Hanseatic Life Science Research Infrastructure Consortium

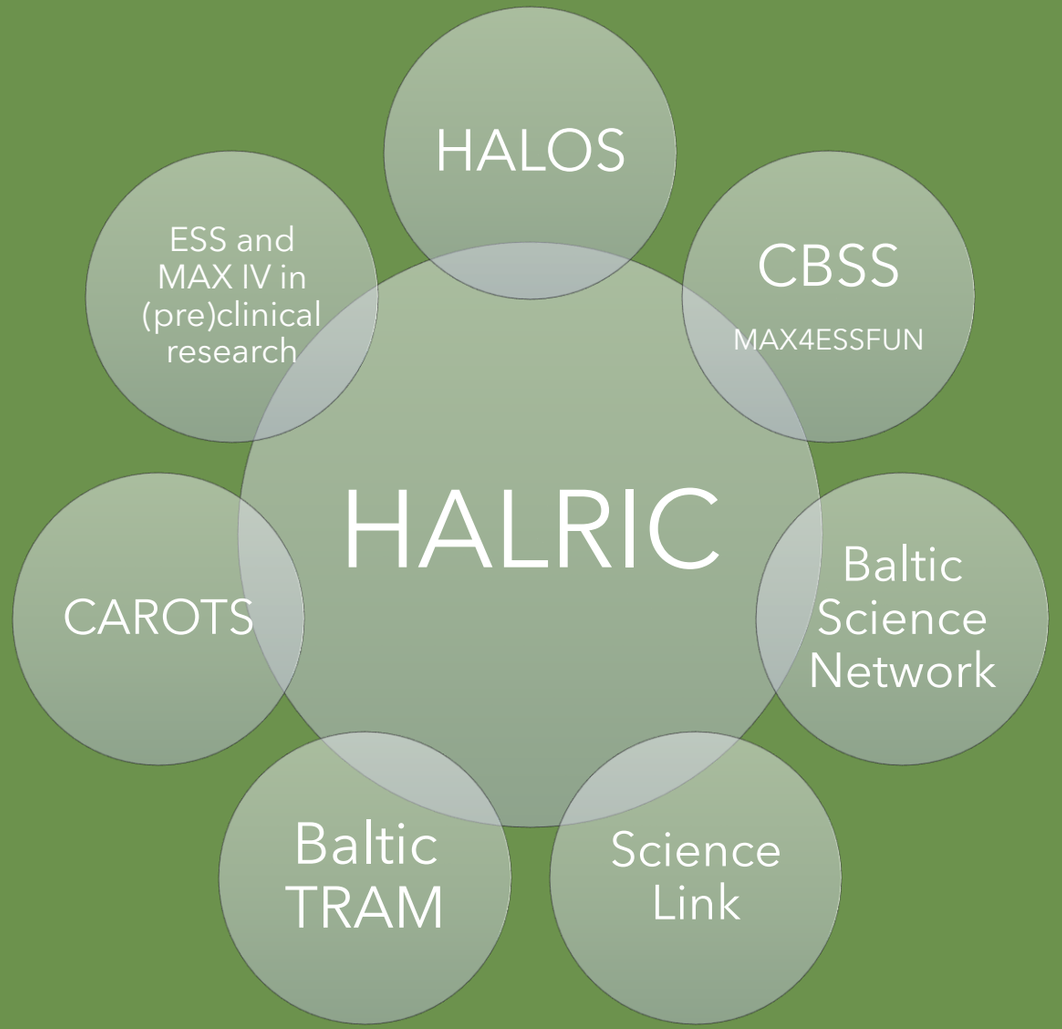
HALRIC Final conference | 25 February 2026

