open

Annual Review by the ZBW

Topic:
AI IN LIBRARIES:

Metadata for Transparent AI Research and AI Use
p. 16

(with a survey)

ZBW
Leibniz-Informationszentrum Wirtschaft
Leibniz Information Centre for Economics

The ZBW in 2025:

Open Access Transformation: Publishing openly together. **p. 22**
Data sovereignty: When research data suddenly disappears. **p. 28**
Information organisation: The networked open library of 2035. **p. 42**

Dear readers,

2025 was a year of further development and transition for the ZBW. In an increasingly dynamic environment of digitalisation, artificial intelligence and Open Science, we have further refined our role as a central infrastructure institution for economics. Our mission remains unchanged: in times of digital transformation, we not only organise information, but we also create the conditions for reliable, transparent and increasingly digital science.

The articles in this annual report demonstrate how we put this mission into practice. Our own research activities on and the use of artificial intelligence in libraries illustrate how closely research-led innovation and scholarly practice are intertwined at the ZBW. This also applies to our strong commitment to generating and providing high-quality metadata, as well as to our contributions to the further development of Open Science, particularly in the areas of Open Access and open research data. At the same time, we are actively involved in science policy, where issues of data sovereignty and the sustainable and resilient availability of infrastructures – for example, for publications or research data – are becoming increasingly important.

We do not merely organise information. We create the conditions for reliable, transparent and increasingly digital science.

In addition to our national commitment, we place a particular focus on contributing to the further development of the European Research Area. The ZBW actively contributes its expertise to initiatives such as the European Open Science Cloud, thereby helping to strengthen reliable, sovereign and open scientific structures in Europe. Our activities in the field of Open Economics and in science communication also underline our commitment to making knowledge openly accessible and to promoting dialogue with diverse communities.

In addition to these key areas of focus, the report also documents the further development of our organisation. New ways of working, flexible and accessible working environments, and the continuous adaptation of our structures demonstrate how we, as an institution, are responding to the demands of modern science.

This report provides an insight into the diversity of our activities and makes it clear that the ZBW is constantly expanding and adapting its role as a reliable partner for the economic sciences.

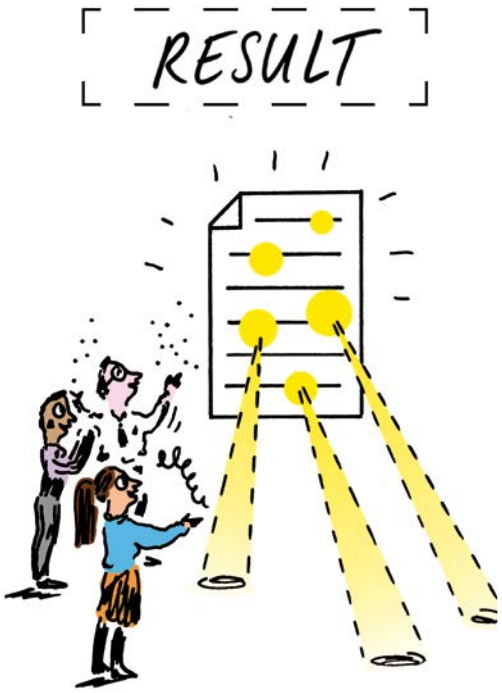
Our special thanks go to our staff, whose ongoing commitment and professional expertise form the basis for the ZBW's success. We would also like to thank the Foundation Board for the trust they have placed in us and their continuous support for our strategic development. Finally, we would like to thank the ZBW Advisory Board for their valuable input on content and their critical insights.

Lastly, we would like to express our sincere thanks to our former Library Director, Thorsten Meyer, who has successfully helped shape the development of the ZBW over the past 21 years. He has since taken over the management of a university library renowned throughout Germany.

We hope you find this an inspiring read.

Klaus Tochtermann, Axinia Braunisch, Christiane Müller

„We do not merely organise information. We create the conditions for reliable, transparent and increasingly digital science. “



Content

16 At the ZBW, metadata is updated continuously to provide a basis for collaborative working processes.

20 “The concept of access for libraries is currently undergoing a shift.”

38 The ZBW has made communication with the business school a key focus through its "Expedition Open Science Land" initiative.

56 Several projects at the ZBW in 2025 demonstrated how interior design can be understood as part of the New Work movement.

VISION

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

MISSION

*The **ZBW** collects and catalogues economic literature published worldwide. It offers comprehensive services that enable the efficient, effective and sustainable use of specialised economic information. It is a user-orientated scientific information infrastructure institution that is committed to modern and innovative requirements of information dissemination.*

255 employees from 14 count
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ZBW 2025 in figures

Open Science Conference

Around 100 participants on site and 118 online participants from 27 countries accepted the invitation from ZBW and the Leibniz Strategy Forum Open Science to attend the International Open Science Conference in Hamburg on 8 and 9 October. The conference explored how Open Science can help make AI systems more transparent, traceable and thus more trustworthy. Researchers, infrastructure providers and policy-makers exchanged views on opportunities, challenges and concrete solutions to further strengthen openness and traceability, including in the context of AI.

EOSC Symposium 2025

The EOSC Symposium 2025, which took place for the first time with ZBW Director Klaus Tochtermann as President of the EOSC Association, brought around 500 participants from 36 countries to Brussels in early November with the aim of establishing a common European research data infrastructure. Speakers such as Marc Lemaître, Director-General for Research and Innovation at the European Commission, and Robbert Dijkgraaf, President of the International Council for Science, emphasised the need for global cooperation, digital sovereignty and Open Science. Practical examples demonstrated how researchers can already utilise interoperable data, artificial intelligence and scientific services via the European Open Science Cloud (EOSC). A highlight was the signing of the Memorandum of Understanding by Klaus Tochtermann, marking the official establishment of the EOSC Federation.

ZBW strengthens trustworthy AI research and use with high-quality metadata

Anyone working with AI methods in research requires high-quality, well-structured data as a reliable foundation. The ZBW will therefore specifically expand its role as a central provider of economic metadata and was able to secure funding for this strategic project in 2025 under a special provision. In autumn 2025, the GWK approved funding for the project amounting to 7.5 million euros for the period 2027 to 2030, thereby clearing the decisive hurdle in a highly competitive and science-led selection process. With its long-standing and multidisciplinary expertise in the AI-based creation and processing of metadata, as well as its role as the central information infrastructure for economic science content in Germany, the ZBW will fundamentally transform its metadata production and maintenance processes using AI methods in future. Dorit Stenke, Minister for General and Vocational Education, Science, Research and Culture of the State of Schleswig-Holstein, emphasised: “With this project, the ZBW is demonstrating how digitalisation and artificial intelligence can be used responsibly in academia.”

New EconBiz partner country: Colombia with CESA

In July 2025, the EconBiz Partner Network welcomed CESA – Colegio de Estudios Superiores de Administración as a new partner in Colombia. This means that the Americas are now represented by a further institution in the network, which now spans eight countries. The EconBiz Partner Network supports international exchange in the economic and social sciences. The aim is to provide access to high-quality specialist information and to facilitate the exchange of information on current services for our communities. A complete overview of all partner countries is available on the EconBiz website.

ZBW supports the open access launch of the "Vierteljahreshefte zur Arbeits- und Wirtschaftsforschung" via OLEcon

Since 2025, the ZBW has been supporting the open access transformation of the newly founded journal "Vierteljahreshefte zur Arbeits- und Wirtschaftsforschung" (VAW). This was made possible by Open Library Economics (OLEcon) and the OLEKonsort project, funded by the Federal Ministry of Education and Research. From 2025, the journal will be published under Diamond Open Access. There are no costs for authors or readers. The journal "Vierteljahreshefte zur Arbeits- und Wirtschaftsforschung" is a peer-reviewed journal focusing on labour and economic policy topics. It continues the editorial focus of the former "Vierteljahreshefte zur Wirtschaftsforschung" and has been published since 2024. More on the topic of open access transformation on p. 20.

ZBW once again awarded the "audit berufundfamilie" certificate

In 2025, the ZBW was once again awarded the 'audit berufundfamilie' certificate. Following a successful re-audit, berufundfamilie Service GmbH confirmed the organisation's exemplary measures to support the balance between work, family and personal life, as well as the further development of future objectives. The reconciliation of professional demands with family and personal needs has been firmly embedded in the ZBW's organisational culture for decades and is continuously being developed. Key elements of the family-friendly HR policy include, in particular, flexible working time models and opportunities for location-independent work.

Klaus Tochtermann took part in the Falling Walls Executive Table

On 8 November 2025, ZBW Director Klaus Tochtermann was invited to the Falling Walls Executive Table. Under the title "Data Infrastructures – Connected & Resilient AI Enablers", selected experts discussed the role of research data infrastructures as a central foundation for AI-driven innovation. The discussion covered the legal, technical and societal frameworks that contribute to ensuring resilience and digital sovereignty in Europe. Falling Walls is an international platform that connects science, business and society. Its aim is to actively shape the future through interdisciplinary exchange and innovation-oriented ideas.

EconStor, the open-access repository for economic sciences, surpasses the 300,000 full-text mark

What began in 2009 as a platform to raise the profile of economic research is now one of the world's largest open publication infrastructures for economics. Within five years, the collection on the open-access repository EconStor has grown from 200,000 to 300,000 publications – a development that reflects the transformation in academic communication. This growth is fuelled by several sources: universities, research institutions and individual authors use EconStor as a trusted publication platform, whilst at the same time an increasing number of academic publishers are making their open-access publications available via EconStor. This makes EconStor a key hub for the open-access transformation in the field of economics. An international Advisory Board established in 2025 is guiding the strategic development of EconStor. Representatives from economic research, information science and infrastructure operators contribute their perspectives to the board.

Thorsten Meyer elected to the Federal Executive Committee of the German Library Association

With Thorsten Meyer, Director of the ZBW until December 2025 and a member of the ZBW's three-person Executive Board, a prominent figure from the academic library sector joined the Federal Executive Board of the German Library Association on 1 June 2025. The German Library Association (dbv) brings together over 8,000 public and academic libraries in Germany and represents their interests in the political and social spheres. Thorsten Meyer has been Director of the University Library at the Free University of Berlin since 1 January 2026.

Digitisation on demand for public domain heritage collections

In 2025, a user-driven digitisation feature was introduced on the EconBiz specialist portal. The aim is to manage the digitisation of public domain works from the print collection in line with demand. Around 80,000 titles from the older collection have been tagged with a 'Request digitisation' button. Users can use this to submit specific digitisation requests. The incoming requests form the basis for prioritisation in the subsequent digitisation process.

EOSC Coffee Lectures

In 2025, Klaus Tochtermann, President of the EOSC Association and Director of the ZBW, hosted a series of EOSC Coffee Lectures. The main focus was on the establishment and further development of the EOSC Federation within the European Open Science Cloud (EOSC). Topics discussed included the current status of the node structure, the onboarding process for additional research data infrastructures, strategic framework conditions,

and prospects beyond 2027. The EOSC Symposium and the launch of further nodes were also discussed. The web talks were consistently well attended, with around 200 participants per event, and served as an ongoing platform for information and exchange for stakeholders from research, infrastructure and policy.

Standard Thesaurus for Economics

In 2025, the ZBW published an introduction to the Standard Thesaurus for Economics (STW) for economic sciences, together with its editorial guidelines. The publication explains the structure, terminology and maintenance of the controlled vocabulary. The aim is to present the editorial processes behind the STW in a comprehensible manner and to increase transparency for the specialist community and cooperation partners.

Sold-out joint conference by Intereconomics and CEPS

In early December 2025, the joint conference organised by the journal "Intereconomics" and the Brussels-based think tank Centre for European Policy Studies (CEPS) focused on the question of Europe's position in a rapidly changing world order. The topic proved compelling: 120 participants filled the room to capacity, whilst twice as many interested parties had registered but could not be accommodated. The two sessions addressed not only economic dynamics but also the uncertainties arising from a resurgence of power politics coupled with rapid technological upheavals. Globalisation expert Adam Posen, President of the Peterson Institute for International Economics, opened the conference with his keynote address "US policy shifts and the changing global economic landscape: What implications for Europe". The conference proceedings were published in the Forum section of the January/February 2026 issue of Intereconomics.

Symposium on the state of social sciences and humanities journals

On 17 November 2025, the 13th symposium on the state of social sciences and humanities journals took place at the ZBW in Hamburg. The event provided a comprehensive overview of current and future challenges in academic publishing, particularly with regard to artificial intelligence, the presentation of different journal perspectives, and the funding of academic journals. The Leopoldina paper on sustainable journal funding was presented and discussed. The conference thus offered the 45 participants an important exchange on the key transformation processes in the social sciences and humanities journal landscape.

9th Open Science Retreat

The 9th Open Science Retreat in September 2025 focused on the critical question of whether Diamond Open Access – a publication model in which neither readers nor authors incur fees – is in fact the only fair future for academic publishing, or merely a beautiful utopia. Two keynote

speeches examined the topic from very different perspectives. In her keynote, Caroline Edwards from the University of London demonstrated how the Open Library of Humanities (OLH) has developed into a successful example of community-supported Diamond Open Access (DOA). Dr Ulrich Herb, from Saarland University, on the other hand, took a highly critical look at the prospects for Diamond Open Access on a broader scale in his talk 'Diamond Open Access – Too good to be true?', highlighting several problematic issues. Following this introduction, the promises and limitations of Diamond Open Access were examined in greater detail, and successful Diamond Open Access initiatives such as OLEcon and effective consortia for funding the models were presented as practical examples.

17th SWIB Semantic Web in Libraries Conference

The 17th Semantic Web in Libraries Conference (SWIB) took place from 17 to 19 November 2025 as an online event, with just under 200 logged-in participants from Europe and around 100 more from every continent. In addition, 263 visitors watched the live stream. The programme comprised 16 talks and 6 workshops. Presentations and practice-oriented formats showcasing technical innovations and applications of semantic and Linked Open Data technologies dominated the conference. In his keynote address, "Library Resilience Exercises by the Internet Archive", Brewster Kahle, founder of the Internet Archive and the Open Library, spoke about current threats to libraries. He identified these as book bans, the criminalisation of librarians, funding cuts and cyberattacks. However, he considered the licensing system established by powerful media conglomerates to be the greatest challenge. SWIB is a joint conference organised by the ZBW and the University Library Centre of North Rhine-Westphalia.

Protection for cultural heritage in emergencies: ZBW joins regional network

In June 2025, the ZBW joined the Kiel Emergency Network to better protect its collections in the event of a disaster. On 10 June 2025, the ZBW signed

INCONECSS 2025 shows: Artificial intelligence is transforming library practice worldwide

The integration of artificial intelligence is increasingly transforming academic practice – from data analysis to text production. This development also presents libraries with a constant stream of new challenges. What role do they play in an academic landscape shaped by AI? What support services will researchers expect in future? These questions were at the heart of the fourth INCONECSS – International Conference on Economics and Business Information, which took place in Berlin from 15 to 16 May 2025. Under the theme "Research Support in an Age of AI", the international conference organised by the ZBW brought together around 100 participants from 34 countries representing academic libraries, infrastructure institutions and economic research. The international scope of INCONECSS enabled a comparison of institutional approaches across different countries. INCONECSS 2025 demonstrated that libraries worldwide are beginning to redefine their role within the research ecosystem.

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the emergency agreement. The ZBW is thus part of a regional network that organises coordinated assistance for cultural institutions in the event of water, fire or structural damage. The Emergency Network currently comprises 15 cultural institutions from the Kiel area. They are committed to providing mutual assistance in the event of damage – with materials, personnel and logistical support. At the same time, systematic preparations are underway: each institution documents priority collections, organises internal procedures and participates in the joint provision of emergency equipment.

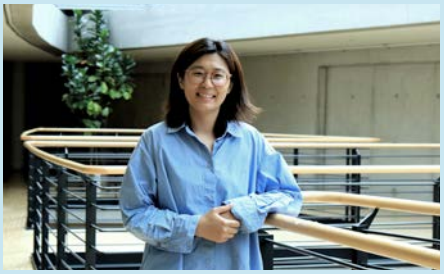
Community: Academic Research

In 2025, two online events took place as part of the 'Scholarly Work in the Economic Sciences' community, coordinated by Dr Tamara Pianos, Head of the Information Services Department. In March, the focus was on 'Systematic Literature Reviews in the Economic Sciences'. Subject specialists from universities and libraries discussed support services for researchers and students, as well as methodological and organisational issues. In September, the community focused on experiences with CORE Econ. Lecturers from various universities shared practical insights and exchanged views with participants on potential applications and framework conditions. Both events adopted dialogue-oriented formats and systematically incorporated questions and comments from participants.

Digital long-term archiving

The ZBW is strengthening its commitment to digital long-term archiving as part of the Germany-wide competence network "nestor". In 2025, the ZBW initiated and established a new working group for beginners, which is led by the ZBW. In 2025, the ZBW also surveyed experts on the OAIS model and published the results in several videos. Furthermore, it participates in a series of podcasts and video contributions on digital long-term archiving, including interviews in English. The contributions are aimed at a specialist audience and receive up to 500 views per episode annually. Through these activities, the ZBW contributes to networking within the specialist community and supports knowledge transfer in the field of digital long-term archiving.

