

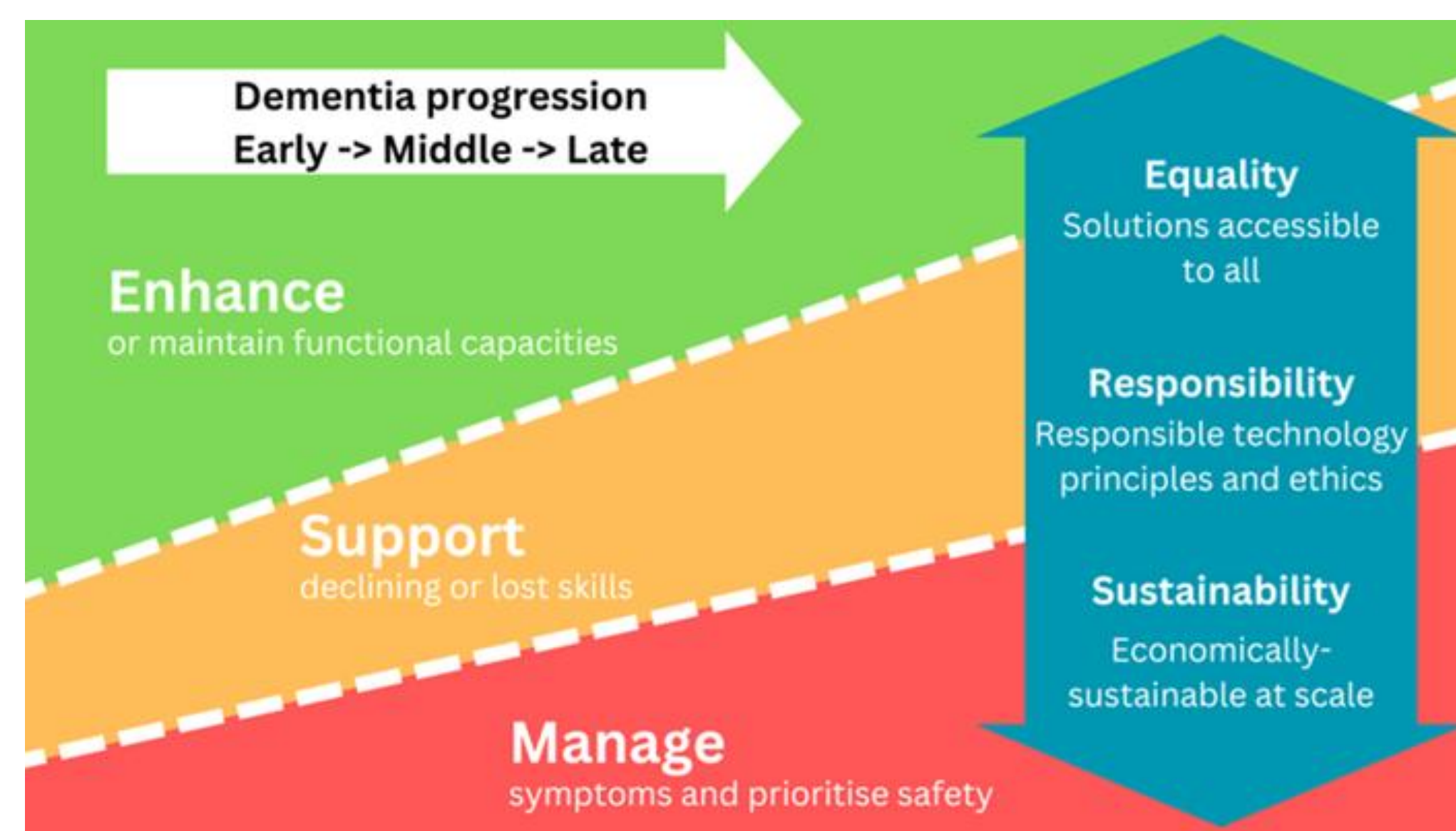
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Background

Most people living with dementia wish to remain independent in their own homes for as long as possible. Needs change substantially across disease stages and are shaped by cognitive, behavioural, psychological, social and environmental factors. While digital and assistive technologies offer potential to support independent living, many lack robust evidence, fail to address meaningful user needs, or risk exacerbating inequalities. There is a critical gap for needs-led, person-centred and theory-informed approaches that integrate technology with behavioural, social and health interventions to slow functional decline.