Unlocking access: HALRIC's journey with Research Infrastructures

Looking back: Our vision and mission

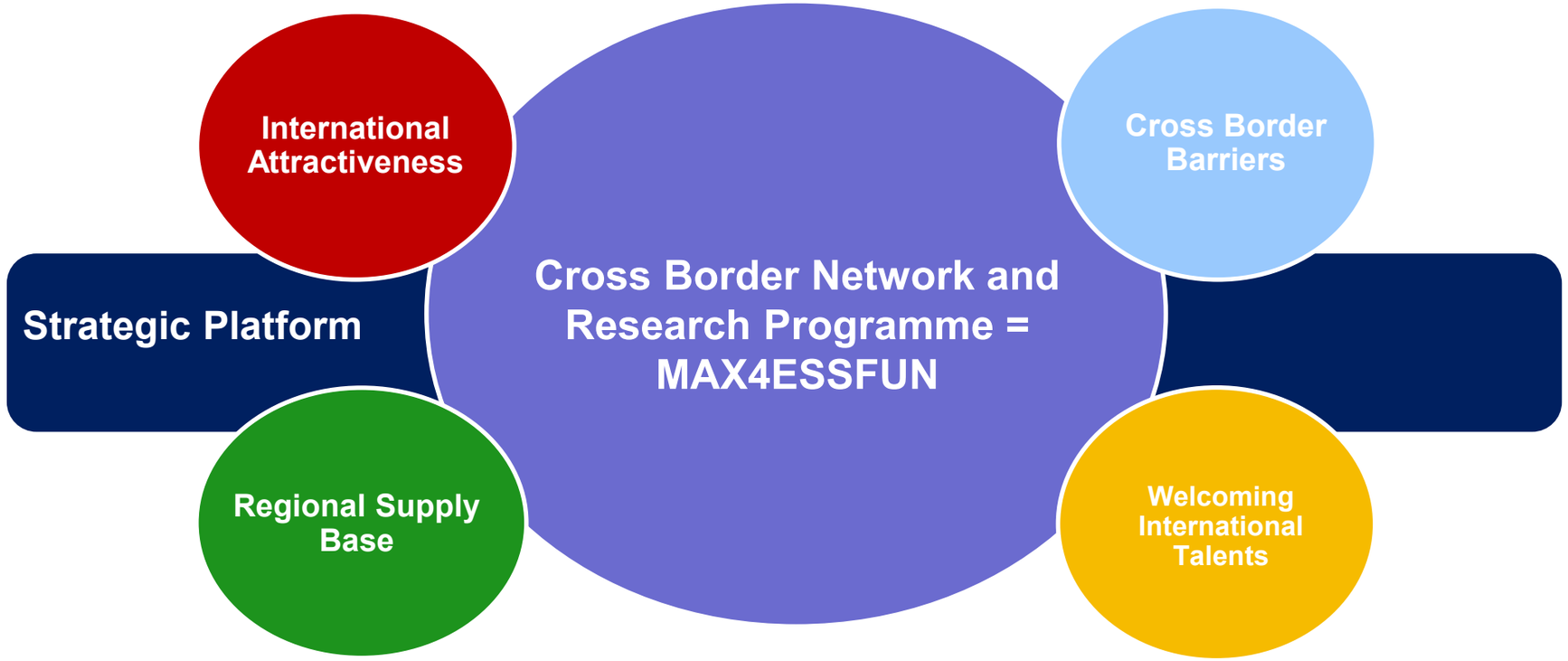
Kajsa M. Paulson, HALRIC Director, Lund University

Building on strong foundations


HALOS
ESS and MAX IV in (pre)clinical research
CBSS
MAX4ESSFUN
HALRIC
CAROTS
Baltic Science Network
Baltic TRAM
Science Link

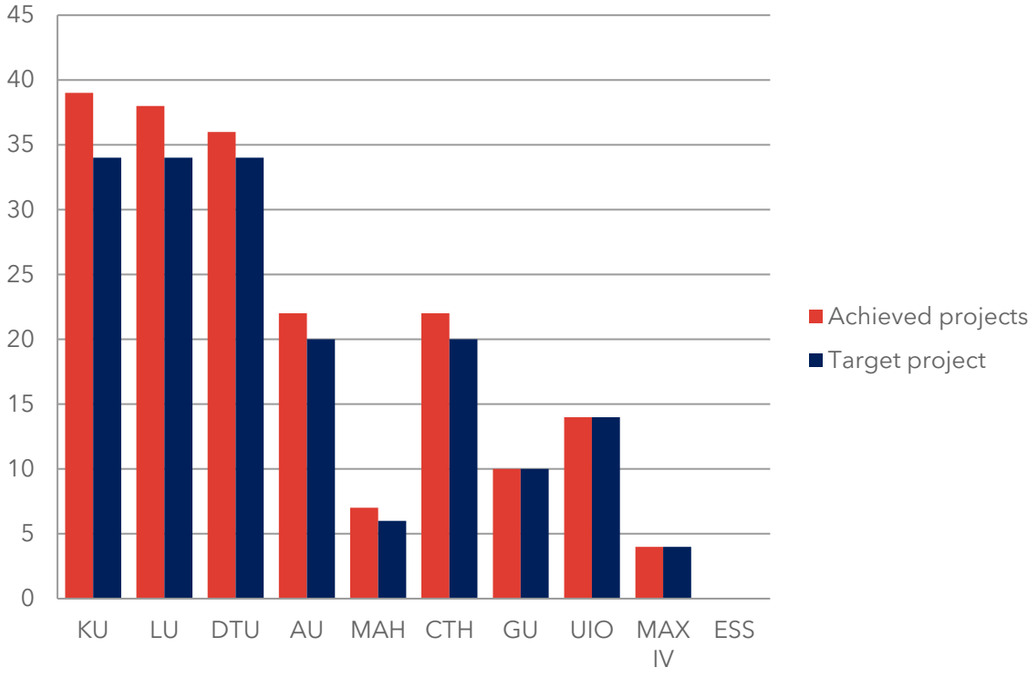
Before HALRIC

MAX4ESSFUN: **Cross Border Science and Society** (2015-2018)

