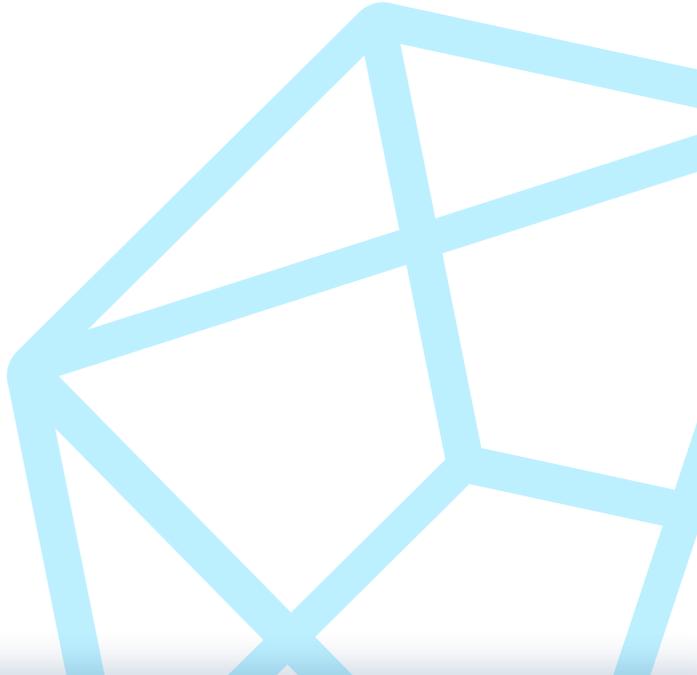




UK Dementia
Research Institute

Care Research & Technology Centre

Pioneering new technologies
aimed at supporting people
to live well for longer.



Imperial College
London



UNIVERSITY OF
SURREY

NHS
Surrey and Borders
Partnership
NHS Foundation Trust

850,000

people living with dementia in UK.

85%

of people living with dementia want to live at home.

1 in 4

hospital beds are occupied by people living with dementia.

20%

of hospital admissions are potentially preventable.

The Care Research & Technology Centre is one of seven Centres that collectively make up the UK Dementia Research Institute (UK DRI).

The Centre is based at Imperial College London and runs in collaboration with the University of Surrey and the Surrey and Borders Partnership NHS Foundation Trust (SABP).

