation involves many stakeholders: universities, research institutions, libraries, and publishers. All these stakeholders face the same challenge of implementing the Open Access policies of institutions and research funders, against a background of ever more complex agreements between publishers and institutions, especially in the field of transformative agreements.

To coordinate, monitor and promote the collaboration between these stakeholders, the ZBW, TIB – Leibniz Information Centre for Science and Technology and ZB MED – Information Centre for Life Sciences have jointly signed a consortial membership agreement with OA Switchboard. This is a technical infrastructure which supports the automated processing of publication and cost management of transformative agreements and thus simplifies workflows.

Since late 2022, the three German Central Information Centres have been funding participation in the OA Switchboard Initiative for universities and research institutions in Germany for two years. The membership financed by the information centres enables all participating organisations to use the service until 2024 without paying additional fees.

The OA Switchboard offers a central interface for a fast standardised exchange of information and news be-

tween universities, research institutions, libraries, publishers, and research funders. OA Switchboard has been developed for smooth data exchange between publishers and institutions to improve communication about submitted articles and finished publications by transmitting relevant metadata for each article timely and in a standardised data format. The tool thus supports universities and libraries in the required documentation of their own researchers' Open Access publications.

## Instrument

*Promoting scholar-led journals*

### **Open Library Economics supports non-commercial Diamond Open Access for economics journals.**

The ZBW engages in many ways for Open Access transformation. One of them is the funding of non-commercial Open Access journals. Since 2021, the ZBW has offered funding for independent journals in economics under the label of "Open Library Economics" – OLEcon for short. Funding, consulting and hosting is available for scholar-led journals who want to act independently of publishers. The ZBW offers support for the transition to an Open Access business model without author fees, so-called Diamond Open Access. The aim is to keep scientific research findings in scientists' hands.

Open Library Economics offers transitional funding for the change and support in building a sustainable alternative consortial funding. Open Library Economics also provides comprehensive advice for the transition to Diamond Open Access and offers hosting services in cooperation with TIB Open Publishing.

The innovative service of TIB Open Publishing organises the entire publishing process from article submission to publication with the Open Source software Open Journals Systems (OJS). Next to journal hosting, TIB Open Publishing offers other publishing-related services, such as semi-automatic article production with templates, plagiarism software, indexation support, DOI registration and the registration or transfer of an eISSN. The option of staying with a commercial publisher is also available as long as they only function as service provider for the publication and the decision-making authority rests with the editors.

In 2022, OLEcon could transform "European Journal of Economics and Economic Policies". The journal provides a forum for studies in macroeconomic theory, economic institutions and economic policies. On 1 January 2023, the journal switched to Diamond Open Access.

In mid-2022, the ZBW also carried out a survey among editors of economics journals as a scientific accompanying study. The study supplied information about the factors editors regard as motivating for switching "their" journal to Open Access or as hindering. The OLEcon team also linked up with the community of scholar-led journals and their supporters in the focus group scholar-led.network. The digital focus group is part of the information and networking project open-access.network funded by the Federal Ministry of Education and Research.

OLEcon thus realises two key demands in science policy: (1) strengthening non-commercial infrastructures and (2) Open Access without fees for researchers and readers.



## Olaf Siegert

Open Access Representative of the ZBW, is convinced of the tool's benefits for scientific institutions

*"For the Open Access transformation, the processes between all participants must be reorganised and, wherever possible, automated and simplified. We see OA Switchboard and its non-profit approach as progress for the information exchange between publishers and research institutions. Therefore we support the effort to make this tool available to German research institutions and their libraries without financial barriers".*

## Regaining the decision-making authority – Open Library Economics

The brain behind the project Open Library Economics is **Dr Juliane Finger** (see photo on page 17). She is a psychologist, gained her PhD in communication science and has many years of experience in the field of Open Access transformation, especially in the context of implementing Open Access. She has been heading the OLEcon project at the ZBW since 2020.

### How did you get involved in scholar-led Open Access and what inspires you?

**JF:** With OLEcon we enable editors to regain or to keep the decision-making authority for academic journals. The publication of the journals is independent of commercial publishers. Publishers are at the most service providers for the publication. I think it very important that OLEcon offers such an alternative and therefore contributes to a diverse academic publishing market. It's great to collaborate with the editors on making research findings from economics available to all everywhere and not hiding them behind a paywall.

### What are the most important benefits of scholar-led journals for researchers in your opinion?

**JF:** As editors of scholar-led journals, researchers can decide for themselves how to disseminate research findings. The journals can be developed further independently of commercial interests. This is in the interest of all researchers, because it's about content, not money. For example, there's no pressure to publish a certain number of articles to make the journal "pay". This contributes to higher scientific quality. OLEcon journals are published in Diamond Open Access, i.e. without fees for authors and users. This eliminates the hurdle of article fees for researchers as authors. That is a large benefit. In the survey we took in 2022, researchers also told us that Open Access makes

knowledge exchange across country and disciplinary boundaries much easier and they regard this as a huge benefit.

### How are scholar-led journals funded and are there alternative funding models?

**JF:** There are different models. Some journals are affiliated to research institutes through their editors and financed by them. Not everyone has this "luxury", though. Many scholar-led journals have funding problems. Some are possibly financed with project funds for a certain time, but have no long-term funding. Some young researchers edit their journals voluntarily, often in self-exploitation. The focus group scholar-led.network published a manifesto in 2021 to raise awareness of the problem.