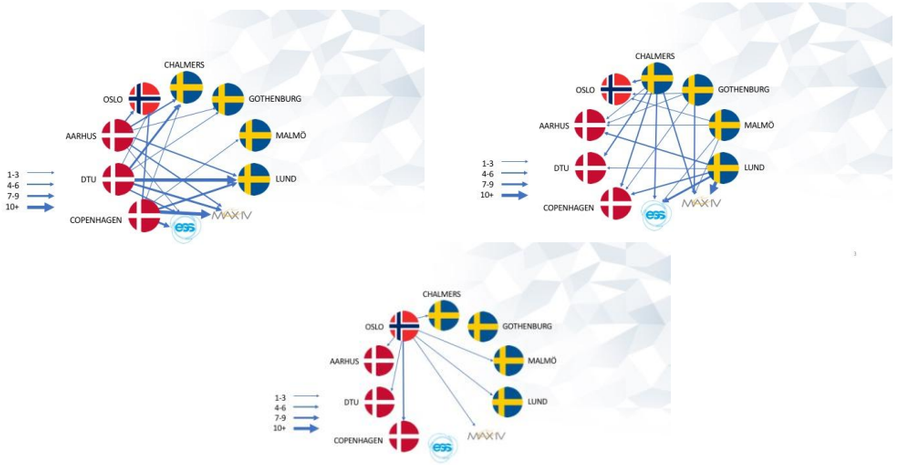


Before HALRIC

MAX4ESSFUN - 194 cross-border research projects in the ÖKS



194 projects with 181 of the projects involved synchrotron experiments and 87 neutrons.



The projects created a network for using synchrotron light and neutrons in the ÖKS.

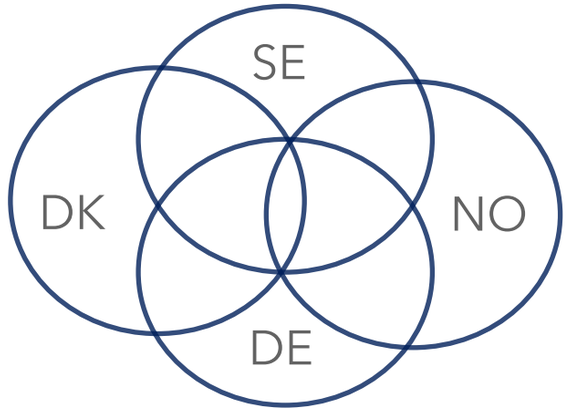
~ 50% of the MAX4ESSFUN projects were within life science

Before HALRIC

HALOS - Hanseatic League of Science - interconnecting infrastructures for life science and innovation (2019-2022)

