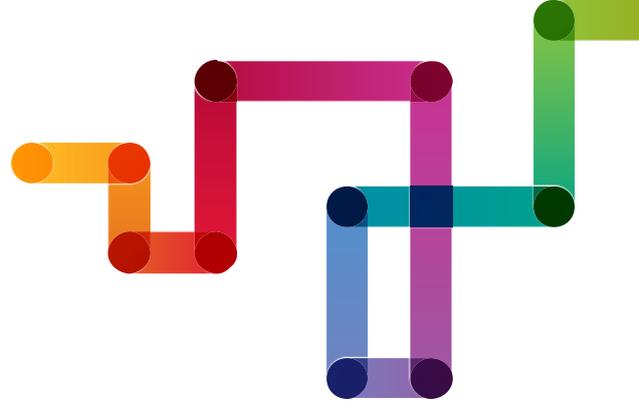


Intelligent homes

Prevent age related isolation and unhappiness by developing people-centred technologies that enable fulfilling and independent lives in their own homes for longer.



Our vision

The global population is ageing, putting more pressure on care services. In the future our current systems of care will no longer be able to support our population's needs. We want to incentivise new technology to support an ageing population to have a happy and healthy lifestyle, to promote autonomy and choice while preventing isolation.

The challenges and their context

The global population is ageing. This demographic shift is set to continue over the coming decades, with dramatic economic, political and social implications. Ageing is often talked about as a burden or a crisis waiting to happen. This negative perception ignores the huge contribution that older people can make. The Select Committee on Public Service and Demographic Change in the UK concluded that: "Longer lives can be a great benefit but...without urgent action this great boon could turn into a series of crises"¹.

Perceptions of ageing influence societal behaviours and expectations towards older people² as well as older adults' well-being³. A study of public perceptions of ageing affirmed several stereotypes about older people, concluding that "older people are stereotyped as having poor health, as being unattractive, asexual and with a declining mental ability. Older people are also perceived as being conservative as well as being unhappy, lonely, isolated and overall undervalued by society."⁴. It found a number of reasons for the dominance of these stereotypes, including media influence, the development of the industrialised west and general lack of contact with older people.

We need to prepare for what lies ahead, identify areas of need and respond accordingly, tackling the social implications and perceptions of ageing as well as the economic and political ones.

1 Select Committee on Public Service and Demographic Change (2013) 'Ready for Ageing?' London: House of Lords.

2 e.g. Pasupathi M, Löckenhoff CE. Ageist behaviour. In: Nelson TD, editor. Ageism: Stereotyping and prejudice against older persons. MIT Press; Boston: 2002.

3 e.g. Levy BR. Mind matters: Cognitive and physical effects of aging self-stereotypes. *Journal of Gerontology: Psychological Science*. 2003; 58:203–211; Levy BR, Myers LM. Preventive health behaviours influenced by self-perceptions of aging. *Preventive Medicine*. 2004; 39:625–629

4 Lyons, Imogen. Nov 2009. 'Public Perceptions of Older People and Ageing: A literature review. NCPOP. Available from: http://www.ncpop.ie/Year%201%20Reports/Microsoft%20Word%20%20NCPOP%20Lit%20Rev%201%20IL%2012_09Cover%20inc22_01_10.pdf

CHALLENGES BRIEF

One of the biggest challenges will be to ensure older people can access the support they need to have a good quality of life. The provision of public sector support is targeted at those with high care needs, but to improve more older people's quality of life, we also need to improve preventative support and build effective networks of alternative care to provide emotional and practical support, within a supportive society.

Current innovation

Smart home technologies can be defined as an "integration of technology and services for better quality of housing and living."⁵

The smart home is a concept that has been marketed as a lifestyle tool, one that can assist by controlling functions of your home. Panasonic sell smart home products such as the 'home monitoring and control kit' which includes the ability to remotely and automatically control electrical devices as well as having camera monitoring functionality. Nest is another example of a company developing products for the smart home, including intelligent thermostat control, home camera monitoring and smart alarms.

There are still relatively few companies that sell products for a fully integrated smart home. For example, a fully integrated smart home might automatically control, heating, lighting, have a robot cut the grass and vacuum, control your sound system, recognise the occupants, learn about their needs and order the shopping.

However these innovations are mainly being designed for fit, healthy people, with innovation focused on the minor inconveniences of the cash-rich, time-poor. The developments in this area could have a greater social impact if they were focused to helping people in need – in this case to revolutionise elderly care.

The potential for challenge prizes

The Intelligent Homes Prize could be awarded for the development of an integrated and adaptive smart homes system that can support the activities of daily living, social and care needs of older people, and is thus able to extend their independent living at home.

It should be adaptive: get to know its users and change in useful ways. It should be modular: the system must have multiple functionalities and have the ability to work with a variety of other products and/or have a variety of native functions and facilities which can be selected to suit the needs of its user. Finally it must be affordable (comparable to current care costs) and improve the user's quality of life

Prepared for the Nesta Challenge Prize Centre by Anna Williams. Last updated 04/03/2016.

5 Ad Van Berlo. 2015. 'How can Europe meet the needs of its population for age friendly homes, cities and living environments?'. Available from: <http://ec.europa.eu/research/innovation-union/pdf/active-healthy-ageing/advanberlo.pdf#view=fit&pagemode=none>