With OLEcon we address sustainable financing. We are building a consortial funding model for scholar-led journals in economics. It means that academic libraries jointly provide the necessary funds for publishing in scholar-led Diamond Open Access. Such joint funding models are being successfully implemented internationally and in Germany, too. For journals in the humanities there's "Open Library of Humanities" ([openlibhums.org](https://openlibhums.org)) or the KOALA project. The wide base of participants allows stable and sustainable funding.

### What's the review process for manuscripts in a scholar-led journal and who are the reviewers?

**JF:** Usually it works just the same as in other scholarly journals; the usual mechanism is a peer review process, i.e. an independent assessment by reviewers from the same domain. It's a prerequisite for funding in OLEcon that journals apply a peer review process.

### How important is the contribution of the community for the success of a scholar-led journal?

**JF:** In my view it is very important. First because every journal depends on the engagement of the community

for its content: editors, authors and reviewers contribute their work. Then, at least in the case of OLEcon, the community is important for funding. Usually it's the scientific institutions and their libraries who contribute to the joint funding. The co-funders not only benefit individually, they also contribute to making scientific articles available for all worldwide. If the number of participants were too small, the funding model would fail.

### What are the challenges you see for the introduction and the growth of scholar-led journals and how can these challenges be addressed?

**JF:** I believe one of the big challenges right now is that many established journals are in the hands of big commercial publishers. And what we have seen in our survey is the fact that there are editors who are quite comfortable with their publisher. Changing to another publishing or funding model would be an effort for this group for which they see no need. And we have other projects at the ZBW for such cases, where Open Access is possible for publishers' journals, for example *Subscribe to Open* or *transformative agreements*.

#### **GLOSSARY:**

##### **What is a scholar-led journal?**

Scholarly journals are to return from the hands of commercial publishers into the hands of science. This is also called scholar-led Open Access. It means that the rights to the journal title and thus the decision-making authority for all interests of the journals rest with the editors. In some cases, the rights to a journal title belongs to a commercial publisher. OLEcon supports editors who want to negotiate a return of these title rights.

#### **LINK TIP:**

<https://olecon.zbw.eu/>







**DR JULIANE FINGER**  
*Open Access Representative*

On the other hand there are editors who are strongly interested in more autonomy and who want to separate from their publisher. We offer them support with OLEcon and try to make the transition process as easy as possible for them. It's easier for newly or recently established journals where there is a different situation right from the beginning, regarding the rights and the publishing process. I see great potential here for the growth of scholar-led Open Access.

### Where do you see the future of scholar-led Open Access?

**JF:** There's a lot of momentum for scholar-led Open Access right now. There are increasing demands from science policy which emphasise the importance of non-commercial Diamond Open Access models. And which also state that the decision-making authority of researchers about the dissemination of research findings should be protected.

I also perceive a change of heart among researchers. There's a growing awareness that the academic publishing system should not be left solely in the hands of a few big publishers. I think there will be both models in the future: Open Access by publishers, but also scholar-led models. For the latter we've seen innovative developments of publishing formats over the last few years which are being tried by a younger generation of researchers. In some disciplines there are already quality-assured science blogs besides the classic journals, for instance *Verfassungsblog.de*, *mittelalter.hypotheses.org*, to disseminate research findings. These new formats are often completely independent of commercial stakeholders from the beginning. These are exciting developments. ■

#### **LINK TIP:**

Here's the link to the manifesto of the focus group scholar-led network. DOI: [10.5281/zenodo.4925784](https://doi.org/10.5281/zenodo.4925784)



# 4

## Instrument

*Open Access models for individual publishers' journals*

### **ZBW and academic publisher Duncker & Humblot try out Open Access business model "Subscribe to Open".**

The ZBW actively cooperates with academic publishers to implement new models for the Open Access transformation. In 2022, the ZBW started the innovative model "Subscribe to Open" in collaboration with academic publisher Duncker & Humblot.

"Subscribe to Open" means that institutions and libraries which subscribed to journals now invest in transforming these journals to Open Access. Existing funding structures, subscriber relations and invoicing workflows remain in use. Institutions which know and appreciate the journals' content continue their subscriptions as before. However, author fees or other additional costs for readers no longer apply. As long as the publishers receive subscription fees as before, the current year's and back issues are made available in Open Access. If subscription revenues fall significantly, new issues return behind a paywall and are available to subscribers only. The ZBW contributes financially besides current subscribers to assure the transformation.

**"Subscribe to Open" has an important bridging function for a sustainable Open Access transformation especially for economics and the social sciences.**

Since 2022, Credit and Capital Markets – Kredit und Kapital (CCM) and Journal of Contextual Economics – Schmollers Jahrbuch (JCE) have been available in Open Access. In addition, the cooperation partners ZBW und Duncker & Humblot digitise back issues of both journals back to the years 1948 (JCE) and 1968 (CCM). In 2022, several thousand articles have been made freely available und reusable.

**Professors Nils Goldschmidt and Stefan Kolev, co-editors of**

**JCE:** “We are very happy to be part of this pilot project. Our journal is rich in tradition and has seen many changes over the years, adapting itself in content and organisation to new realities. The digitisation of back volumes planned in the project will make the journal’s 150 years of history widely accessible.”

**Professor Hans-Peter Burghof, co-editor of CCM:**

“Science depends on openness for new ideas and diverse perspectives. But the scientific community also has a tendency towards restriction. You pick up on things that are currently en vogue and publish where it will best benefit your career. This is very understandable, given the high risks of a scientific career. But it also gives value to all efforts that ensure the openness and diversity of science in its appropriate contemporary form. Open Access in combination with the Subscribe to Open concept is a very promising way of connecting scholarly quality with the highest possible degree of openness for the scientific community.”