40 Cross Border projects

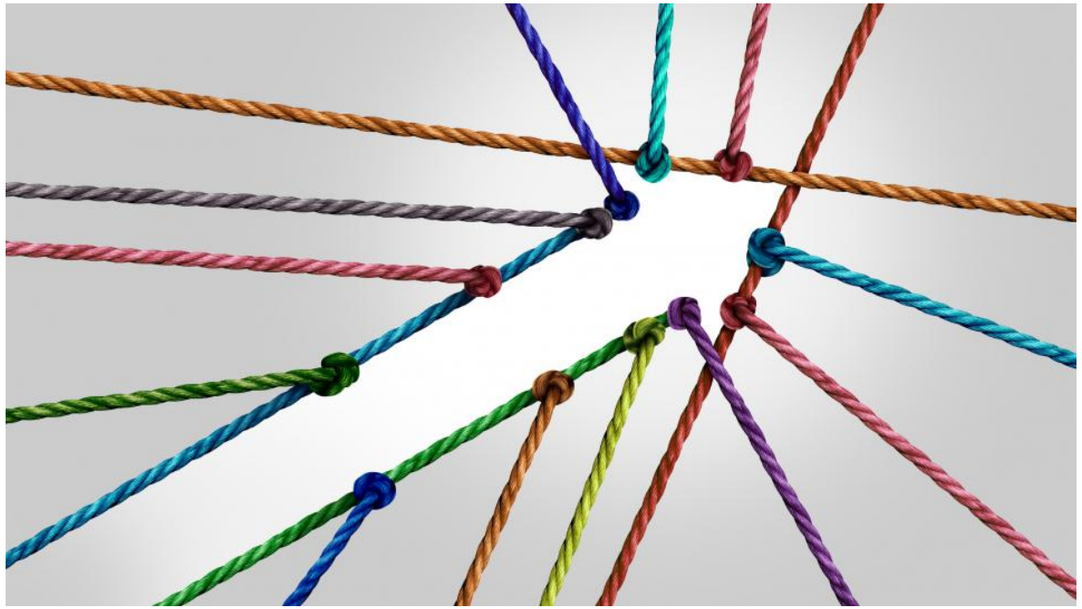
- Denmark
- Sweden
- Norway
- Germany



all in life science and all with industry outreach plans

Before HALRIC

HALOS - Hanseatic League of Science - interconnecting infrastructures for life science and innovation (2019-2022)



The HALOS joint strategy

- Create a common narrative for the HALOS region

- Develop cooperation platforms for common strengths

- Present a strong value proposition within specific strength areas

- Use the potential of proximity and the Fehmarn Belt Fixed Link

HALRIC

The why & what of HALRIC

HALRIC's vision is to increase the innovation capacity in the Öresund-Kattegat-Skagerrak-Hamburg Life Science sector, through increased access to Research Infrastructures (RI) and use of cross-border front-end technologies, instruments, expertise, and data handling solutions.

HALRIC

Strategic relevance of HALRIC

Why collaboration around infrastructures matters

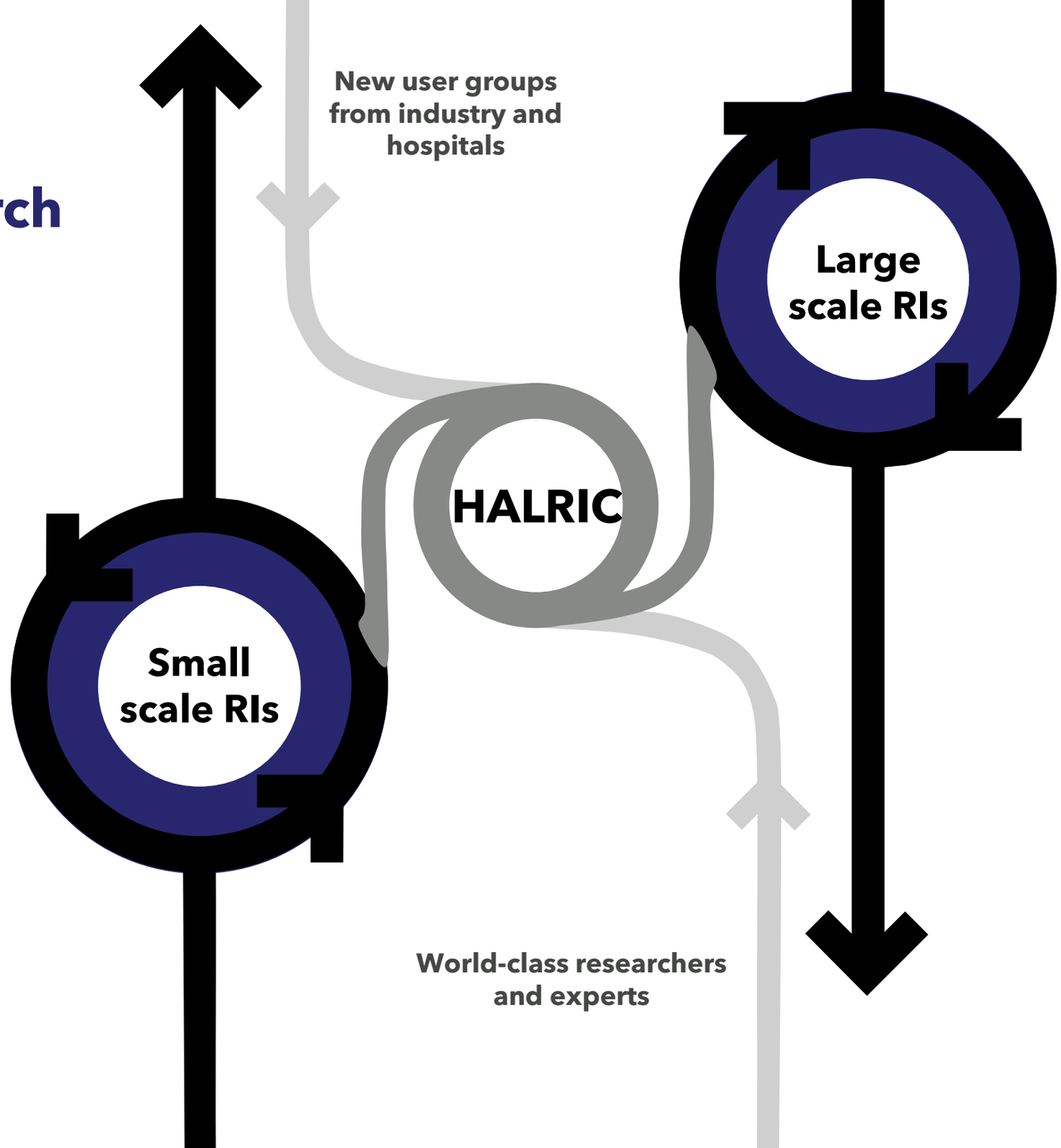
The **geographical proximity** including The Fehmarnbelt Fixed Link

