



**BERD**  
@NFDI



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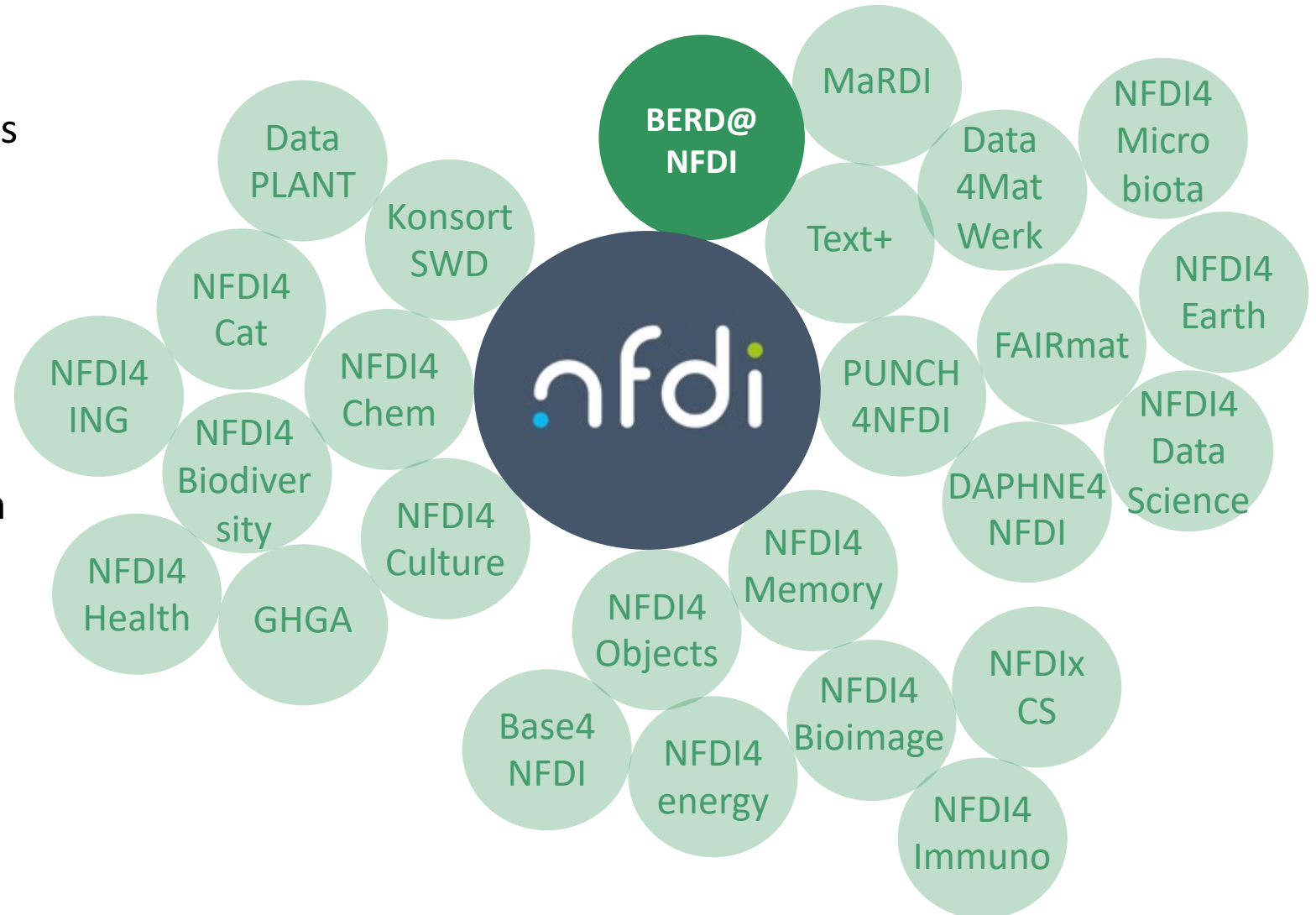
**BERD@NFDI**

# A Data Marketplace to Foster Industry – Academia Collaboration

Frank Ohnesorge, University of Mannheim

March 2024

- 27 consortia represent a broad spectrum of scientific disciplines
- BERD@NFDI is a consortia of all business and economic related disciplines.
- BERD@NFDI strengthens the links with industry, as data from companies is playing an increasingly important role in aresearch