# 5

## Instrument

*ZBW supports free access to “Schriften des Vereins für Socialpolitik”*

### Open Access models for books

As a national information infrastructure for economic research, the ZBW has been cooperating actively with academic publishers on driving the Open Access transformation. In 2022, the ZBW, the publisher Duncker & Humblot and the learned society Verein für Socialpolitik transformed “Schriften des Vereins für Socialpolitik” into an Open Access model. Since May 2022, the titles in this series of monographs have been freely available in digital form directly after publication. In addition, all available back issues from 1873 until today have been made accessible in Open Access in 2022. More than 700 works are now freely available and reusable.

The ZBW pays the costs for production and for making the series available in Open Access. It also makes them accessible on the disciplinary repository EconStor. There are no author fees in this new model.

Verein für Socialpolitik is one of the largest associations for economic researchers in Germany. The series “Schriften des Vereins für Socialpolitik” dates back to the official foundation of the association in 1873. It contains books by eminent economists such as Ludwig von Mises, Friedrich August von Hayek und Gustav Stolper.

**Professor Georg Weizsäcker, chairman of the board of Verein für Socialpolitik:** “With the Open Access model we increase the visibility and findability of our scientific findings and make them available to a broad community freely and without cost. We are happy with the collaboration with Duncker & Humblot and thank the ZBW for the implementation.”

### In brief: Library of Rights

One of the biggest challenges in libraries remains taking the user directly to the full-text. By far the largest share of journals can be read only in a library which has bought a licence. The administration of these licences requires much effort and care, especially in the context of Open Access transformation where different licensing models and periods are on trial or already implemented. Existing systems are usually not designed for such licence administration, and other solutions must be found.

At the ZBW, the Library of Rights is the planned solution. This is an additional database where the licences for individual journals or even whole journal packages are recorded. Via interfaces to the verification and/or hosting systems, the licence provisions are queried as soon as a reader wishes to access them, and access is authorised. The ZBW has received additional funding for the realisation of the database from the Joint Science Conference. ■

**“FOR ME, GOOD COOPERATION MEANS THAT THE DIFFERENT DEPARTMENTS WORK AS ONE UNIT TO ACHIEVE THE GOALS AND ASPIRATIONS OF THE INSTITUTION AND THAT COLLEAGUES DO NOT HESITATE TO HELP OTHERS WHEN NEEDED. I THINK ZBW HAS GONE A LONG WAY WITH THAT.”**



**DR MOHAMMAD ABDEL-QADER**  
*Research Assistant in the Department  
Digital Information Infrastructures*

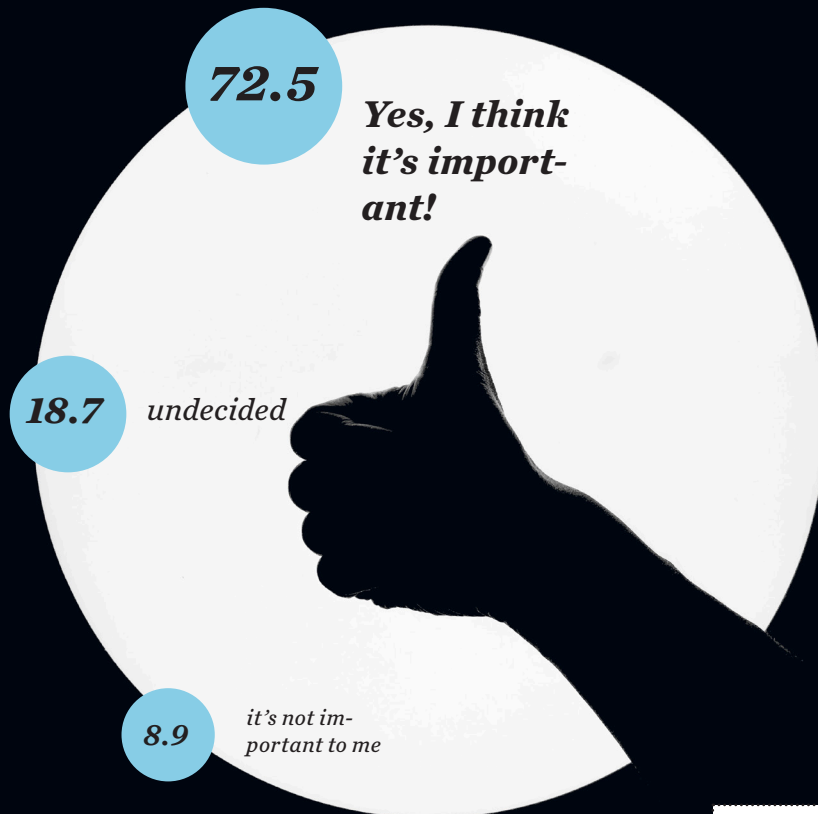
# ZBW recognised as an Open Science driver

*Do economists care if an organisation like the ZBW argues the case for Open Science?*

What does the Open Science commitment of the ZBW mean to economists?

The ZBW has been an advocate for Open Science for many years. Open Science is the key issue in research. The ZBW argues the case for Open Science at the national, European and international level. The ZBW is building various Open Science services – interactive formats as well as tools and infrastructures. The ZBW addresses the topic from many perspecti-

ves and with the long-term in mind. Open Science proponents, such as other libraries, scientific infrastructure providers, and science policy welcome these broad and sustained activities. But how do ZBW users see this? How do economic researchers in Germany at universities or research institutions regard it?