Growing **interest from industry** to use state of the art Research Infrastructures (RIs)

Sustainable development calls for maximizing the cross-border utilization of RIs to save resources

Demand for new technology and methods to solve the Life Science and medical research questions of today and tomorrow

Increased **utilization** of globally **unique Research Infrastructures**



21 PARTNERS

Hospitals, Universities,
Research Infrastructures,
Regions and
Life Science Clusters

HALRIC

Large-scale Research Infrastructures

Petra III, DESY Synchrotron
Hamburg, Germany

European XFEL
Schenefeld, Germany

ASTRID2 Aarhus University
Aarhus, Denmark

MAX IV, Lund University
Lund, Sweden

ESS – European Spallation Source
Lund, Sweden

HALRIC infrastructures for structural biology (selection)

University of Oslo

- NMR laboratory
- Protein expression and purification
- Hydrogen-deuterium exchange mass spectrometer
- Small-angle X-ray scattering
- Biophysical characterization
- X-ray data collection
- Crystal screening and plate imaging

University of Copenhagen

- The Center for Advanced Bioimaging
- Core Facility for Integrated Microscopy
- Copenhagen Center for Open NMR Spectroscopy
- The Copenhagen facility for Biological SAXS
- CPR Biophysics program

Technical University of Denmark

- NMR center
- X-ray Crystallography and scattering
- Proteomics core facility
- Protein Biophysics core facility
- Bioimaging core facility

Aarhus University

- Danish Center for Ultrahigh Field NMR Spectroscopy
- iNANO Cryo-Electron Microscopy facility
- Small-angle x-ray scattering
- MBG Bioimaging
- Bioimaging core facility
- MBG Mass Spectrometry facility
- Atomic force microscopy
- Biophysics & Biochemistry Core Facility

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HALRIC infrastructures for structural biology (selection)

University of Hamburg

- Multi-User Cryo-EM facility
- Advanced Light and Fluorescence Microscopy Facility
- Protein production
- Sample preparation and characterisations facility
- NMR spectroscopy
- Mass spectrometry

EMBL Hamburg

- Beamline for biological small angle X-ray scattering at the PETRA III synchotron
- Beamlines for macromolecular crystallography at PETRA III
- Sample Preparation and Characterisation Facility

Lund University

- NMR center
- SAXSlab
- Correlative Image Processing and Analysis center
- Cryo-EM facility
- BioMS (mass spectrometry)
- Lund Protein Production Platform (LP3)

Mission

Industry perspective

The unique competences available at large-scale and/or complementary Research Infrastructures (RIs) can help companies translate their challenge or problem to a solution.

HALRIC helps companies:

- To get **access** to a broad network with advanced expertise.
- By financially supporting the **academic and/or infrastructure partner to run** a pilot project with an industry partner.
- To utilize advanced RIs as well as **identify the best methods** to make sense of the data and **translate the findings**.

Mission

Hospital perspective

Through HALRIC, Research Infrastructures and hospitals can combine techniques and competences for the benefit of clinical research. They can for example provide a fuller picture to visualize the impact of a particular substance, procedure or material, on an organ, cells etc.

Hospitals benefit as a partner in HALRIC, because they can:

- Be supported to **access a diverse set of techniques** available at Research Infrastructures in the ÖKS-Hamburg Region.
- **Attract new collaborators** to use their unique radiology and medical imaging technology, and at some hospitals even biobanks and register data.
- Collaborate to optimize the acquisition, output and post analysis methods of hospital lab equipment towards e.g., higher resolution, to ultimately **improve diagnosis of patients.**

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