THE CONCEPT OF HELMHOLTZ AI
On a mission for democratizing AI

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AS A PART OF THE HELMHOLTZ ASSOCIATION...

We are one of the Incubator platforms.

HiDA <HMC>
HELMHOLTZ IMAGING
HIFIS

6 LOCAL UNITS
Earth @ Hereon
Energy @ KIT
Matter @ HZDR
Space @ DLR
Health @ HMGU
Info @ FZJ

We advance AI and democratise access to it across all scientific domains at Helmholtz.

We do this by offering AI consulting, computing resources, project funding & novel tools and research.
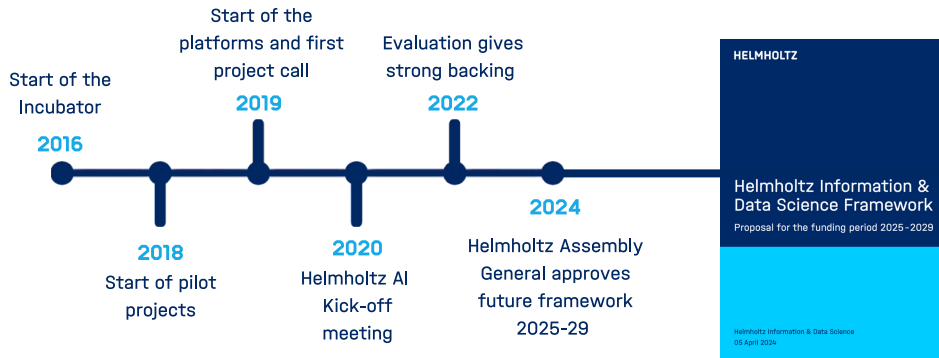
KEY OBJECTIVES

Enable the development and implementation of AI solutions

Ensure accessibility and effective use of tools, data, compute capabilities, and expertise

Promote collaboration within and beyond the Helmholtz Association

Elevate the Helmholtz Association into top-level international visibility within the applied AI community

HELMHOLTZ AI GOING FORWARD
FROM PATHBREAKING BOTTOM-UP INITIATIVES TO INTEGRATED FRAMEWORK

Start of the
Incubator
2016

Start of pilot
projects
2018

Start of the
platforms and first
project call
2019

Helmholtz AI
Kick-off
meeting
2020

Evaluation gives
strong backing
2022

Helmholtz Assembly
General approves
future framework
2025-29
2024

HELMHOLTZ

Helmholtz Information &
Data Science Framework
Proposal for the funding period 2025-2029

Helmholtz Information & Data Science
05 April 2024

WE ARE A NETWORK ACROSS GERMANY
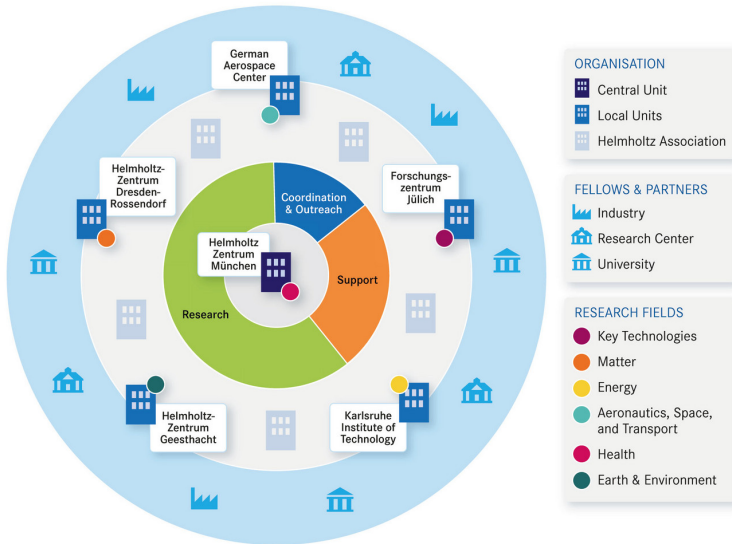
THE FACES BEHIND THE SCIENCE

CONSULTING

Peter Steinbach
Matter (HZDR)

Marie Piraud
Health (Helmholtz Munich)

Tobias Weigel
Earth and Environment (DKRZ - Hereon)

Markus Götz
Energy (KIT)

Daniela Espinoza Molina
Aeronautics, space and transportation (DLR)

Stefan Kesselheim
Information (JSC - FZJ)

RESEARCH

Schiffer Group
Large-scale artificial intelligence for brain mapping

Greenberg Group
Model-driven machine learning

Albrecht Group
Large-scale data mining in earth observation

Albarqouni Group
Deep federated learning in healthcare

Kilbertus Group
Reliable machine learning

Peng Group
AI for microscopy and computational pathology

Urban Group
One Health

Fortuin Group
Efficient learning and probabilistic inference for science

Kelling Group
AI for Future Photon Science

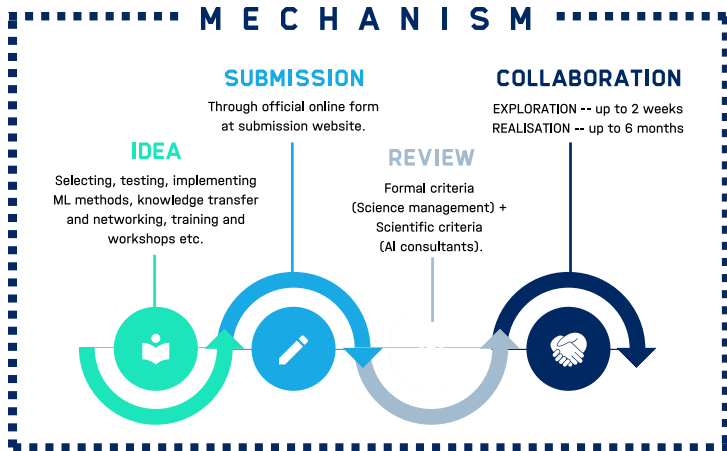**Schäfer Group**
Data-driven analysis of complex systems

Akata Group
Explainable Machine Learning

Bauer Group
Data Science and Intelligent Systems

HELMHOLTZ AI
CONSULTANCY

MECHANISM

Leverage AI methods & expertise & set up flexible, dynamic and transparent collaborations with the Helmholtz AI consultant teams, free of charge.

SUBMISSION
Through official online form at submission website.

COLLABORATION
EXPLORATION -- up to 2 weeks
REALISATION -- up to 6 months

IDEA
Selecting, testing, implementing ML methods, knowledge transfer and networking, training and workshops etc.

REVIEW
Formal criteria (Science management) + Scientific criteria (AI consultants).

HELMHOLTZ AI
COMPUTING RESOURCES

Computing resources (HAICORE, more invest coming) provide easy, free and low-barrier GPU access to the entire AI community within the Helmholtz Association.

WE EXPAND CAPACITY AND ADD MORE OPERATING CENTERS TO REALISE HAICORE 3.0

Simple, unbureaucratic access through our website.

Intros + user support by the consultant teams at KIT and FZJ.

Lightweight projects of up to 5,000 GPU hours per half year at Forschungszentrum Jülich (FZJ; JUWELS Booster)

Ad-hoc usage for initial testing with data and/or AI methods at Karlsruhe Institute of Technology (KIT; HoreKa)