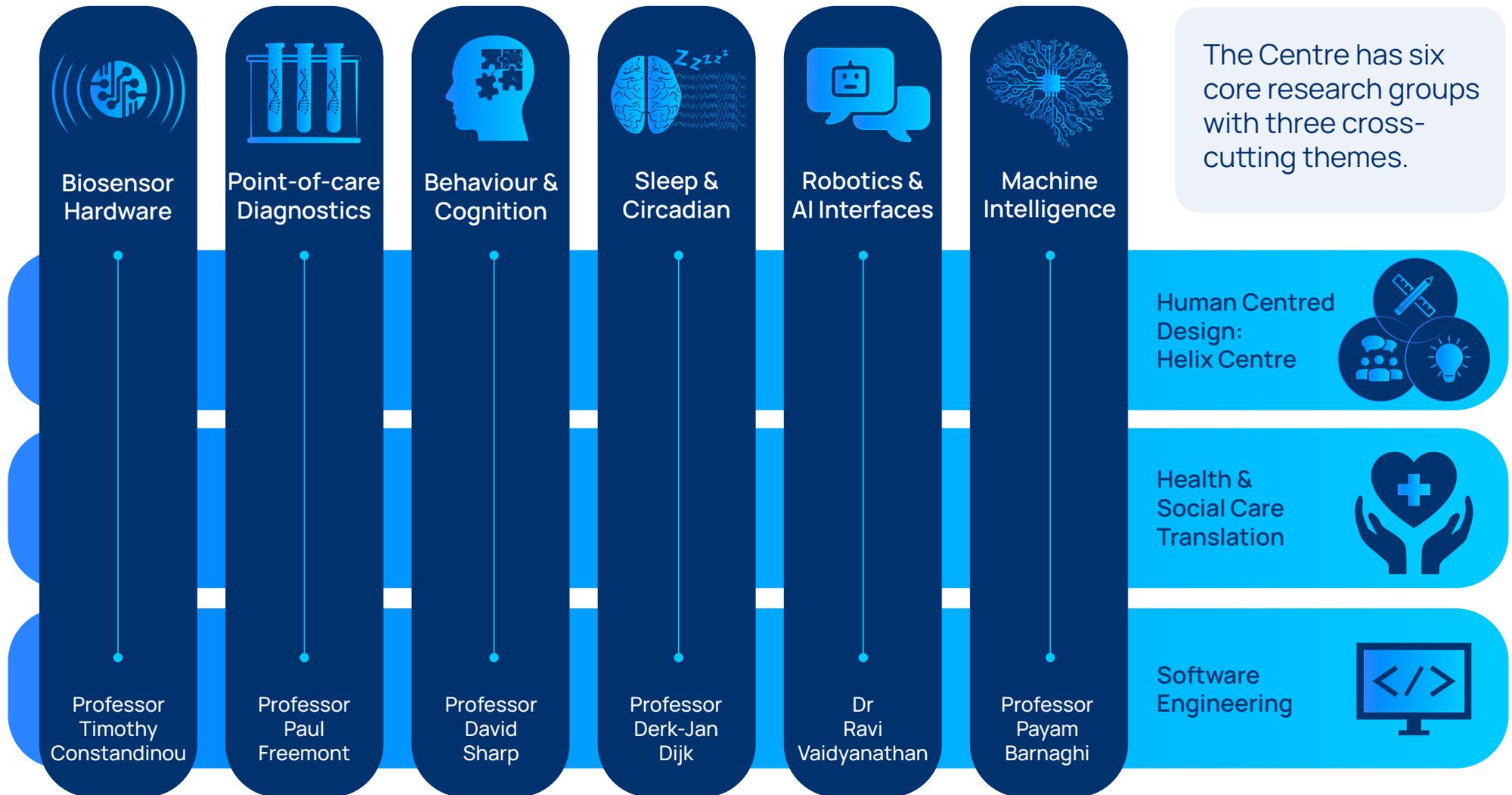
The Centre leads the [Minder Study \(page 8\)](#) which is pioneering a smart home system to support people living in their homes.

“We have brought together a diverse team of doctors, engineers and scientists who together can harness recent advances in artificial intelligence, engineering, robotics and sleep science to create novel technologies that will deliver the highest quality dementia care in the home by establishing a smart home environment.”

- Professor David Sharp
Centre Director, UK DRI CR&T

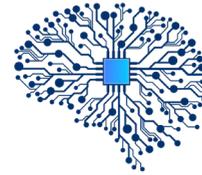


Research Programmes

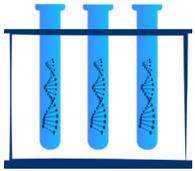




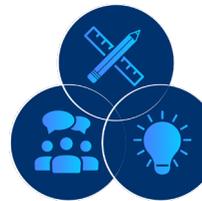
The **Biosensor Hardware** team develop novel bioelectronic systems focusing on compliance - specifically, low cost, unobtrusive, non-contact sensing technologies.



The **Machine Intelligence** team develop the Minder platform and its machine learning capabilities through cross-cutting data science programmes.



The **Point-of-Care Diagnostics** team investigate risk factors for adverse infective outcomes using synthetic biology methods to revolutionise the management of common infections.



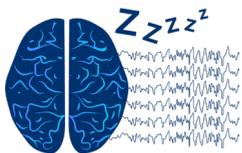
The **Helix Centre** works with people living with dementia, scientists, clinicians and engineers through co-design processes to maximise the acceptability and usability of the Minder platform and associated products.



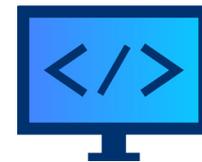
The **Cognition & Behaviour** team develop novel ways to measure, understand, and treat behavioural effects of dementia, developing digital biomarkers for behavioral abnormalities.