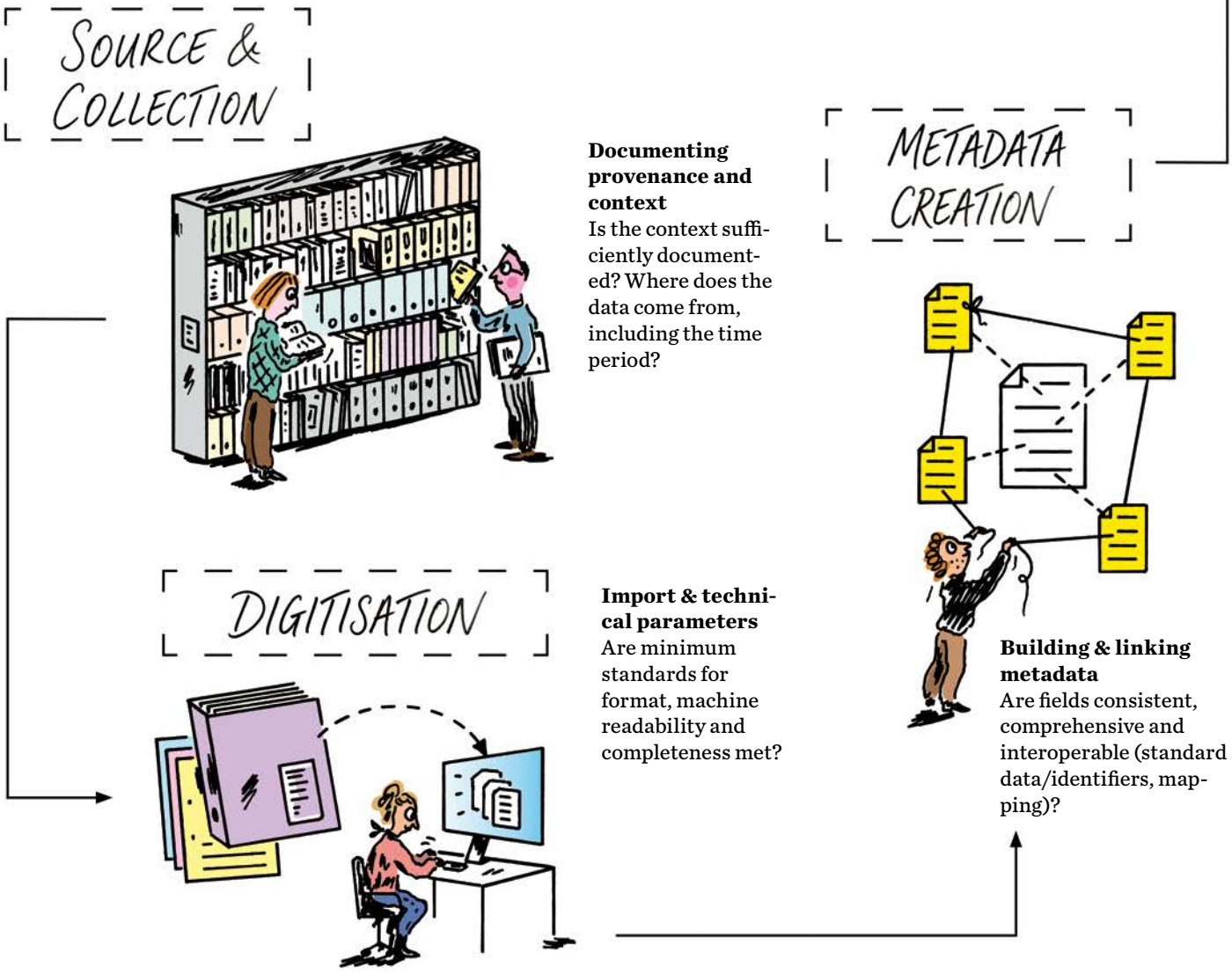
ZBW's international network



Hyunmo Park, a librarian at the Korea Institute for International Economic Policy (KIEP), spent two months as a guest at the ZBW in Kiel in 2025. The visit served as a platform for professional exchange on Open Science, research data management, generative AI and research support. The aim was to learn about advanced practices and identify points of contact for collaboration between the KIEP Library and the ZBW in the context of the transition to Open Science.

Metadata *for transparent AI research and AI use*

Metadata, rights, quality and versions – a history of the process in graphics



AI-supported research becomes verifiable when data flows are visible. The illustration shows the documentation that must accompany a dataset so that research can contextualise and reproduce results. This includes the chain of custody and provenance, rights and licence status, documented quality metrics, and uniquely referenceable versions.

QUALITY CHECK

Measuring, correcting and labelling quality, 'human in the loop'
Is quality documented in a measurable way (sample, error classes) and are uncertainties flagged?

RIGHTS & ETHICS

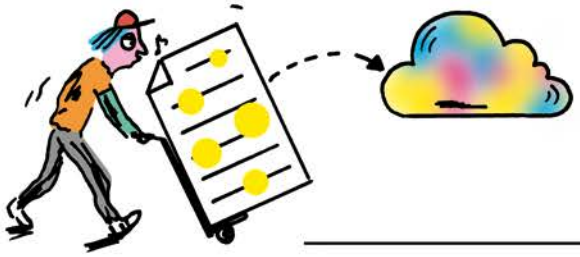
Rights verification, licence assignment, clarifying usage rights, Rights as Data (machine-readable)
Is access regulated? Which access model is permitted? What is permitted (use, sharing), and under what conditions?

CURATED DATASET

Compiling the dataset
Are criteria and exclusions documented in a transparent manner?

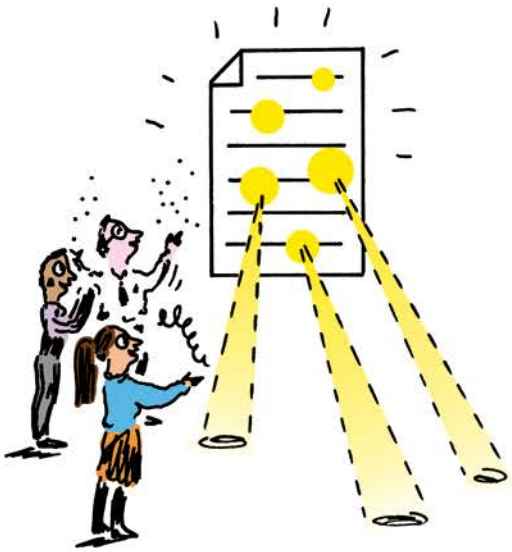
ACCESS & USE

Provision & referencing, versioning, access model
Have access conditions and citation requirements been clarified?



Reproducible, citable datasets
Is a persistent identifier available?

RESULT



Metadata as a core task of a ZBW data infrastructure
AI methods are used in research to analyse texts, publication landscapes and digital collections, for example for thematic analyses, trend monitoring or linking publications with datasets. However, 'text as input' is not sufficient for reliable results. The decisive factor is whether the underlying database is described in such a way that it can be verified, cited and compared over time. In this context, metadata is not a supplement, but the infrastructural layer that enables discoverability, machine readability and interoperability across systems. As structured "data about data", metadata follows defined syntactic and semantic rules and must be interchangeable between systems and subject domains, both technically and in terms of content. It is generated automatically or curated and is continuously enriched and updated, serving as the basis for collaborative work and data exchange within research infrastructures.

In the form of standardised data and in combination with persistent identifiers, metadata also takes on a referencing and linking function. Individuals and organisations can be uniquely referenced, and digital cross-references to works, terms, research data and scientific software can be reliably mapped. This mechanism also forms the basis for publishing metadata as Linked Open Data and integrating it into ontologies or knowledge graphs, in order to bring together many sources within integrated knowledge structures.

"Linked Open Data requires increased semantic interoperability of standardised data," explains Dr Andreas Oskar Kempf, research associate at the ZBW and an expert in taxonomy and thesaurus management. "Whilst controlled vocabularies used to be primarily geared towards use within one's own collection, it is now crucial that concepts are modelled in a similar way so that different vocabularies can be linked together."

Against this backdrop, the ZBW describes the generation of standardised, high-quality and structured metadata for publications as the core of its role as an information infrastructure for the economic sciences. Metadata serves not only for research, but is understood as a prerequisite for making collections reliably usable in data-intensive research settings. In the field of economics, the ZBW plays a key national role in this regard. It already produces the majority of economic metadata in Germany. Consequently, requirements for quality, consistency and interoperability are directly linked to day-to-day operations.

Central to this is the ZBW's aim to optimise metadata in future not only for human use, but also for machine processing and integration into semantic web environments. Concrete building blocks of the ZBW metadata infrastructure are, on the one hand, alignment with established metadata standards (including Dublin Core and MARC21), and, on the other hand, the use of persistent identifiers, in particular DOIs via DataCite, as well as for traceability and long-term referencing, and finally linked data architectures and open interfaces to enable technical and semantic interoperability with external systems.

Anke Böhrnsen, who heads the Integrated Acquisition and Cataloguing Department at the ZBW, emphasises that these elements are relevant not only in terms of infrastructure but also analytically. "The high data quality at the ZBW is based on the consistent enrichment and interlinking of its datasets – a key step in enabling bibliometric analyses and ensuring the future viability of the data as Linked Data."

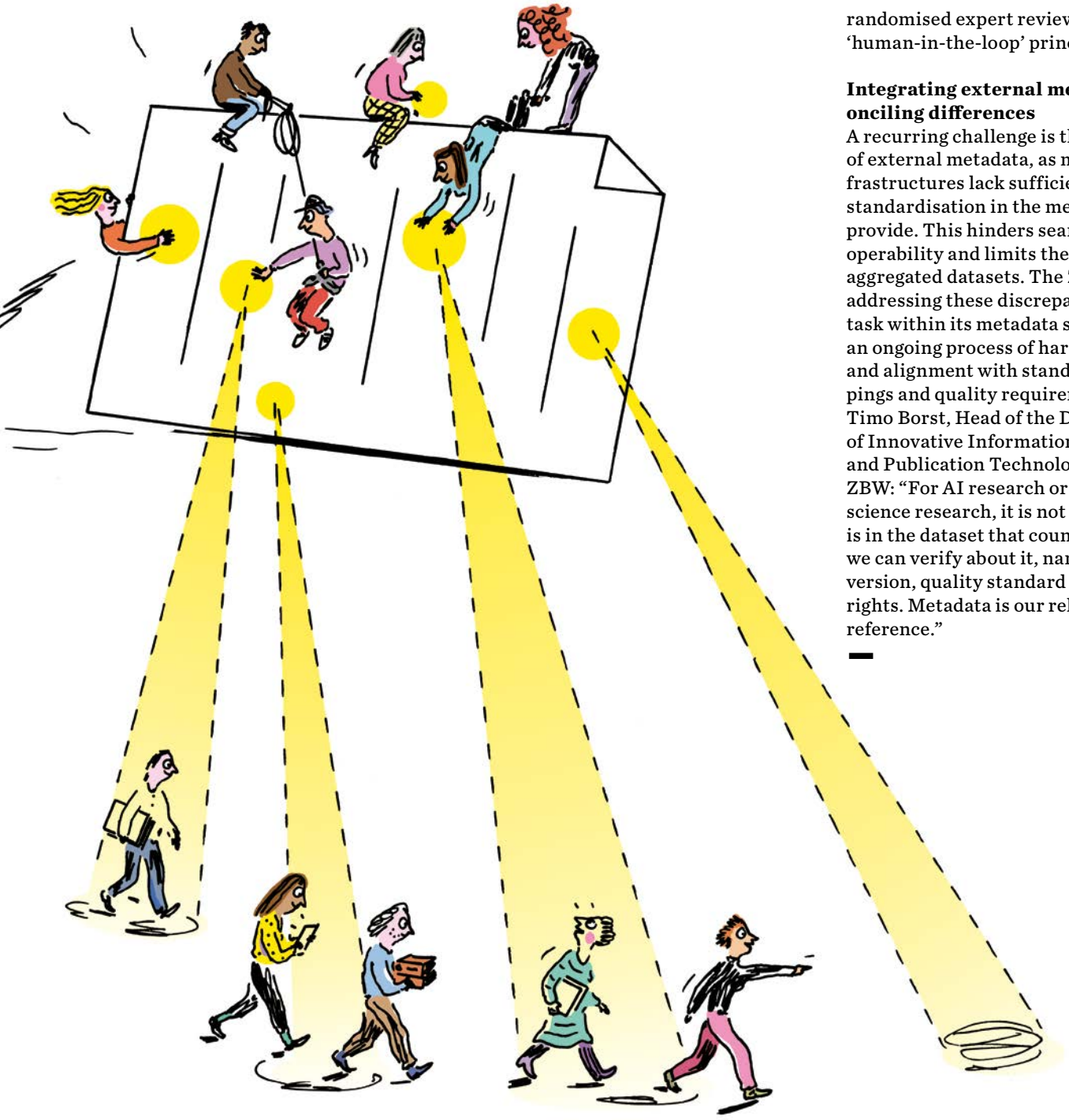
From keyword to machine-readable context
The ZBW processes its metadata in such a way that it can be used in a variety of ways. In addition to bibliographic details, structural and semantic information is also recorded – that is, information about content and the relationships between them. This allows data to be linked more effectively, for example between publications, researchers and topics. An important foundation for this is the Standard Thesaurus of Economics (STW) developed by the ZBW, an open, controlled vocabulary for economic terms. The STW is the world's most comprehensive bilingual specialist vocabulary, covering all economic subject areas and important related fields.

Dr Lena Dolud, a research associate at the ZBW, explains: "The STW provides stable terms and relationships that we embed in metadata and make interoperable via mappings – for example, to the Gemeinsame Normdatei (GND) – so that topics remain consistently referenceable across collections, systems and languages, and diverse reuse by the economics research community and on the Semantic Web is possible."

Technical interoperability as a goal
For the ZBW, the components described are not merely architectural decisions, but prerequisites for interoperability. Metadata should be made available in such a way that it can be used in external infrastructures, toolchains and analytical environments, including where data from different sources is consolidated. This is also in line with the infrastructure objective of establishing interoperable metadata as the basis for the integration, distribution and exchange of knowledge.

Automation with quality assurance
For ongoing metadata production, the ZBW relies on automation to enable the timely indexing of increasing volumes and heterogeneous resources. Central to this are AI-supported indexing workflows, which are combined with a 'human-in-the-loop' approach to ensure quality and oversight. This links operational scaling with the requirement to keep metadata controllable as a reference and verification layer.

As Dr Argie Kasprzik from the ZBW explains, whilst automation helps to index large volumes, responsibility is not left to the system. Dr Argie Kasprzik explains: "We combine automated enrichment based on machine learning methods with fine-tuning using intellectually annotated data and



randomised expert review – that is our 'human-in-the-loop' principle."

Integrating external metadata, reconciling differences

A recurring challenge is the integration of external metadata, as many data infrastructures lack sufficient quality or standardisation in the metadata they provide. This hinders seamless interoperability and limits the usefulness of aggregated datasets. The ZBW regards addressing these discrepancies as a key task within its metadata strategy – as an ongoing process of harmonisation and alignment with standards, mappings and quality requirements. Dr Timo Borst, Head of the Department of Innovative Information Systems and Publication Technologies at the ZBW: "For AI research or information science research, it is not only what is in the dataset that counts, but what we can verify about it, namely: origin, version, quality standard and usage rights. Metadata is our reliable point of reference."

Share your thoughts on the article ***in just 10 seconds!***

"We don't just organise data, WE SAFEGUARD SCIENTIFIC SCOPE FOR ACTION."

Interview with Susanne Schmucker

Text and data mining is changing the way research works with knowledge, particularly in the light of generative AI. For academic libraries, this shifts the core mission from 'enabling access' to 'ensuring usability'. We discuss the associated issues of licences, interfaces, metadata, documentation, long-term availability and data sovereignty with Susanne Schmucker, Head of the Collection Development & Metadata Programme Area at the ZBW.

Why is the topic of text and data mining more than just a technological trend for libraries?
S. Schmucker: Text and Data Mining, or TDM for short, encompasses methods used to automatically analyse large volumes of text and data, right through to the preparation of training data for AI applications. For libraries, this shifts the meaning of 'access'. It is not enough simply to make content available in a readable form. Researchers want to be able to compile texts and data into corpora, process them automatically, version them, document them and review them later. TDM therefore touches on core library tasks such as licence management, metadata work, provision, long-term availability and advisory services.

What is often overlooked in the TDM debate?
S. Schmucker: Outside the library community, it is often overlooked that TDM and AI frequently fail not because of a lack of computing power, but because of the data itself. Data is stored in silos, is not machine-readable, or the licence terms are unclear and inadequate. As a result, what should be a technical method turns into a coordination project. The effort often lies in rights clearance, access, data cleaning or data selection. And thus in areas where libraries play a central role.

Where do the first practical problems arise when researchers request TDM?
S. Schmucker: For researchers, the problems usually start with corpus construction. Which sources may be used? How are they technically incorporated into the corpus? And how is the data status documented? Particularly with licensed platforms, there is often a lack of stable interfaces or clear permission for machine processing. This leads to uncertainty and corpora that are difficult or impossible to reproduce scientifically.

What is the most common stumbling block in the licensing sector today?
S. Schmucker: A fundamental issue! The gap between 'access' and 'usability' is often a hurdle here. Many contracts regulate reading, but do not clearly address machine processing. Or the licence information is not documented in a machine-readable format on the individual publication. It then remains unclear whether automated downloading, long-term storage or sharing a corpus with various cooperation partners is permitted.

What is the next sensible step for libraries in this context?
S. Schmucker: What we need is a streamlined standard process for TDM requests from the research community that brings together rights, technology and documentation. This means: clarifying the data source and protection requirements, checking terms of use, determining the access path, defining documentation and versioning standards, and assigning responsibilities. In addition, a data and licence catalogue would be helpful, making it clear which collections can be reused, how, and under what conditions. **Thank you!**

ABOUT SUSANNE SCHMUCKER:
Susanne Schmucker has been working at the ZBW – Leibniz Information Centre for Economics since 2009. She has headed the Collection Development and Metadata Programme Area since October 2025. Drawing on her background in economics, Susanne Schmucker combines expertise in knowledge organisation, metadata management and user-oriented information services with the aim of translating access into sustainable usability for research.

