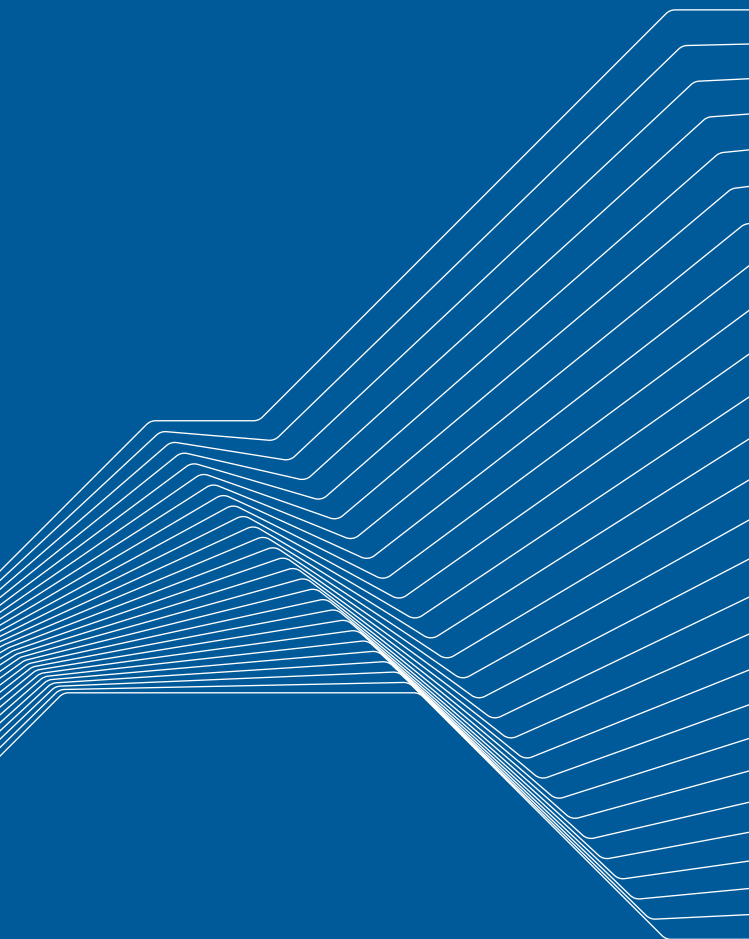


**19 RESEARCH CENTERS –
ONE ASSOCIATION**



SHAPING THE FUTURE TOGETHER

The Helmholtz Association comprises 19 scientific-technical and biological-medical Research Centers with more than 40,000 employees and an annual budget of more than 4.7 billion euros.

Research for Mankind and the Environment

All research at Helmholtz – whether it concerns climate change, a sustainable energy supply, the mobility of tomorrow, the preservation of an intact ecosystem or the treatment for diseases – is ultimately aiming at securing the foundation of human life in the long term and creating the technological basis for a competitive economy.

Excellent Science from basic Research to Application

Around 16,000 scientific publications, more than 400 patent applications per year and currently around 3,000 industry collaborations – Helmholtz has an excellent track record in both basic research and the development of applications. We have the tenacity to drive large-scale projects forward. At the same time, we have the capacity to bring together expertise from various areas of research.

Transfer and Innovation

Our technology transfer activities translate research findings into usable products and services. To accomplish this, successful structures and processes have been in place in our Centers for many years. This is evidenced by numerous products on the market, license revenues, cooperation agreements and, in particular, the high number of spin-offs. Helmholtz has created additional funding instruments such as the Validation Fund, spin-off funding, innovation labs and innovation funds. We support numerous activities in the field of knowledge transfer such as consulting, further training or special dialogue formats, thus supporting the exchange with the public, politics or administration.

Talent Management

The promotion of talented researchers for science and management is a key task for Helmholtz. We offer our employees ideal development opportunities and promote their exceptional skills. To this end, we have designed overarching measures within the framework of the Initiative and Networking Fund to supplement the Helmholtz Centers' support for young researchers. These funding instruments have been developed into a comprehensive talent management strategy that offers attractive conditions to talents at all career levels.

Cooperation

Helmholtz cooperates with the best national and international partners from science, industry and politics in order to achieve outstanding research results quickly and efficiently. Our research transcends the boundaries of disciplines and countries. In this way, Helmholtz is internationally competitive and able to deliver a decisive contribution to solving the major challenges facing society.

Research Infrastructures and large-scale Facilities

Accelerator systems, research vessels, observatories or super-computers – Helmholtz offers scientists unique research infrastructures and large-scale facilities. Every year, more than 10,000 visiting scientists from more than 30 countries benefit from the unique research opportunities offered by our Helmholtz Centers.

International Project Management

Helmholtz is frequently the hub of large-scale international research projects. Our outstanding experience in the management of large-scale projects enables us to set up and operate efficient infrastructures. As a strong member of the global scientific community, Helmholtz is thus helping to shape the future of modern societies.

OUR MISSION

- We contribute to solving the grand challenges facing society, science, and the economy by conducting top-level research as part of strategic programs in the Research Fields Energy, Earth and Environment, Health, Information, Matter, and Aeronautics, Space and Transport.
- We research highly complex systems using our large-scale facilities and scientific infrastructures, and cooperate with national and international partners in the process.
- We shape our future by combining research and technological advancements with prospects for innovative applications and services for tomorrow's world.
- We attract and promote the best talents by offering them a unique scientific environment and ongoing support throughout every stage of their career.

