



Rat für  
Informations  
Infrastrukturen

# 2015 OPENING DECLARATION

GERMAN COUNCIL FOR SCIENTIFIC INFORMATION INFRASTRUCTURES  
**OPENING DECLARATION**

JUNE 2015

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# 1 MANDATE AND VISION OF THE COUNCIL

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The German Council for Scientific Information Infrastructures (RfII) was appointed by the Joint Science Conference (GWK) in 2014 for an initial pilot phase of four years. It was tasked with formulating recommendations, identifying courses of action, and increasing the level of transparency of developments and processes in the area of information infrastructures. These recommendations should be directed at science and, via the GWK, at the German federal and state governments. Similarly, the RfII should support the development and communication of German positions in European and international debates.

The RfII should strengthen self-organising processes in science, identify new areas of action and possible synergy potential in good time, and coordinate the advancement of competitive processes to further develop scientific information infrastructures. It should also investigate the requirements for supervision by the relevant players concerned with science policy.

The activities of the RfII should focus on selected areas such as hosting and long-term archiving, retro-digitalisation, cultural heritage, digital transformation, data production and quality, access to (research) data, virtual research environments, licensing, user integration, specialists, framework conditions, and international competition.<sup>1</sup>

Based on this mandate the Joint Science Conference formulated the following vision for the work of the German Council for Scientific Information Infrastructures.

<sup>1</sup> The formation of the Council as described here originates from the GWK document 13.48 from the meeting on 22 November 2013.

## 1.1 INFORMATION INFRASTRUCTURES AND DIGITAL TRANSFORMATIONS IN SCIENCE

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The activities of the RfII concern the design of future-proof information infrastructures for science. Science comprises research, teaching, and the transfer of knowledge. Information infrastructures comprise technically and organisationally networked services and facilities for working with data, information and inventories of knowledge significant to science. It is a component of the research infrastructure and serves also the economy and society.

Science requires high-performance, reliable information infrastructures in order to ensure the sustainable provision of information and knowledge, to improve cooperation with business, and to enable innovation. The performance of information infrastructures depends significantly upon expertise and training, technical features, user-friendly access methods, international standards and tools, and the quality of customised services. In order to maintain the services and facilities at the state of the art and to ensure that their development is future-proof, information infrastructure facilities perform their own research.

Future-proof information infrastructures must support the digital transformation in science. The focus should be on various aspects such as the development of new Internet-based forms of research and publication, the promotion of open access to scientific knowledge where possible, the management of an increasing quantity of (research) data from the perspective of sustainable use and long-term availability, the development of innovative equipment and services, and the qualification of specialists.

An important future potential for scientific advancement is the exploitation of data, information, and inventories of knowledge from various areas of public life. The promotion of open access to scientific knowledge (Open Access, Open Data) will alter the landscape of commercial and non-commercial service providers. As an advisory body, the RfII will monitor this digital transformation process and support it with recommendations.

The RfII will first engage in the areas of "Research Data – Sustainability – Internationality" in detail. Substantial recommendations should be compiled which serve as an example for the future, sustainable design of information infrastructures in the context of international developments. From an innovation policy and legal viewpoint, these areas also have great potential – for example against the background of demands for the results of research to be available to third parties in a format where the data can be re-used.

The challenges of digital change in science have already been comprehensively described in previous years and are being addressed by an increasing number of players. The federal and state governments promote the digital agenda for science, economics, and culture with numerous initiatives and programmes.

Building on the work of the "Future of the Information Infrastructure Commission" (Kommission Zukunft der Informationsinfrastruktur) (2011), the recommendations of the German Council of Science and Humanities (Wissenschaftsrat) regarding the "Further Development of Scientific Information Infrastructures in Germany until 2020" (Weiterentwicklung der wissenschaftlichen Informationsinfrastrukturen in Deutschland bis 2020) (2012), and the mandate of the Joint Science Conference (Gemeinsame Wissenschaftskonferenz) (2013), the RfII aims to analyse implementation deficits and develop proposals for the further development of the scientific system. In doing so the RfII will look for synergies with other drivers of change processes such as the Alliance Priority Initiative "Digital Information".

The RfII will take into consideration international perspectives and the efficient use of resources. It aims to compile recommendations related to structures and processes. These should take into account the demand for the long-term reliable and location-independent as well as legally, financially, and technically secured availability of data, information, and inventories of knowledge.

The RfII wants to improve the links between science, politics, and economics in the area of information infrastructures. In doing so it intends to reflect on those factors significant to acceptance and feasibility, including administrative, political, and financial aspects of possible measures. It wants to prioritise recommendations for feasible measures with a focus on sustainability, but also, where possible, outline longer-term courses of development. As a science hub, Germany already has access to pioneers in the development of web-based, networked databases of knowledge and content. Such expertise must be built on.