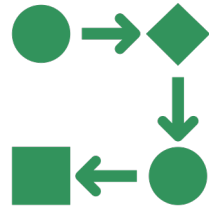


## Building



networked  
information  
infrastructure &  
research data  
management

## Establishment



of standardized  
procedures and  
handling of research  
data

## Development



Of sustainable  
services and meta  
data standards

## Connection

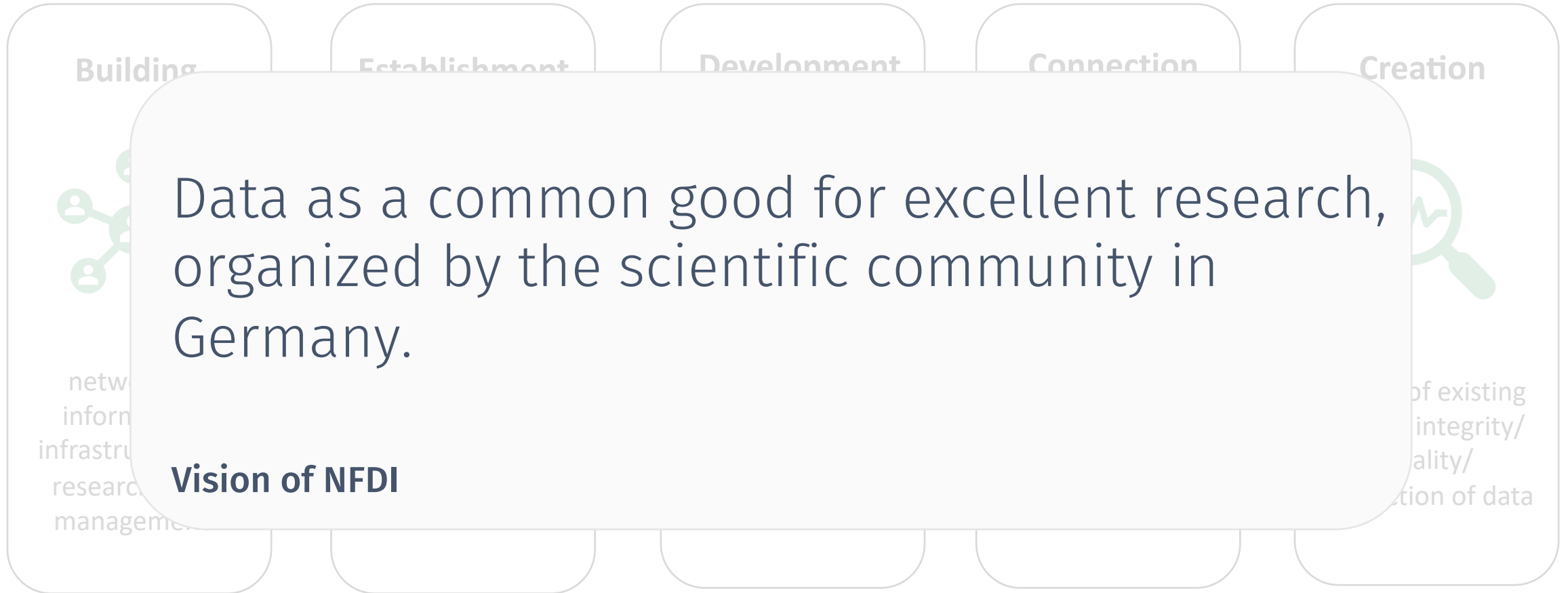


of European &  
international  
platforms

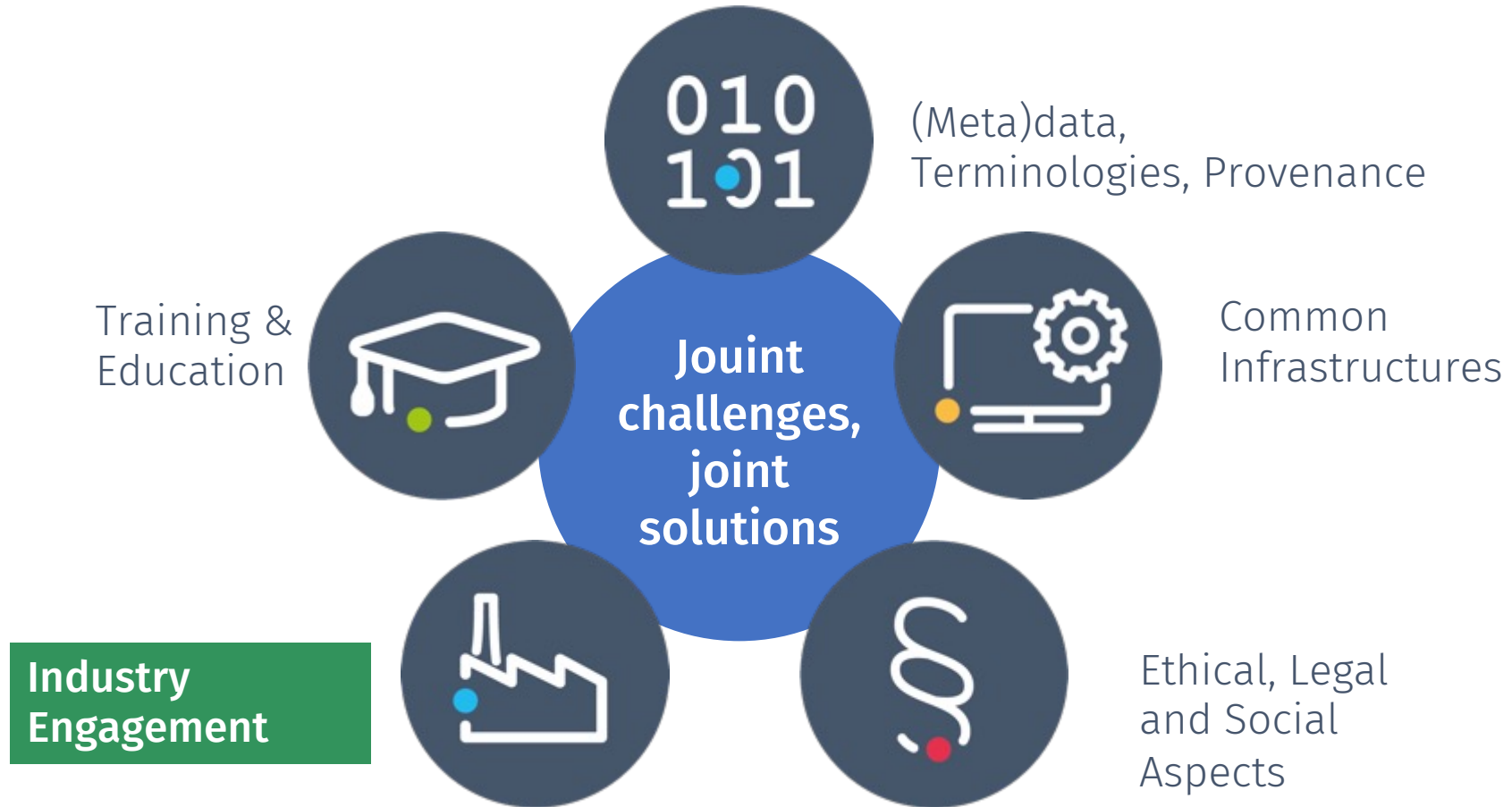
## Creation



Reuse of existing  
