



| Fact Sheet northh medical

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Foundation & Founder

northh medical GmbH emerged from research at the UKE. In June 2017, northh medical GmbH was founded based on the research and development results. In total, the company consists of seven founders with complementary know-how in the fields of engineering, radiology, gynecology, and business development.

Employees

The team of northh medical GmbH currently consists of the three founders Dr. Fabian Kording (CEO), Dr. Christian Ruprecht (CTO) and Kai Fehrs (CQO), three employees in the areas of Clinical Affairs and Development Engineering as well as working students. northh medical is supported by the Dr. med. Björn Schönagel, Prof. Dr. med. Jin Yamamura and Dr. med. Manuela Tavares de Sousa from the departments of radiology and gynecology.

Company Overview

northh medical GmbH is a Hamburg-based company in the field of cardiac MR imaging and medical devices. With the new **smart-sync** technology, northh medical's experts from the fields of radiology, gynecology and medical engineering are enabling prenatal diagnosis of congenital heart disease using magnetic resonance imaging (MRI) as an alternative to echocardiography for the first time worldwide, as well as an improved cardiac MR imaging in adults. northh medical GmbH is located at the Hamburg site of Philips GmbH, in the Health Innovation Port (HIP).

Product

smart-sync is an MR-compatible Doppler ultrasound system that synchronizes the cardiac cycle with image acquisition ("gating"). It provides a direct fetal cardiac gating signal and thus enables prenatal cardiac MR examinations of the fetal heart. Similarly, **smart-sync** can be used as an alternative to ECG for cardiac gating in adults without being influenced by the magnetic field of the MRI. The product is thus available for fetal, adult and soon also paediatric use. **smart-sync** is integrated wirelessly and is compatible with all major MR providers.



Markets

MRI cardiac imaging is a growing market segment within radiology and corresponds to a turnover in Europe of 1.3 billion euros with an annual growth of more than five percent. The fetal market results from the high rate of cardiac malformations, with one in 100 newborns the most common birth defect. In 120,000 cases annually, babies require heart surgery after birth. Due to limitations in ultrasound diagnostics, malformations are overlooked and not correctly diagnosed in three out of ten cases. In order to offer a more reliable diagnosis in this field, northhh medical GmbH developed its product *smart-sync*.

Customers

In the fetal B2B market, customers are pediatric cardiologists and radiologists as well as gynecologists at university hospitals and level I and II perinatal centers worldwide. Customers of the adult application are radiologists in hospitals as well as radiological practices.

Partners

Within the last few years, prototypes have been delivered for research purposes to the world's leading hospitals in the field of prenatal MRI imaging, for example to the Children's Hospital of Colorado, University Medical Center Lund, Sick Kids Hospital Toronto, Tel Aviv Medical Center Israel and the University Medical Center Vienna. In the meantime, results from Lund, Hamburg, Göttingen and Denver are available, and some have already been published. northhh medical has maintained a close and successful research cooperation with Philips Medical for many years. In 2018, northhh medical participated in the *Philips HealthWorks startup program* and has since been part of the startup network of the Health Innovation Port (HIP) in Hamburg.

Investments Overview

The development and spin-off of northhh medical had already been supported since 2015 by an EXIST research transfer from the Federal Ministry for Economic Affairs and Energy (BMWi). After the company was founded in 2017, direct funding was provided as part of the EXIST II funding, also by the BMWi. northhh medical has been able to realize product development and market entry in three seed financing rounds by business angels since 2017.