

ESFRI | European Strategy Forum on Research Infrastructures

ACTRIS | Aerosols, Clouds and Trace gases Research Infrastructure

Using standardised and quality-assured long-term studies, ACTRIS contributes to our understanding of atmospheric processes, climate change and the effects of measures for improving air-quality. The network focuses on the atmosphere's short-lived and highly variable components. The plan is to operate around 70 monitoring stations, primarily in Europe but also world-wide. ACTRIS provides measurement data and offers access to its observatories and laboratories.



EMPHASIS | European Multi-environment Plant phenomics And Simulation Infrastructure

EMPHASIS focuses on the measuring of crop plants and their reactions to changes in their environment. What happens to plants when they react to environmental stresses? What influence does the respective location exert, and what are the characteristics that breeders must take into account with regard to future varieties in order to ensure that yield is increased while the requirements in terms of water and fertiliser in agriculture is decreased? EMPHASIS links up research locations throughout Europe to create a comprehensive infrastructure for plant phenotyping.



EST | European Solar Telescope

The EST is a four-metre sun telescope designed for studying the magnetic fields throughout the sun's atmosphere. It can be used to make observations with great spatial and temporal resolutions using several instruments simultaneously, which can efficiently capture two-dimensional spectral information. It is to be set up on the Canary islands and could be operational in around 10 years.



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Leibniz Roadmap for Research Infrastructures



Firm Ground for Scientific Progress



Research infrastructures are central resources which make science possible and open up new questions. In this way they drive progress and bring dynamism to the scientific system. With its internal strategy process, the Leibniz Association has highlighted the significance of decentralised as well as medium to small-sized research infrastructures and their work, which do not always find mention in the national and international debate. Information infrastructures, major data-recording projects for social data, panels and cohorts, scientific collections as well as social research infrastructures guarantee innovative science both within and outside of the Leibniz Association.

With the Leibniz Roadmap for Research Infrastructures, the Leibniz Association is now presenting a plan for the future so that excellent research can continue to be carried out over the next 10 to 15 years, and to advance the standard of this research to the highest levels. The Leibniz Roadmap contains concepts for research infrastructures which the Leibniz Association has prioritised in an internal process – with priority going to concepts which require a larger consortium of Leibniz partners and external partners. The selection criteria for the projects were as follows: the enabling of excellent research, social relevance, being of central importance to the scientific landscape, and a user-orientated approach. The concepts also stand out thanks to their innovative character and a clear unique feature. Thus, they further consolidate the profile of the Leibniz Association. The internal process has also contributed to the incorporation of four concepts in the national prioritising process – the National Roadmap for Research Infrastructures. At the same time, three projects have been newly included in the 2016 update of the ESFRI Roadmap, in which the Leibniz Institutes are involved – in some cases as the project leader. These projects also form a part of the Leibniz Roadmap.

The Leibniz Roadmap for Research Infrastructures represents the establishment of a continuous process. The Roadmap will be regularly assessed and updated. It maps out how the Leibniz Association can sustainably consolidate, and help dynamically shape, the German scientific system, including the Association's own institutes.

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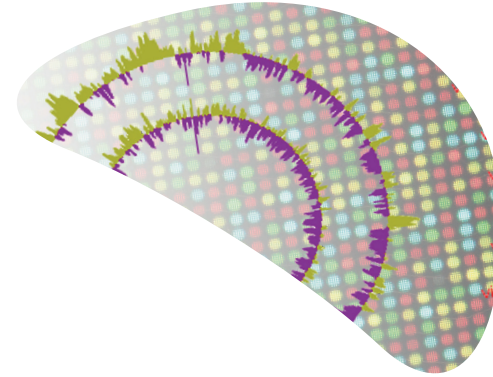
BioM-D | German Centre for Biodiversity Monitoring



BioM-D envisions an infrastructure of networked, multi-sensory measuring stations, computing systems and analyses systems. Its purpose is to measure and document changes to the biological environment as well as provide data, analyses and scenarios for biodiversity and environmental research, from which policy options can be derived for the political and social sphere.

GeWissDigital | Leibniz Expertise Network for Digital Change in the Sciences of History

As an infrastructure-based expertise network, the purpose of GeWissDigital is to advise the sciences of history on handling digital research data, issuing digital publications and evaluating digital research infrastructures. It thus forms a nucleus for the (further) development of digital research infrastructures. GeWissDigital also bundles, explores and evaluates methods in the field of digital humanities.



LiON | Leibniz Omics Network



LiON is designed as a networked research infrastructure intended to serve the further development of and access to current omics technologies for university and non-university-based research throughout Germany, to which end it bundles complementary expertise of the partner institutes within this coordinated network.



DCOLL | German Natural Sciences Collections as an Integrated Research Infrastructure

As a networked infrastructure, the aim of DCOLL is to comprehensively digitally catalogue natural sciences collections in order to provide optimised access to, and thus holistic usage by, the sciences and the public.

KultSam | Cultural-Historical Collections as a Digital Knowledge Repository for Research, Teaching and Public Dissemination

With KultSam, a research infrastructure is being established which develops innovative tools for supporting cutting-edge research in the humanities and cultural studies and for digitally cataloguing collection-related knowledge to make it available to a wide range of user groups.



LPI | Leibniz Centre for Photonics in Infection Research

The LPI is a concept for an open-access research and development platform which researches, develops and transfers into routine use fundamentally new solutions for diagnostics, monitoring and experimental therapies for treating infection.

LEIBNIZ DATA | Leibniz Network for Open Research Data

LEIBNIZ DATA is designed as an infrastructure which offers a reliable and long-term service to those research infrastructures of the Leibniz Roadmap and beyond which work with heterogeneous research data. It provides expertise on the cataloguing, archiving and subsequent use of these diverse and in some instances unique digital research data, and thus ensures that they remain available and usable as a central information source for scientific research and development. The data archives of the Leibniz Association's specialised and established research data centres are networked with, and made visible to, one another using international metadata standards. As a network, LEIBNIZ DATA thus works towards the common and collaborative (further) development of sustainable solutions for the integration of heterogeneous data.