data & integrity/  
quality/  
protection of data

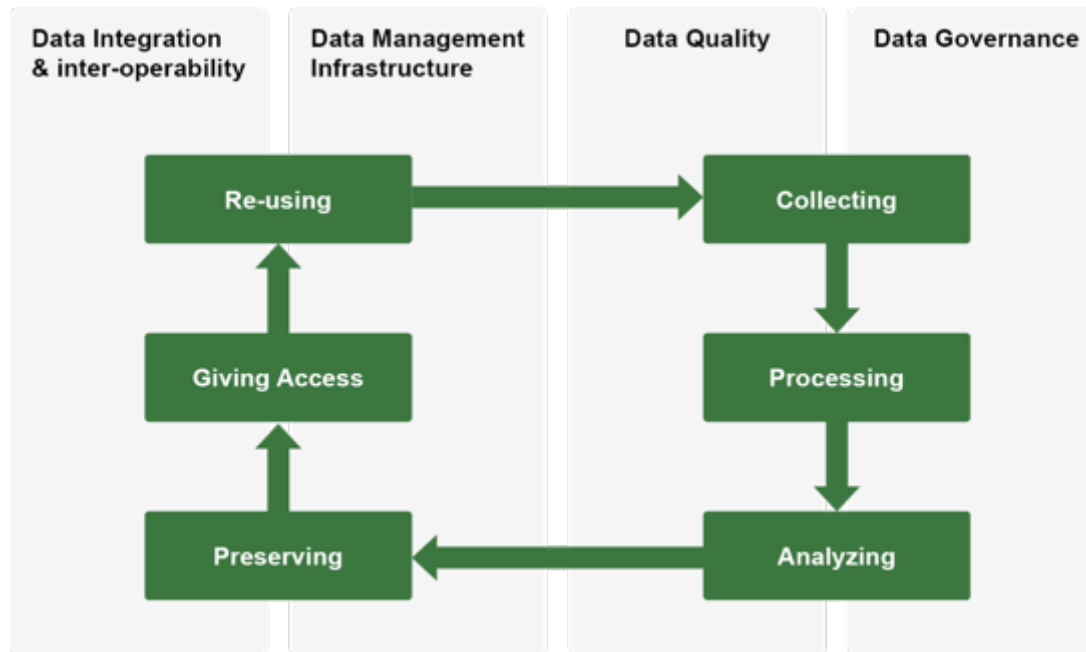


## NFDI sections work on cross-disciplinary topics...



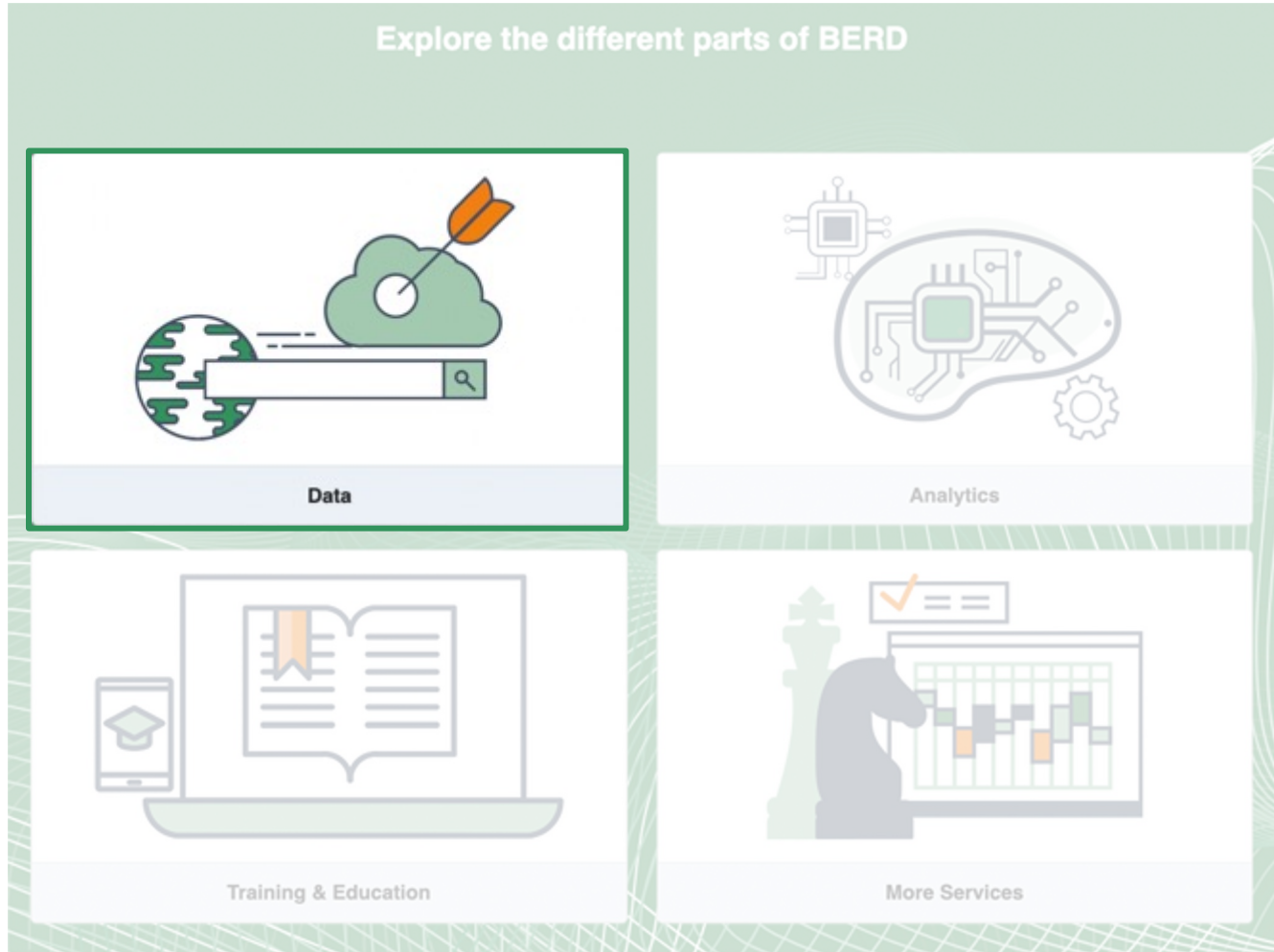
# BERD is becoming a powerful platform for data and collaboration

BERD@NFDI builds a powerful platform for collecting, processing, analyzing and preserving Business, Economic and Related Data – all in one place.



- **Open**  
Linked unstructured and structured data
- **Fast and accessible computation**  
By cloud-based HPC solution
- **Best practices in ML**  
Platform provides guidance on methods
- **Reproducible and Transparent**  
Documented used data and methods
- **Management of the entire data life cycle**

We facilitate the integrated management of algorithms and data along the whole research cycle, with a special focus on unstructured (big) data such as video, image, audio, text or mobile data.