"TO ME, A RELIABLE LIBRARY…

…is one that ensures society has continuous access to relevant new findings in economics and that these findings are readily accessible."

JOHANNES EBER
Scientific Editor Wirtschaftsdienst, Open Economics Programme Area

PUBLISHING OPENLY TOGETHER

ZBW is designing funding and support structures for Diamond Open Access

Open Access is part of a trend towards Open Science that is transforming research processes and publication pathways. Expectations regarding the accessibility and reusability of research results are rising, whilst at the same time new requirements are emerging in the areas of organisation, technology, law and funding. For the ZBW, this transformation is not a peripheral issue, but a field of activity in which information infrastructures are taking on responsibility. Through various collaborations, the ZBW connects academic communities, develops models for open publication formats and creates reliable frameworks for quality, visibility and sustainability. The specific achievements in this area by 2025 are outlined below.

Establishing Diamond Open Access as a reliable practice

The ZBW pursues a clear line in its efforts within the context of the open access transformation. Diamond Open Access – that is, research-led, non-commercial publishing at no cost to authors and readers – is to be strengthened where it is relevant to specialist communities and where sustainable structures can be established. The focus lies on two complementary approaches that were visibly advanced in 2025: Open Library Economics (OLEcon) as a funding and transition model for economics journals, and participation in the Diamond Open Access Service Centre (SeDOA) as a national service centre, within which the ZBW is responsible for community support services. Together, they form a strategic contribution by the ZBW to the question of how Diamond Open Access can become sustainable in the long term, not merely as a principle but as a reliable practice.

> *"**If many institutions** take joint responsibility, Diamond Open Access will become a permanent reality. The annual pledging process lays the groundwork for this and demonstrates that collaboration within the consortium is the foundation for sustaining research-led journals independently, openly and in the long term."*
>
> **Dr Juliane Finger,**
> OLEcon Project Manager

Making Diamond Open Access more resilient

What is the starting point? Diamond Open Access reduces barriers to access, but does not eliminate the work that makes scholarly publishing possible. Editing, quality assurance, platform operation, metadata, DOI registration, indexing, legal clarifications, accessibility and further development all incur costs, regardless of whether article or subscription fees are charged. In many Diamond initiatives, key tasks are covered by in-kind contributions, i.e. non-monetary contributions such as voluntary editing, technical support or institutional hosting. This form of resource utilisation can work, but it often remains tied to specific individuals and is difficult to safeguard in the event of staff changes or shifting priorities. Furthermore, costs and responsibilities are often not transparently documented because they are 'included' in staff positions or arise across several units.

Against this backdrop, the ZBW is addressing two areas with OLEcon and SeDOA that repeatedly prove to be bottlenecks in practice. One lever is funding. This involves key questions such as: Who bears which costs? How are funds pooled? How can sustainability be achieved? The other lever is support. How are knowledge, standards, advice and exchange organised so that Diamond Open Access can be professionalised on a broad scale?

Funding and sustaining Diamond Open Access in the economic sciences

Through OLEcon, the ZBW organises the co-funding of Diamond Open Access journals in the field of economics via a

funding consortium. OLEcon thus addresses a specific field, namely economics journals, and combines two tasks. On the one hand, the ZBW is committed to ensuring the financial security of the journals, and on the other, the OLEcon team, led by Dr Juliane Finger, supports publishers in the transition to research-led Diamond Open Access.

Funding mechanism
At the heart of the OLEcon model is the annual 'pledging' for a bundle of journals. Co-funding institutions – the OLE consortia – contribute a fixed amount for one year, scaled according to the size of the institution. The ZBW coordinates the consortium, organises the institutions' participation and passes on the funds collected by the consortium to the journals. This implements a collectively supported funding principle that does not rely on individual transactions, but on predictable contributions from a community.

OLEcon stands for research-led publishing. The academic editors have decision-making authority, and the journals are non-commercial in nature. Publications are released under an open licence (CC BY), which allows for re-use and retains rights with the authors. OLEcon combines these editorial guidelines with pragmatic implementation strategies, including consultancy and, where appropriate, optional referral to non-commercial publication providers.

Focus for 2025 – Expansion and Stabilisation
For OLEcon, 2025 was a year in which the groundwork laid earlier resulted in more robust structures. Four journals were co-funded by the funding consortium in 2025. At the same time, the expansion of the consortium was further advanced as part of the BMFTR project "OLEKonsort" (2023–2026). The project provides additional funds for the consortium's development and supports the transition from seed funding to an increasing share of consortium co-funding. Following approval by the ZBW Advisory Board, the ZBW will continue to fund the project until 2031.

An important aspect in 2025 was the community work surrounding the consortium. The ZBW engaged co-funders not only through payment processes, but also through information and exchange. Newsletters, online information events, the provision of individual publication lists for institutions, and virtual community formats were designed to create transparency and foster long-term commitment among participants. In doing so, OLEcon responded to the practical reality that open access funding in institutions is often tied to budgetary considerations, acquisition processes and internal responsibilities. It was precisely these 'how' questions that were systematically addressed in 2025 and harnessed to ensure the model's sustainability.

National support infrastructure SeDOA
Whilst OLEcon represents a subject-specific funding model,

SeDOA addresses the cross-disciplinary question of how Diamond Open Access in Germany can become more coordinated, visible and manageable. SeDOA is being established as a DFG-funded collaborative project led by the University and State Library of Darmstadt and brings together services for publishers, publication services, libraries, professional societies and other stakeholders.

FIVE FIGURES TO BEAR IN MIND:

- **4** journals co-funded by a consortium via OLEcon in 2025
- **6** journals that OLEcon 2025 has funded in total (economics/business research).
- **38** co-funding institutions in the OLEcon Consortium 2025 (Germany/Austria/Switzerland).
- **14** new institutions that joined the OLEcon Consortium in 2025.
- **15** Einrichtungen im SeDOA-Konsortium

ZBW's role in SeDOA
The ZBW is part of the SeDOA consortium and is responsible within the project for establishing Community Support Services.

The ZBW's contribution therefore aims to organise support in such a way that it can be utilised widely, across disciplines and organisational structures.

Community support services include, in particular:
- needs-based advisory and support services,
- workshop and exchange formats,
- the development of a knowledge base,
- where necessary, the involvement of legal expertise, for example through expert opinions on recurring issues.

SeDOA's start-up phase and first community formats
2025 was the year of establishment, during which SeDOA became operational and offered its first formats for the community. For the ZBW, the central question was how to structure the exchange so that it addresses concrete implementation issues rather than remaining at the level of general position statements. A detailed online survey and several workshops were used to identify the community's needs and the formats desired for community support. Two online events are also illustrative of the ZBW's dialogue with the community:

- **Open Science Retreat (23–24 September 2025):** Under the title "Diamond Open Access: Utopian Dream or the Only Fair Future?", Dr Juliane Finger, an Open Access expert at the ZBW, placed Diamond Open Access within a broader Open Science context and discussed it with participants from various perspectives. The format facilitated in-depth discussions on the tensions between aspiration and practice, for example regarding resources, roles and the assumption of long-term responsibility.

- **Online workshop "Diamond Open Access at the state level: Impulses, perspectives, exchange" (25 November 2025):** SeDOA, together with state initiatives from North Rhine-Westphalia, Berlin, Brandenburg and Saarland, hosted an exchange on funding and networking structures at the state level. Four short presentations highlighted the status, framework conditions, measures and challenges of the initiatives. A panel discussion focused on the transferability of experiences and the question of what role state-level commitment can play in the sustainable establishment of Diamond Open Access.

From the ZBW's perspective, these formats fulfil a dual function. They foster networking among stakeholders and provide feedback for the design of Community Support Services. As a result, real needs—such as funding practices, integration into budgetary frameworks or accountability models—are not only made visible but can also be translated into concrete services.

OLEcon and SeDOA – Two levers for a shared vision
OLEcon and SeDOA represent different levers, but serve a shared vision of the ZBW. Diamond Open Access is intended to be reliably operable as a research-led, non-commercial publication option. Reliability here encompasses three aspects: predictability, sustainable support and community anchoring.

What does this mean? Reliability in the sense of good predictability means that costs, resources and responsibilities are organised in such a way that publication projects do not depend exclusively on individuals or temporary funding. Efficient and sustainable support encompasses advice, knowledge and practical assistance, provided in such a way that they can be utilised by many initiatives without having to start from scratch each time. Furthermore, for a stable transformation, it is essential that the rights to the titles and decision-making authority lie with the numerous academic communities. ▬

"Legal issues are often the point at which projects in Diamond Open Access come to a standstill. Who holds the copyright? Which licence suits the publication's objective? How are responsibilities, contracts or liability issues clearly regulated? To provide guidance here, we pool legal expertise so that decisions can be made with confidence."

Bente Steinecke
SeDOA legal advisor

*"**Community work** is strategically important because, in practice, Diamond Open Access often fails not due to a lack of will, but due to a lack of guidance, the absence of templates, unclear responsibilities and fragmented knowledge."*

Helene Strauß
Open Access expert from the ZBW-SeDOA team

What happens after 2025?
We asked three open access experts involved in the OLEcon and SeDOA projects about the plans beyond 2025. Dr Juliane Finger, Head of OLEcon and the OLEconsortium; Helene Strauß, open access communicator from the SeDOA project; and Bente Steinecke, lawyer and expert on licensing issues relating to open access.

In your view, what is the most important next step to ensure that Diamond Open Access becomes sustainable in the long term?
Dr Juliane Finger: We need to further expand consortium funding models. The added value lies in spreading the burden across many shoulders. When institutions commit to joint and recurring contributions, a stable foundation is created that extends beyond project durations. It is precisely this joint commitment that makes it possible to operate research-led journals in the long term.

Where do you see the greatest need for support services for the community?
Bente Steinecke: In practice, the same questions keep cropping up. How do we plan costs realistically? How do we clarify roles and governance? Which workflows are efficient, and which standards help with visibility and quality? Community Support Services should systematically address these recurring issues.

How will OLEcon and SeDOA work more closely together in future?
Helene Strauß: We want to link practice and coordination more closely. Experience from OLEcon, such as how Diamond Open Access funding can be embedded in institutions' budgets and processes, is valuable for SeDOA's work. Conversely, SeDOA's services can support OLEcon, for example through knowledge, standards and exchange formats. Our aim is to bring together funding, support and community work in such a way that the focus is not on individual projects, but on robust structures for Diamond Open Access. **Thank you very much!**

LINK-TIPPS:

https://olecon.zbw.eu/
https://olecon.zbw.eu/konsortium
https://diamond-open-access.de/events/

Open Access and licence management

ZBW as consortium leader and negotiator

The ZBW – Leibniz Information Centre for Economics plays a central role in the open access transformation of the economics publishing market. As a consortium leader and negotiator, the ZBW not only acts as an intermediary between research institutions and publishers, but also actively shapes the framework conditions for the future publishing landscape. In 2025, numerous agreements were renegotiated and, based on previous experience, negotiations began for a follow-up transformation agreement with the academic publisher Taylor & Francis.

Renewal of the contract with the academic publisher Taylor & Francis
The ZBW plays a central role in the open access transformation of the academic publishing market. This involves not only coordinating consortia, but also negotiating framework agreements that meet the diverse requirements of academic institutions. As the lead negotiator, the ZBW is in direct contact with other consortium-leading institutions at national and international level and, together with partners, develops contract models that support the transition to open access.

A key example of this is the renewal of the contract with the academic publisher Taylor & Francis. Following intensive negotiations, the ZBW has succeeded in establishing a model for an initial three-year contract period that enables Open Access without placing an additional financial burden on the participating institutions. In addition to around 120 universities, higher education institutions and research organisations, the institutes of the Leibniz Association, among others, also benefit from clearly regulated publication options across the publisher's entire portfolio. However, for the negotiating team and the publisher, this was explicitly intended only as the basis for the further development of a robust Read & Publish agreement. Well in advance of the end of the first term, a negotiating group led by the ZBW was established in 2025 and intensive negotiations were conducted with Taylor & Francis to ensure the continuation of the consortium.

Read & Publish agreement with Emerald Publishing
Another successful outcome of the negotiations is the development of the Read & Publish agreement with Emerald Publishing. The ZBW is thus creating clear benefits for users at the participating institutions. Access to the content of Emerald journals is reliable and governed by favourable financial terms; depending on the respective requirements, the publisher's entire journal portfolio or individual subject packages can be licensed through the consortium. At the same time, publishing in Open Access in the covered journals is contractually agreed without additional fees. A secure workflow reduces the administrative burden for authors and creates transparency regarding the conditions for Open Access publication. Overall, the consortium's offering supports both the comprehensive provision of specialist literature and the visibility and reusability of the consortium's own research results in Open Access.

Consortium offerings expanded and terms improved
In 2025, the ZBW negotiated a Germany-wide offer for two options within the newly established consortium with the Economist Group. Firstly, access to the news platform 'The Economist' for individual use from the institutions participating in the consortium has been established. Secondly, there is a consortium offer for the provider's EIU Viewpoint database under significantly improved terms. EIU Viewpoint combines analysis, context and data in an integrated platform, thereby supporting research, market and country analyses, as well as the assessment of political and economic developments. Twenty academic institutions have already decided to make this new access available to their staff and students via the consortium.

The ZBW has also secured a new agreement in the field of factual databases. Morgan Stanley Capital International (MSCI) is one of the world's leading providers of equity indices, risk management tools and analytical instruments. It offers MSCI sustainability and climate data, providing a wide range of data solutions that help users assess sustainability and climate risks. The licence terms, which are primarily geared towards the financial markets, have been adapted for the consortium to allow use in economic research and academic teaching, and can thus be utilised by interested research institutions. MSCI complements the ZBW consortium for LSEG, which is used by over 60 institutions; LSEG is also a leading platform for financial market and economic data, operated by the London Stock Exchange Group (LSEG). ▬

"Data sovereignty is first and foremost a question of decision-making rights"
– Interview with ZBW Director Klaus Tochtermann

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Academic work today increasingly depends on the availability and accessibility of data, which rarely stops at institutional or national borders. This creates a new vulnerability. Geopolitical tensions, domestic policy shifts in third countries, and the logic of sanctions and export controls can restrict access to data, services or repositories depending on the situation. What was long considered reliable thus becomes political and negotiable.

At the same time, the infrastructure landscape is changing. Centralised databases, indexing services, and cloud and platform ecosystems are unevenly distributed internationally. Europe has invested, but remains partly dependent on infrastructures operated or controlled outside Europe. Governance is crucial here. Who sets the rules for access and use, and decides on re-use, changes to metadata or de-publication?

AI exacerbates this situation. Data is not merely research output, but training material. Literature becomes input for automated analysis. This increases incentives for commercialisation and vulnerabilities, for instance through manipulation, 'poisoning' or a flood of low-quality content.

Against this backdrop, data sovereignty has become a political priority. One of the key questions, alongside the aforementioned governance, is: how can science in Europe remain reproducible, verifiable and capable of action without abandoning trust-based international cooperation?

A prominent venue for this debate was a panel discussion held on 1 October 2025 at the European Parliament on data sovereignty in research (video recording: https://zbw.to/SUeCA). Klaus Tochtermann was also present there in his voluntary capacity as President of the European Open Science Cloud Association (EOSC-A). As Director of the ZBW, he combines infrastructure practice with issues of governance, standards and integrity. We spoke to him about this perspective.

What is the current state of play in the European debate on data sovereignty in research?
KT: We are currently experiencing a situation in which scientific work depends more heavily on external conditions than many have long assumed. Data access, repositories, search and indexing services, cloud and platform infrastructures are not merely technical building blocks, but part of an international framework of law, politics and economics. If conditions change in the US or China, this has immediate consequences for research practice here in Europe and in Germany. These consequences range from restrictions on availability to limitations on re-use and replication.

What exactly does Europe's dependence on data infrastructures entail?
KT: Central data infrastructures are unevenly distributed internationally. We are talking about large platforms, computing capacities, indexing and reference services, but also specific specialised repositories. Europe has high-performance facilities. But critical work processes often depend on services that are operated or controlled outside Europe. That is not automatically a problem. An international division of labour is normal. But it is a risk if there are no alternatives, no fallbacks and no secure rules.

What role does governance play here?
KT: Governance encompasses key questions such as: Who defines access rules? Who sets the terms of use? Under what conditions is reuse permitted, including automated reuse? Who can depublish content or change metadata? What are the priorities for further development? These questions determine whether research remains reproducible. Dependencies often arise 'invisibly', that is, not as technical disruptions, but through contractual terms, API restrictions, licensing models or proprietary formats.

Currently, the international scientific community is exposed to several risk areas simultaneously, which also reinforce one another. Which interactions do you consider particularly relevant?
KT: Geopolitics influences the framework conditions, economics influences access and incentives, and AI changes the speed and risk profile. As data becomes scarcer, the pressure to monetise it increases. When AI accesses this data, both its value and its vulnerability increase. At the same time, the system becomes more sensitive: even minor disruptions or manipulations can trigger major effects because automated analysis scales.

If political intervention goes as far as the deletion, restriction or reinterpretation of data, what is the key damage caused?
KT: In addition to the immediate loss or short-term disruption, the damage to trust within the scientific community is a key concern. If researchers have to expect that datasets are dependent on geopolitical or economic circumstances or political decisions, then the reliability of the entire scientific chain – from data collection, archiving and reanalysis right through to replication – is undermined. However, scientific work urgently requires stable references and traceable versions. If this becomes fragile, work processes suffer, and with them quality assurance. We must therefore build greater resilience into the infrastructures – that is, redundancies, mirroring or federated nodes, as the EOSC, for example, is already demonstrating. We also need clear responsibilities and documented processes for crisis situations.

