

## Founder story

In 2016, Anke Mayfarth was a member of the management team at Waldkliniken Eisenberg, one of the largest clinics in Germany in terms of total hip and knee arthroplasty cases. The clinic was approached by Prof. Horst-Michael Gross, head of the Cognitive Robotics lab at Ilmenau University of Technology in search for mobile robot applications in the healthcare sector. With her degrees in physiotherapy and management and 15 years of clinical experience as a physiotherapist in areas such as neurology and orthopedics, Anke was asked to look into this. She was thrilled immediately since there was this one exercise where she always wished to have a robot taking over this task: gait training on crutches. This task is boring for therapists as it is highly standardized – and, thus, suitable for robot employment. In addition, this exercise affects more than 1.5 million patients after lower limb surgery in Germany alone that need to walk on crutches – in acute clinics first, with many of them transferring to rehabilitation clinics thereafter. So, the total usage potential is more than two million cases in Germany annually, representing a sizable market.

Waldkliniken Eisenberg then joined forces with the Ilmenau Cognitive Robotics lab, MetraLabs as a mobile robot manufacturer, and Barmer, one of the largest public health insurances companies in Germany. Between 2016 and 2019, a demonstrator was developed and tested for patients walking in three-point-gait. In 2018, Anke joined MetraLabs as a product owner to be closer involved in developing the product.

At MetraLabs, she met Christian Sternitzke who was asked by the MetraLabs founders if he could support with filing patents in the research project. After having spent many years in Venture Capital, Christian had quit his investor job and was looking for novel opportunities to found a startup. He also brought extensive patenting experience to the table. Throughout the project, he not only filed patents for healthcare applications around the mobile robot extensively, but also co-invented many technologies for MetraLabs. Christian also looked deeply into possible business models and boundary conditions – something he was extremely familiar with due to its prior investor role. It turned out that the original idea to establish a medical device unit within MetraLabs would have created disadvantages for the company's product portfolio of industrial and retail robots, so the decision was made to spin out the healthcare activities and also acquire IP from Ilmenau University of Technology that was developed throughout the project.

Anke then went on a scholarship for founding tediro. She and Christian conducted many stakeholder interviews with clinics, questioning therapists, managing directors, and physicians. The potential of the robotic system was broadly confirmed. Consequently, Anke and Christian incorporated tediro in Mai 2020. To get the robot going, they hired, among others, former PhD students from the Cognitive Robotics lab at Ilmenau University of Technology who were involved in developing the demonstrator.