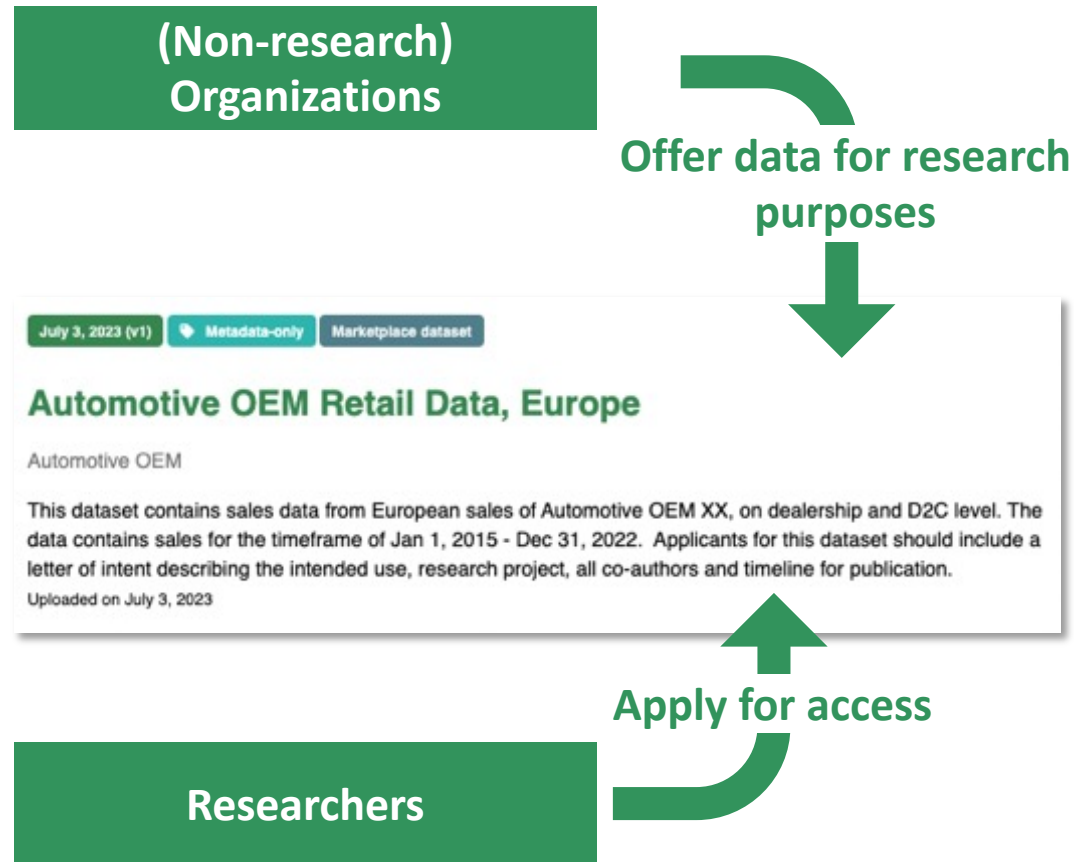
## Beyond other services, BERD currently offers

- **Open-Big Data Directory**  
Curated collection of high-quality, open-source datasets
- **BERD Marketplace**  
Bridging the gap between organizations and researchers to create value for both sides

## Key objective:

Enable and foster engagement between industry organizations and researchers through exchange and collaboration on relevant data-based problems

The BERD@NFDI **Data Marketplace** bridges the gap between owners of unique and new types of data and researchers



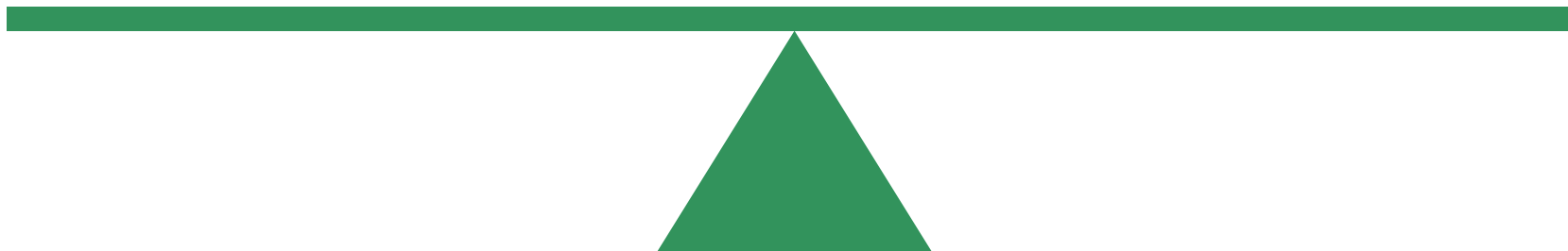


## BERD@NFDI Data Marketplace supports organizations to balance...

Data-based value creation &  
Data-driven innovations



Data privacy &  
Data regulations



## Wharton Research Data Services



For **25+ years**, Wharton Research Data Services (WRDS) has supported users with targeted solutions that underpin **research**, reinforce **learning**, and enable **discovery**. WRDS advances comprehensive thought leadership by giving users the power to analyze complex information.

