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# Industrial Strategy Challenge Fund
# Healthy ageing innovation and investment in the UK

August 2019

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# Acknowledgements

This report has been commissioned by UK Research and Innovation. The information and views contained in this publication are those of the author(s).

This report was produced by Jemma Mouland with support of Jo Blundell and Stephen Muers (Big Society Capital). The author would like to thank Anna Dixon and Ploy Suthimai from the Centre for Ageing Better for their support and contributions to the report and to all who attended the roundtable in March for their valuable contributions and ideas.

# Executive Summary: Healthy ageing innovation and investment in the UK

## UK strengths and opportunities

Strong ageing research & knowledge base, creative & design industry and consumer insight

Growth in social investment and venture capital interest in ageing innovation

Some successful ventures are reaching scale

Huge opportunities - over-50s account for nearly half of all consumer spending: £320 billion a year

## Gaps and challenges

Businesses are not meeting the needs of older consumers: 4 in 5 over 55s say retailers don't understand what they want or need

There is limited focus on opportunity, prevention and 'ageing' with most attention on 'older people' and care

Current funding is fragmented and it takes time to establish funds and investments in ageing

There are significant gaps in the current funding and investment landscape and barriers to success

- Grant-funding for lower-return affordable solutions
- Lack of investment in taking early stage ideas to scale

**Across the seven ISCF themes there is a need to:**

- Stimulate new markets
- Shift existing markets
- Stimulate consumer demand

...and address Business to Business (B2B), Business to Consumer (B2C) and Business to Government (B2G) markets

# Solutions

**Create demand for inclusive products:**
- Consumer insight
- Producing standards/ tools for good design

**Stimulate inclusive innovations:**
- Preventive/ upstream focus – rather than health and care tech
- Evidence-informed, user-led and tech-enabled

**Enhance existing activity:**
- Blended funding
- Leadership and support partnerships & collaboration

**Fill gaps in current ecosystem and support:**
- Invest in higher-risk, high-impact, slower-return ventures
- Support systems innovation & collaboration
- Open markets

# Introduction

Over-50s account for nearly half of all consumer spending – worth about £320 billion a year (Centre for Economics & Business Research, 2014). However, the needs of older consumers too often remain overlooked by business. Around four in five of those aged over 55 say their favourite retail brand no longer understands them or what they need (Hall, S. Rennick, K. Williams, R, 2019).

There is an increasing interest in developing new products and services that address the challenges, and realise the social and economic opportunities, of our ageing population. These range from ageing organisations who are establishing innovation programmes, through to social investment and venture capital firms that are initiating new funds and investments in ageing-related innovation.

Whilst we are seeing promising shifts in thinking, often the products and services emerging through these funds are limited in scale and scope. Many innovations focus narrowly on health and care technology. Furthermore, despite significant growth in the over 50s consumer base, new products and services are also often failing to reach significant scale.

# Background

In Autumn 2018 Ageing Better produced a **framework for the Healthy Ageing Challenge Fund**. This framework set out our views on what healthy ageing means and outlined seven areas to stimulate innovation and tackle market failures in pursuit of longer, healthier lives for all.

In January 2019, Ageing Better and Big Society Capital were grant-funded by UK Research and Innovation (UKRI) to provide a review of the current healthy ageing innovation and investment landscape. This paper provides a discussion of key market opportunities and challenges. It concludes with reflections on where further investment and innovation is necessary and proposes how the Industrial Strategy Challenge Fund can fill identified gaps and complement existing initiatives.

This paper was produced by Ageing Better, with the support of Big Society Capital, based on conversations and involvement with various ageing organisations, innovators and funders who are interested in ageing. This included a roundtable held on 5th March 2019 with a range of social investors, venture capital (VC) firms, ageing organisations and representatives from central government to inform the content and development of the paper.

# Section One: Current healthy ageing innovation landscape

The UK has strong foundations for being a leader in ageing innovation. There are a wealth of universities, research centres, consortia, councils, and funders that focus on ageing issues. The UK also has a range of other significant assets, including a strong design and creative industry and established networks promoting older people's voices and representation.

The recent establishment of the UK Longevity Council, and the appointment of a new Business Champion for the **Ageing Society Grand Challenge** will play an important role in galvanising wider business interest in ageing. It has been set up to advise on how best to use innovations in technology, products and services to improve the lives of our ageing population.

There is a large and rapidly growing industry around 'longevity' which is primarily focused on health technologies such as predictive medicine, regenerative medicine and personalised medicine. These are largely commercial, for-profit ventures.

