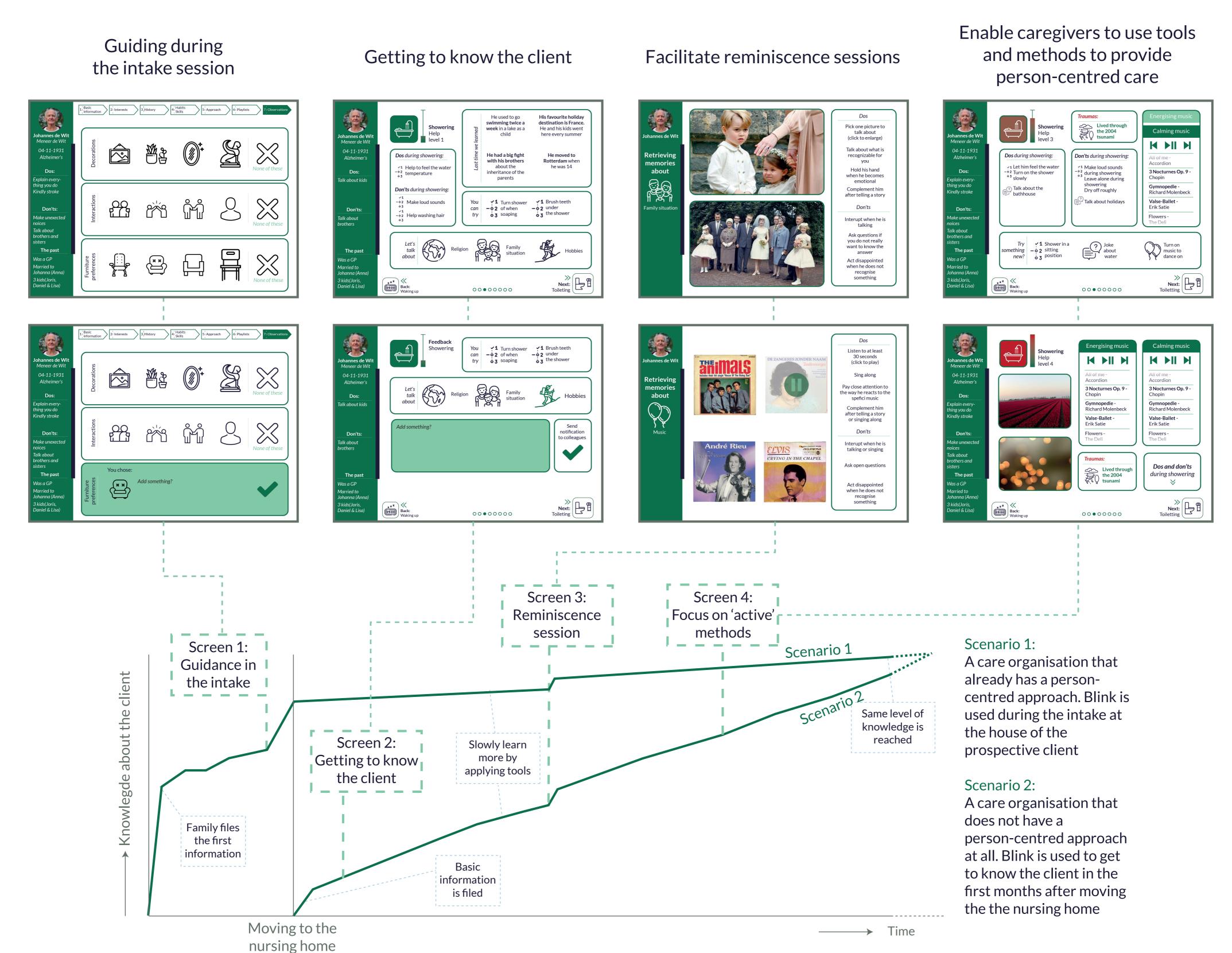
# Blink

# enabling caregivers to provide person-centred care

to increase the acceptance of the Dental Robotics toothbrush among people with dementia



## The problem

The quality of oral care among frail elderly people in nursing homes is low. Due to reduced mobility or cognitive functioning, elderly people fail to complete the oral care ritual sufficiently. Once this happens, caregivers are obliged to take over this task. Unfortunately, in many cases this does not happen due to the difficulty of the task, the uncomfortable feeling of intimacy for both the elderly person and the caregiver, and the high time pressure caregivers experience during the morning care ritual.

Dental Robotics aims to improve the quality of care among frail elderly by developing an automatic toothbrush that takes away these pains. The Dental Robotics toothbrush simply requires the elderly person to bite in a mouthpiece. This enables the caregiver to brush all teeth at the same time while applying the right pressure and angle without skipping any teeth. The toothbrush completes this task in only 10 seconds, helping to reduce the total amount of time of the oral care ritual.

### The goal

However, for people with dementia such a product, bringing along new and different interactions, is difficult to comprehend. This lack of understanding can lead to problematic behaviour. This can be apathic, anxious, aggressive or agitated behaviour, all of which is difficult to overcome by the caregiver. Currently, the most common solution that caregivers use to overcome problematic behaviour is skipping the oral care altogether. When this happens, the care ritual cannot be completed. This is a major challenge for Dental Robotics, leading to the following design goal:

Increase the acceptance of the Dental Robotics toothbrush among people with dementia and their caregivers, by creating a more pleasant experience for both.

### The approach

Person-centred care is a way to avoid problematic behaviour in the long term. This is an approach that puts the client with dementia in the centre of their own care, and uses the preferences and habits of the client during the care ritual. Since everyone has a different history, the way in which care should be approached should be different for everyone as well. In addition, the symptoms and severity of all clients are different. In order to apply this person-centred care, it is important to have a good understanding of the person in question.

Blink is an app that aims to enable caregivers to apply the person-centred approach over the entire care ritual. This is supported by the theory that, when the entire care ritual is executed without any problematic behaviour, the client with dementia will be put at ease and be more prone to accept such a difficult product as the toothbrush.