## Chicago Booth KILTS Center Research Datasets



The Kilts Center is home to a **rich archive of data** available to academic researchers at Chicago Booth and beyond. Made possible through **relationships with Booth alumni and corporate partners**, these unique resources help academics around the world generate multi-disciplinary insights.



**Close collaboration between academia and industry enables mutually beneficial relationships, producing high-quality, business-friendly articles and enabling access to data science talent and insights**



## Data challenge 2022: Product recommendations based on previous purchases



### Situation

H&M Group is a family of brands and businesses with 53 online markets and approximately 4,850 stores. Their online store offers shoppers an extensive selection of products to browse through.



### Problem

**Overwhelmed customers do not find inspiration or what they are looking for and thus do not purchase**



### Objective

Develop product recommendations based on data from previous transactions, as well as from customer and product meta data.

## Key outcomes



### Enhanced Experience

Personalized product recommendations simplify selection, reduce decision fatigue, and increase customer loyalty.



### Increased Sales & Revenue

Targeted cross-selling and upselling through recommendations lead to higher conversion rates and increase the average order value.



### Sustainability Impact

Reduced returns from informed recommendations result in reduced emissions and transportation, consistent with environmentally friendly practices.



## Data challenge 2022: Predicting future loan defaults



### Situation

Modern life counts on the convenience of a credit card to make daily purchases. It saves us from carrying large amounts of cash and can also advance an entire purchase that can be paid for over an extended period.



### Problem

**Credit card issuers face risk of payback defaults with varying likelihood across the client portfolio**



### Objective

Leverage an industrial scale data set to build a machine learning model that challenges the current model in production to predict credit default

## Key outcomes



### Innovative risk assessment

Disrupt the credit default prediction model employed by the global leader in payment cards, fostering the development of cutting-edge solutions.



### Enhanced customer journey and experience

Improved cardholder experience by streamlining credit card approval and ensuring a seamless and hassle-free process.



### Pathways to success

Open doors to exciting career ventures at American Express, inviting participants to embark on an engaging and rewarding journey.

**SARTORIUS** **Data challenge 2021:**  
**Single neuronal cell detection in**  
**microscopy images**

**Situation**

Neurological disorders contribute significantly to global mortality and disability. Accurately segmenting neuronal cells in images, crucial for treatment evaluation, is a challenge that computer vision aims to overcome, enabling innovative drug discoveries.

**Problem**

Current methods to segment unique and irregular neuronal cells from images lack accuracy, hindering research progress.

**Objective**

Detect and delineate distinct objects of interest in biological images depicting neuronal cell types.

**Key outcomes**



**Advances in Research**

Successful results advance understanding of neurobiology via accurate segmentation of neuronal cell instances and data generation.



**Enhanced Disease Insights**

Researchers gain deeper insights into the effects of disease and treatments on neuronal cells, leading to more targeted therapies.



**Innovative Drug Discoveries** The breakthrough in accurate segmentation may facilitate the discovery of novel drugs, potentially reducing death and disability rates related to neurological disorders.



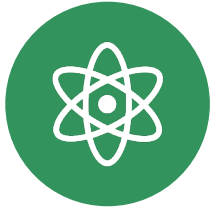
## Innovation and creativity

Academic collaboration fosters innovative problem-solving with unconventional approaches and techniques.



## Access to talent pool

Academia provides diverse talent, fresh perspectives, innovation, and advanced skills for complex challenges.



## Addressing major challenges

Joining impactful data challenges aligns a company with broader goals and shows social responsibility.



## Research and techniques

Academia leads research. Partnerships offer firms cutting-edge technologies, methods and tools to gain a competitive edge.



## Long-term relationships

Partnerships foster lasting relationships between companies and universities that lead to ongoing collaboration, knowledge sharing, and joint ventures.



## Learning and development

Companies gain insights from academia on trends, methods, and emerging tech, fostering professional growth.