## 1.3 UNDERSTANDING ACROSS INSTITUTIONS AND DISCIPLINES

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In light of the variety of forms of research and requirements, university and non-university research and infrastructure providers, museums, archives and libraries, public funding bodies, and people from the general public are represented in the RfII. The 24 members represent a wide range of scientific disciplines, forms of research, and infrastructure expertise. They bring experience from numerous initiatives that have developed solutions for the digital transformation at the national and international level. They are individually appointed by the Joint Science Conference in an honorary capacity. As members of the Council, they will act independent of vested interests and in the interest of the German scientific system as a whole.

Cooperation in the RfII therefore requires the synthesis of very different disciplines and institutional perspectives. Agreement on comprehensive recommendations resulting from this synthesis is a prime example of the numerous negotiation processes which must take place given the limited resources in many parts of the scientific system.

## 1.4 COMMUNICATION

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The RfII acts through publications as well as through the organisation of conferences, workshops, and symposia. The RfII's publications and information regarding its members, working groups, and general working methods are available to the public at [http://www.rfii.de /en/](http://www.rfii.de/en/) ↗.

## 2 WORK PROGRAMME TO 2018

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The work of the German Council for Scientific Information Infrastructures is initially funded until October 2018. Working groups and committees have been formed to do analyses and compile recommendations regarding various topics during this period, which the RfII will publish in a series of reports. The work programme will include the following topics:

- a. INITIAL SITUATION AND INNOVATION POTENTIAL  
The RfII will classify existing initiatives and investigate opportunities for science in Germany. Monitoring existing areas of action will enable approaches which have already been drafted to be analysed and tracked. In order to communicate to politicians and the public in an understandable format, it will additionally create a helpful terminology glossary which will include both traditional and current concepts.
- b. INTERNATIONAL DEVELOPMENT  
The RfII intends to include an international outlook, to outline opportunities for German players in European and global strategy development, and to support the development and communication of German positions in European and international debates. Opportunities and risks to the German infrastructure system will be jointly evaluated with international partners, and its importance to science, business, and the public will be made transparent.
- c. GOVERNANCE OF THE SCIENTIFIC INFORMATION INFRASTRUCTURE IN GERMANY  
A transformation strategy must ensure the momentum of infrastructure development as well as its stability and performance. The RfII will examine funding instruments, resource requirements, and legal framework conditions with regard to these requirements. Its recommendations will be oriented towards the primacy of the self-organisation of science, but will also specify the requirements for supervision by the relevant players concerned with science policy. Likewise, the RfII will shine a light on the balance required between the interests of science, economics, and the public.

- d. **BUILDING AND FURTHER DEVELOPMENT OF EXPERTISE**  
The appreciation and dissemination of information and infrastructure expertise at all organisational levels are part of designing sustainable transformation processes. It will be necessary to provide training in specific methodological skills for the new work and publication formats. An understanding of the proper operation of sustainable information infrastructures needs to be developed at all managerial levels. The RfII shall therefore address questions of cultural change and the development of new occupational profiles in the area of scientific data and information management.
  
- e. **QUALITY MANAGEMENT**  
In the light of rapidly growing volumes, a greater heterogeneity and high momentum, the quality management of data, information, and processes is an urgent concern for scientific work. The RfII will look at how to achieve the implementation of standards and best practices developed by successful initiatives and scientific communities.

## 3 COUNCIL AND MEMBERS

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The German Council for Scientific Information Infrastructures has 24 members and is composed as follows to ensure equal participation:

- 8 representatives of scientific users from a wide range of scientific disciplines;
- 8 representatives of providers of information infrastructures who cover the entire range of the science system;
- 4 representatives of the German federal and state governments;
- 4 representatives of the public.

The first 16 representatives are appointed in a procedure similar to the German Council of Science and Humanities. The other 8 representatives are nominated by the Joint Science Conference. All members are appointed by the chair of the Joint Science Conference for a term of four years.