**READ MORE:**

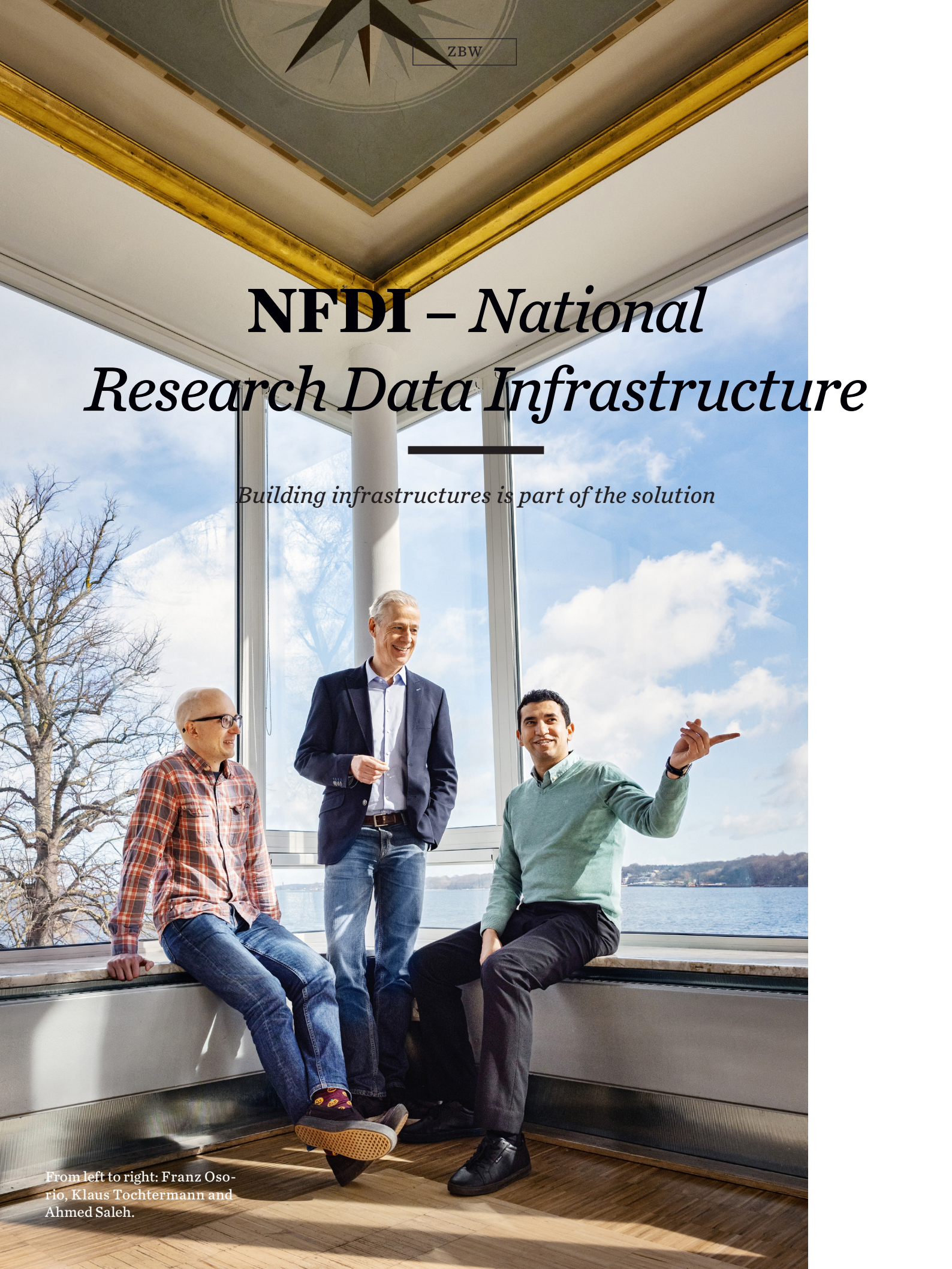


Selected findings from the ZBW Open Science study 2022 at: [https://zbw.to/Studie\\_2022](https://zbw.to/Studie_2022)

# **NFDI** – *National Research Data Infrastructure*

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*Building infrastructures is part of the solution*



From left to right: Franz Osorio, Klaus Tochtermann and Ahmed Saleh.

## How the ZBW works as an infrastructure partner in the economics-related NFDI consortia

The National Research Data Infrastructure (NFDI) is to systematically index and link research data from science and research for the entire German science system. The Federal and State governments are funding the project from 2019 until 2028 with up to 90 million Euros annually. The main keystones of the National Research Data Infrastructure are the NFDI consortia, 29 at present. Various institutions from a research field collaborate in these consortia on building a research data infrastructure for their discipline. This bottom-up process is to guarantee solutions that will be truly accepted within the communities and are widely compatible. All research data must be made available in accordance with the FAIR principles.

*ZBW is infrastructure partner in economics-related NFDI consortia*

The ZBW is embedded as an infrastructure partner in the two big consortia for economics, i.e. NFDI Consortium for Business, Economic and Related Data (BERD@NFDI) and Consortium for the Social, Educational, Behavioural and Economic Sciences (KonsortSWD). The ZBW is also involved in the field of economic history in the NFDI consortium NFDI4Memory which puts its focus on historical humanities.

