

# Dementia

## Warm Technology for People with Dementia

### Challenge Introduction

Incidences of age-related diseases such as dementia are increasing. The societal views on dementia have drastically changed from addressing people with dementia by their symptoms to people with unique life experiences. Attention is shifting to living well with dementia, and how non-pharmacological interventions such as technology can play an important role to support this. However, there are still many challenges ahead. Technology is often devised without full consideration of the target user group, or a thorough understanding of the context in which it is to operate. Furthermore, technology is often perceived as impersonal, complicated, and cold. The recently launched “Expertise Centre for Dementia & Technology” at the TU/e has developed a novel approach to technology design and evaluation that we call “Warm Technology”, which we apply in the domain of dementia.

The warm approach to technology design is inclusive, person-centred, and focused on the abilities and aspirations of people living with dementia and their caretakers, rather than merely compensating for the loss of motor function or cognitive ability. Warm technology builds on this perspective by contributing to the well-being of every person through reinforcing dignity, supporting agency, and providing feelings of comfort and safety.

We challenge students to conceptualize and develop innovative and ground-breaking manifestations of Warm Technology that improve the quality of life and care of people with dementia and their loved ones.

There are multiple examples of Warm Technology [available on our website](#). For example, the Homing Compass: People with dementia can often feel lost during walking or have difficulty finding their way. This Homing Compass is a navigation system for people with dementia with one function: pointing to home. The compass is a concrete example of Warm Technology that supports independence, dignity and inclusion.



### Who is behind this initiative?

The TU/e “Expertise Centre Dementia & Technology” is an initiative of the TU/e and Alzheimer Nederland to positively change the lives of people with dementia through the use of Warm Technology. The societal perspectives on dementia are changing, as someone with dementia is much more than just their pathology.

Therefore, the development and implementation of technology must address the well-being of every person: dignity, the freedom to make your own choices, and feeling comfortable and safe. We do this by putting the wishes, needs, and input of people with dementia and their

By doing so, we at the Expertise Centre Dementia & Technology (ECDT) develop technology that is user-friendly and non-stigmatizing. We call this Warm Technology, and it builds on the emancipation slogan: ‘Nothing about us, without us’, a source of inspiration.

In working on this challenge you will be supported by **Maarten Houben** and his ECDT colleagues. Maarten is Assistant Professor at the TU/e in the Department of Industrial Design.



### How does this challenge enhance connections?

We specifically encourage students to address the ethical challenges of emerging technologies such as artificial intelligence (AI), socially assistive robots (SARs), or virtual reality (VR) to expand the notion of warm technology and increase the impact on quality of life of people with dementia and their social surroundings. The outcome of this challenge can provide novel conceptualizations and perspectives on what Warm Technology can be, and what it can mean for people with dementia. In addition to broadening the scope of technology in dementia, the challenge outcome can further contribute to raising societal awareness and countering stigma in the context of dementia.



### Relevant considerations for the challenge

This challenge description is still very broad, but based on the students’ interests, we can provide more concrete cases from care practice for the students to work on, including connections with clients from care practice (care home in the region), health-tech companies, patient organizations, etc.