The **Health & Social Care Translation** team ensure safety and wellbeing of participants with a team of experts including Occupational Therapists, General Practitioners, Local Authorities and Clinical Consultants.



The **Sleep & Circadian** team identify optimal approaches to monitor sleep and circadian rhythms at home and study new treatments for sleep disturbance produced by dementia.



The **Software Engineering** team develop the Minder Platform which is a healthcare data collection, integration, clinical monitoring and research platform. It features a clinical dashboard and visualisation, analysis, and reporting tools.



The **Robotics & A.I Interfaces** team develop robotic devices to augment the capability of the Minder platform by supporting direct interactions with people living with dementia, carers and their homes.



Minder

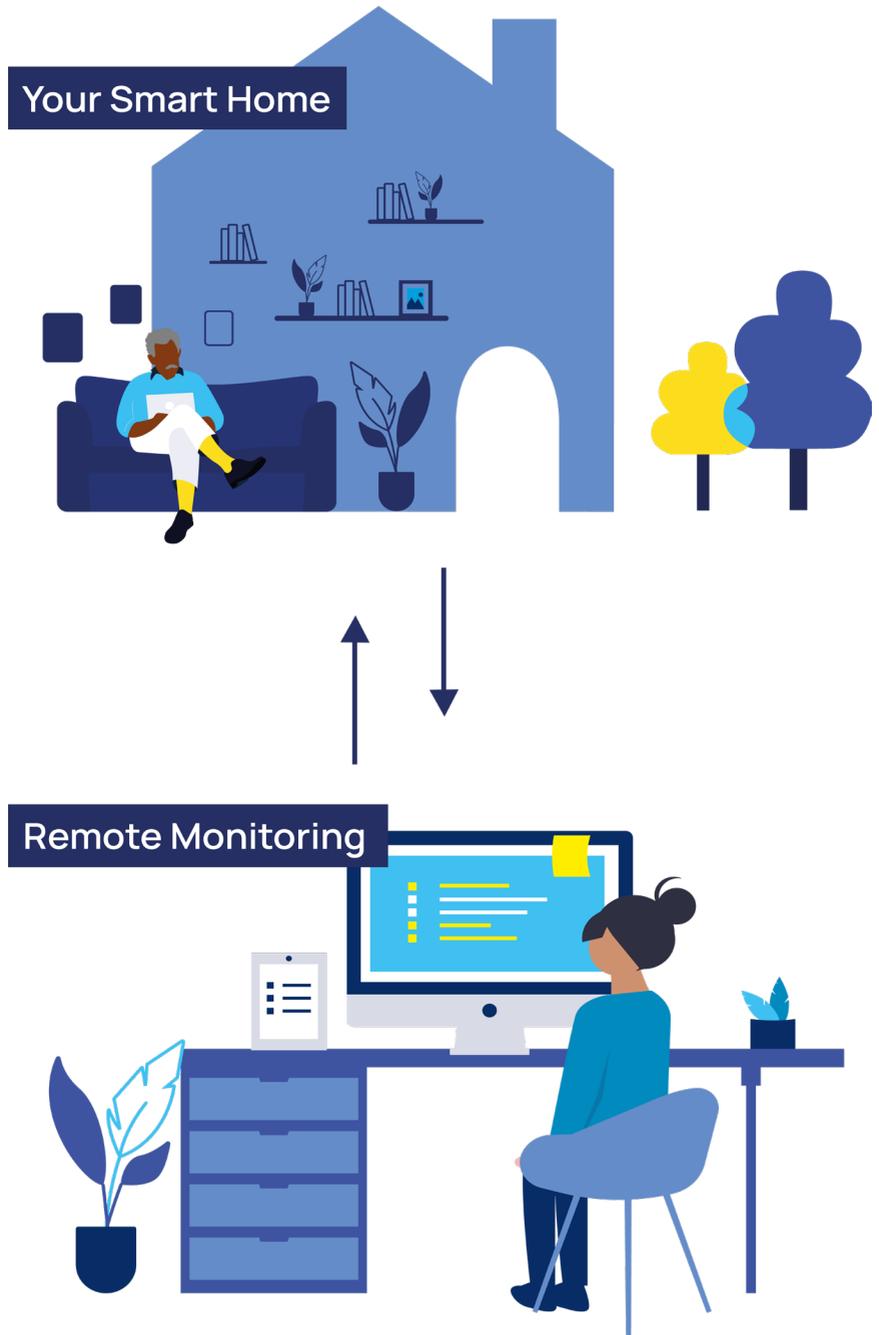
Minder is the name of the study and system we are developing.

