



Within the scope of the **MEDICAL INFORMATICS INITIATIVE (MII)**, a project funded by the German federal government, medical and IT professionals collaborate with researchers and scientists across multiple disciplines in German university hospitals. Their shared goal is to digitally capture hospital healthcare data, making these available for research – to provide faster and better medical treatments. At the same time, therapies can be improved for individual patients.

→ www.medizininformatik-initiative.de/en

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Medical Informatics Initiative Strengthening research and advancing healthcare



Creating new opportunities through digital transformation of medicine

The aim of the Medical Informatics Initiative (MII) is to enhance research and patient care through the sharing and use of data from healthcare and from clinical and biomedical research – across multiple entities and sites, while ensuring robust data protection and security.

MII was launched to build bridges between research and healthcare. Its goals include:

- aggregating clinical patient data
- developing IT solutions and infrastructure for tailored treatments
- harnessing patient data to gain scientific insights
- making new findings immediately available for patient care
- strengthening medical informatics in Germany

MII aims to enable the effective exchange and use of data from healthcare and from clinical and biomedical research.



Developing innovative IT solutions for healthcare

In the initiative's current phase, university hospitals and partner organisations establish and link data integration centres. These centres allow research and healthcare data – that continue to reside securely on-site – to be aggregated and integrated across multiple locations. As a support for newly established professorships for medical informatics, the German Federal Ministry of Education and Research (BMBF) is funding junior research groups at universities. In addition, MII consortia develop innovative IT solutions for concrete medical use cases, demonstrating the benefits of high-tech digital healthcare services and infrastructures.

Examples of the first use cases are:

- Multiple sclerosis
- Parkinson's disease
- Cardiology
- Infection control
- Appropriate antibiotics use
- Precision medicine for tumour patients
- Improvements to healthcare processes

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Consortia and participants during the development and networking phase

DIFUTURE

CONSORTIUM PARTNERS

Augsburg:

- University of Augsburg (UA)

Bochum:

- Kairos GmbH (KAIVOS)

Munich:

- Technical University of Munich (TUM)/University Hospital rechts der Isar (MRI)*

- Ludwig-Maximilians-Universität (LMU) München/Hospital of the Ludwig-Maximilians-University (LMU) Munich*

Tübingen:

- University of Tübingen (EKUT)/University Hospital Tübingen (UKT)*

Ulm:

- Ulm University/Ulm University Medical Center*

NETWORK PARTNERS

Regensburg:

- University Hospital Regensburg

Saarbrücken, Homburg:

- Saarland University/Saarland University Medical Center

HiGHmed

CONSORTIUM PARTNERS

Berlin:

- Robert Koch Institute
- Ada Health GmbH
- Charité – Universitätsmedizin Berlin*

Brunswick:

- Brunswick University of Technology (TU Braunschweig)
- Helmholtz Centre for Infection Research GmbH (HZI)

Darmstadt:

- Darmstadt University of Technology (TU Darmstadt)

Erlangen:

- Siemens Healthcare GmbH

Frankfurt am Main:

- Dell Technologies

Göttingen:

- University Medical Center Göttingen*

- HAWK University of Applied Sciences and Arts Goettingen

Hanover:

- Hannover Medical School*

- Hannover University of Applied Sciences and Arts

Heidelberg:

- Heidelberg University Hospital and the Medical Faculty of Heidelberg*

- German Cancer Research Centre

- NEC Laboratories Europe

Heilbronn:

- Heilbronn University

Kiel:

- University Medical Center Schleswig-Holstein (UKSH) – Campus Kiel*

Cologne:

- University of Cologne/University Hospital Cologne (UKK)*

Lübeck:

- University Medical Center Schleswig-Holstein (UKSH) – Campus Lübeck*

Münster:

- University of Münster/ Münster University Hospital (UKM)*

Potsdam:

- Hasso Plattner Institute

Walldorf:

- InterComponentWare AG

Würzburg:

- University Hospital of Würzburg/ Julius-Maximilians-Universität (JMU)*

NETWORK PARTNERS

Cottbus:

- Carl-Thiem-Klinikum Cottbus (CTK)

MIRACUM

CONSORTIUM PARTNERS

Dresden:

- TU Dresden/University Hospital Dresden*

Erlangen:

- Friedrich Alexander University Erlangen-Nuremberg/ University Hospital Erlangen*

Frankfurt am Main:

- Goethe University Frankfurt/Main/ University Hospital Frankfurt*

Freiburg:

- University of Freiburg/Medical Center – University of Freiburg*
- Averbis GmbH

Giessen:

- Justus Liebig University Giessen/ University Hospital Giessen/ Marburg*

- THM University of Applied Sciences

Greifswald:

- Greifswald University Hospital*

Magdeburg:

- Otto von Guericke University Magdeburg/University Hospital Magdeburg*

Mainz:

- University Medical Center of the Johannes Gutenberg University Mainz*

Mannheim:

- Medical Faculty Mannheim, Heidelberg University/ University Medical Centre Mannheim*

- Mannheim University of Applied Sciences

Marburg:

- Philipps-Universität Marburg/ University Hospital Giessen/ Marburg*

SMITH

CONSORTIUM PARTNERS

Aachen:

- RWTH Aachen University
- Uniklinik RWTH Aachen*

Berlin:

- ID Information und Dokumentation im Gesundheitswesen GmbH & Co. KGaA

Bonn:

- University Hospital Bonn*

* University hospital with Data Integration Centre (DIC)

Dortmund:

- Fraunhofer Institute for Software and Systems Engineering ISST

Essen:

- März Internetwork Services AG
- Universitätsmedizin Essen*

Freiburg:

- Averbis GmbH

Halle (Saale):

- University Hospital Halle (Saale)*

Hamburg:

- University Medical Center Hamburg-Eppendorf*

Jena:

- Friedrich Schiller University Jena
- University Hospital Jena*

Jülich:

- Forschungszentrum Jülich GmbH (Jülich Research Centre)

Leipzig:

- Leipzig University
- Leipzig University Medical Center*

Leverkusen:

- Bayer AG

NETWORK PARTNERS

Bochum:

- Verband des Universitäts-klinikums der Ruhr-Universität Bochum

Düsseldorf:

- Düsseldorf University Hospital

Rostock:

- Rostock University Medical Center

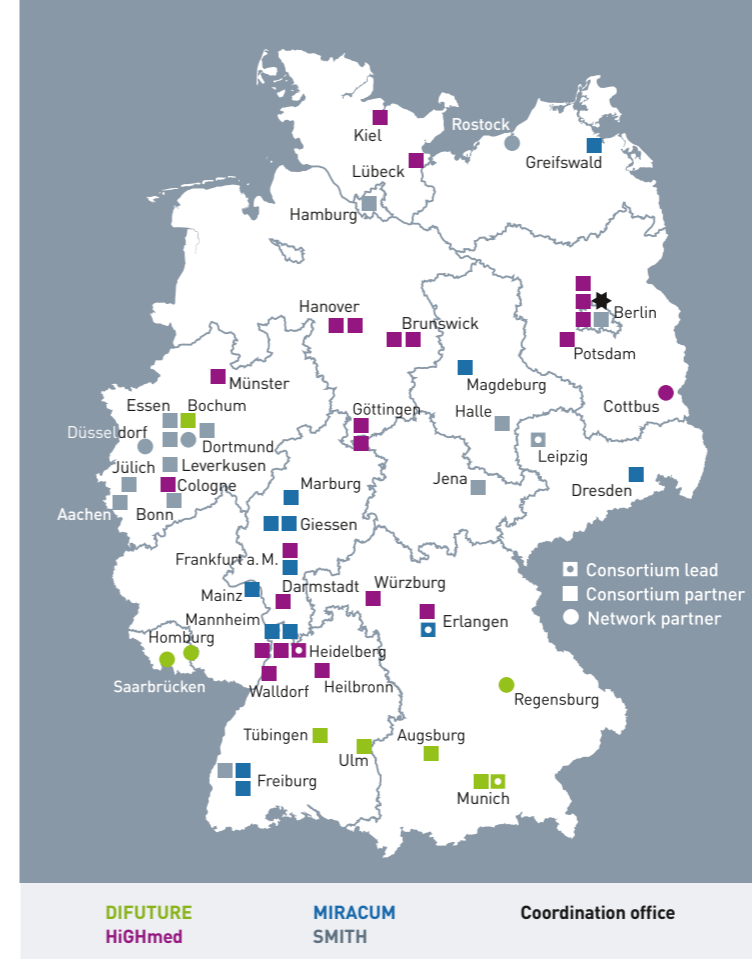
Coordination office

Berlin:

- MFT/TMF/VUD



The German Federal Ministry of Education and Research (BMBF) is investing a total of 180 million euros in the Medical Informatics Initiative through 2022. In a later phase of the initiative, results and solutions will be developed further and consolidated.



Initial results

With the support of the coordination office, the National Steering Committee (NSC) and its consent, data-sharing and interoperability working groups have developed core documents to address key MII topics and challenges:

- shared core data set in line with international standards
- paper summarising key points on interoperability
- specifications for shared use of standardised metadata

Shared success: Collaboration across Germany

Within the four funded consortia – DIFUTURE, HiGHmed, MIRACUM and SMITH – all German university hospitals and medical centres at over 30 locations cooperate with research institutions, businesses, health insurers and patient representatives. Their mission is to lay the foundations required to enable the use of research findings to the direct benefit of patients.

All MII consortia are represented in the National Steering Committee (NSC), with the aim of aligning activities and agreeing parameters. Cross-consortia collaboration within the initiative is organised and supported by the Berlin-based coordination office, operated by TMF (Technology, Methods and Infrastructure for Networked Medical Research) with MFT (German Association of Medical Faculties), and VUD (German Association of Academic Medical Centers).

- template text for patient consent forms, developed in cooperation with German Federal and State data protection agencies and the Association of Medical Ethics-Committees in Germany
- contractual framework for the use of patient data, biosamples, analytical methods and routines
- use and access policy
- concept of the Central application and registration office (ZARS)
- roadmap for the MII 2017 – 2025
- MII roadmap for enhanced research, education and skills development
- university hospital initiative for interoperable patient records