*"The composition of the Council reflects our fundamental consideration that the future of scientific information infrastructures is a joint task to be carried out by institutions providing the infrastructures, scientific users, funding bodies, and related national and international stakeholders."*

- Joint Science Conference, November 2013 -

## 3.1 REPRESENTATIVES OF SCIENTIFIC USERS

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Professor **LARS BERNARD** ↗

TU Dresden – Department of Geosciences

Professor **FRIEDERIKE FLESS** ↗

DAI - German Archaeological Institute and Freie Universität Berlin

Professor **FRANK OLIVER GLÖCKNER** ↗

Max Planck Institut for Marine Microbiology and Jacobs University Bremen

Professor **STEFAN LIEBIG** ↗

Bielefeld University – Department of Sociology

Professor **WOLFGANG MARQUARDT** ↗

Forschungszentrum Jülich

Professor **OTTO RIENHOFF** ↗

University of Göttingen – Department of Medical Informatics

Professor **JOACHIM WAMBSGANß** ↗

Centre for Astronomy of Heidelberg University (ZAH)

Professor **DORIS WEDLICH** ↗

KIT- Karlsruhe Institute of Technology: Division I – Biology, Chemistry and Process Engineering

## 3.2 REPRESENTATIVES OF INFORMATION FACILITIES

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**SABINE BRÜNGER-WEILANDT** ↗

FIZ Karlsruhe – Leibniz Institute for Information Infrastructure

Professor **THOMAS BÜRGER** ↗

Saxon State and University Library Dresden (SLUB)

Professor **PETRA GEHRING** ↗

TU Darmstadt – Department of Philosophy

Dr **GREGOR HAGEDORN** ↗

Museum für Naturkunde Berlin – Leibniz Institute of Evolution and Biodiversity Science

Professor **MICHAEL JÄCKEL** ↗

Trier University

Dr **MARGIT KSOLL-MARCON** ↗

Archives of the Bavarian State

Professor **KLAUS TOCHTERMANN** ↗

German National Library of Economics and Kiel University

Professor **RAMIN YAHYAPOUR** ↗

GWDG – IT in Science

### 3.3 REPRESENTATIVES OF THE GERMAN FEDERAL AND STATE GOVERNMENTS

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RÜDIGER EICHEL ↗

Ministry of Science and Culture of Lower Saxony

Dr THOMAS GRÜNEWALD ↗

Ministry of Innovation, Science, and Research of North Rhine-Westphalia

Dr STEFAN LUTHER ↗

Federal Ministry of Education and Research

Dr DIETRICH NELLE ↗

Federal Ministry of Education and Research

### 3.4 REPRESENTATIVES OF THE PUBLIC

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Dr habil. REINHARD BREUER ↗

Science Journalist

Dr h.c. ALBRECHT HAUFF ↗

Thieme Publishers

Dr SIMONE REHM ↗

University of Stuttgart

ANDREA VOßHOFF ↗

BFDI – German Federal Data Protection Authority

### 3.5 CHAIR

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The members of the Council elect a chair and a deputy chair on a simple majority basis from the representatives of scientific users and the representatives of providers of information infrastructures respectively. The chair and the deputy chair represent the Council externally. Their term of office is two years.

Professor OTTO RIENHOFF ↗

Chair

SABINE BRÜNGER-WEILANDT ↗

Deputy Chair

## 4 HEAD OFFICE

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Administrative support for the German Council for Scientific Information Infrastructures is provided by a head office financed jointly by the German federal and state governments. The Council's head office was established as a project at the University of Göttingen on 1 November 2014 (Project leader: Professor Norbert Lossau) based on a competitive process.

Dr BARBARA EBERT

Director

STEPHANIE HAGEMANN-WILHOLT

ILJA KALININ

Dr SVEN RANK

Scientific Officers

SARAH BARUFFALDI

Team Assistant

## 5 KEY TERMS

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The RfII will include a glossary with each publication that explains the terms used. The following definitions represent a sample of such terms from the comprehensive specialist glossary currently in the works.

### RESEARCH DATA

Research data is data that is generated in the course of scientific projects, for example as a result of digitalisation, the study of source materials, experiments, tests/readings, surveys or interviews, re-cording signal currents or electronic process data, and likewise data which serves a possible evidential role for scientific projects through selection, preparation, collection, and storage.

### RESEARCH INFRASTRUCTURES

A research infrastructure is a scientific infrastructure which serves research (plants, resources, facilities, and services). This includes a) large apparatus and instruments for research purposes, b) knowledge resources such as (digital or non-digital) collections, archives, libraries, and databases, c) technical information and communications infrastructures such as computers, computer networks (GRID, Cloud), software, and connections, and d) any other plants, resources, facilities, or solutions providing a service to scientific research in a comparable function.

### INFORMATION INFRASTRUCTURES

An information infrastructure comprises technically and organisationally networked services and facilities for working with data, information, and inventories of knowledge relevant to science. The focus here is on the digital nature of the data. Information infrastructures primarily serve the purposes of research and have enabling functions. The performance of a digital information infrastructure depends significantly upon staff training, technical features, user-friendly access methods, international standards and tools, and the quality of the customised services.

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