Four team members describe what working in these consortia was like in 2022:

### 1. The project manager



**Anja Busch** is project manager at the ZBW for interdisciplinary and often international research data projects with numerous partners. In the past she was involved in the building of GO FAIR and managed the DFG project GeRDI – Generic Research Data Infrastructure.

#### **Anja Busch, what is your job?**

**AB:** I coordinate the tasks of the ZBW in the various consortia in which the ZBW is a member. For example, all consortia process metadata that comply with the FAIR principles. To avoid duplicate work and to think the NFDI holistically from the very start, I take care that the consortia in which we participate work to the same standards and seek the same solutions.

#### **What has been done exactly in 2022?**

**AB:** I would like to focus on BERD@NFDI because that's the consortium in which the ZBW has the biggest role as infrastructure partner. The work in 2022 can be divided into two areas. Content-wise, we have mainly developed user stories with the partners from the disciplinary communities. These are descriptions showing how future users could use BERD. From this we were able to derive requirements for our development work in a further step. For the presentation of these requirements we worked with an external agency which supported us in defining the user interface and the clickpaths for the targeted system. The starting point in BERD is that there is no data repository yet for the type of data on which BERD is focused. Technically, the first step has been to analyse the infrastructure environment in which the repository is to be made available and which basic technology is to be used. We have decided to offer the repository as a cloud solution. Our basic technology is to be an Open Source solution called Invenio which will be gradually adapted to the concrete requirements of BERD.

#### **What have been the big challenges of 2022?**

**AB:** In all, the ZBW participates in four consortia of the NFDI. Besides the ones mentioned above, there's also a consortium in computer science. These consortia have all started at different points in time, they work at different speeds and have different joint histories. One of the challenges therefore is to synchronise the technological commonalities in the consortia. For example: KonsortSWD has a long pre-history between the partners. They know each other well and already have agreed standards, for example for metadata. BERD on the other hand has a very young joint history, and many things, such as a metadata standard, have yet to be developed together. But we aim to keep these standards closely together which is a challenge when the consortia are at different stages of progress.

The different speeds in the consortia in which we participate are not the only challenge. The entire environment of these consortia is changing dynamically. For instance, there is now a federated project of all consortia in the NFDI which aims to develop the basic technologies needed by all consortia. It's important here to monitor how the work in this consortium can be aligned with our own work. Another example is the call for tenders from the Federal Ministry of Education and Research for the building of data competence centres in Germany. Again you have to monitor carefully how this relates to the training activities of our consortia. There are many other examples that could show the dynamic, such as the newly established data institute of the Federal government or the European Open Science Cloud.

**Thank you!**

## 2. The chief technology officer



**Ahmed Saleh** is the chief technology officer of BERD@NFDI. Ahmed Saleh is a computer scientist and a research assistant at the ZBW in the department Digital Infrastructures. So what does a CTO do in an information infrastructure institution which many of us still call a library?

### What is the job of the CTO of BERD??

**AS:** The chief technology officer (CTO) is responsible for the technical architecture of the project and heads the technical development of the project's components. The CTO ensures that the requirements of the use cases are implemented correctly and integrated with each other. In the BERD consortium I coordinate the technical work with all consortium partners and I accompany the strategic direction with my technical knowledge. We practise agile development. That's why it's important to keep an eye on technically relevant results to plan development

### FACT SHEET BERD – AN INFRASTRUCTURE FOR DATA, ALGORITHMS AND NEURAL NETWORKS

Besides data, BERD@NFDI focuses on algorithms and technologies that enable the collecting, processing and analysing of these data. The disciplinary community is involved through the learned societies in economics and the social sciences. A survey among early career researchers ensures that user needs are identified and taken into account. BERD@NFDI focuses the integrated management of (un)structured data and corresponding scientific software in business and science and is clearly committed to openness (e.g. open software, open standards) and transparency (in particular FAIR Data Principles).

**Partners of the ZBW** are GESIS – Leibniz Institute for the Social Sciences, Institute for Employment Research, Ludwig-Maximilians-University Munich, University of Cologne, University of Hamburg and University of Mannheim (Lead).

tasks well. It's elementary to have a good team which has all the qualifications needed for the project. That's why I also sit in on the selection process for new staff.

### What are the big challenges in your work?

**AS:** In BERD we have several components, such as Crawler and Data Market Place. Different partners are responsible for each component. One of the challenges is to combine these components closely. BERD is an interdisciplinary project. Therefore the use case owners come from different domains. It's always a challenge to keep everyone on the same page regarding the understanding of the BERD platform functions. But we succeed quite well in this, and everyone's highly motivated. I hope we can continue in the same spirit.

### What's most fun?

**AS:** Everyone in BERD is committed, talented, hard-working and positive. So we're all very confident that we will find a solution for every problem we face. When we discuss a long list of difficulties in our weekly meetings and at the end of the meeting we have solved them all, I'm always very happy.

### What's the structure of your team?

**AS:** At the ZBW we have a developer team and a metadata team. The developer team consists of three developers, Franz Osorio, Mahmoud Hassan and David Glück. The metadata team is headed by Dr Atif Latif and Fidan Limani. Soon we'll have a student assistant for each team.

### With whom do you collaborate?

**AS:** Here at the ZBW I work with the colleagues in the development and metadata teams I just named. Then of course with Anja Busch who's the project coordinator for the team and with Professor Klaus Tochtermann, the technical project manager. And of course I work closely with the external project partners.

