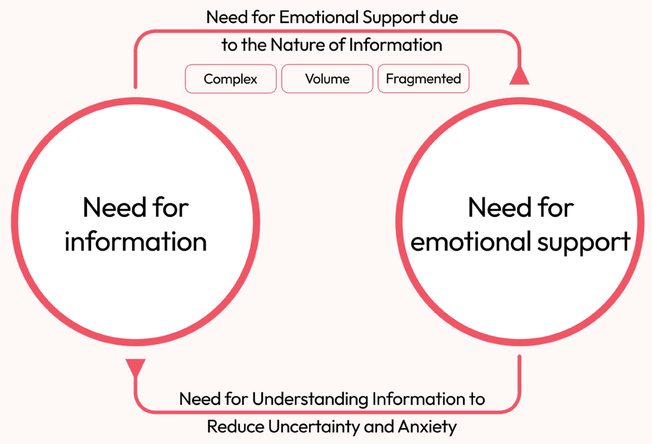
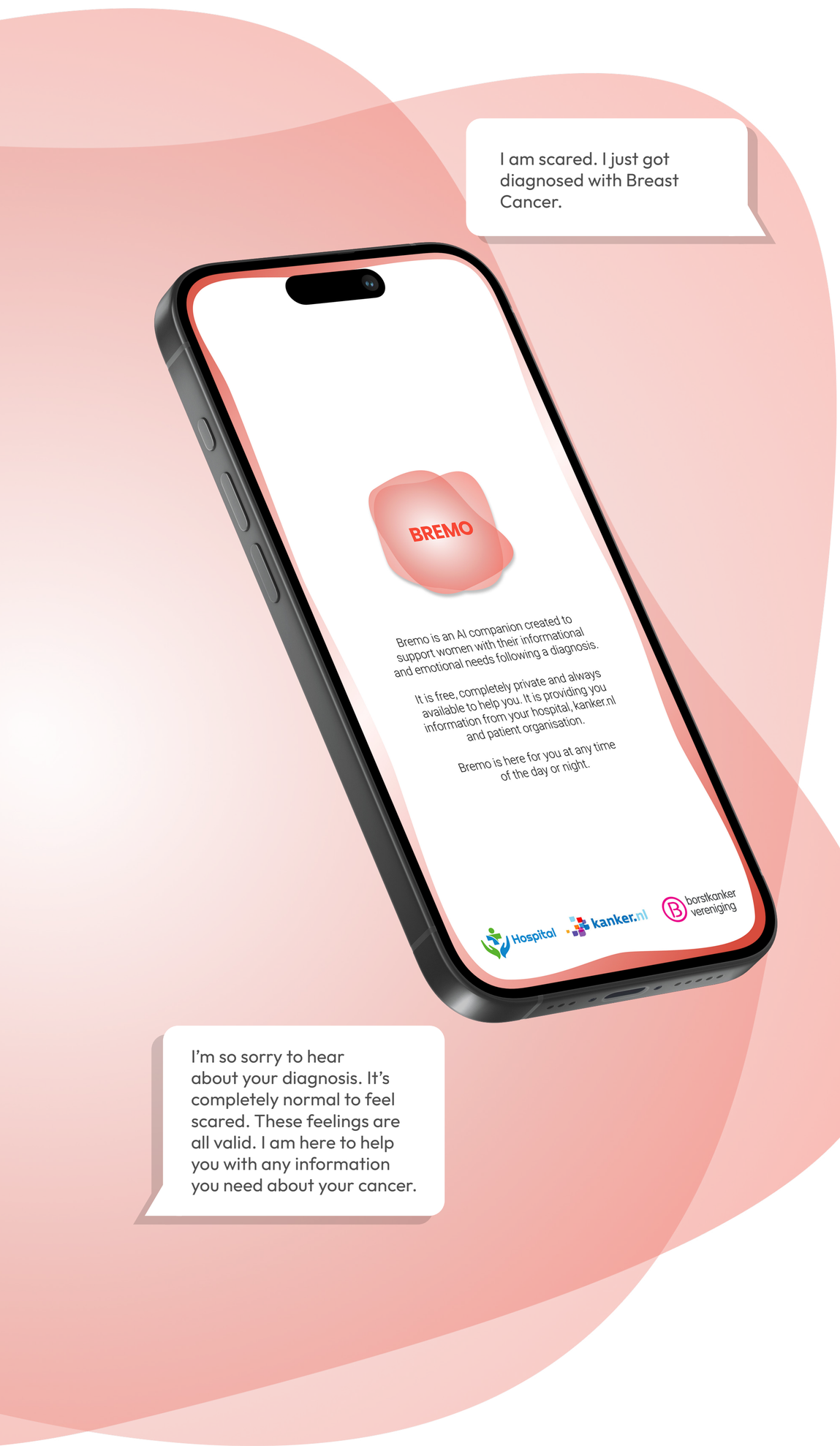
BREMO: A Personalised AI-Companion for Individuals with Breast Cancer Post-Diagnosis

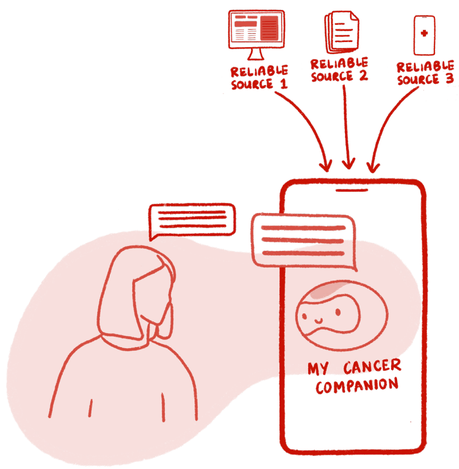
In the Netherlands, breast cancer is highly prevalent, with 15,634 new cases reported in 2023, making it a significant health challenge due to the complexity of treatment decisions. The rapid evolution of breast cancer treatment leads to a constantly expanding and sometimes conflicting body of information. Due to short duration of the consultation sessions, demanding schedules of healthcare providers, overwhelming nature of the illness and to reduce uncertainty, individuals seek information from various sources. This information-seeking behaviour from fragmented sources can increase volume and present complex and conflicting information. This can result in “information overload”- a complex, multidimensional construct with various factors where the ability to process and use it effectively, leading to confusion and difficulty in decision-making.

As healthcare increasingly integrates technological innovations, individuals are turning to digital tools and the internet to understand their conditions. While some of these resources are helpful, they can also contribute to information overload.

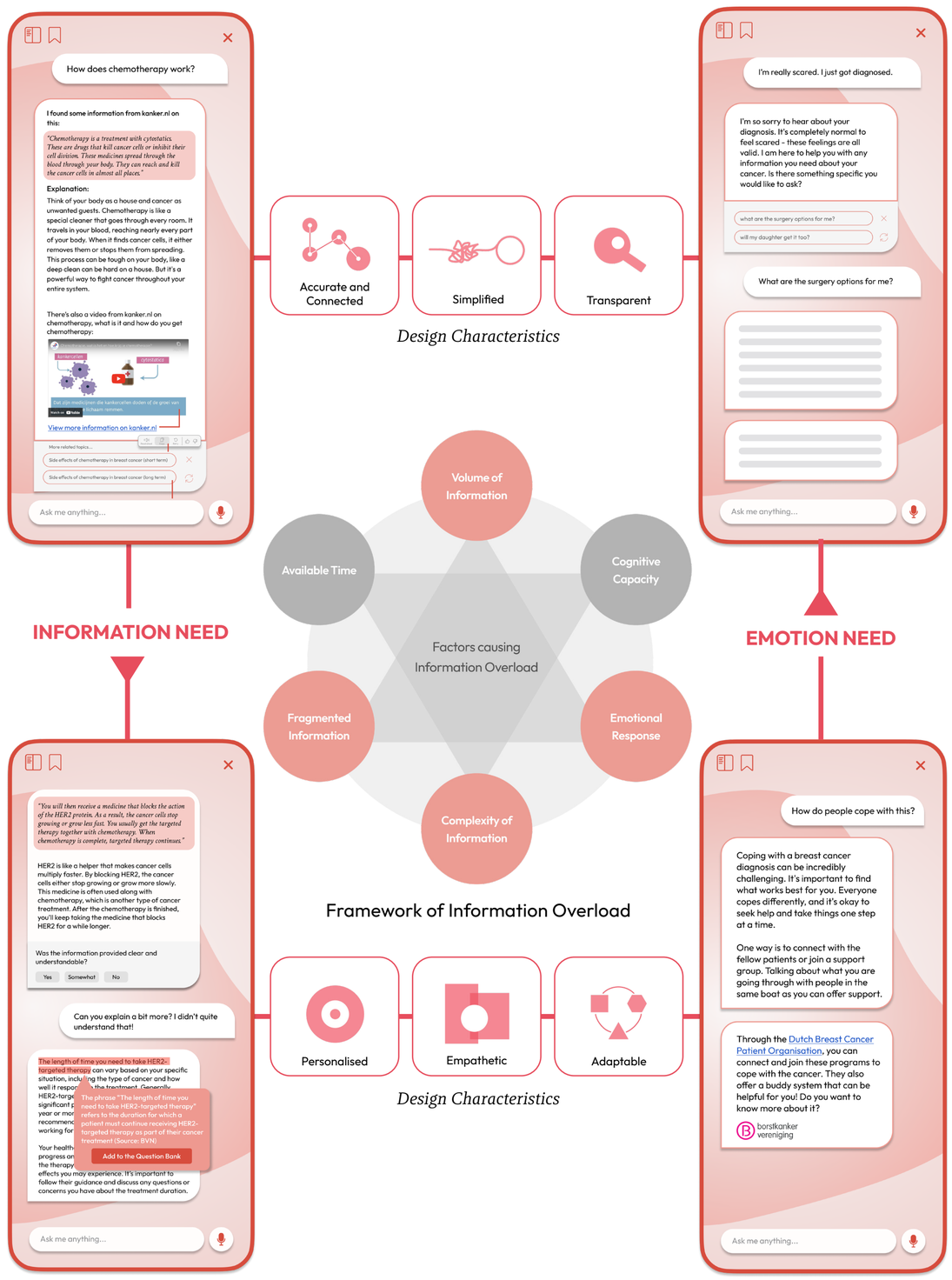
AI is emerging as a promising solution by providing personalised, relevant, and simplified information tailored to individual needs and preferences. AI has the potential to not only enhance patient engagement but also support individuals in understanding their conditions and making informed decisions. By addressing the two interconnected unmet needs—information and emotional support—AI offers a holistic approach that recognises the continuous interaction between these needs through six design characteristics.







Bremo, a personalised AI companion is introduced into the healthcare system as a centralised gateway connecting various existing credible sources of information for people with breast cancer. It connects existing reliable sources, such as hospitals, kanker.nl, and patient organisation, providing accurate and relevant information through conversational interactions. Bremo is designed to anticipate the emotional state of individuals, adapt to their needs, and deliver simplified explanations that are easy to understand. It is proposed to be accessible via smartphones, recommended and provided by healthcare providers during consultation sessions.



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