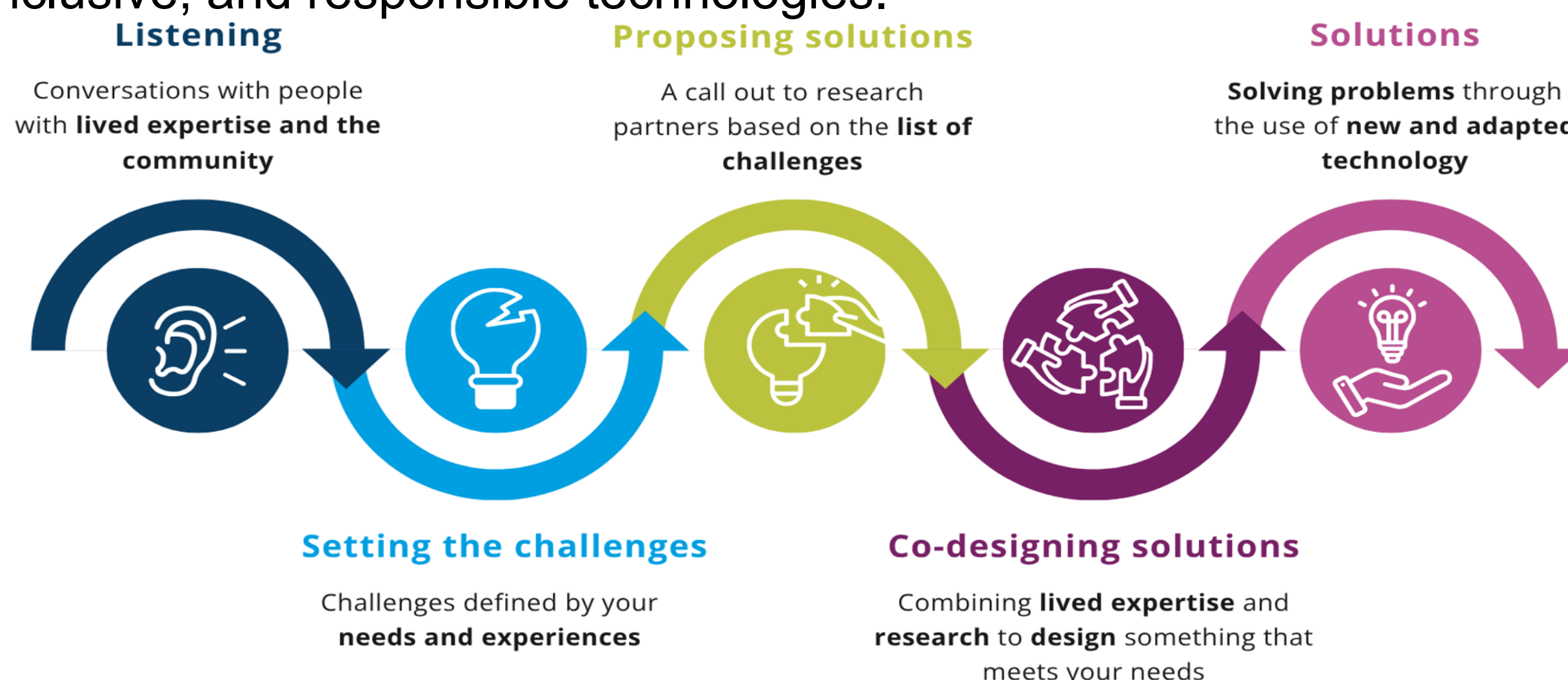
Figure 1. CONSOLIDATE's model to support technologies aimed at prolonging independence in people living with dementia.



Methods

CONSOLIDATE is a multidisciplinary, quadruple-helix innovation network bringing together people living with dementia, carers, researchers, third sector organisations, health and social care providers and industry. Using co-design methodologies, CONSOLIDATE identifies meaningful functional needs to co-develop technology-enabled solutions that adapt across dementia stages. The network integrates scoping reviews, person-centred consultations, feasibility studies, capacity-building workshops and business incubation, underpinned by principles of equality, responsibility and sustainability.

Figure 2. CONSOLIDATE's knowledge-to-action framework to move from needs to scalable, inclusive, and responsible technologies.



Results

Pre-application patient and public involvement identified openness to technology among people living with dementia, coupled with concerns about complexity, fragmentation and digital exclusion. Stakeholders emphasised the importance of technologies that promote learning, engagement and social connection rather than passive monitoring.

CONSOLIDATE addresses these priorities by integrating multiple intervention targets, reducing device burden, and embedding responsible innovation practices. Planned outputs include co-designed feasibility studies integrating multiple intervention aims, workforce upskilling, and pathways for scalable deployment through trusted third-sector platforms.

