

Technology for Aging in Place

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Aging in Place Technology Watch

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Chairman Collins, Ranking Member McCaskill, and Members of the Committee, thank you for the opportunity to testify today about the potential and requirement for technology innovation to help older adults age in place. I am here today to describe the demographics that make this market of technology essential – and to describe the categories of enabling technology that will make it more feasible for older adults to meet their own hopes and expectations. What is ‘aging in place’? Successful aging has been described as ‘the ability to do things for myself; feel safe; and have good health.’ Aging in place therefore is the ability to successfully age in your home of choice. Aging in place technology, continually innovated by entrepreneurs, provides a useful underpinning and enhancement of the quality of life of seniors as they age in place.

Demographics. Today there are 46.3 million adults aged 65+. There are 20 million adults aged 75+ -- 46% of women aged 75+ women live alone. The Society of Actuaries recently updated life expectancies at age 65 to reflect a new reality: women at aged 65 can now expect on average to live to be 88.8, with 25% of them living to age 90+. Men at 65 will live on average to age 86.6. The average 1-year cost at an assisted living community will be \$51,000/year by 2020, but in the Northeast, San Francisco, Chicago and most memory care units, that number has already been reached. Seniors know this and defer move-in to Assisted Living communities until they are in their mid-80s.

Aging in place technology categories can be thought of as interlocking pieces of a puzzle that supports and enables successful aging. With all of the puzzle pieces, older adults benefit from innovations that address their ability to connect with other people and opportunities, stay engaged in their communities, be safe and manage their health and well-being. Looking at each category, starting with the upper left puzzle piece, these are the categories that matter:

- 1. Communication and Engagement.** The devices change, but their purpose remains the same – help us stay connected to others – through email, online text and video chat, searching the Internet, participation in forums, playing games, finding people with shared interests, and just as important, finding services and resources that meet our changing needs. Today, while 59% of the 65+ population has access to the Internet and 27% have smartphones, both percentages drop off noticeably at age 75 – according to Pew Research, only 12% of those aged 75+ have smartphones.
- 2. Safety and Security.** The most fundamental technology in this category is a home alarm system that can monitor and alert about fire, temperature, and excessive moisture in the home. Without it, the other technologies are just nice-to-haves. Other useful technologies include personal emergency response system (PERS) pendants, ideally those that enable

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use away from the home (called Mobile PERS). Also useful are devices with fall detection, home-based motion sensors – sometimes called activity monitors, even the ability to monitor inactivity. Increasingly, information from devices will be combined to detect changes in patterns over time, perhaps noticing gait changes that signal decline -- which may precede a health incident.

- 3. Health and Wellness.** These include the growing number of mobile devices and apps, plus wearables, sometimes placed in the mHealth or wearable health category. In addition, Digital Health is the new term for sharing, accessing, and using health information online. Technology to support physical and cognitive fitness has received great attention. And telehealth is the category of technologies used to remotely monitor chronic diseases – and in some cases, consult with the patient and other doctors about those diseases. New software has been developed to help with dementia care, support health care coordination or help find home care workers. And a variety of new devices are available to assist those with vision and/or hearing impairment.
- 4. Learning and Contribution.** This category includes the technologies to help older adults leave a legacy of information about their own history, participate in volunteer organizations, find work, acquire certifications and degrees, and learn new skills both leisure and work-related – all online. Much of this online training is free. Many forums are available to find expertise and ask questions about nearly every topic, including guidance on using new devices. Online access today is expensive – it is available through mobile device data plans (average cost \$60-80/month) and WiFi access – think coffee shops and libraries. Otherwise, older adults need to have high speed Internet access (\$50/month or more) enabled in their own homes.

As people age, all four categories are enhanced by inclusion of the role of the formal or informal caregiver. For the formal (or professional) caregiver, there are newer technologies that not only track time and attendance, but also note the care recipient status for activities of daily living, communications with family members, mobility, eating, and cognitive function. More of these platforms are emerging.

The future market potential includes greater availability of smart phone features, in-car technologies, and even robotics – it has been sized at \$20 billion by 2020. In the future, you will see fewer special-purpose offerings for seniors, and more examples of standard hardware/device platforms with customizable software to meet the specific needs of the user. That concept, called ‘Design for All’ – and can be seen today in the customizable features in cars, tablets, smartphones, televisions, and other consumer electronics.

Thank you very much for your time.