PubMed is a particularly well-known example of concentration risks. What is systemically critical about such cases?
KT: PubMed is a central infrastructural hub for the life sciences. If such a dominant hub is lost or restricted, a painful gap first emerges, followed relatively quickly by a market for inferior substitute services, aggressive

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APPEARS

In this context, people often talk about 'geopolitical vulnerability' as the new normal. What is new about this? Haven't we been dependent on commercial providers for a long time?
KT: What is new is the combination of speed, scope and uncertainty. Decisions in third countries can alter access at short notice, whether through administrative measures, new legal interpretations or shifts in political priorities. For researchers and infrastructure operators, this means we can be less certain that a service, a dataset or an interface will still be available tomorrow under the same conditions as today. Planning becomes more difficult, even though research and infrastructure rely on continuity.

commercialisation or, in the worst case, fraud. It is like a company that is heavily dependent on a single major client. As long as everything remains stable, the concentration appears efficient. However, if this major client changes its terms or drops out, a risk immediately arises that cannot be compensated for in the short term, because alternatives first have to be established and integrated. Resilience in business and science is achieved through diversification and robust fallbacks. To ensure that we do not now build up duplicate structures in an uncoordinated manner, priorities must of course be set. The aim is not parallelism at any cost, but a secure capacity to act.

Let's talk about AI. With the introduction of AI into the working routines of the academic world, data also becomes a target. What is the crux of the so-called 'poisoning' problem?
KT: If training or reference data is deliberately manipulated, AI systems can systematically produce incorrect results. This is particularly critical when AI is used in sensitive areas, such as medical diagnostics. In addition, there is the contamination of scientific literature and data repositories through the mass production of low-quality or fraudulent content. This is not just a quality issue, but an integrity issue. It can undermine trust and validity.

What does this mean for infrastructure?
KT: Security-by-design is becoming central. We are talking here about risk analyses along the data pipeline, mechanisms for detecting manipulation, versioning and provenance, as well as incident response plans. This is not 'IT as a secondary task', but IT as a core task of scientific operations. If data forms the basis for decisions and models, integrity and traceability must be safeguarded both technically and organisationally.

At the ZBW, the quality of metadata for scientific purposes plays a major role. Why is quality so important – also in the context of data sovereignty?
KT: Metadata, which should always be machine-readable, provides the context for research. How was the data created? Under what conditions? What adjustments were made? Without clear provenance and contextual description, reliable re-use is difficult. This applies to both replication and AI training. FAIR principles provide guidance, but implementation requires standards, resources and commitment. Otherwise, FAIR remains an aspiration that does not hold up in practice.

It seems we need a whole package of measures for greater data sovereignty in Europe. What do you see as the common thread?
KT: Firstly: science is a global endeavour and we do not wish to abandon international cooperation in principle. Isolation is not a solution. But we need greater resilience through diversification. We require our own governance capabilities and reliable infrastructure chains. Europe must make dependencies visible, create alternatives and fallbacks, and design rules in such a way that controlled openness remains possible. Controlled openness here means that we protect the data in the EOSC – which is primarily a European infrastructure for researchers from the Member States – on the one hand, and on the other hand make it internationally compatible through negotiations with friendly countries, so that we can reach fair and binding agreements on data use. This does not correspond to the ideal of complete openness, but it is understandable and pragmatic from a science policy perspective.

What does data sovereignty as a governance programme mean in practice?
KT: Data sovereignty is first and foremost a question of decision-making rights. This gives rise to tasks such as joint governance models and clear responsibilities between Member States, the European Commission and institutions within the research system, which do not obscure dependencies. Contracts and standards must be designed in such a way that risks are not only noticed once access has been restricted.

What do you think of long-term funding?
KT: Yes, of course. That is fundamental! Infrastructure is a long-term undertaking. Resilience requires redundancy, mirroring, federated nodes, security, standards, staff and operations. Project-based approaches and temporary funding streams are not sufficient for this. If Europe views infrastructure as a strategic capability, funding must enable operations, security work and further development on a permanent basis.

How do you see the issue of dependencies and data sovereignty developing over the next few years?
KT: Data sovereignty is not a state that is achieved once and for all. Data sovereignty is an ongoing governance issue. It is crucial to continuously identify and assess dependencies, particularly through ongoing risk analyses, diversification of providers and technologies, and binding standards. What is important to me here is that data cannot be viewed in isolation from the infrastructure. The EOSC is one such central European infrastructure. As a trustworthy, FAIR-compliant research infrastructure provided by European providers, the EOSC makes a significant contribution to securing data sovereignty for researchers in Europe in the long term.

Thank you very much! ▬

Open Science in Europe

Klaus Tochtermann brings the perspective of information infrastructures to the EOSC leadership

On 1 July 2025, Klaus Tochtermann took up the post of President of the EOSC Association. As an organised community structure, the EOSC Association helps shape the implementation of the European Open Science Cloud (EOSC) and represents the interests of the scientific community in negotiations with the European Commission and the Member States. The organisation brings together over 250 member organisations. The EOSC President represents the EOSC Association externally and, together with the Board of Directors, shapes the priorities and positions within the European partnership surrounding the EOSC.

The European Open Science Cloud (EOSC) is the central and sovereign European research data infrastructure for science, the development of which is being supported with around €1 billion from funding programmes of the European Commission, the Member States and associated countries until 2030.

Klaus Tochtermann aims to firmly anchor the EOSC within the European Commission's 10th Framework Programme. He plans to expand dialogue with stakeholders from the European research community and to further develop the governance structures required for the operation and further development of the EOSC in such a way that all stakeholders remain adequately represented in the future. Tochtermann emphasises how important it is for the scientific community to have a strong voice in processes of change.

Klaus Tochtermann is a nationally and internationally recognised leader in the Open Science movement, with a focus on research data management. The ZBW Director is an expert in digital information infrastructures and Open Science and brings extensive experience in shaping the European Open Science Cloud. He has been closely involved in the development of the EOSC from the outset. Since 2015, he has played a key role in the two High Level Expert Groups on the European Open Science Cloud established by the European Commission, which have driven forward both the strategic foundations and the practical implementation steps of the EOSC.

"The European Open Science Cloud heralds a new era of collaboration between researchers and infrastructure operators within the European research system. As President, I wish to help ensure that Europe assumes a leading role in the global exchange of knowledge and research through a sustainable and sovereign EOSC," explained Tochtermann following his election on 27 May 2025 in Antwerp.

The presidency of the EOSC Association offers academic libraries the opportunity to help shape the European framework for Open Science from the perspective of libraries and information infrastructures. This enables libraries to systematically contribute their practical experience to governance and coordination processes. This strengthens the alignment of national and local services with European developments and makes it easier to translate common positions from the library and infrastructure landscape into European partnerships and programmes.

RECOMMENDED READING:

About the European Open Science Cloud (EOSC) Association:
www.eosc.eu

"TO ME, A RELIABLE LIBRARY…

…is one that provides impartial and readily accessible access to the latest research findings as well as to historical specialist literature."

HENNING MANSKE
Senior Developer, Digital Information Infrastructure Programme Area

COMMUNICATING OPEN SCIENCE

Pathways to the practice of economics

BU: LOD

A PhD student is preparing to submit a paper to a conference. The code is versioned, and the data consists of a mix of official statistics and her own surveys of sensitive corporate data. At her university's department, it is clear that traceability and reproducibility are important. However, it is unclear what can be shared openly, what must remain protected, and how both can be documented in such a way that other researchers can verify and reuse the results.

Such situations are the rule rather than the exception in economics, as a nationwide study by the ZBW in 2024 showed. Open Science is rarely a single step here, but rather a chain of decisions regarding data access, documentation, publication channels, replication packages, right through to the question of how transparency fits with legal or contractual constraints. It is precisely at this point that communication becomes an infrastructural issue. It translates principles into options for action, clarifies terminology, provides examples and creates formats in which researchers can make their own research results transparent.

The ZBW has been supporting this process for many years with a variety of information and communication formats that address different situations in everyday research and teaching. What this programme has achieved in 2025 is outlined below, focusing on key formats.

Open Science as a key focus of the Verein für Socialpolitik

Whilst the Verein für Socialpolitik has long been committed to evidence-based policy advice and access to research data in accordance with Open Science principles, the Chairman Klaus M. Schmidt began addressing the topic of Open Science at a comprehensive conceptual level for the first time from 2025 onwards. A new development in 2025 was that Open Science was, for the first time, established as a key focus area within the professional association "Verein für Socialpolitik" (VfS) itself. Consequently, in 2025 and 2026, the ZBW will supplement its own communication formats with its involvement within the VfS.

Under the chairmanship of Klaus M. Schmidt, the Verein für Socialpolitik put 'Open Science' on the agenda for 2025/26 and established a dedicated eight-member working group to coordinate activities and disseminate them across the wider economics community. For the ZBW, this integration into the professional association is an important step. Marianne Saam and Doreen Siegfried are working there with other experts on various aspects of Open Science within the economic research landscape.

MINI-GLOSSARY:

Terms explained briefly

- *Replication package:* Materials (code, documentation, data or access methods where applicable) that can be used to verify results.
- *Ex-post reproducibility check:* A retrospective check to determine whether published results can be reproduced using the materials provided.
- *Meta-study:* Analysis of numerous studies to identify patterns, heterogeneities or biases.

This resulted in a section on the VfS website featuring practical guidance from the ZBW's "Open Economics Guide" on how researchers can incorporate open practices into their day-to-day research. In addition, the working group collaboratively developed an explanatory video that defines Open Science as open, transparent and reproducible science, encompassing Open Access, Open Data and Open Source. It illustrates how transparency, reproducibility and open data make economic research comprehensible, verifiable and accessible. By the end of 2025, the video had been viewed 16,400 times.

The focus topic was accompanied by sessions organised by the Open Science Working Group at the VfS Annual Conference at the University of Cologne (14–17 September 2025). The workshop "Practical Guidance for Open Science in Your Research" with Levent Neyse, PhD, (WZB – Berlin Social Science Centre, DIW – German Institute for Economic Research, Berlin) and Lars Vilhuber, PhD, (Cornell University and American Economic Association) offered a clear introduction to the topic of Open Science.

The panel "Open Science – Increasing Research Transparency in Economics" on 15 September 2025 examined how transparency and reproducibility standards in economics have developed in recent years. The focus was on experiences with systematic reproducibility checks on submissions by international professional associations, as well as large-scale ex-post review initiatives for studies that have already been published. In addition, the panel discussed the insights provided by replication studies using robustness analyses and meta-analyses regarding patterns of result generation and selection in the publication process. Moderated by Marianne Saam (ZBW), Jörg Ankel-Peters (RWI – Leibniz Institute for Economic Research in Essen), Jan Marcus from Freie Universität Berlin, Severine Toussaert from the University of Oxford, and Lars Vilhuber, PhD, discussed practical examples from various institutional contexts as well as perspectives for the next steps – including typical hurdles, conflicting objectives and risks in implementation.

Open Science Magazine – Guidance and Best Practice Experiences

In 2025, the interview format played a central role in the ZBW's Open Science Magazine. A total of 16 interviews were published with representatives from the field of economic research in a wide variety of roles and at different stages of their careers. The spectrum ranged from Bettina Rockenbach, President of the Leopoldina, to Anna Popova, a PhD student at Ludwig Maximilian University of Munich. In this way, Open Science is not presented from a single perspective, but as a topic that affects science policy, research practice and early-career researchers in equal measure. As a communication tool of the ZBW, the magazine complements the ZBW's Open Science service portfolio in terms of both content and methodology, and supports the ongoing expansion of information and tools for the economics research community.

FACTS & FIGURES 2025

- 16 interviews in the Open Science Magazine
- 16,400 views of the VfS working group Open Science explanatory video by the end of the year
- more than 1,500 downloads of the Open Science slide deck via Zenodo (May–December 2025)
- 4 Coffee Lectures on Open Science Education (online)
- 50 participants at the Leibniz Open Science Day on 27 October 2025 in Berlin

Coffee Lectures on Open Science Education – Peer learning from universities and research institutes

In 2025, the ZBW continued the 'Coffee Lectures on Open Science Education' format, launched the previous year, as an English-language online series focused on economics and business research as well as related disciplines. The Coffee Lectures are a peer-to-peer event. They complement the information produced by the ZBW to facilitate peer-to-peer exchange on how Open Science practices can be successfully communicated. This communication can take place in university teaching, in the training of early-career researchers,

but also in collaborative formats. The series kicked off on 29 January 2025 with a presentation by Markus Herklotz, Ludwig Maximilian University of Munich, on the BERD Academy as an open-education initiative for research involving (unstructured) data in business, economics and related social sciences. This was followed on 25 February 2025 by "Teaching what we Practice – Open Science in Higher Education" with Meikel Neumann (née Soliman) from Leuphana University Lüneburg, focusing on integrating Open Science elements such as pre-registration, material and data sharing, and replication into teaching, thereby preparing students for changing research practices.

On 24 June 2025, "Open Source Software and Open Science: A Productive Pair" focused on the role of open software stacks in computer-assisted research, and Hans-Martin von Gaudecker from the University of Bonn discussed, using practical examples, how open-source tools can support the traceability of economic research. The year 2025 concluded on 9 December 2025 with a look at FORRT ("Building the Future of Open Inclusive, Rigorous, and Open Research with FORRT"). Flavio Azevedo from Utrecht University presented learning about Open Science as a global, inclusive training and resource ecosystem, ranging from curricula and replication infrastructures to educational games.

Leibniz Open Science Day 2025

Another highlight of 2025 was the second "Leibniz Open Science Day", held under the title "Better Science for Better Policies", which took place on 27 October 2025 in Berlin at the Leibniz Association's headquarters. The event was organised by the ZBW in collaboration with the German Institute for Economic Research (DIW Berlin), the Berlin Social Science Centre (WZB) and the RWI – Leibniz Institute for Economic Research.

In terms of content, the Open Science Day focused on meta-scientific approaches as a prerequisite for robust evidence in policy advice. Replications, meta-studies and many-analyst/many-designs approaches were discussed as tools for identifying heterogeneities and biases, strengthening methodological standards and increasing transparency.

The programme combined plenary sessions with parallel sessions and addressed both methodological foundations and specific fields of economic and social research, ranging from robustness in development economics and publication and reporting bias to questions of external and construct-valid generalisability. Johanna Rickne's (Stockholm University) keynote address used a replication case study to examine the relationship between evidence-based research and socially sensitive policy issues in the field of crime.

With institutional partners such as the Leibniz Association, the Institute for Replication (I4R), Lab2 – MetaLab for Better Science, the RWI Policy Lab Climate Change, Development & Migration and BSoE Insights, Open Science Day 2025 was also positioned as a networking and knowledge transfer platform that places Open Science quality issues within the context of 'Better Policies', thereby strengthening the discussion's relevance to the economic and social science communities as well as to evidence-based policy advice.

Podcast "The Future is Open Science"

The podcast "The Future is Open Science", which the ZBW has been running since 2020, was a key tool in 2025 for explaining and contextualising Open Science in the economic sciences, providing background information and bringing it to the attention of the academic community. In doing so, the podcast directly supports the ZBW's strategy of accompanying the Open Science transformation within the economics communities and providing guidance as a point of contact.

In terms of content, the podcast episodes in 2025 focused specifically on topics that are equally relevant to research practice and debates on science policy. One key focus was on the integrity of the scientific publication system. This included, for example, organised forms of scientific fraud, such as through so-called "paper mills", and the incentive structures within the scientific system. Another area of focus concerned new ways of funding academic publishing. Diethard Tautz and Konrad Förstner presented and dis-

cussed the Leopoldina paper on the funding of Diamond Open Access, which had just been published at the time. The European research data infrastructure was also a key focus. The podcast focused on the European Open Science Cloud and, in conversation with Klaus Tochtermann, examined the role it plays in the exchange, reuse and long-term availability of research data in Europe.

Open Economics Guide: A Guide to Open ResearchThe ZBW's "Open Economics Guide" is a practical guide for researchers in the field of economics who wish to integrate Open Science into their work. It brings together knowledge, tools and concrete steps to take. It covers everything from fundamental questions such as "What does Open Science mean in this discipline?" to practical implementation in day-to-day project work, for example regarding open access, the handling of research data or the sharing of code. The aim of the "Open Economics Guide" is to support transparency, reproducibility and knowledge transfer in such a way that researchers can find concrete guidance on implementing Open Science practices in economic research and teaching within their day-to-day research activities.

A key focus in 2025 was the development of a clear introduction to the topic of Open Science. In May 2025, the ZBW published the slide deck "An introduction to the topic of Open Science for researchers in business studies and economics" as an open educational resource (OER) on Zenodo. This ensures that the content of the "Open Economics Guide" is not only documented in a searchable format, but also made permanently available for citation and facilitated for reuse in academic workflows. At the invitation of several universities, Dr Guido Scherp, Head of the Open Science Transfer Department, also delivered information sessions based on this material.

The presentation is intended for reuse by lecturers and offers a concise, practical introduction for PhD students and researchers in the economic sciences. It covers the fundamentals of Open Science and guides participants through typical questions and decisions based on the key components of Open Access, Open Data and Open Code. The material is designed in such a way that it can be used either as a single 90-minute session or divided into shorter modules. This makes it suitable for a variety of teaching contexts, ranging from research training groups and methodology courses to workshops and in-house training programmes.