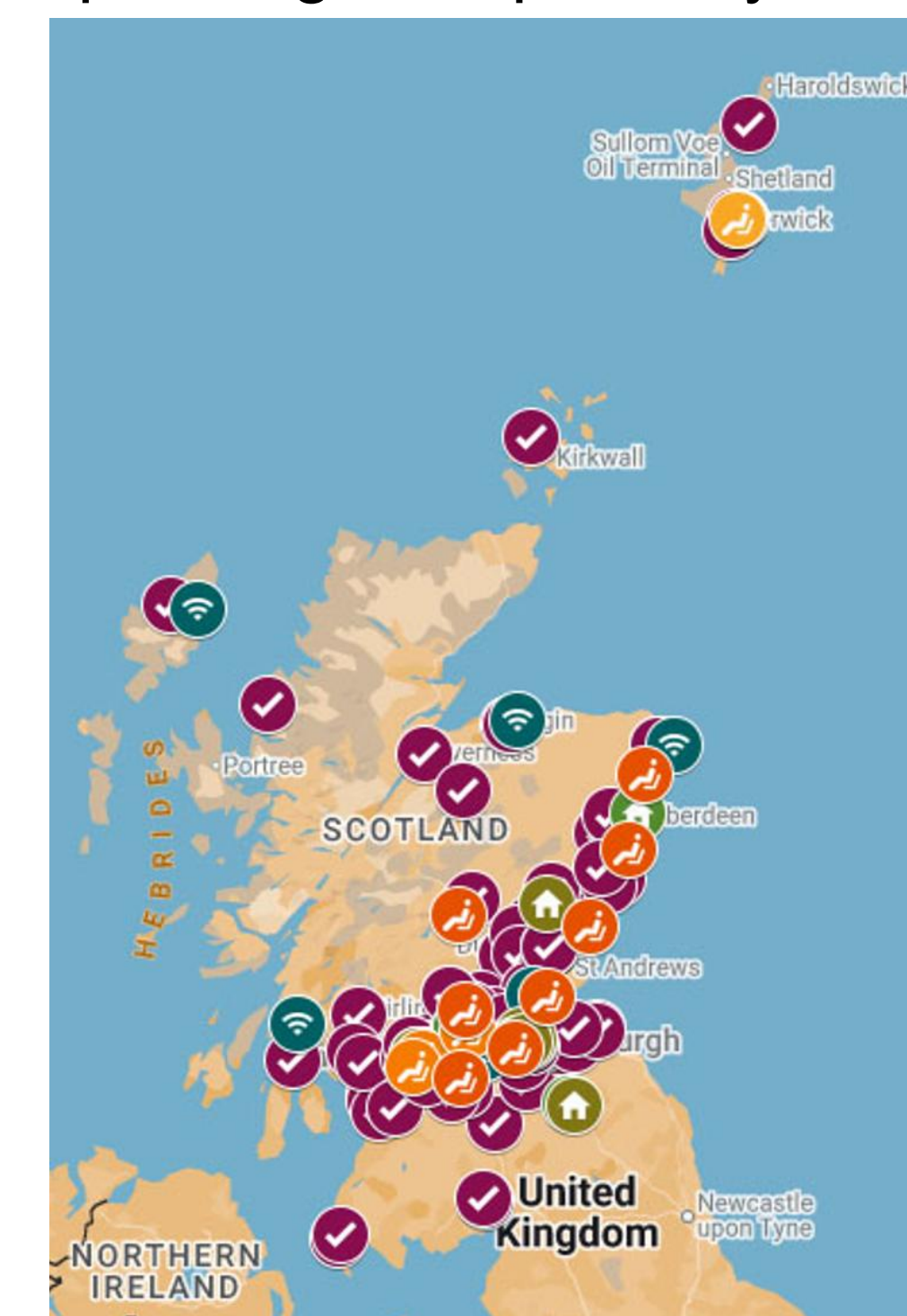


Figure 3. CONSOLIDATE scoping activities to build the knowledge base (i.e., challenges that people living with dementia want to see addressed), and that will inform future network actions, included online and in person interviews and workshops and a national survey.

Participation from across Scotland comprised (see table):

	Community	Survey	Total
People living with dementia	61	11	72
Unpaid carers	100	69	169
Care professionals	19	52	71
Total	180	132	312

Data from the scoping activities are being qualitatively analysed, with people with lived experience supporting coding and prioritisation. The analyses will identify Grand Challenges, with funding to be made available for teams to propose solutions.

Conclusions

CONSOLIDATE provides a scalable, person-centred model for co-designing technology-enabled solutions that support independent living with dementia. By aligning meaningful functional assessment, participatory design and responsible innovation, the network aims to yield technologies that slow functional decline, reduce care burden and enhance quality of life, while addressing inequalities in access and adoption. This approach offers a transferable framework for future dementia research, technology development and policy implementation.

Join CONSOLIDATE to benefit from: training and capacity building; opportunities to develop your network including lived experience, practitioners, researchers and industry; funding calls. Scan the QR code, visit www.dementia.hw.ac.uk or email dementia@hw.ac.uk.



CONSOLIDATE NetworkPlus is led by Heriot-Watt University, the University of Strathclyde and Age Scotland, in partnership with Alzheimer Scotland, Meeting Centres Scotland, Carers Scotland, Community Renewal Trust, Edinburgh College, Life Sciences Scotland, NHS Borders, NHS Forth Valley, NHS Grampian, NHS Lothian and NHS Shetland.

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