

# PORTFOLIO PORTFOLIO PORTFOLIO

The perspective of each research group



PLEASE USE YOUR RGB FILTERS



Applied research designed to create cutting edge technology  
and bring value to industry and society, connecting:

PEOPLE *INTELLIGENCE* THINGS

Living and Ageing with Data

Digital Farming

# SENSE

Cognitive Connected Solutions

Decentralised Health Technology

Connected Things

HOW DO WE MAKE  
IOT ACCESSIBLE  
HOW DO TO EVERYONE?  
WE WEAR IT? **HOW CAN**  
Human-Centred Design **INTELLIGENCE**  
**BE DISTRIBUTED**  
**THROUGH THEM?**

*Intelligent Systems*

Digital Farming

# CONNECT

Cognitive Connected Solutions

Human-Centred Design

HOW TO  
PRESENT THE  
NOTION OF CONNECTED  
DEVICES TO NEOPHYTES?

HOW DO WE PREPARE INFRASTRUCTURE FOR EASY MAINTENANCE?  
*CAN WE ADAPT LINKS' CAPACITY DYNAMICALLY BY LEARNING USERS' HABITS?*

Connected Things

*Intelligent Systems*

Living and Ageing with Data

# COMMUNITY

Decentralised Health Technology



*Intelligent Systems*

**CAN WE PROCESS HUGE  
AMOUNTS OF DATA TO  
LEARN COMMUNITIES'**

**CAN WE COLLECT BEHAVIOURS?  
VAST AMOUNTS OF HOW CAN WE  
DATA WITH SMALL DIGITALLY ENGAGE  
INFRASTRUCTURE? CITIZENS WITH  
GOVERNMENTS?**