The strength of the resource lies not only in its content, but in the consistent support provided for sharing it. The slide notes provide presenters with guidance on delivery, and numerous slides refer to further resources in the 'Open Economics Guide', turning an introduction into a gateway to more in-depth materials. A PDF version with clickable links can also be used as a handout. This facilitates use even when participants wish to review the content independently or when lecturers wish to integrate the material into existing courses.

The success of this initiative became quantitatively apparent for the first time in 2025. The slide set, published via Zenodo, was downloaded more than 1,500 times between May and December 2025. This is a measurable indication of the demand for and compatibility of reusable materials on Open Science. ▬

"This ensures that the content of the "Open Economics Guide" is not only documented in a searchable format, but also made permanently available for citation..."

RECOMMENDED LINKS:

The Open Economics Guide:
openeconomics.zbw.eu

To the Open Science Magazine:
open-science-future.zbw.eu/en

To the podcast“The Future is Open Science”:
podcast.zbw.eu/fos

To the Coffee Lectures on Open Science Education:
openeconomics.zbw.eu/coffee-lectures-on-open-science-education

To the video “Open Science in Economics”:
zbw.to/YEopg

EXPEDITION

Open Science Land

The ZBW is strengthening Open Science within the business research community

In 2025, the ZBW launched 'Expedition Open Science Land', a key initiative in open science communication for business research. The project addresses discipline-specific challenges and employs a methodology based on co-creation with business researchers. The result is a guide that maps open science practices throughout the research process, highlights decision-making points and identifies practical pathways.

Targeted expansion of Open Science communication in business research

In business research, there is a growing demand to present results in such a way that they are robust, traceable and compatible with further research, practice and policy. At the same time, there is increasing discussion within the discipline – as in other areas of management and organisational research – regarding transparency, reproducibility and appropriate standards. Against this backdrop, Open Science in business research is less a matter of individual measures than of practical feasibility throughout the research process, from planning and data collection through documentation to publication and re-use.

In 2025, the ZBW specifically expanded its Open Science communication in business research with the aim of not only explaining Open Science but also making it usable within the discipline. Central to this was the ZBW's role as a point of contact for researchers in the economic sciences. Information and guidance are to be made available in such a way that they support concrete decisions in research and publication practice.

The "Expedition Open Science Land" project

The focus in 2025 was on the "Expedition Open Science Land" project, a communication and knowledge transfer format that makes Open Science practices accessible through the metaphor of a "journey". The accompanying guidebook outlines steps, decisions and typical stumbling blocks along the research process, deliberately not as a traditional textbook, but as a low-threshold resource designed to spark discussions within the academic community and provide guidance.

Co-creation as a method

The project is designed as a peer-to-peer approach. This means that content and tone should be chosen in such a way that they resonate with the business research community and explicitly address typical objections or hurdles rather than glossing over them. In this context, co-creation is useful because key issues in business research are highly context-dependent, for example depending on the type of data—such as company data, confidential data, proprietary data sources—methodological tradition, publication culture, or requirements arising from collaborations with companies. Co-creation helps to address these differences at an early stage and formulate recommendations in such a way that they are understood as practical options rather than abstract norms.

Furthermore, recent findings from PR research and science communication research show that co-creation in the communication work of organisations serves to increase the relevance, comprehensibility and acceptance of messages. By developing content and strategies together with their stakeholders, organisations generate meanings that gain legitimacy through the participation of peers from the intended target group. Empirical findings also show that dialogue-based processes foster trust and engagement, particularly where established structures for mutual resonance are in place. Furthermore, empirical studies in science communication research demonstrate that jointly developed narratives are accepted more sustainably. Active participation has been shown to reinforce perceptions of goodwill and integrity. The collaboratively developed guide "Expedition Open Science Land" thus focuses on a joint learning and development process with the business school community.

Open Science as a set of paths and options

The guide addresses the points at which business researchers typically make decisions and experience conflicting goals: transparency versus effort, openness versus legal/contractual limits, standardisation versus discipline-specific requirements. It describes Open Science as a set of approaches and options that may vary depending on the project context. In terms of content, it particularly emphasises transparency and traceability as a response to demands for robust results and to criticism regarding a lack of reproducibility. Furthermore, it addresses the disclosure of data and methods as a lever for re-use and integrity, noting that openness in practice also encompasses graduated solutions. Furthermore, "Expedition Open Science Land" addresses open publication formats as a bridge between science and practice, which is particularly relevant for an application-oriented discipline such as business research. To complement the book, the project provides links to further information, practical recommendations, as well as materials and downloads on the website expedition-open-science.org.

TIP:

Factsheet "Expedition Open Science Land"

- **Authors:** Marko Sarstedt, Doreen Siegfried, Meikel Neumann, Susanne J. Adler, Oliver Genschow, Monika Imschloss
- **Languages:** German and English
- **DOIs (Zenodo)**: German: 10.5281/zenodo.18384596; English: 10.5281/zenodo.18384735

LORI – A framework for transparent rights information at the object level

A publication's rights at a glance

The management of usage rights for digital publications is complex. The legal status of an individual digital object often cannot be deduced solely from the overarching licence or package context. Furthermore, rights situations can change over time. With the Library of Rights (LORI), the ZBW has developed a system-independent solution for centrally recording and managing rights information at the level of individual digital objects.

Since its launch at the ZBW in June 2025, LORI has thus delivered benefits for various stakeholders: it enables users to be clearly informed as to whether and under what conditions a publication is accessible and how it may be used. At the same time, LORI enables the relevant subject and repository teams to maintain rights consistently, manage them over time and document changes transparently, without having to maintain the same information in multiple systems in parallel. It also provides a reliable foundation for the operation and further development of the digital hosting infrastructure at the ZBW, as serving systems can query rights information uniformly in one place, rather than implementing their own, divergent logic.

By deliberately separating rights management from presentation or workflow systems, even complex and time-dependent rights situations can be mapped, regardless of which repository at the ZBW an object is stored in or in which process it is used. Rights are documented in a structured manner, assigned validity periods and linked to clearly defined access and usage options.

The following rights map illustrates the rights of a publication at a glance.

Rights card – A quick overview of publication rights

AI Fantasies: The Generative Growth Frenzy
Max Wunder & Luna Traum; 2025

Freely accessible

Valid: Since 14 April 2025
History: Until 31 December 2024: limited access

Who has access?

What is allowed?

Basis:
Licence Agreement

- Recorded in the rights management system
- Questions or suggestions for corrections rights-enquiry@zbw.eu

Rights status:
- Freely accessible
- Restricted access
- Not accessible

Validity:
Time period and any changes, e. g. moving wall/early release

Access:
- Everyone
- Registered users only
- Only within certain organisations

Terms of use:
- Read
- Download
- Reuse
- Text and Data Mining

Basis:
Briefly state the reason for the rights status e.g. licence agreement, open content licence, copyright exception, special agreement

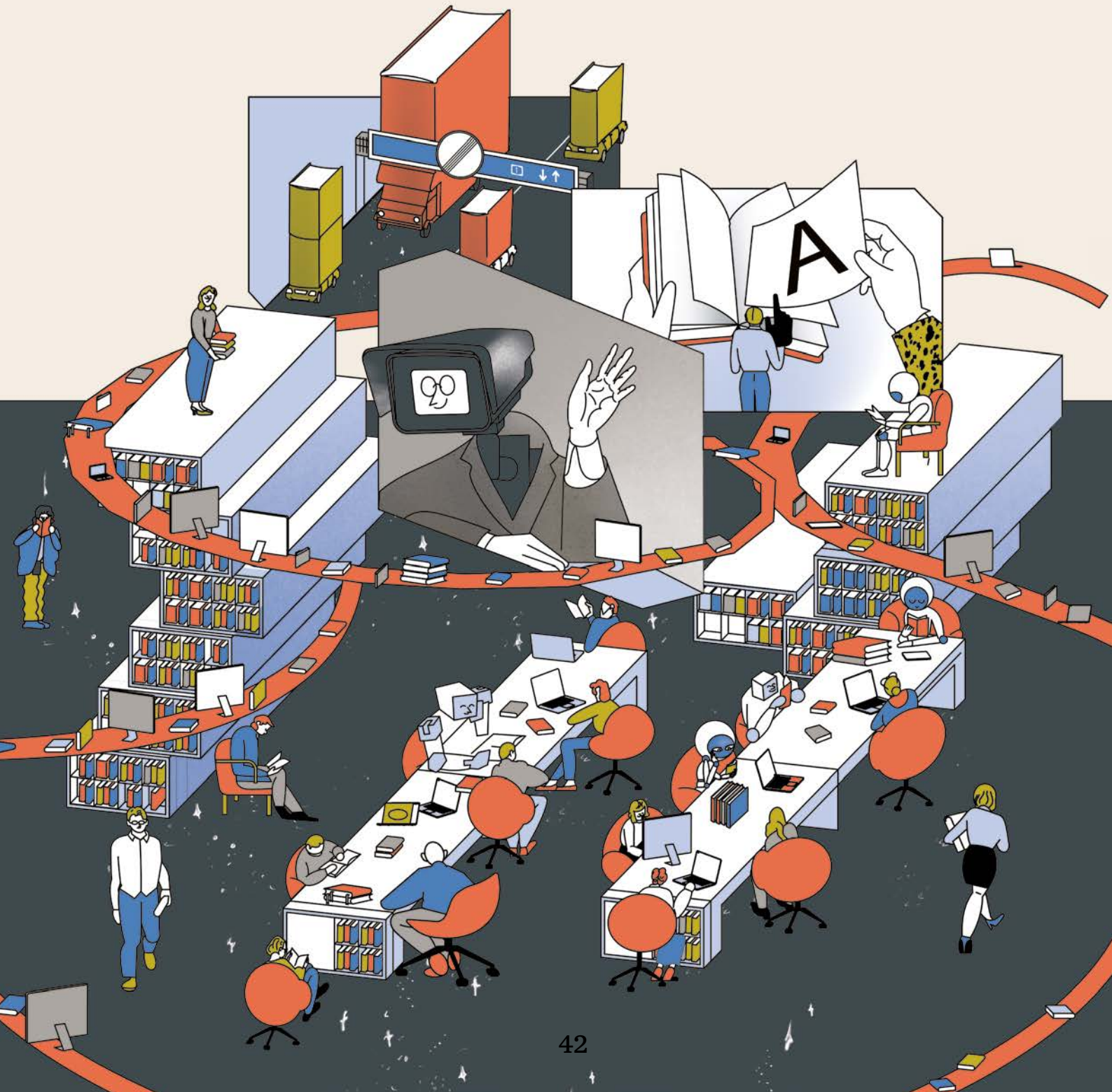
"TO ME, A RELIABLE LIBRARY:...

...is one that secures the broadest possible long-term usage rights for all licensed resources."

NORBERT NECKRITZ
Licence Management, Collection Development & Metadata Programme Area

Networked Open Library 2035

Focus on information access and information organisation



In 2025, the ZBW launched a concept entitled "Networked Open Library 2035". In it, the ZBW focuses on key themes of its library work planning and translates them into an infrastructure agenda. Among other things, it addresses re-use rights, access control, data sovereignty, metadata pipelines and transparent search and analysis environments.

In many areas, the extent to which research can operate smoothly is determined behind the scenes of digital information provision. It is about the interplay of licence terms, machine-readable rights information, the quality of structured metadata, and secure search and analysis environments whose functioning is transparent. In order to effectively enrich, consolidate and link knowledge resources, the underlying data must be designed to be machine-readable and interoperable – a fundamental prerequisite for Open Science and AI applications.

For the 'Networked Open Library 2035' concept, the ZBW is analysing the requirements for a comprehensive and sustainable information provision for the research community in the context of the digitisation of science, and is deriving a forward-looking work programme from this. In particular, the areas of action 'information access' and 'information organisation' will serve as cornerstones for the reorientation of services in the future. By focusing on the core tasks of library value creation, systematic, user-oriented service development and dynamic adaptation to trends in the digital knowledge landscape are optimised.

Five selected key points are highlighted below. They do not represent the entire concept, but they illustrate the prerequisites for the interlinking of information resources particularly clearly and explain how rights, metadata and services interrelate and why this is precisely where the infrastructural leverage lies.

1) Enabling reuse: read-only access is not enough
The ZBW takes the concept of an interconnected open library as its starting point and consistently expands upon the notion of 'access'. In addition to fast, location-independent access to articles, data and research results, the ZBW considers it important to structure usage rights in such a way as to enable subsequent library and academic processes. To this end, for example, the use of full texts should be permitted in order to train AI processes for automated content indexing. Similarly, text mining should be allowed to identify complex topics or connections within texts.

With this in mind, the ZBW wishes to further develop the licence terms in collaboration with publishers and other stakeholders in an appropriate manner, whether for location-independent use, comprehensive archiving, the standardisation of a heterogeneous rights landscape, or for the integration of extensive text and data mining rights, all documented in a machine-readable format. The aim is to achieve a high level of detail in this development. Where legally and technically feasible, this should also involve legal clarification or optimisation and machine-readable documentation of the rights status for publication elements that can be reused individually, such as abstracts, tables or diagrams.

For the ZBW negotiating team, this means that by incorporating re-usability – i.e. mining, training and machine analysis – the way is paved for fully exploiting the potential of digital and AI-supported indexing and research. This shifts the focus of the negotiations: the emphasis is no longer solely on access rights for manual access, but increasingly also on rights for automated access and data-driven research approaches.

DID YOU KNOW?

- According to the UNESCO Science Report (2021), the number of researchers worldwide grew almost three times as fast (+13.7 per cent) as the global population (+4.6 per cent) between 2014 and 2018. In 2018, there were around 9 million researchers worldwide. Furthermore, the annual number of scientific publications worldwide rose by 21 per cent between 2015 and 2019.
- According to Statista, Germany had 106 AI master's degree programmes in 2020. In the UK, there were 657 at that time, and in the US, 978.
- Turning to the topic of big data, IDC & Statista predict that the total volume of data created, captured, copied and consumed worldwide will rise from 183 zettabytes in 2025 to more than 390 zettabytes by 2028.
- According to a survey conducted by the Max Planck Institute for Innovation and Competition in 2024 of 6,215 employees at the Max Planck Society and the Fraunhofer Society on how they use AI tools in their work, it emerged that around two-fifths are very familiar with AI tools and use them frequently. Almost a quarter used AI tools daily or more frequently in 2024, with younger researchers tending to use AI more often than older ones.

2) Rights are themselves becoming an object of infrastructure
A second point follows logically from this: if re-use rights are crucial, they must be managed systematically. With its concept of a networked open library, the ZBW explicitly makes rights and licence information an integral part of its infrastructure. Two specific elements are central here: Component 1 is the Library of Rights (LORI), a database that documents the licensing status of electronic publications at the individual title level and ensures legally compliant access control. Component 2 is LAS:eR – a service developed by several academic libraries and institutions under the leadership of the University Library Centre of North Rhine-Westphalia (hbz) – which enables the management of complex and dynamic usage rights. Among other things, consortium memberships, licence terms and contract texts are documented there. LAS:eR forms the basis for LORI.

The ZBW links this topic to its role in supra-regional provision. It currently negotiates and manages more than 50 consortium licences and, as the lead negotiator, takes on consortium administration and the organisation of access control. Thus, 'rights management' is not viewed as a by-product, but as a service intended to relieve the burden on other institutions whilst simultaneously ensuring technical interoperability.

„AI-supported indexing and analysis of texts takes place not only within infrastructures, but increasingly also by researchers themselves. It is only by integrating access, rights and metadata that such research can be carried out and transparently documented."

Professor Marianne Saam
Head of the Open Economics Programme Area

3) Data sovereignty is becoming a supply issue
However, the implementation of networked digital library work must also take into account an important development within publishing houses. What are we talking about? Major academic publishers are increasingly carrying out usage analyses to identify researchers and examine their activities. This data is also frequently made available to third parties. In response, the ZBW plans to contribute to standards and tools for the transparent handling of usage traces and to incorporate corresponding agreements into contract negotiations. This means that data protection is treated not merely as a compliance issue, but as an integral part of how digital provision is organised.

For the academic community, this means: as soon as usage traces themselves become the subject of negotiations, the issue is no longer whether tracking takes place, but rather what data is collected, what it is used for, how transparently this happens, and who has control over it.

4) Metadata is planned as a pipeline – open and reusable
In the field of information organisation, the ZBW will in future provide an infrastructural response to two trends: on the one hand, the heterogeneity of resources is increasing – including publications, research data, open educational resources, research software and nanopublications – and, on the other hand, the importance of the automated processing of information resources is growing. This results in a growing need for high-quality, standardised and open metadata as the basis for discoverability and reusability.

WHAT IS A NANOPUBLICATION?

A method of publishing very small research findings so that they can be cited and traced individually. A nanopublication contains a specific statement or piece of data, along with details of its origin. Nanopublications can publish content that would otherwise often remain unpublished, such as individual datasets, hypotheses, or negative results, even without an accompanying research article.

Further information:
https://www.nanopub.org

The 'MetaFor' metadata infrastructure, currently under development, is intended to create a new, modular infrastructure that generates metadata on a larger scale and makes it available for reuse. The aim is to achieve extensive automation of extraction, processing and storage. Existing ZBW systems for machine processing, such as Metamat or the AutoSE service, are to be integrated into the new structure.

In addition, there will be automation services for formal cataloguing and named entity identification, as well as automated methods for curating and maintaining knowledge organisation systems such as the Standard Thesaurus for Economics (STW). Explicit openness is key. The metadata produced is to be made openly available for reuse. Furthermore, software components are to be published as open source wherever possible, and findings shared with interested communities. What makes this exciting for the ZBW is that it is not individual metadata projects that are being addressed, but rather the combination of a pipeline approach, automation, community reuse and an open-source orientation forms a strategic framework to make the achievements of digital transformation as reusable as possible and to interlink information resources.