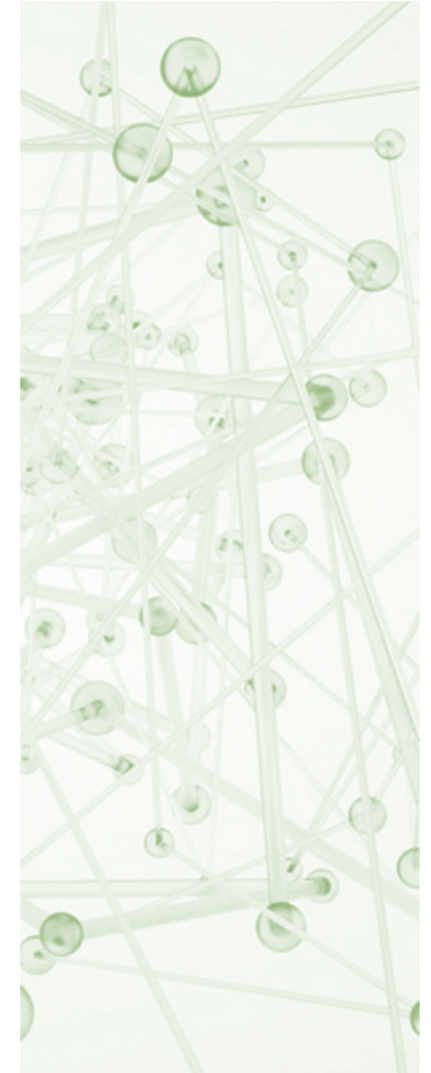
## Real-world impact

Real-world data and problems allow researchers to address practical questions that can be very motivating for participants.



## Recruitment opportunities

Collaboration with academia can serve as a platform for talent recruitment, identifying potential employees and partners.

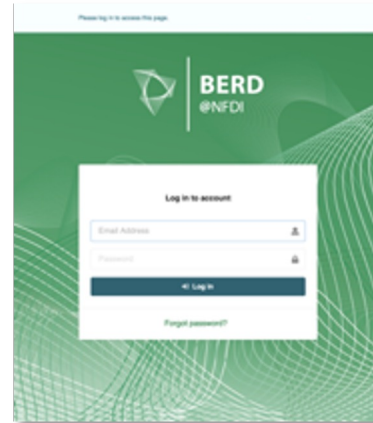


# Offering data collaborations on BERD Data Marketplace

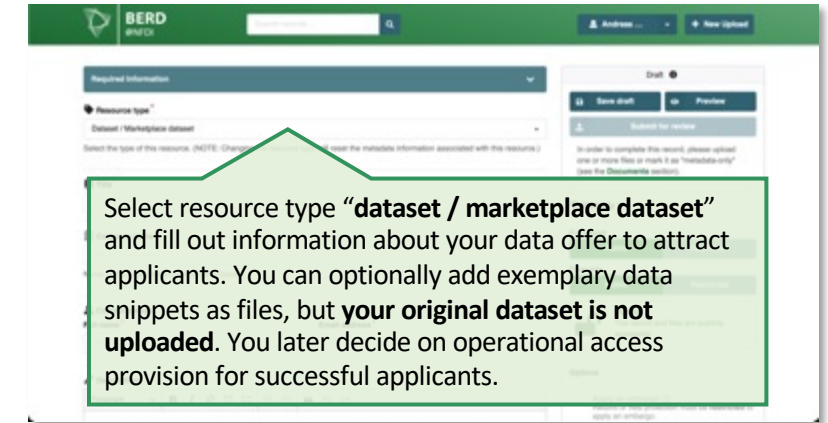
## 1. Visit BERD Platform



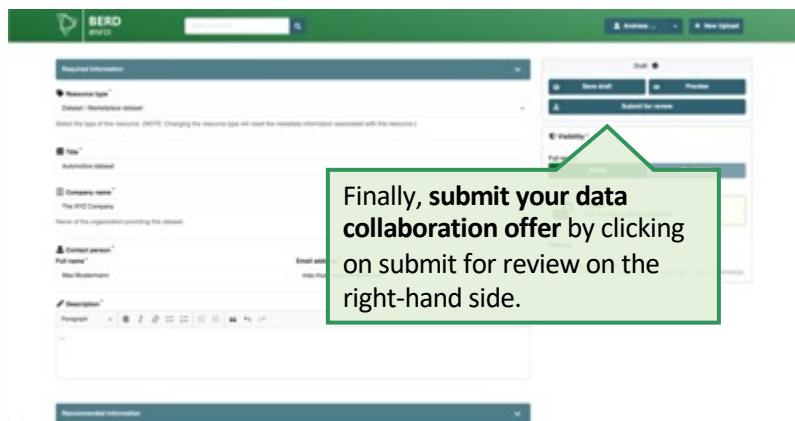
## 2. Login / create account



## 3. Define your "dataset / marketplace dataset"



## 4. Submit data offer for review



## 5. Align with BERD team

A BERD team member will be in touch with you to consult with you and confirm / optimize your offer for the best possible outcome.



## 5. Start reviewing & approving applications



You remain in control through the entire process. You are the only one with access rights to review, approve or reject applications.



Your data remains secure, access is granted according to your preferences. Your data is never directly uploaded to BERD. You define with whom and how you like to share data.