Connected Things

Human-Centred Design

Living and Ageing with Data

---

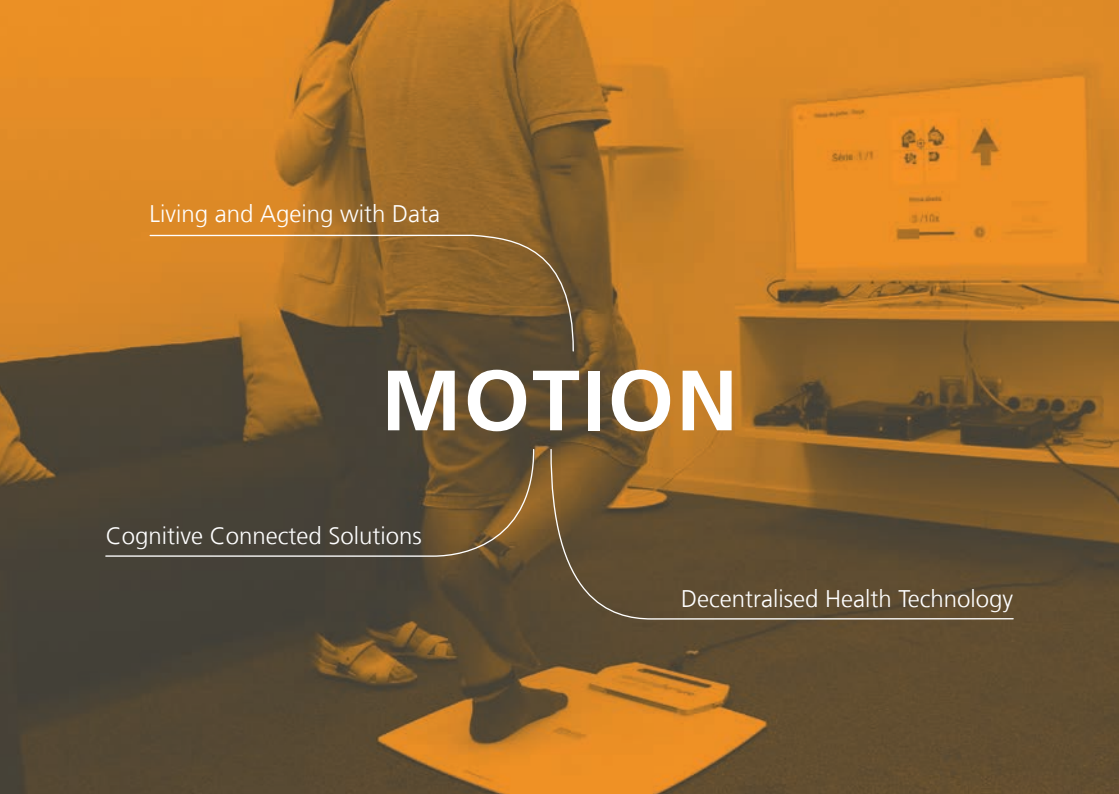
# MOTION

Cognitive Connected Solutions

---

Decentralised Health Technology

---




*Intelligent Systems*

**CAN WE UNDERSTAND  
HUMAN MOTION USING  
INFORMATION FROM**

**HOW DO WE GIVE WEARABLES?  
PEOPLE MEANINGFUL WHICH  
FEEDBACK ABOUT STRATEGIES  
THEIR MOVEMENT? CAN WE USE TO  
IMPROVE SENSOR  
BATTERY LIFE?**

Human-Centred Design

Connected Things



Living and Ageing with Data

# NUTRITION

Accountable Artificial Intelligence

Decentralised Health Technology

*Intelligent Systems*

**CAN FOOD WASTE BE  
REDUCED BY BALANCING  
INDIVIDUALS' HEALTH  
AND RETAILERS' STOCK**

**HOW ARE PEOPLE'S *OUTFLOW?*  
FOOD CHOICES MADE? HOW DO WE**

Human-Centred Design **CONVERT LEGACY**

**APPLIANCES**

**INTO SMART OBJECTS?**

Connected Things

Living and Ageing with Data

---

# PERSONAL

Accountable Artificial Intelligence

---

Decentralised Health Technology

---

Human-Centred Design

WHAT INFORMATION  
DO PATIENTS NEED  
FOR SELF-MANAGEMENT?

HOW CAN WE *CAN WE PREDICT*  
CONTINUOUSLY *DISEASE EXACERBATIONS*  
COLLECT DATA *FROM EVERYDAY ACTIVITY?*  
ON PEOPLE'S *Intelligent Systems*  
HABITS?

Connected Things

Decentralised Health Technology

# DERMA

Accountable Artificial Intelligence






Human-Centred Design

HOW TO CONTROL SMARTPHONE CAMERA SETTINGS TO OPTIMISE IMAGE QUALITY?  
HOW DOES THE DEVICE FIT INTO DERMATOLOGY CARE PROVISION?  
*CAN WE IMPROVE RISK*

Connected Things

*PRIORITISATION  
OF SKIN LESIONS?*

*Intelligent Systems*



Decentralised Health Technology

# OPHTHA

Accountable Artificial Intelligence

*Intelligent Systems*

**HOW CAN WE**

**ENABLE USER**

Connected Things **GUIDANCE AND**

**HOW CAN WE** **AUTO-CAPTURE**

**IMPROVE PATIENT** **DURING HANDHELD**

**COMFORT USING** **ACQUISITION?**

**NON-INVASIVE** **HOW CAN**

**TECHNIQUES?** **WE GUIDE**

**NON-EXPERTS**

**INTO USING IT?**

Human-Centred Design

Decentralised Health Technology

# MICRON

Accountable Artificial Intelligence

Connected Things Human-Centred Design

HOW CAN WE CAN WE DESIGN  
AUTOMATISE IT TO BE PRODUCED  
SAMPLE ANALYSIS, ANYWHERE AND USED  
MINIMISING BY NON-EXPERTS?  
SCANNING TIME? **CAN WE**  
**EFFECTIVELY SUPPORT**  
**MICROSCOPY-BASED**  
**DIAGNOSIS?**

*Intelligent Systems*



# AUDIT

Cognitive Connected Solutions

Connected Things

CAN WE Human-Centred Design

AUTOMATE THE HOW CAN WE

ACQUISITION OF ENABLE USE

INFORMATION IN EXTREME

FOR REAL-TIME SITUATIONS?

AUDITING? *HOW DO*

*WE DESIGN ALGORITHMS*

*THAT ARE TOLERANT TO*

*IMAGES OF LOW QUALITY?*

*Intelligent Systems*