5) Search is defined as a neutral, transparent space for analysis and development
When it comes to search, the concept of the networked digital library is based on neutrality and transparency. For the ZBW subject portal EconBiz, this means that EconBiz enables a neutral search free from commercial interests and transparently discloses the algorithms used. At the same time, the machine-readable and networked metadata generated in the

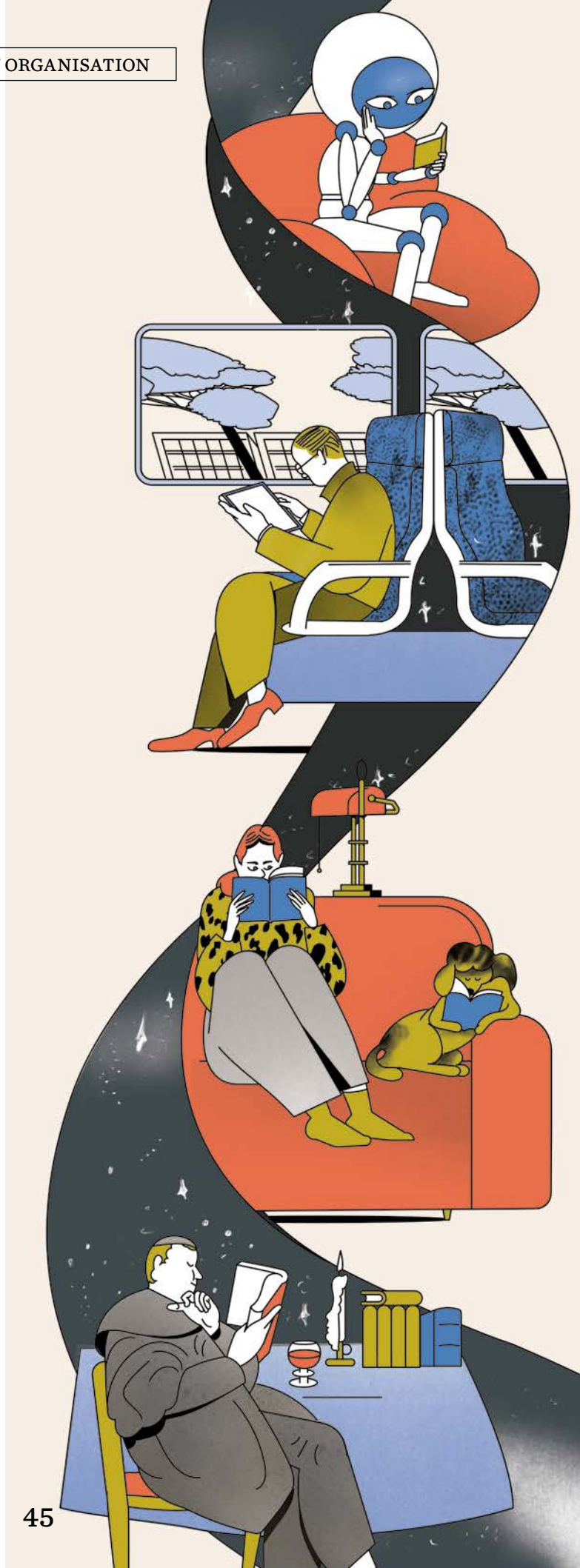
MetaFor project is to be enriched with additional information from automated processes. The aim is to further develop retrieval towards transparent, customisable ranking algorithms and context- and user-dependent search.

The move, which goes beyond simply integrating AI into the search function, is explicitly outlined in the 'Networked Open Library 2035' concept. In future, EconBiz is intended not only to provide a search interface but also, where possible, to make available the underlying data pool – such as training data for language models or the data foundation of a knowledge graph. Furthermore, the EconBiz research portal is described as an environment for developing prototypes of open, transparent and reusable LLMs and knowledge graphs that use full-text academic articles and metadata as a basis for information and training.

> "We want to organise digital information provision in such a way that it functions reliably in the day-to-day work of economic research. Even where it is not visible: in terms of rights, metadata and the data flows from which services are created."

Susanne Schmucker
Head of the Collection Development & Metadata Programme Area

What is new about the "Networked Open Library 2035" concept?
The "Networked Open Library 2035" concept marks a shift in the ZBW's role. As a research-led academic library, the ZBW will in future see itself not only as a place of access to information, but increasingly as a key player in the development and provision of metadata infrastructures. The strategic alignment of library services with the key areas of information access and information organisation brings into focus those issues that are crucial for sustainable access to specialist economic information – from licences, rights and metadata through to data protection and search. This focus makes it easier to concentrate scarce resources specifically on high-quality, user-centred services. ▬



From name to identity

RELATE links articles to reliable personal data

Is Min Kim the same person as Kim, M. in a journal article? And is Li, Jun identical to Li, J. simply because the name and initial match? When metadata becomes unclear, this means that literature cannot be reliably found for research purposes and data becomes unsuitable for reuse. The ZBW therefore launched the RELATE project in 2025. Agnes Grützner and Kirsten Jeude, the two project managers for RELATE, explain what lies behind this acronym.

If you were to explain RELATE to someone with a basic understanding of library work: what is the core of the project?
AG: RELATE stands for REcord Linking Assistant for Titles and Entities and helps us to uniquely identify authors in article metadata that we cannot enrich in our union catalogue. A name in the record is linked to a matching authority record from the Gemeinsame Normdatei (GND). In addition, we record the role in which a person is involved, for example as an author or as an editor. This makes the metadata more meaningful and allows it to be put to better use in various application scenarios.

Why has this unambiguity been so difficult to achieve for journal articles to date?
KJ: Article metadata can be recorded manually to a certain extent. But in relation to the output of the journals indexed at the ZBW, this is only part of the solution. We obtain much of the article metadata from publishers. This data is sufficient for use in publisher portals, but does not meet our quality standards, as our metadata does not serve the sole purpose of discoverability. There is currently no automated way to integrate this reused metadata into the network environment where standardised data links are established. RELATE is designed to bridge this gap and enable linking with GND records – both manually and automatically.

What are the benefits of a standard data link for people conducting research?
AG: Three things are key. Firstly, a person's publications can be reliably grouped together, even if names are spelled differently. Secondly, confusion is reduced when several people share the same name. Thirdly, it becomes possible to analyse relationships, such as co-author networks.

What are the typical stumbling blocks when it comes to disambiguating personal names in practice? And how do you ultimately measure the quality of RELATE?KJ: In order to unambiguously assign publications to the correct person, a wide range of information must be taken into account, such as their affiliation, their specific field of expertise, and biographical data available from various sources: primarily the publication itself, but also authority databases such as the GND or ORCID, and other online sources. RELATE aims to provide colleagues with optimal support in their decision-making process YES! The fact that an idea, so that the enrichment made possible for this collection is always correct, straightforward to carry out and speeds up the workflow. And, in a later development phase, this will also be achieved through AI-generated suggestions.

What is the final result that is saved and shared?
KJ: The result is a concordance, i.e. a link between a person's name in a publication – identified by the publication ID, such as a DOI or an internal EconBiz ID – and the ID of a person authority record from the GND, supplemented by the person's role in the work. This creates a dataset that can be used both to enrich the publication data in EconBiz and outside the ZBW.

'Outside' means: others can adopt these links?
AG: Yes, exactly. That is the aim. If the mappings are made openly available, other institutions can build on them, for example for their own search services, data enrichment or research infrastructures. The openness of the ZBW's work results is a key priority for us and is practised across many of our areas of work.

Thank you!

Write your best essay

Strong demand in 2025*

6,400
Print

1,341
Downloads

***Print (GER 5,120 / EN 1,280) + recorded downloads (GER: 1.016 / EN: 325)**
The new edition of EN (Dec 2025) has not yet been taken into account. The actual reach of the downloads is significantly higher due to local sharing.

ZBW researches structures of digital science

Findings from Web Science and Information Profiling and Retrieval

The research areas 'Web Science', led by Professor Isabella Peters, and 'Information Profiling and Retrieval', led by Professor Ralf Krestel, investigate how people use information in digital environments and how research-relevant content, such as academic publications, can be reliably found and accessed. The focus is on both the interactions between science, media and digital technologies, and AI-supported methods for processing, analysing and presenting information in an understandable way. From this research spectrum, three research findings from the year 2025 are presented below.

What is the value of Open Science?
Research findings from the transnational VOICES project

How accessible are scientific publications to the public? And who decides on openness? Crises such as the COVID-19 pandemic have highlighted just how much access to scientific publications depends on whether content is freely available and how well it is communicated. The VOICES project (Value of Openness, Inclusion, Communication, and Engagement for Science in a Post-Pandemic World) investigated how Open Science practices developed during the pandemic and whether they contributed to a more equitable and inclusive science. The focus was not only on publications, but also on science communication and societal impact. A transnational team, including the ZBW's Web Science Working Group led by Prof. Dr Isabella Peters, analysed these developments in Brazil, Germany, Canada and the United Kingdom. The results were published in 2025.

The pandemic accelerated open access. However, the opening up of access to scientific information varied depending on the country, institution and subject area, and thus remained unevenly distributed. The VOICES project also showed that Open Access was frequently understood as a public good, but that equity and inclusion in the research process were not consistently taken into account. Openness accelerated the dissemination of findings, but did not automatically lead to broader participation in knowledge production.

Preprints played an important role in making research findings available quickly during the period under review, but they also created a tension between speed and reliability in media coverage. Without peer review, it remained difficult to assess scientific quality; a lack of tools and framework conditions made responsible use difficult; and interest in preprints waned as the pandemic progressed.

At the same time, a divide between Open Science and science communication became apparent. Publications released as open access remained difficult for many people to access because they were written in technical language and presented in a way that was not easily accessible. Open access alone was therefore insufficient for engaging with societal stakeholders on scientific matters. The lessons learnt can therefore be summarised as follows: additional formats and collaborations are needed to make research understandable and to explain its benefits to society in a way that is easy to grasp.

Finally, VOICES highlighted the fragility of pandemic-driven initiatives to open up science. As the crisis subsided, many scientific papers returned behind paywalls. This points to underlying structural issues, in particular the lack of sustainable business models and the importance of durable, stable infrastructures for the scientific publishing system, from which society can also benefit in the long term. Overall, the project made it clear that, for Open Science to have a long-term impact, structural reforms are needed alongside technical solutions, as well as a stronger focus on equitable participation, diversity and inclusion in the consumption and production of knowledge.

Economics vs. Science: ROARA analyses conflicts in research evaluation
Project partners to launch joint analysis of conflicting objectives in research evaluation in 2025

As the central currency in the scientific ecosystem, publications disseminate research findings and influence careers, for example in relation to professorships or funding. With digitalisation, Open Access is challenging paywalls, and funders and institutions are increasingly demanding free access. Many publishers are therefore shifting the costs from reading to publishing: authors sometimes pay several thousand euros per article.

The ROARA project – Repercussions of Open Access on Research Assessment – analyses where economic and scientific interests collide. This can be the case, for example, when publishers publish more to increase revenue but, in doing so, forgo adequate quality control. These conflicts and their impact on research assessment are being comprehensively investigated in this project.

The interdisciplinary project is led by Prof. Dr Isabella Peters from the ZBW and is funded by the Volkswagen Foundation for four years. The team from Bielefeld University and the team from the University of Ottawa (Canada) bring extensive experience in mixed-methods research in the fields of scientific communication and bibliometrics. The ROARA team thus combines disciplinary perspectives from the fields of bibliometrics, library and information science, web science, economics and the sociology of science.

In 2025, the project partners came together for the first kick-off meeting in Kiel. There, the key work packages, interfaces and coordination formats for the coming four years of the project were defined. The meeting marked the operational starting point for the collaboration between the ZBW, Bielefeld University and the University of Ottawa.

When the technology behind AI studies becomes visible
Systematically cataloguing computing infrastructure in AI publications

Many academic AI studies can only be properly contextualised or replicated if, in addition to methodology and data, the technical framework is also known. This is particularly true of work in the field of natural language processing. Here, models are trained and then tested, for example for translation, text summarisation or dialogue systems. The computing infrastructure used plays a crucial role in these experiments. Although such details are frequently included in publications, they are often scattered throughout the body text and written in different ways. This makes them difficult to find, hard to compare and rarely directly machine-readable. This hinders reproducibility, fair comparisons between studies and a realistic assessment of resource requirements.

This is precisely where the 'Information Profiling and Retrieval' research group, led by Prof. Dr Ralf Krestel, came in. The aim was to extract infrastructure details from scientific texts in such a way that they are automatically recognised, structured and made usable for research and analysis. This is relevant because, firstly, it can improve the traceability of results; secondly, comparisons between models and studies can be made on a more transparent basis; and thirdly, information systems will in future be able to index publications according to technical parameters, such as the hardware or software environment used.

The research group's work focuses on various aspects. In the first step, SH-NER (Software Hardware Named Entity Recognition) was used to create a dataset on which automatic methods can be trained and evaluated. The results show that specially trained models can reliably recognise infrastructure details in NLP papers. General large language models without targeted adaptation achieve significantly weaker results. In a second step, the ZBW research group demonstrated, using the Infrastructure Knowledge Graph (InfraKG), how this information can be converted into a usable knowledge resource on a large scale. InfraKG is a knowledge graph that automatically extracts, standardises and links infrastructure details from numerous publications. This creates a structured 'database' in which technical framework conditions can be specifically searched for and evaluated.

Both contributions bridge the gap between scientific full text and machine-readable research information, thereby enabling progress in information science. Infrastructure data is indexed as independent contextual information extracted from texts. This opens up new possibilities for research, monitoring and analysis, for example, to visualise developments in software stacks or hardware generations over time, or to filter publications according to comparable technical conditions.

SEE PUBLICATIONS:

- Anjum, A., Maqbool, N., & Krestel, R. (2025, September). Beyond Methods and Datasets Entities: Introducing SH-NER for Hardware and Software Entity Recognition in Scientific Text. In Proceedings of the 15th International Conference on Recent Advances in Natural Language Processing Natural Language Processing in the Generative AI Era (pp. 85–94).
- Anjum, A., Krestel, R., Maqbool, K., & Afzal, M. M. (2025). InfraKG: Extracting and Structuring Infrastructure Entities from Scientific Articles. In International Conference on Asian Digital Libraries (pp. 185-202). Singapore: Springer Nature Singapore.

*From the ZBW to the **EOSC***

ZBW creates research data infrastructures that are interoperable at European level

The European Open Science Cloud (EOSC) aims to make research data in Europe more discoverable and usable by linking existing services via common rules and technical interfaces. The ZBW is working on this interconnection. As part of the National Research Data Infrastructure (NFDI), it develops and operates components that make research data from the economic sciences visible across Europe, thereby demonstrating how national infrastructure work can be translated into the European federation.

The EOSC is based on a federated model. Data remains at its point of origin and becomes visible and usable across Europe through shared standards, interfaces and persistent identifiers. This approach guides the ZBW's actions. As an infrastructure provider, it organises access to economic literature and is increasingly applying this principle to research data as well.

Within the framework of the NFDI, the ZBW is implementing the provision of this data in the EOSC in line with clearly defined use cases. It demonstrates how national infrastructure components can be integrated into the European infrastructure. By 2025, the ZBW will have established the technical and organisational foundations for this. Data will be described in a standardised manner, assigned stable identifiers and made discoverable across the board.

NFDI as a national framework
The NFDI is the national framework for the development of research data infrastructures in Germany. It operates through subject-specific consortia that gather requirements from their communities and translate them into concrete offerings. In the economic sciences, these are BERD@NFDI and NFDI4Society. In both subject-specific consortia, the ZBW is the central infrastructure partner, supporting developments since the start-up phase and implementing them on an ongoing basis. As an infrastructure partner, it contributes its technical expertise holistically, translates subject-specific requirements into concrete software and service development, and ensures reliable operation.

A research data repository compatible with European standards
The focus in 2025 was on a use case from the BERD consortium that demonstrates how NFDI work feeds into the EOSC: the operation of the BERD Data Portal for the business research community. Here, business researchers can store, publish and share their data with their community. A key component is the assignment of DOIs, which make datasets citable and link them to publications.

In terms of content, the Data Portal addresses specific needs within the economic sciences, particularly in areas where data is not available in traditional tabular formats. These include, for example, text-based collections and other unstructured data sets. In addition, data collections from other sources are curated and made available in such a way that they can be searched for and accessed by the specialist community in one central loc —a significant simplification in research practice. The Data Portal thus supports the discovery, classification and use of data.

Why 'data description' is infrastructure work
Whether data can be found and used depends heavily on how it is described. Researchers themselves have the best insight into this. That is why, in 2025, work on so-called metadata was a central part of infrastructure work.

The ZBW addresses this issue in two ways. Firstly, there is the question of usability. Secondly, quality assurance prior to publication plays a key role. Before a dataset is published, so-called data stewards check the completeness and basic quality of the information. In addition, in 2025 the ZBW gathered systematic feedback from practitioners through extensive usability studies.

The focus of the ZBW's work here is therefore on bringing together technology and impact. After all, European discoverability is not achieved solely through rules and standards, but also by describing data in such a way that it can be used in the long term and by machines – even outside one's own portal.

Connection to the EOSC not through relocation, but through interoperability

The path taken by the NFDI as a national contribution to the establishment of a European data space for research data follows the federated principle of the EOSC. For example, the datasets remain in the BERD Data Portal, the central repository of BERD@NFDI. They become visible across Europe by feeding their descriptions into overarching search and discovery systems. Technically, this is achieved via services that consolidate descriptive metadata from numerous sources. The European platform OpenAIRE plays a central role in the EOSC's search contexts because it retrieves metadata from repositories and bundles it into a unified search index.