Ageing Analytics Agency recently conducted an extensive mapping of the UK Longevity Industry in the '**Longevity Industry in the UK 2018' report** (Ageing Analytics Agency, 2018). The report identifies an unprecedented growth in longevity industry activities, with 260 companies and 250 investors acting in this space.

A growing number of 'age-tech' ventures are also being established - the application of technology to support older people's quality of life. These actors are predominantly focused on issues around health and care management.

However, as outlined in the Healthy Ageing ISCF Framework, supporting 'healthy ageing' and the mission to add *five more years of healthy, independent life in their own homes by 2035, whilst narrowing the gap between the experience of the richest and poorest* requires much broader innovation across a range of different stakeholders, customers and markets.

**Health and care innovations are important, but consideration of the wider determinants of health, such as work, homes, built environment and social connections is essential.**

There has been an increasing number of early-stage social ventures seeking to respond to the challenges and opportunities of our ageing population, followed by a growth in funders and investors interested in ageing. There are also a number of commercial VC funds establishing funds or investment priorities around ageing.

Recent mapping undertaken by Big Society Capital[1] has highlighted the significant range of different initiatives that have been established in recent years aimed at addressing these wider issues.

The remainder of this section provides details about significant investors and organisations who are operating or establishing funds to support 'healthy ageing'. Whilst not exhaustive, this provides a clear indication of the breadth of activities relevant to the healthy ageing agenda.

## Ageing organisations

Several organisations that have a focus on ageing have recently established, or are in the process of establishing, innovation funds and programmes. Often these are focused on early-stage ideas stimulation through grant funding and, more specifically, on specific ageing issues or target groups.

**Alzheimer's Society** has set up a new accelerator programme to fund **innovations and inventions that could help people affected by dementia live better**. Funds of up to £100,000 will be awarded to individual products/services and Alzheimer's society has invested in two products in the programme's first round. There are new calls for ideas annually and the next round will open for applications in Autumn 2019.

**Independent Age** are developing plans to play a catalytic role in ageing innovation focused on prototyping, piloting and scaling what works. An accelerator and an evergreen social investment fund are in development. Independent Age are also scaling up the **Reconnections service** – originally piloted as a Social Impact Bond funded partnership of local organisations, specialist providers and wider stakeholders working together to reduce loneliness in Worcestershire.

**International Longevity Centre (ILC) and Just Group plc** recently ran the 'Innovating for Ageing' programme, which aimed to **identify solutions to address the challenges faced by ageing consumers** at risk of vulnerability due to physical disability, serious illness, dementia or financial exclusion. Up to £10,000 and specialist business support was available to the selected winners to help develop their proposition.

**National Innovation Centre for Ageing**, in collaboration with the Innovation SuperNetwork, Northstar Ventures and Newcastle City Council (working with Aging2.0), are running an **Innovation in Ageing Accelerator** programme to identify new solutions for an ageing society and get them to market.

The programme involves idea generation workshops, in-depth support with selected ideas and funding for commercialisation. Ventures can secure up to **£12,500 investment from Northstar Ventures** for each business involved with the potential for further follow on funding for the best performing companies.

1 See: https://www.bigsocietycapital.com/latest/type/blog/our-investment-stratagey

 

There are also organisations supporting the networking and collaboration of ageing innovators, although often these are focused on specific entrepreneurs as opposed to investors. **Aging2.0** and **Age of No Retirement** are well connected organisations operating in this space.

Of particular note is Aging2.0's **The Collective**, a data-driven insight and matchmaking platform that connects and engages stakeholders around the world looking for next-generation solutions.

## Other organisations

There has recently been a growth in organisations that are not ageing-focused but are interested in establishing ageing funds, investments and programmes. Many of these funds are still in the process of being established. These are being developed by a range of actors, from social impact investors through to commercial venture capital funds.

**Big Society Capital (BSC)** has a mission to support access to investment for organisations seeking to improve lives in the UK. It works through fund managers and social banks to increase the quality and quantity of investment into areas of social need. Taking early action to prevent problems, including early action to tackle the problems around ageing, is one key area of strategic focus. In 2018 BSC published a strategy for its work on ageing with five areas of opportunity:

1. **Stimulating new ideas**.
2. **Testing and developing** promising innovations through the use of development grants, as well as tailored incubators and accelerators to support teams in their earliest stages of growth.
3. **Scaling up potentially sustainable models** that are showing significant potential for impact and sustainable financial returns.
4. **Supporting innovative property-based models** that are emerging in the UK and abroad.
5. **Creating a more collaborative ecosystem** of ageing-focused funders, investors, academics and government representatives to share insights, experiences, expertise and best practice between these otherwise largely siloed groups.