### How did you become CTO?

**AS:** I started my career in 2009 as a web developer. Since then I have worked in several projects for different employers. In 2016, I gained my master's degree in Intelligent Adaptive Systems and joined the ZBW where I worked on two infrastructure projects, MOVING and EduArc. This has given me a good knowledge of the structure of third-party funded projects. The position of CTO in BERD was attractive because the project aims to create a powerful platform for the collecting, processing, analysing and storing of data. It means the project combines two of the main aspects I'm most interested in: machine learning and web development.

**Thank you!**





*“I am happy to be able to participate in the design of the infrastructure for research data management in Germany in the coming years.*

*I want to emphasise that NFDI is not a purely technical infrastructure; it is intended mainly to network the science community and to offer a platform for the training of data skills. The empowerment of researchers is elementary and a future skill of innovative science. It will be of particular importance to me to show how NFDI can interact with the European Open Science Cloud.“*

PROFESSOR KLAUS TOCHTERMANN.



### **3. The NFDI Senate member**

The Scientific Senate is the NFDI Association’s body responsible for the overall strategic direction and advises on the effects on the science system. In October 2022, ZBW director Professor Klaus Tochtermann was nominated as expert to the NFDI Senate by the member institutions of the Alliance of German Science Organisations. The Board of Trustees of the NFDI followed the proposal, and as of 19 October 2022 he will be a member of the NFDI Senate for two years. The German library and Open Science communities will thus see one of their long-term representatives at the cutting edge of German science policy.

Klaus Tochtermann is a nationally and internationally active driver of the Open Science movement and focuses on research data management. He has been a member of the German Council for Scientific Information Infrastructures (RFII) from 2014 until 2022. The Council initiated the National Research Data Infrastructure for Germany, in which the ZBW is an active member in four NFDI consortia. Klaus Tochtermann is also one of the speakers of the International Support and Coordination Office of the international GO FAIR Initiative. Klaus Tochtermann initiated the Leibniz Research

Alliance Open Science in 2012 and in 2014 he launched the international Open Science Conference which will be held for the tenth time in 2023.

### **4. The software developer**



**Franz Osorio** is a librarian and computer scientist who brings the knowledge of these two worlds to the development of BERD@NFDI. Franz Osorio studied computer science at Oregon State University in the USA. He first gained a Master of Library and Information Science degree at Simmons College in Boston. He loves software development because there is always a problem to solve and something new to learn. Before he joined the ZBW in 2018, he worked as a librarian at the Board of Governors of the Federal Reserve System which supervises the Federal Reserve Banks.

**Can you tell us something about your experience with software development in the NFDI consortium BERD?**

**FO:** My job is to help build the infrastructure for the emerging platform. This includes support for setting up the cloud-server infrastructure and providing and adapting the InvenioRDM platform to the needs of the various consortium partners. InvenioRDM is a platform for the administration of research data developed by CERN and a few other partners. It accomplishes much of what BERD wants to do and offers a good starting point from which to achieve the goals of the BERD project.

**How do you collaborate with other participants of your NFDI consortium so far?**

**FO:** There's a lively exchange between members since we work jointly on the development of BERD. In the ZBW group it's mostly about the specifications and requirements of the various members regarding the use cases they defined. We communicate through various channels to ensure that everything is covered and clearly understood.

**What do you see as the most important skills of a software developer in a NFDI consortium?**

**FO:** It's important to be flexible and to learn new things. We work in a running system and often have to learn something new about this system so we can develop necessary new components that work effectively. We try to keep as close to the basic system as possible and that means we try to use the same tools which are often completely new to us.

**How do you proceed with the integration of research data into your software development?**

**FO:** Since BERD will host research data, these data flow directly into the development. The research data give us information about the metadata that we need to collect and to support, which in turn provides information about how we must build the system so it can collect and store metadata appropriately. The better we understand the research data going into the system, the better we can support them.

**What's innovative in your work?**

**FO:** Innovative in BERD is the platform and especially the ways and means in which it tries to connect resources in new or novel ways. One of the goals of BERD is to link a dataset with an algorithm or a machine-learning process that has been applied to this dataset. In this way, BERD tries to add context to the data and resources uploaded by researchers.

**Thank you! —**

**FACT SHEET KONSORTSWD**

The mission of **KonsortSWD** is to strengthen, widen and deepen the infrastructure that enables research into society and business. This provides support for research into topics such as demographic change, migration and integration, innovation, financial market stability, labour, education, populism and democracy. KonsortSWD will encourage scientific communities in their efforts to find agreement on ethical standards for data collection and research.

**Partners of the ZBW** in KonsortSWD are DIPF – Leibniz Institute for Research and Information in Education, DZHW – German Centre for Higher Education Research and Science Studies, GESIS – Leibniz Institute for the Social Sciences (Lead), LifBi – Leibniz Institute for Educational Trajectories, Research Data Center Qualiservice at University of Bremen, SOEP at DIW Berlin – Socio-Economic Panel at German Institute for Economic Research, University of Duisburg-Essen, WZB – Berlin Social Science Center and ZPID – Leibniz Institute for Psychology.