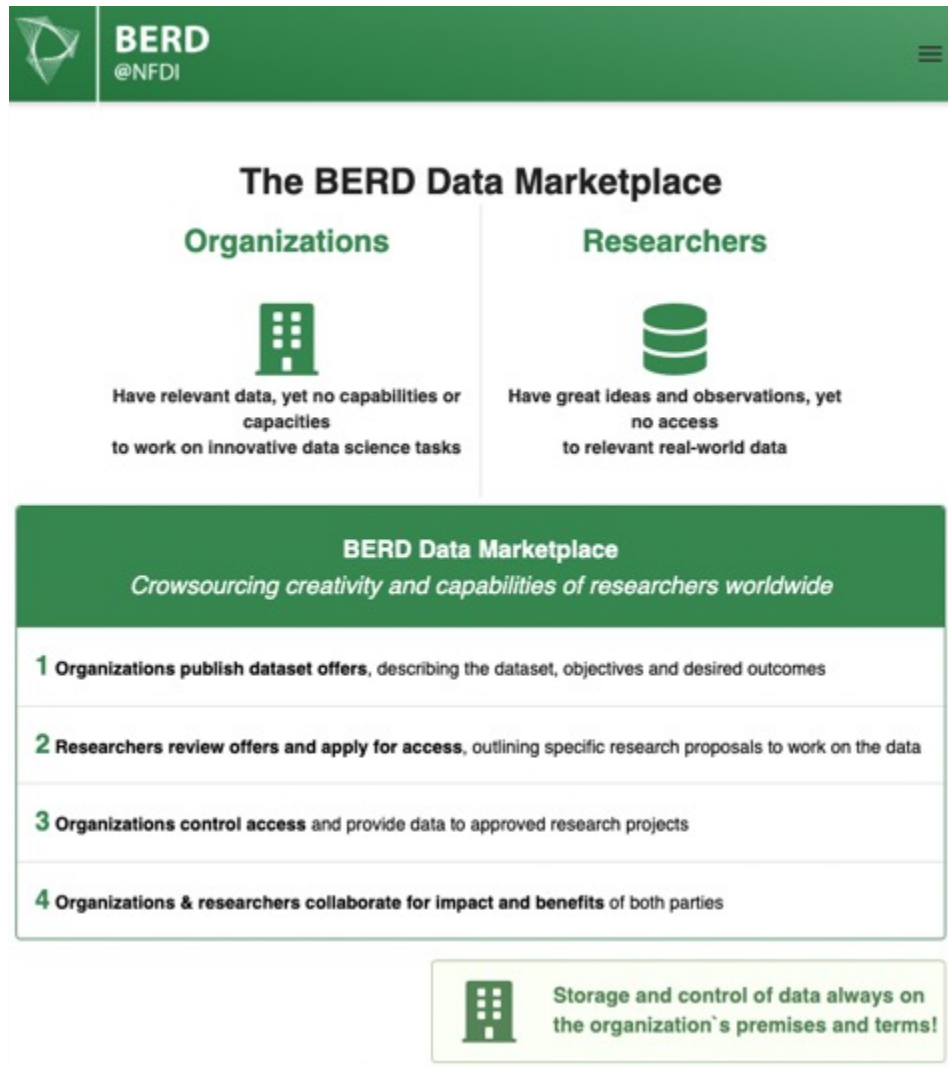


You remain in power to define contractual obligations and policies with the users of your data. Agreements to your terms of use and license agreements can be signed with users.

1. Turning your companies' data into **innovation and business value** by matching your company with **leading academic research and data science teams** in Germany, Europe and North America
2. No risk of data getting into the wrong hands. You retain **control of the data at all times**, even during a collaboration.
3. Service is **for free for companies** as well as academic researchers, no hidden costs.



# The BERD Data Marketplace is accessible NOW!



The screenshot shows the BERD Data Marketplace website. At the top left is the BERD@NFDI logo. The main heading is "The BERD Data Marketplace". Below this, there are two columns: "Organizations" and "Researchers". The "Organizations" column features a building icon and the text: "Have relevant data, yet no capabilities or capacities to work on innovative data science tasks". The "Researchers" column features a database icon and the text: "Have great ideas and observations, yet no access to relevant real-world data". Below these columns is a green banner with the text "BERD Data Marketplace" and "Crowdsourcing creativity and capabilities of researchers worldwide". Underneath the banner is a list of four steps: 1. Organizations publish dataset offers, describing the dataset, objectives and desired outcomes; 2. Researchers review offers and apply for access, outlining specific research proposals to work on the data; 3. Organizations control access and provide data to approved research projects; 4. Organizations & researchers collaborate for impact and benefits of both parties. At the bottom right, there is a box with a building icon and the text: "Storage and control of data always on the organization's premises and terms!".

Visit us today:



<https://berd-platform.de/for-companies>

## BERD & NFDI section “Industry Engagement”

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# Thank you!

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