RESEARCH AT HELMHOLTZ

Our six Research Fields focus on the grand and pressing challenges facing our society. Helmholtz develops sustainable solutions for the future and covers the entire spectrum from basic to application-oriented research.

ENERGY

The Research Field Energy works on solutions to secure an economically, ecologically and socially sustainable supply of energy. We explore and develop innovative technologies for energy conversion, distribution, use and storage as well as the intelligent integration of these technologies in a sustainable energy system, always taking account of the climate and environmental impacts involved. One of our main goals is to work towards replacing fossil and nuclear fuels with sustainable, climate-neutral energy sources. To this end, we are also exploring the potential of renewable energy sources. Our work is thus making a major contribution to the successful implementation of the energy transition.

EARTH AND ENVIRONMENT

In the Research Field Earth and Environment, we conduct research into the Earth system and the complex interactions between society and nature. Our work focuses on expanding and interconnecting long-term observation systems, improving predictions and as fast as possible making the results available to society. We make science-based policy recommendations on how the Earth's resources can be used in a sustainable way without destroying the foundations of life. Such knowledge is essential to securing quality of life for future generations.

HEALTH

The Research Field Health investigates the complex causes and development of major wide-spread diseases. These include cancer, cardiovascular, metabolic, pulmonary and infectious diseases, allergies and disorders of the nervous system. Our aim is to use excellent basic research to develop new approaches for prevention, diagnosis, early detection and individualized treatment. This requires an interdisciplinary approach, which the Helmholtz Centers implement in cooperation with partners from medical schools, other research organizations and industry.

AERONAUTICS, SPACE AND TRANSPORT

The Research Field Aeronautics, Space and Transport addresses the major challenges facing society in the fields of mobility, information systems, communication, resource management, the environment and safety. We develop concepts and solutions and provide advice to policymakers. The German Aerospace Center (DLR) is Germany's national center for aeronautics and aerospace research. In its capacity as the German space agency, the DLR is responsible for research within the framework of the national aerospace program and for Germany's contribution to the European Space Agency (ESA).

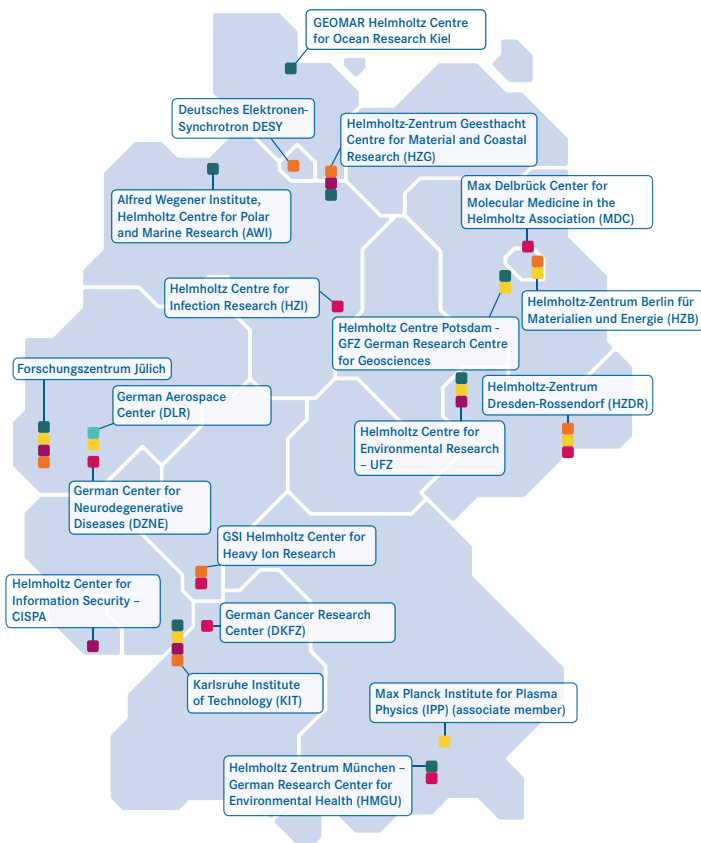
MATTER

The Research Field Matter explores the building blocks of matter and the forces operating between them at a wide range of levels, from elementary particles to complex functional materials to the systems and structures in the universe. We are thus creating the basis for a better understanding of our universe, and of materials and active substances for industrial or medical application. This includes the development, construction and operation of outstanding research infrastructures and large-scale scientific infrastructures that are intensively used by researchers from Germany and abroad.

KEY TECHNOLOGIES (IN THE FUTURE: INFORMATION)

This Research Field focuses on three areas: information technology, materials sciences and life sciences. In the coming years, these areas will play a decisive role in shaping the scientific, social and economic development of our country. Integrating multi-disciplinary approaches, such as the linking of technology and medicine, simulation and big data, supercomputing and brain research, as well as microbial biotechnology and plant sciences, provides the groundwork for innovative solutions in Key Technologies.

LOCATIONS OF THE 19 CENTERS



Research Fields

- Energy
- Earth and Environment
- Health
- Aeronautics, Space and Transport
- Matter
- Key Technologies
(in the future: Information)

The Helmholtz Association
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