**“FOR ME, GOOD COOPERATION IS A  
COMBINATION OF  
FRIENDLY INTERACTION  
AND PRAGMATIC PROBLEM  
SOLVING.”**

**RALF FLOHR**

*Academic Librarian*

# ZBW is **COMMITTED** to **Open Science**

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*Dialogue formats, platforms and cooperations*





*In its pro-active engagement for Open Science, **the ZBW** focuses on free and open access to economics-relevant information. The ZBW also wants to inspire economic researchers for the topic of Open Science and to accompany them on their way. We present some of our activities and tools and look back on the year 2022.*



## **ZBW Open Science Guide:** *Practical tips, methods and tools for economists*

In 2021, the ZBW launched a comprehensive information portal for researchers in economics, the Open Economics Guide with the slogan “Discover Openness – Boost Your Research”. Open Economics Guide is the tailor-made central entry point for Open Science in economics. The information portal offers tangible benefits for researchers, advice which can be applied quickly and easily and can advance their work and career. Open Economics Guide provides economists with practical tips, methods, knowledge databases and tools that enable them to practice Open Science successfully.

The English version of Open Economics Guide was launched in 2022. The tool overview is oriented along the phases of scholarly workflows and now lists more than 90 applications. Every month, the blog posts practical news, tool descriptions and step-by-step instructions. A monthly newsletter has also been launched which keeps economic researchers up-to-date with ongoing Open Science developments and events.

Open Economics Guide is monitored continually for topicality and also picks up on feedback from the economics community. The team of Open Economics Guide held several workshops with economists in 2022 where they received valuable input for the further development of the guide. The response confirms the team of Dr Guido Scherp in their plans and has also led to more requests to present Open Science in the context of lectures.

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

→ [OPENECONOMICS.ZBW.EU](https://openeconomics.zbw.eu)



## **Leibniz Strategy Forum Open Science** *Fostering a culture of openness*

The Leibniz Association has identified Open Science as an important strategic area of action for acting on digital change and fostering a culture of openness in the daily research practice of Leibniz institutions. With this end in mind, the Leibniz Strategy Forum on Open Science was founded in 2022. It is coordinated at the ZBW.

The Leibniz Strategy Forum on Open Science is tasked with supporting the Leibniz Association and its institutions in their strategic developments in the field of Open Science, and with positioning itself as a central point of contact for open science issues. The strategy forum envisions bundling the open science activities within the Leibniz Association across all Sections and promoting the visibility of these activities at national, European and international levels. In addition, it plans to create an environment for cooperative research into conditions for success in Open Science.

In 2022, the Leibniz Strategy Forum on Open Science concentrated on activities which accompany the implementation of the Leibniz “Open Science Policy”. This included a series of events for early career researchers. The policy was adopted at the General Assembly of the Leibniz Association at the end of 2022. Professor Klaus Tochtermann headed the project group which developed the policy on behalf of the Executive Board. His comment: “The Leibniz Open Science Policy aims to create awareness of Open Science as big movement. And it wants to give reference points on positioning oneself in this broad field.”



## International networking forums: *The Open Science Retreat*

Open and reproducible science is an ideal that can only be reached through joint efforts: scientists collaborating with science communicators, data stewards, librarians, publishers, editors, and science policy stakeholders. The ZBW has launched the Open Science Retreat to do this.

After the first kick-off retreat in 2021, the ZBW hosted three networking forums in 2022. The topic in February was “Sustainable and reliable Open Science Infrastructures and Tools”, “Impact of Global Crises on the Open Science Movement” in June, and “Economic actors in the context of Open Science – The role of the private sector in the field of Open Science” in November. The Open Science Retreat is a discussion-heavy format which enjoys great popularity.

→ [OPENSCIENCERETREAT.ZBW.EU](https://OPENSCIENCERETREAT.ZBW.EU)

**One of the brains behind the Open Science Retreat is  
Dr Anna Maria Hoefler:**



**“I think the Open Science Retreat is a very exciting event: the topics are developed jointly with the Open Science community, active engagement and small group discussions among the participants are paramount. And the virtual format enables people from all over the world to contribute their perspective.”**

Coordinator for science policy activities at the ZBW



## Open Science Magazine *for economists*

The Open Science Magazine invites economists to discover science in the digital age and learn about the Open Science experiences of their peers in individual stories. They can get Best Practice reports from other economists, work sheets with concrete tips, background information on current developments in the podcast “The Future is Open Science”, and interviews with inspiring transformation ideas.

The bilingual magazine puts its focus on Open Science experiences of economic researchers. The ZBW regularly interviews economists from Germany, Austria and Switzerland about their experience. It covers topics such as Open Access, Open Data, Open Source, Open Educational Resources and open science communication with non-academic experts.

At the end of 2022, more than 50 interviews were available in German and English for inspiration. There are also work sheets, i.e. little tasks that can be easily incorporated into the daily work routine. With these, the ZBW provides economists with tips and tricks on how to implement Open Science in practice. These are complemented by background articles and episodes of the podcast “The Future is Open Science”. Interviews with experts and practitioners conducted by the team of Dr Doreen Siegfried explain backgrounds and contexts.

→ [OPEN-SCIENCE-MAGAZIN.DE](https://OPEN-SCIENCE-MAGAZIN.DE)

→ [PODCAST.ZBW.EU/FOS](https://PODCAST.ZBW.EU/FOS)



**CHALLENGES**  
*for a modern  
organisation*



***Our working world is undergoing rapid change. This has given rise to many challenges which will continue to intensify and which modern employers must face increasingly. The initiative “WORLD” demonstrates how the ZBW is working on finding tangible solutions.***

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**Challenge: diversity and inclusion**

Employers must ensure that all members of staff are treated the same, independent of age, gender, ethnicity or other factors. Diversity-friendly recruiting also grows in importance as a response to skills shortages. The ZBW has been addressing equal opportunities for many years and achieved a development from initial women’s advancement to work-life balance and family-friendliness and today’s diversity equity.