For ZBW, this means that research data metadata must be provided in suitable formats and interfaces implemented in such a way that collection functions reliably. The contribution to the EOSC thus lies in interoperability, achieved through clear data descriptions, reliable technical access and traceable mappings between local and cross-platform formats.

Sustainable infrastructures underpin the EOSC

For the EOSC to function as a federated research data infrastructure, different systems must work together on a common level. This creates a typical area of tension. Local systems often provide very detailed data descriptions, whereas at the European level, standardisation across many sources is required to enable a joint search. This may mean that not every piece of information is visible in the same way everywhere.

This is precisely where part of the ZBW's key work lies. Interoperability does not arise automatically, but through the translation of subject-matter logic into technically agreed standards. In other words, in order to put European objectives into practice, we need not only permanently operated platforms and services, but also standards, binding interfaces and quality processes.

Greater visibility, less duplication of effort, better cooperation

The impact of the EOSC connection is evident on several levels. For users in Europe, datasets become discoverable via cross-platform search interfaces, even if the BERD Data Portal, developed by ZBW's software developers, was not previously known to them. For researchers, publishing data via the repository means greater visibility without having to store datasets in additional systems to increase re-use. And for the overall system, the technical integration creates robust working relationships between services and teams.

The connection of the BERD Data Portal to the EOSC is also significant because it serves as a pilot for a replicable approach, namely the connection of research data repositories to the EOSC or other discovery systems. In doing so, the ZBW fulfils a dual function. It brings its own expertise and services into the European context and provides a procedural model that other institutions can adopt.

Guiding principle: FAIR – only robust when the right infrastructure is in place

The FAIR principles form the guiding framework for handling research data. The aim is to ensure that data can also be processed by digital services. Crucially, FAIR does not come about simply because researchers 'describe data well'. FAIR only becomes robust when the appropriate infrastructure is in place and is operated on a permanent basis. This includes stable, persistent identifiers so that datasets remain uniquely referenceable, even as technical environments change.

Equally important are machine-readable metadata that provide context, for example on the methods employed, the variables used, licences or access conditions. Only when such information is available in a structured format can search engines reliably find datasets and assist users in assessing their suitability.

Interoperability also requires common interfaces and exchange formats so that repositories, catalogues and other services can automatically adopt and merge data descriptions. This demonstrates that FAIR is also a matter of translation work. Local, subject-specific levels of detail must be mapped in such a way that they are preserved in overarching European search and discovery systems.

Ultimately, the implementation of the FAIR principles relies on a reliable infrastructure. Clear processes for submission and review, versioning and citability, documented responsibilities, and measures to ensure the long-term availability of datasets build trust. In this sense, FAIR is not merely a label for datasets, but the interplay of shared rules, technology and operations. And this is precisely where infrastructure work such as that carried out by the ZBW comes into play. ▬

"TO ME, A RELIABLE LIBRARY…

… is long-term availability for all media, including digital."

YVONNE TUNNAT
Expert in long-term digital archiving,
User Services & Collection Care Programme Area

YES! – Young Economic Solutions 2015–2025

Knowledge transfer between research and schools

The school competition YES! – Young Economic Solutions was concluded at the ZBW in 2025 after a ten-year run. Since its launch in 2015, YES! had been a joint project of the ZBW – Leibniz Information Centre for Economics and the Joachim Herz Foundation. Both institutions were united by the goal of introducing young people to economic thinking and academic work, and of strengthening the dialogue between academia and society. The project was funded to a significant extent by the Joachim Herz Foundation.

What began with a few teams in the north, from Schleswig-Holstein and Hamburg, and a single academic partner – the Kiel Institute for the World Economy (IfW) – grew by 2019 into a nationwide competition with four additional regions, and with the introduction of the sixth digital region even reached international schools in the USA, England, Hong Kong, Chile and beyond. By 2025, the number of academic partner institutions that had participated in YES! over the years stood at more than 40. These included all Leibniz economic research institutes as well as other institutions from the Leibniz Association, the Max Planck Society, the Fraunhofer Society, various universities, private higher education institutions and state bodies. The patronage of the Federal Ministry for Economic Affairs and Energy demonstrated, from the outset, recognition of the competition's high social relevance and underlined its lasting contribution to the promotion of education and science.

Over 4,100 pupils, 600 teachers and more than 500 researchers developed over 400 ideas for solutions to economic, environmental and social challenges within this framework. The high level of participation, the sustained commitment of the partner institutions and positive feedback from participants characterised the competition over many years.

As part of a strategic reorientation, ZBW and the Joachim Herz Foundation decided to bring the successful collaboration to a close in 2025. In future, the competition will focus even more on entrepreneurship education – a development that taps into the strong drive for action among many young people, but which offers only limited points of connection with ZBW's mandate as a scientific information infrastructure.
The 2025 national final, along with an evening event attended by project participants and partners and featuring the Federal Ministry for Economic Affairs and Energy, provided an opportunity to pay tribute to this successful collaboration and to pass the baton to the Joachim Herz Foundation's new project partner, the German Climate Foundation.

The ZBW would like to express its sincere thanks to all partners for their long-standing involvement, their expert support and their joint development of a format that has built bridges between science and schools. The experience and networks established through YES! form a foundation for future forms of knowledge transfer and collaboration. The ZBW wishes the Joachim Herz Foundation and the German Climate Foundation all the best for the further development of YES! The fact that an idea developed within a scientific infrastructure is now being further developed outside scientific institutions represents a successful knowledge transfer for the ZBW. ▬

Knowledge transfer ***through dialogue***

With "Dialogue on Current Issues live", the ZBW is trialling a new format for urban society

When the ZBW brings economic research to the city, it is not about lecturing from a podium. It is about taking research out of the specialist community and discussing economic policy issues in direct, live exchange with the urban community. Not as a comments section, but in conversation on the ground. With the "Dialogue on Current Issues live" (in German: Zeitgespräch live) format, ZBW 2025 launched precisely this initiative and was able to attract prominent voices from the field of economic policy research right from the start.

The "Zeitgespräche live" event series organised by the ZBW's specialist journal Wirtschaftsdienst is designed as a knowledge transfer tool to link current topics with academic expertise and create a framework in which analysis, contextualisation and dissent can coexist. For the ZBW, knowledge transfer is not a one-way street. Exchange is key. This logic of dialogue shaped two evenings in 2025, which addressed politically charged topics in such a way that arguments remain verifiable and conflicting objectives become apparent.

The series kicked off on 29 January 2025 with a discussion in Hamburg entitled "Is free trade finished?". The editor-in-chief of Wirtschaftsdienst, Dr Nicole Waidlein, discussed free trade, deglobalisation and de-risking with Professor Gabriel Felbermayr from the Austrian Institute of Economic Research (WIFO) in Vienna, on the occasion of his book "Der Freihandel hat fertig". The discussion centred on questions that resonate in many debates but are rarely discussed with the necessary rigour. How is Europe adapting to a changed US economic policy? Which external economic dependencies – for instance on China or within specific industrial sectors – are economically justifiable, and which become a risk? And what are the implications if "change through trade" loses its explanatory power? The Zeitgespräch took these topics out of the realm of sensationalist headlines and back into a discussion with the guests on site, which sorted through options for action whilst also considering the limits of political control.

The second Zeitgespräch followed live in Hamburg on 19 November 2025. Ten years after the phrase "We can do it", the programme featured an assessment of German migration policy, coupled with a look ahead. The guests were Professor Tobias Heidland (Kiel Institute for the World Economy) and Professor Herbert Brücker (Institute for Employment Research). The evening was moderated by Dr Kristin Biesenbender, Head of the Wirtschaftsdienst and Intereconomics departments and Deputy Editor-in-Chief of Wirtschaftsdienst.

The exchange demonstrated what a transfer format can achieve when it discusses a socially contentious issue not by dividing it into opposing positions, but by examining findings and mechanisms of impact. At the same time, the discussion did not remain confined to the room. The contributions are documented in the September issue of Wirtschaftsdienst 2025 and are thus accessible beyond the event itself.

Dr Kristin Biesenbender explains: "For us, bringing science to the stage does not mean providing answers. It means discussing the right questions in public, in such a way that research provides guidance." ▬

FURTHER INFORMATION:

- Live Debate: Is Free Trade Dead? with Professor Gabriel Felbermayr
  Further resources: zbw.to/WTrHH
- Live discussion: Ten years of "We can do it" – review and outlook for German migration policy
  Further materials: zbw.to/FkpqT

ZONED, FLEXIBLE, ACCESSIBLE

New ZBW library in Hamburg planned to meet students' needs

In future, the ZBW will relocate its Hamburg premises to the former historic telecommunications office on Schlüterstraße. This move presents both an opportunity and an obligation to consistently align the library with current usage trends. Modern libraries are no longer exclusively places for quiet reading, but working environments that accommodate a variety of needs simultaneously. These include focused work, collaborative project work, digital communication, consultation, and short breaks between periods of intensive work. Precisely because many students use their library throughout the day – whether for studying, team coordination, online meetings or as a reliable place between lectures – there is a need for facilities that go beyond traditional reading areas. A library that aims to be attractive for this purpose must provide flexibly usable spaces, create clarity through clear zoning, support digital and analogue working methods equally, and incorporate accessibility as a standard feature.

Proven concept from Kiel as a basis

In 2024, the ZBW in Kiel completely revamped its library concept and optimised it for different work scenarios as well as students' work and learning needs. Since then, the New Work area has focused on providing zones for quiet work and concentrated study, zones for group and project work, and areas for socialising and taking breaks from academic work.

One innovative feature in Kiel is the so-called 'telephone booths' for meetings, phone calls or video conferences. Thanks to high sound insulation, users can work loudly there without disturbing others. The so-called 'retreat cubicles' have also been very well received over the past two years. These are screened-off seating and working areas that allow for undisturbed individual work as well as collaboration in small groups.

Transfer to Hamburg and status of planning

The New Work concept introduced in Kiel has proven its worth in everyday use. Consequently, in 2025, the ZBW decided to adopt this concept for the library area in Hamburg as well and to adapt it to the spatial conditions. The planning process focused not only on zoning but also on the specific, highly sought-after furnishing elements. In particular, the

project team – comprising library staff from Hamburg and Kiel, led by Manuela Bannick, Head of the User Services Department – incorporated the soundproof telephone booths and quiet study cubicles directly into the plans, alongside other work and study settings from Kiel.

The following plans reflect the current, well-advanced stage of the conceptual and spatial design. The future two-storey space is designed in such a way that different forms of use are recognisable, comprehensible and easily manageable in everyday life. A key design element will be rubber floor coverings in different colours, which will demarcate the areas from one another and aid orientation within the space. The plan is for a clear division into three sections: a welcome area, get-together zones and quiet work areas.

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Welcome area and social zones
The first point of reference will be a welcome area where students can arrive, linger briefly or wait for fellow students. An arena-style seating arrangement will support this function and create a transition between the entrance and the work areas.

This will be followed by get-together zones for project work, discussions and collaborative work sessions. Here, the 2025 project team has planned various furniture scenarios to accommodate different working styles. Particularly striking are the 'marketplace tables'. These are bistro-style table-and-bench combinations with a small canopy, which gives the workspace a defined, slightly screened-off structure and thus supports collaboration without completely opening up the space. A water dispenser is also planned, based on lessons learnt from the experience in Kiel, where this facility is heavily used.

Service counter as a central point of contact
The service counter is situated at the centre of the new library on the ground floor. Here, trained specialist staff will advise students and researchers directly at the counter. The counter is designed at different heights so that advice can be given whilst standing, sitting or, for wheelchair users, in an accessible manner. A long sofa area is planned in front of the service counter. It can be used for working, for short breaks or as a waiting area before a consultation, and reinforces the service counter as a visible, easily accessible point of contact.

Quiet study areas and focus zones on the first floor
The quiet work areas are designed for concentrated work without distractions. From the ground floor, users can reach the first floor via a staircase or a lift. Social areas are also planned there.

However, the focus is on quiet workstations. In addition to acoustic measures, spatial solutions in particular will support concentration. Cubicle-style individual workstations reduce acoustic and visual distractions and will make it easier for users to work with focus without constantly being aware of movement in the room.

Accessibility and flexible workspaces
Accessibility has been considered in all areas of the new library. The project team has planned workspaces that cater to a variety of needs. These include tables for working either sitting or standing, spaces with monitors, and work areas without fixed equipment so that users can use their own devices. In addition to the standard 'telephone booths', larger, accessible 'telephone booths' are therefore also planned. In future, this variety will not only support different ways of working, but also different physical requirements and usage habits. With the planned move, the ZBW in Hamburg is thus creating the structural conditions for a library that is consistently geared towards the working and learning needs of students. ▬

Green in concept, red in execution

Workspace design through dialogue

On a summer's day in 2025, at Düsternbrooker Weg 120 in Kiel, four colleagues stand in a former office, looking out of the windows, examining surfaces and discussing how 'green' should be used here. How green can it be without becoming too distracting? How much surface area can the colour cover? And what effect do wood and light have when combined? Behind terms such as brightness, surface area ratio or materiality lies the practical question of whether the workspace will later function just as well for concentrated work as it does for brief consultations or breaks.

This collaborative approach to decision-making is at the heart of a design process that is guided by real-life usage scenarios. In 2025, several projects at the ZBW demonstrated how interior design can be understood as part of 'New Work' – namely as a collaborative process that brings together different perspectives and involves ZBW staff in the selection and design.

The so-called 'Forest Office' in Kiel set an early example. The aim was not merely a new workspace, but a process that combines acceptance with practicality for everyday use. All staff were invited to view various furnishing options in the future "Forest Office" directly on site and to select them using red sticky dots on a mood board. The decision to use a deliberately analogue process was part of the concept. Those who use the space should not be clicking through digital surveys, but standing in the room, examining perspectives, experiencing distances and comparing impressions.

The framework conditions were clear. Furniture should be reused wherever possible. Additions and the wall design were selected jointly. This was prepared and supported by a user task force led by Axinia Braunisch, who strategically positioned and took responsibility for the change process and New Work themes at the ZBW. The participatory process answered the question of colour with: "As green as possible". In mid-February 2025, the 'Forest Office' was opened for use.

Following the Forest Office pilot, the approach was consistently continued in Kiel with a comprehensive participatory process for the new Workcafé. Unlike the fine-tuning of an existing space, the focus here was on a fundamental transformation. Areas were merged, the space was gutted and completely reimagined as a co-working environment. The aim was to create a space that reliably accommodates a variety of activities, whether working on a laptop, holding team strategy meetings or having a quick chat by the coffee machine. With its soft opening in November 2025, the Workcafé came into use and emerged as a further building block of a working environment tailored to needs and diverse usage scenarios.

Alongside the soft opening of the Workcafé, further newly designed spaces at the Kiel site were also brought into use. These range from the refurbished meeting room with a view of the fjord, to a newly developed family workroom with expanded usage options, to adjacent smaller workrooms, multi-purpose rooms and a locker room for staff from the Hamburg site or for remote workers spending a day at the Kiel site. The Coworking@Leibniz room was also designed as a flexible workspace and as a facility for temporary guests from the Leibniz Association. ▬

Flexible academic work

National project explores models of post-hybrid working

The world of work is changing – shaped by digitalisation, new forms of collaboration and expectations regarding autonomy and reliable working conditions. Hybrid working is now the norm in many places. For employers, this raises the question of how work can be structured and organised sustainably in this evolved, 'post-hybrid' reality. Against this backdrop, the ZBW is participating in the national 'Experimentierraum' project and is trialling 'Sabbatical Light' and 'Workation' within the European Union. Project manager Axinia Braunisch explains how this fits into the ZBW's framework in an interview.

Ms Braunisch, what is the national experimentation space project about?
AB: Overall, the participating institutes from the Leibniz Association and the Fraunhofer Society aim to test new forms of work organisation and time recording in a post-hybrid working world under real-world conditions, and to evaluate them scientifically. The project is deliberately called "Experimentierraum", that means experimentation space in English, because we are testing things step by step, systematically evaluating our experiences and making adjustments where necessary. The aim is to gain reliable insights into the legal and organisational conditions under which flexible working models can be designed to be both practical and sustainable. For us at the ZBW, it is extremely valuable to address these questions within a national network of research institutions. The scientific project framework enables us not only to gather practical experience, but also to reflect on it in a structured manner and translate it into recommendations for action.

What topics are being addressed in the project as a whole, and how does the ZBW fit into this?
AB: The project addresses five different areas relating to work organisation. These include, on the one hand, time recording under trust-based working hours, flexible working hours and fully remote work. These are three areas that are already standard practice at the ZBW. On the other hand, the project focuses on sabbaticals during the working year and workations within the EU. Here, we aim to gather specific experience as part of the project. The aim is to develop models that both meet the needs of employees and are organisationally viable. At the same time, such building blocks contribute to further enhancing our attractiveness as an employer.

Could you explain a little further why these two topics in particular are of interest to you?
AB: Both mid-year sabbaticals and workations are topics that require clear rules to ensure they function reliably in day-to-day working life. With workations in particular, we are interested in how teams with diverse structures, sometimes complex requirements and varying workloads can organisationally accommodate a change of work location and, where applicable, working hours in different time zones. Workations represent a further development of the extensive opportunities for mobile working within Germany, which have been standard practice at the ZBW for many years. Sabbaticals are also frequently requested by our staff. This topic is highly complex due to long durations and the corresponding financial implications. In the experimentation space, we are therefore examining how mid-year models with limited periods of leave – up to a maximum of three months – can be practically implemented.

