EKFZ
Digital Health

Else Kröner Fresenius-Center for Digital Health

OUR SCIENTIFIC FOCUS

The Else Kröner-Fresenius Center (EKFZ) for Digital Health at the Technische Universität Dresden focuses its research effort on the direct interface of the digital world to the patient thereby serving as a bridge between medical big data efforts and traditional biomedical engineering. The EKFZ is structured in virtual application rooms that represent strategic development areas and will be strengthened by specific appointments for center professorships, and in core rooms, which provide the scientific infrastructure and theoretical basics. The competences from the core rooms are the basis for successful translation of high-tech innovation into routine care. The application rooms address "Implants and Sensors" (AR 1), "Connected Care" (AR 2) as well as "Robotics and Coworking" (AR 3). Exemplarily, within the application room "Implants and Sensors" research specializes in sensors and applications close to or inside the patient's body such as implantable sensors or personalized implants. The respective professorship will serve as a central facilitator for medical sensor and implant activities and will perform teaching courses for engineers and future physicians. Core rooms focus on "Data Integration and Security" (CR 1), "Evidence and Implementation" (CR 2), "Teaching and Talent" (CR 3) and "Regulatory Affairs" (CR 4). As an example, the core room "Teaching and Talent" creates a unique interdisciplinary training environment for future physicians and engineers by implementing new courses for biomedical engineering and for medical software technology. Additionally, an integrated career development path towards clinician scientists is provided for physicians. Because the patient-focus is our core mission, centerpiece of the EKFZ for Digital Health is the living lab, which focuses on working in a scientific context and allows a rapid access to patients by providing a common clinical testbed. New concepts and technological applications can thus be tested in a near-realistic setting. Thereby, patients benefit early on from the latest diagnostic and therapeutic procedures.

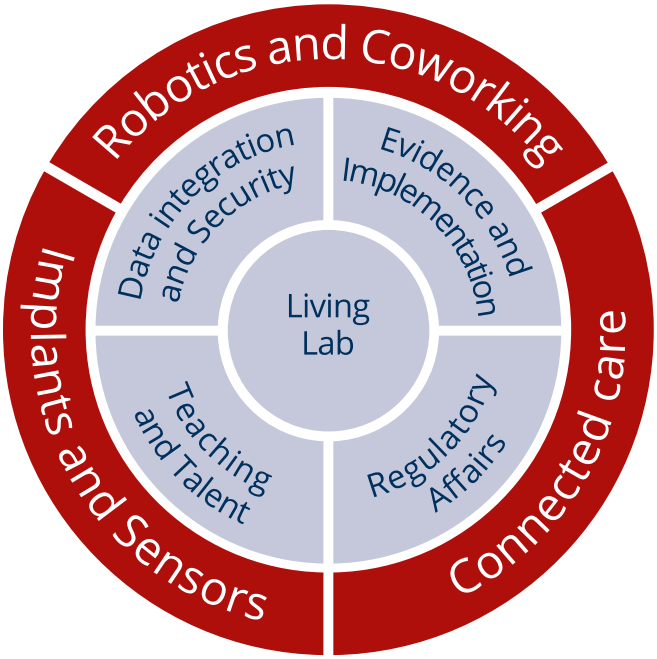

Illustration of relation of the application rooms, core rooms (inner circle) and the living lab of the EKFZ.

The EKFZ for Digital Health aims at enhancing a generation of physicians with comprehensive technical knowhow and skills and vice versa engineers with a thorough understanding of medical and patient needs. When working with us, physicians and technologist will gain a holistic understanding of the future patient care. We enable them to learn from and work with each other to overcome the barriers of disciplines for effective implementation of medical innovation.

We bring digital innovation to the patient.

We create a new Interdisciplinarity between Medicine and Engineering.

F. Brinkmann (physician) and R. Hüttner (engineer) working together on innovative ideas. (© M. Brombach, EKFZ)

WHO WE ARE

The EKFZ for Digital Health, founded in September 2019, is a joint cross-faculty initiative at the Technische Universität Dresden (TUD), the University Hospital Carl Gustav Carus Dresden (UHD) along with several Fraunhofer and Helmholtz institutes on the Dresden campus. Aiming for the benefit of the patient, the School of Medicine and the high-tech specialists on campus bundle their expertise on the medical campus in an initiative driven by medical need and with direct access to medical infrastructure. Whereas conventionally these different disciplines work and research independently, the EKFZ for Digital Health brings them together in training, undergraduate and postgraduate research.

OUR MISSION FOR AN eHEALTH CAMPUS

To enhance innovation in the field of medical digital health, we need specialists who understand and interact constructively and creatively with each other. That is why the EKFZ for Digital Health establishes an eHealth campus, which is directly located on the premises of the University Hospital Dresden. For the first time, physicians, engineers and technicians will learn, teach and research together. The joint training and research on interdisciplinary projects offers the potential to bundle ideas and implement them directly on site. The result is an eHealth campus that will produce groundbreaking improvements for the benefit of the patients.

OUR INNOVATIVE TOOLS

The EKFZ for Digital Health offers flexible financial support of future-oriented interdisciplinary innovation research projects for teams from the Dresden campus. For two years each, physicians and technologists can concentrate their research on a specific, clinically relevant question. These projects aim to shorten the time span from the idea to the prototype and thus generate benefit for the patient. Twice a year new projects can apply for funding. The projects are selected and reviewed by an independent committee. The first interdisciplinary innovation research projects started in December 2019.

WHO FUNDS THE CENTER

The Else Kröner-Fresenius Foundation, the largest private foundation in the field of medicine in Germany, provides the core funding of 40 million Euros over 10 years for the center. The Dresden campus initiative was able to convince an international team of reviewers in a competitive selection of 26 German universities.

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TECHNISCHE UNIVERSITÄT DRESDEN

EKFZ Digital Health

Universitätsklinikum Carl Gustav Carus
DIE DRESDNER.