In 2018, the ZBW was certified as a family-friendly institution in the context of the audit berufundfamilie. This certification builds on the TOTAL E-QUALITY awards which the ZBW received in 2008, 2012 and 2015. It also follows the self-commitment of the Leibniz institutions. The ZBW has its own code of family-friendliness. It strives to increase the number of women in its research departments. It also employs hearing-impaired people in the book-binding department.

But diversity is more than just this. The ZBW also has employees who do not feel represented by the binary gender model or who come from a non-European culture. Diversity is no longer a theory, it has arrived in daily work. Therefore it becomes essential to talk about it and to find ways and means to ensure fair, equal opportunity and appreciative cooperation.

As a first step, the guidelines for gender-appropriate language have been revised and now take diversity into account. A workshop for all employees raised awareness of, and sensitised for, unconscious bias. The largest endeavour in this area is the Diversity Audit which was kickstarted in June 2022. The audit “Shaping diversity” is a certification procedure offered by the Stifterverband for German universities and research institution, and lately also for companies.

**The ZBW is the first non-university research institution to undergo this diversity audit after its pilot phase.**

The audit enables staff from the beginning to participate actively in the evolution of the ZBW towards a diversity-friendly and non-discriminatory organisation. There was huge interest in the kick-off events and several working groups have been founded since. They are currently working on how to take gender identities into consideration, how to ensure all employees can participate in the digital transformation, what an intercultural and international welcoming culture at the ZBW could look like, or how the ZBW can meet the changing needs of staff in different life-phases.

**Challenge: multifunctional room design**

Digitisation enables the ZBW to offer various work models. Besides working in an office it is possible to work from home (teleworking) and to do mobile work. Organising these different models and creating an innovation-friendly working environment for all is a challenge for the ZBW as an employer.

The ZBW has identified room design as a factor for making work at the ZBW attractive, and also other aspects of New

Work, such as technical equipment and management culture. In 2022, analytic preparations have been made for implementation in 2023. The ZBW has also networked with other Leibniz institutions, such as Leibniz-Institut für Wissensmedien and Peace Research Institute Frankfurt, and will jointly drive the project “Work New@Leibniz” in 2023 and 2024. Building on this, there will be tangible implementations regarding room design at the Kiel branch in 2023. Further planning for the new location in Hamburg to be occupied in 2025 will also be oriented along these approaches.

#### **Challenge: cultural change**

Culture is the sum of all habits, attitudes, values, norms and practised behaviours in a defined group. The organisational culture of the ZBW is a collective system of values and says “this is how we do things here”. Shared values and established practices are at the core of the ZBW culture and characterise it – and vice versa. Culture and values are the joint drivers for identity, success, innovation, employer branding, commitment, trust, sustainability and many other factors.

In 2022, the ZBW started an organisation-wide collaborative value process. The organisation addresses small and big questions such as “How do we experience our culture?” or “How can we use all the potentials of diversity and common values?”. The ZBW also aims to make its values more tangible for all and thus to make its DNA even more transparent.

#### **Challenge: skills shortage**

The skills shortage is omnipresent. There are almost 540,000 vacancies at present that cannot be filled, as shown by a recent study of labour market data from German Economic Institute in Cologne. The ZBW also finds it increasingly difficult to attract the skills and competences it requires.

The ZBW positions itself as an agile and family-friendly employer. Employer branding plays an ever larger role at the ZBW. Concrete recruiting strategies beyond the mainstream are therefore important.

The ZBW has adopted the Dual Study model. Since 2022, the ZBW has been collaborating with the Hamburg University of Applied Sciences (HAW) and filled its first dual study place for a course in Applied Computer Science. The ZBW sees dual study as a pro-active way of training computer scientists, and especially software developers, inhouse and attract them to long-term commitment. Computer scientists are in high demand, in the civil service as much as in classic industries or in start-ups. The training of Media and Information Services Specialists (FaMI) is long established at the ZBW and works as a reliable loyalty instrument. Career starters, who have learned about the ZBW and the world of information infrastructures during their training, often use the opportunity to follow up their first education with a complementary university course. In 2022, three employees finished their extra-

occupational qualification in information management. One person took up these studies in 2022.

Internships and hospitations are another good option to meet potential future staff, to present the ZBW as an attractive employer and, in the best case, make them commit to us early.

#### **Challenge: sustainable health promotion**

Corporate Social Responsibility today means offering a healthy working environment. In times of multiple crises, a sense of security, an empathic management style and managers as mentors play an important role. “Health” as part of a set of values is not restricted to health-promoting workplace design, it also means a responsibly acting organisation with all its internal and external areas of activity. The more employees believe in their employer, the higher their own working motivation and thus mental health.

The ZBW has addressed this approach in 2022. The ZBW has used the mandatory risk assessment laid down in the Occupational Health and Safety Act to start a comprehensive survey about mental stress in the workplace. The core issues of work organisation, social relations among each other, the conditions of working time and the working environment in the mobile or fixed office ensure, if they are perceived as positive, work satisfaction and thus healthy employees. The survey results will be incorporated in measures to solve the manifold challenges in the years to come, but they also deliver quick wins in the short term. ■■

*“FOR ME, GOOD COOPERATION WITH  
OTHER LIBRARIES AND COMPANIES  
PROVIDES THE  
**BASIS FOR  
WELL-FUNCTIONING  
WORKFLOWS.”***



**MANUELA BANNICK**

*Deputy Head of User Services*

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