The study is developing a smart home system to support people living in their homes and learn more about different health conditions. This is to help us treat and manage these conditions in the future.

I feel reassured that there's a way ahead and it's not a dark future

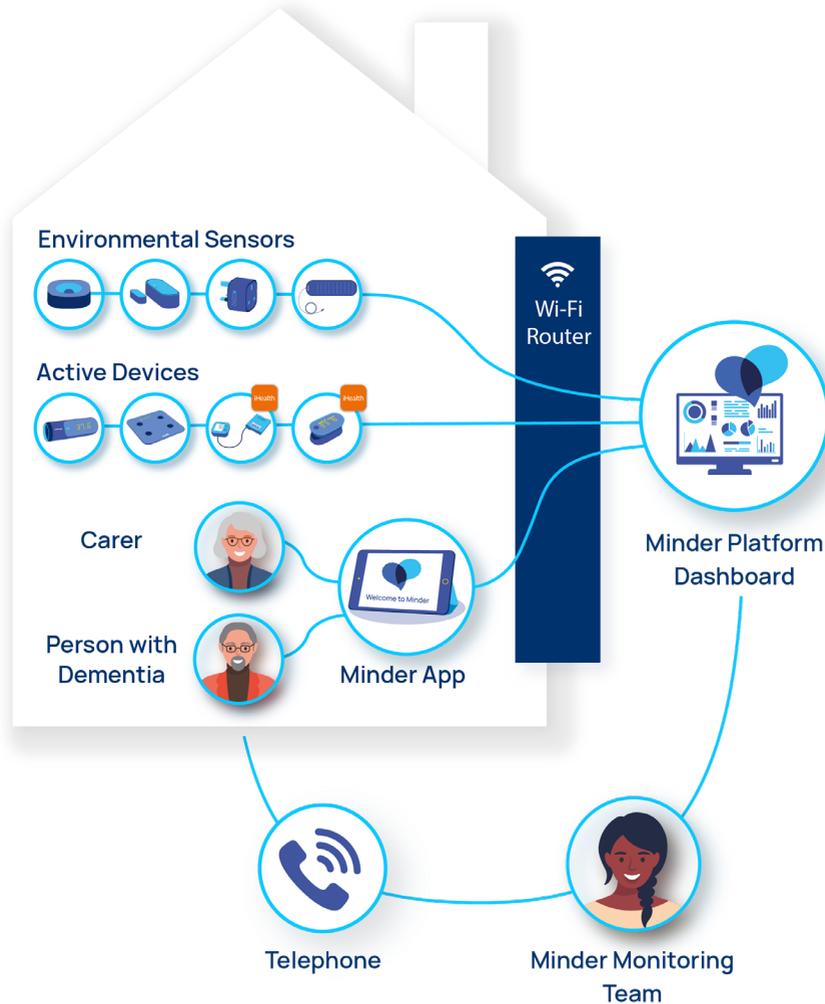
It is invisible support for carers

It takes the scary bits away; it means I'm not on my own



Minder Home System

Minder Devices



A note about privacy, none of these devices can photograph or film people in their homes.



As part of this study, some sensors and electronic devices are placed in the homes of people living with dementia. By monitoring activity and taking daily measurements we can support the health and wellbeing of our participants remotely.

Study sponsors:



Primary care partners:



Health & social care partners:



Technology partners:



WITHINGS



Funded by



Find out more:

UK DRI CR&T

imperial.ac.uk/uk-dri-care-research-technology

Minder meeting place

mindermeetingplace.com

Contact us:

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Watch
our film:

