

# Designing Mobile Applications for Older Adults

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Improvements in food, health and hygiene are delivering a world with an increasing number of older adults. In parallel, society is becoming increasingly dependant on modern technology with public and private services such as shopping, banking and civic interactions migrating on-line. While many services are aimed (implicitly or explicitly) at younger demographics, their importance to older adults cannot be overstated. Mobile devices would appear to offer an ideal route for older adults to access digital services given the portability, low-cost and controlled nature of most mobile platforms. As a result, there has been significant research into designing systems (fixed and mobile) that address the physical, cognitive and sensory needs of older adults [4]. However, to date the vast majority of this research has focused on HCI issues [4], e.g. creating new user interface widgets for those with limited hand-eye coordination. Such initiatives have had limited success, with many of the research challenges that existed 20 years ago continuing to be re-explored [3].

We ran a series of co-creation workshops with older adults to support the design and implementation of appropriate mobile applications for this demographic group. Co-creation is a process designed to draw out end-user wants, needs, constraints and suggested solutions in ways that contribute to the development of tools that are effective, fit for purpose and solve real user problems [2]. Older adults are often overlooked in the development of technologies, which contributes to the precarious position many older adults increasingly face, as access to basic services is mediated through these technologies. We based our activities on a values-led and technology-mediated innovation co-creation framework that has been developed across domains involving hard-to-reach and vulnerable groups in technology innovation projects [1]. Initially, we conducted a total of 25 interviews and four workshops with older adults to gain a first understanding of experiences and insight into how to appropriately focus the workshop activities. The co-creation phase then featured 12 workshops in which a mobile application was designed and developed.

The co-creation workshops allowed us to identify a set of system design considerations in the areas of *usage models*, *trust and security*, and *adoption* that we believe need to be addressed by mobile applications designed for older adults. For example, in terms of usage models older adults described many situations where, instead of having their devices always-on, their mobile device was used on an “on-demand basis”—a distinctive characteristic compared to the majority of mobile phone users.

In this poster we describe our co-creation process and our initial system considerations – placing them in the context of broader initiatives to engage older adults with technology. These design considerations should be of interest to a wide range of researchers involved in creating systems to support mobile applications, both those targeted at the general public and those specifically focused on older adults.

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