

MRI FOR AFRICA

THE DESIGN OF AN MRI FOR THE DIAGNOSIS OF INFANT HYDROCEPHALUS IN UGANDAN HOSPITALS



MRI – or magnetic resonance imaging – is the safest diagnostic imaging technology out there, yet also the most expensive. A conventional system can cost well over a million dollars. The astounding price of this technology prevents most of the world from accessing and using it, causing a huge global inequity in the fundamental right of healthcare. To increase accessibility, researchers from the TU Delft and the Leiden University Medical Center have successfully developed a low-cost MRI technology for the diagnosis of infant hydrocephalus, a condition that - with over 45.000 cases each year in sub-Saharan Africa - can benefit from a better means of diagnosis. This thesis integrated the technology in a usable product that addresses the contextual challenges found in Ugandan hospitals.

CARRIABLE DESIGN

Enables transport over rough pathways often found surrounding hospitals.

SMALL, INTEGRATED SYSTEM

Enables flexible placement in hospitals that frequently have space issues.

OPERATOR AND PARENT CAN REMAIN CLOSE TO THE PATIENT

Increases safety for patient, and allows parent to remain close to their child, often desired in these settings.

LOW-COST AND EASY MAINTENANCE

Affordable to hospitals in Uganda, and prevents long down-times because of low maintenance requirements



Frank van Doesum
MRI for Africa
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Integrated Product Design

Committee Dr. Ir. J.C. Diehl
Ir. M.F. Bakker
Company Dr. Ir. M.B. van Gijzen

 **TU Delft**