What does the experimentation space project mean for the further development of the ZBW?
AB: The ZBW has been awarded the 'audit berufundfamilie' certificate, and we view sabbaticals and workations as building blocks of a broader development strategy. At the same time, the project highlights the need to carefully balance individual flexibility with institutional responsibility. We have a clear mandate here, which we take very seriously. Especially in the current climate, we must be a reliable infrastructure for the academic world. And this balance is particularly fascinating at the moment.

Thank you.

THE "EXPERIMENTATION SPACE" PROJECT IN BRIEF

The "experimentation space" project tests reform proposals from the German government's coalition agreement on flexible working hours and time recording under real-world conditions. The aim is to establish an empirical basis so that steps towards greater flexibility can be designed to be both practical and legally compliant. The project supports ten institutes (including ZBW) in implementation and scientific evaluation, promotes exchange, and derives recommendations for action.

IN DIALOGUE WITH THE COMMUNITIES

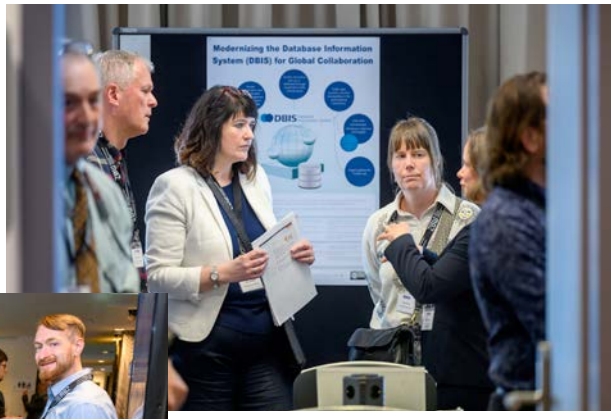
Open Science Conference *Open Science und Artificial Intelligence*

On 8 and 9 October 2025, the ZBW and the Leibniz Strategy Forum on Open Science hosted the International Open Science Conference in Hamburg. Around 235 participants from 27 countries discussed current developments in the Open Science movement and their significance for the responsible use of artificial intelligence.

INCONECSS 2025

Research Support in an Age of AI

The fourth International Conference on Economics and Business Information (INCONECSS), held from 15 to 16 May 2025 under the theme "Research Support in an Age of AI", discussed the strategic reorientation of libraries in the face of increasing human-AI collaborations. 94 subject experts from 34 countries discussed how libraries are positioning themselves to develop new services using AI tools and to strengthen research-related infrastructures.



Live discussion: *“Is free trade finished?”*

On 29 January 2025, the first Zeitgespräch live took place in Hamburg at the Carl von Ossietzky State and University Library under the title “Is free trade finished?”. The editor-in-chief of Wirtschaftsdienst, Dr Nicole Waidlein, discussed free trade, deglobalisation and de-risking with Professor Gabriel Felbermayr from the Austrian Institute of Economic Research (WIFO) in Vienna, on the occasion of his book “Der Freihandel hat fertig”.

Open Science Retreats

Focus on AI and Diamond Open Access

Under the umbrella of the Open Science Retreat, the ZBW brought together international stakeholders from academia, infrastructure and publishing in 2025. The eighth retreat on Open Science and Artificial Intelligence took place on 11 and 12 March 2025 and discussed requirements for open data, transparency, governance and the infrastructural prerequisites for AI-supported research. The 9th edition of the retreat on 23 and 24 September 2025 was entitled “Diamond Open Access: Utopian Dream or the Only Fair Future?” and focused on funding models, international perspectives and practical examples.

Community work: *Systematic Literature Reviews*

On 27 March 2025, the ZBW hosted a web talk with 86 participants on the topic of support for systematic literature reviews in the economic sciences. Dr Tamara Pianos, Head of the Information Services Department at the ZBW, had extended the invitation to this community event.

General Assembly of the FDM.SH State Initiative *Schleswig-Holstein strengthens research data management*

At the first general meeting of the FDM.SH regional initiative on 28 March 2025, attended by 65 participants at the ZBW in Kiel, the follow-up project "FDM.SH Reach-Out" was presented. This project is supported as part of the Digitalisation Programme 4.0 and aims to drive forward the further development of infrastructure, expertise and networking in the field of research data management.

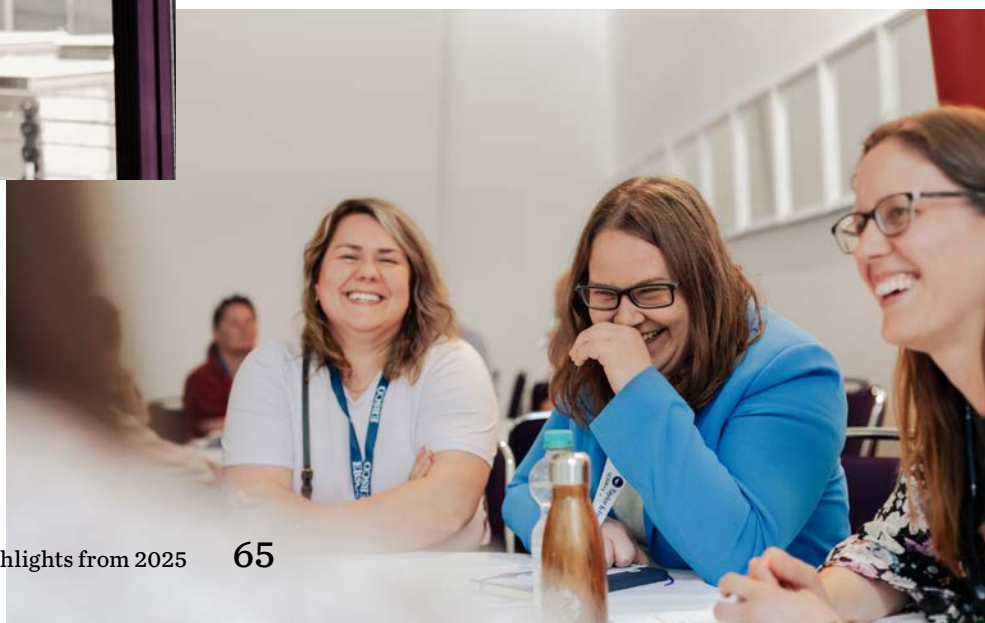
Live discussion *Review and Outlook for German Migration Policy*

On 19 November 2025, the second Zeitgespräch took place live at the ZBW in Hamburg. Ten years after the phrase “We can do it”, the programme featured a review of German migration policy, combined with a look ahead. The guests were Professor Tobias Heidland (Kiel Institute for the World Economy) and Professor Herbert Brücker (Institute for Employment Research). The panel was moderated by Dr Kristin Biesenbender, Head of the Wirtschaftsdienst and Intereconomics departments and Deputy Editor-in-Chief of Wirtschaftsdienst. See also page 54

Diamond Open Access Workshop

Consortium Open Access Funding in Dialogue with Library Acquisitions

On 24 June 2025, the hands-on lab "Shaping the future of consortial open access funding in dialogue with library acquisitions" took place in Bremen at the 9th Library Congress in cooperation with other consortial bodies, led by Dr Juliane Finger. Participants discussed the needs and challenges of consortial funding schemes.



Barcamp Open Science
From threats to collective resilience

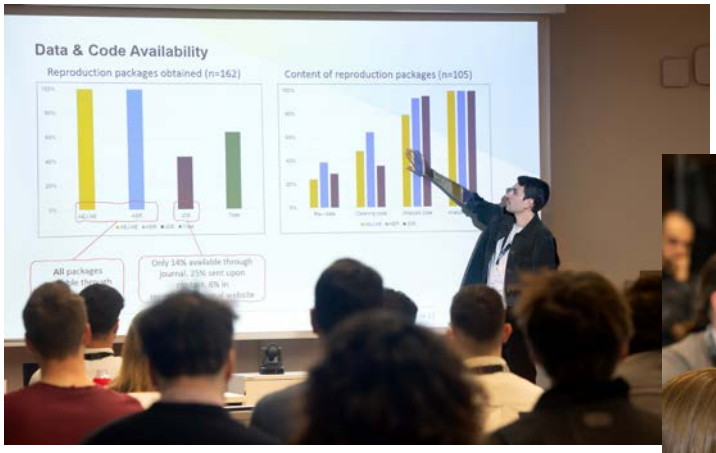
On 18 June 2025, the 11th Barcamp Open Science took place in Berlin. 45 participants from across Germany, as well as international guests, discussed political, digital and structural threats to research and open knowledge infrastructures. The Barcamp provided a space for the exchange of experiences and joint reflection on strengthening collective resilience in the field of Open Science.

Community work
Experiences with CORE Econ

On 25 September 2025, the ZBW hosted an online session on experiences with CORE Econ. The event, organised by the Community for Academic Work and coordinated by Dr Tamara Pianos (ZBW), showcased various contexts in which CORE Econ is used in economics teaching.

Leibniz Open Science Day *Better Science for Better Policies*

On 27 October 2025, the second "Leibniz Open Science Day" took place at the Leibniz Association's headquarters in Berlin under the title "Better Science for Better Policies". 50 economic researchers from Germany and Europe discussed replication studies, meta-analyses, and many-analyst and many-design approaches as tools for identifying biases and increasing methodological transparency in the economic sciences. See also page 31



ZBW panel at the VfS annual conference Focus on measures by the new federal government

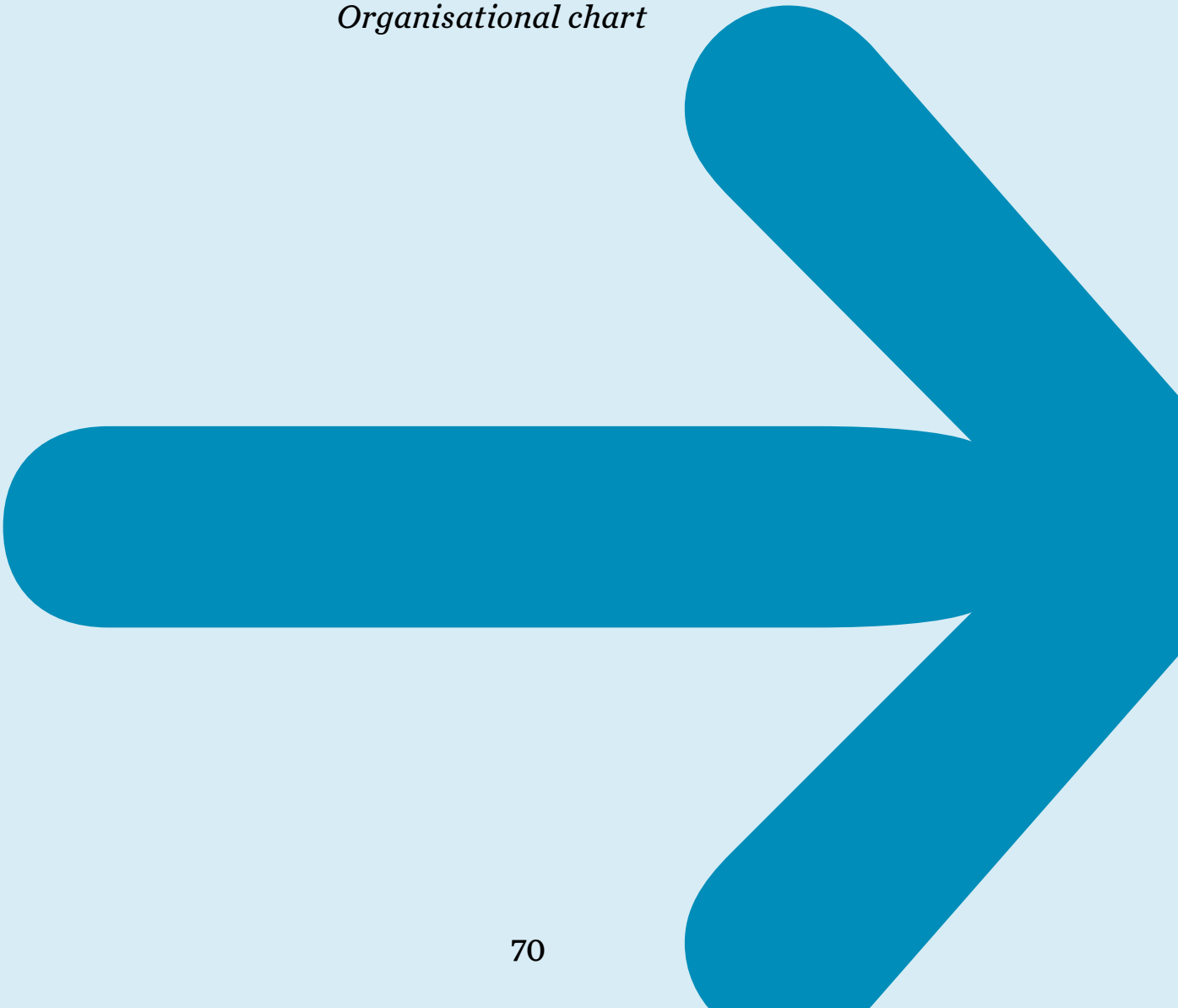
As part of the annual conference of the Verein für Socialpolitik, the ZBW hosted a brown-bag panel on the new federal government's industrial policy on 16 September 2025. The session was moderated by Dr Kristin Biesenbender, editor-in-chief of the journal 'Wirtschaftsdienst', published by the ZBW.

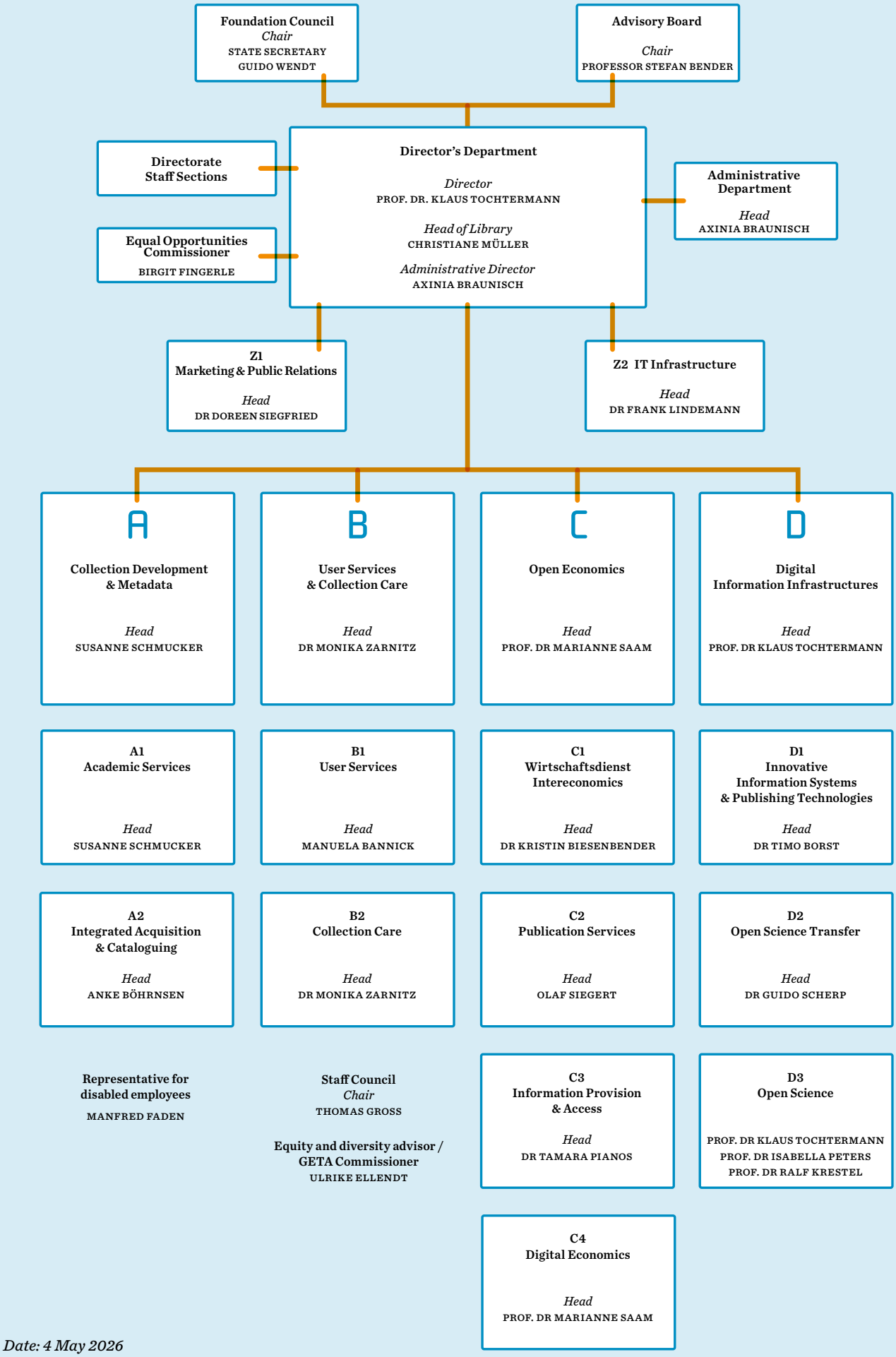
Wirtschaftsdienst Conference: *Economics and Digital Health*

On 30 April 2025, the ZBW and ZEW – Leibniz Centre for European Economic Research hosted the joint annual conference of the journal "Wirtschaftsdienst". Discussions focused on how digital transformation can help to better address the challenges facing the healthcare sector, particularly through greater data availability.

Last but not least

Organisational chart





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