BSC are currently working with investors and social enterprises to identify where they can use investment capital to catalyse new, best in class, ageing-focused investors to accelerate the growth and development of innovative social enterprise models addressing critical social challenges.

**Zinc** runs a 9-month venture-building programme, where 50 people come together with the aim of building new businesses from scratch. Each programme centres on a specific social issue, which the entrepreneurs, along with Zinc's network of experts, are dedicated to tackling. Zinc has chosen **improving the quality of later life** as the central theme of their next programme, which will start at the end of September 2019. This programme will bring together people from research, creative design, health and social care, NGOs, policy, corporates and technology to build new businesses in areas such as disease prevention, social care, financial services, and assistive technologies.

4Gen Ventures is a new collaboration between Northstar Ventures, a venture capital firm based in Newcastle with over £125m under management and Dominic Endicott, formerly a General Partner at **Nauta Capital**. 4Gen Ventures aims to be the **leading investor in innovative firms that digitally-enable the longevity economy** in the emerging Age-Tech VC space. The initial investment locations are London, Newcastle and Boston and each are committed to becoming Age-Tech hubs. 4Gen Ventures are in the process of raising an initial fund, from a mix of corporate, social impact, government and financial investors, with a common interest in societal improvement, scalable and sustainable business formation and pioneering the age-tech space. The aim is to deploy this initial investment into 12-20 **Late Seed and Series A companies**.

**Design Council**, a charity and Government's advisor on design, delivered the **Transform Ageing programme**, with South West Academic Health Science Network, UnLtd and Ageing Better. This programme took a design-led approach to **improving people's experience of ageing**; bringing communities together to develop new solutions that better support the needs of people in later life. Issues covered ranged from mobility and information provision to social connections and carers support. This brought together: early stage awards, venture support, commissioner engagement, capital raising, ecosystem development, research and policy influence in Devon, Cornwall and Somerset.

Design Council have also recently launched their 2019 **'Spark' programme** – a product innovation programme and investment fund of up to £150,000 to support the development and acceleration of products to market. This year's brief is 'The Homes Innovation Challenge' which is aimed at **supporting independent living at home**.

**UnLtd**, the UK's leading provider of financial and non-financial support for social entrepreneurs in the UK has supported **over 200 social entrepreneurs focused on solutions for an ageing society**. The offer has evolved over time and has included pilots in Bradford and Leeds in partnership with Local Authorities, and support across Northern Ireland for 115 social entrepreneurs aged 50+ with Atlantic Philanthropies. Through a partnership with The Coutts Foundation, UnLtd supported 21 ventures who collectively benefited over 6,500 people. They were also key partners on Transform Ageing. In 2018, they launched the **Thrive accelerator** focused on increasing quality of life for people over 50 – the first ventures have now gone on to secure investment.

**Future Care Capital** are establishing an Innovation Fund which aims to help **address major healthcare needs, such as mental health, ageing and living with chronic medical conditions**, by investing in innovative enterprises. The Fund will invest in UK based, early-stage, high-tech, high-growth enterprises in the field of digital health (including machine learning and AI), assisted living, services and Class I medical device. The long-term vision is to create an evergreen fund.

**Social Finance's** Impact Incubator team is working in collaboration with four charitable foundations (the Dulverton Trust, the John Ellerman Foundation, the Rayne Foundation and the Tudor Trust) to explore and develop **sustainable, scalable ways to significantly improve the quality of life of older people** in the UK. The collaboration aims to stimulate innovative responses to the emerging needs of an ageing population, with the aim to launch practical responses in 2020. These responses may be funded by philanthropy, public sector organisations or initially with social investment, with a priority being that they are financially sustainable and have a route to scale in the long-term. Social finance have also previously invested in several ageing-focused initiatives, including Reconnections, Oomph and Shared Lives and in programmes to improve end of life care and local care integration.

**Centrica Innovations** ran the Active Ageing global start-up challenge in 2018 which aimed to explore the role that technology can play as people age. Through the fund Centrica sought to collaborate with the start-up community to drive innovation and create new services and products for their customers. Issues of particular interest were **providing care through smart home technology and transforming care services through the integration of products and services**. Minut, a home security system and EchoCare, a personal emergency response system were the winning ventures. Centrica have recently launched **Hive Link**, a system which utilises Hive technology for remote monitoring/care management. They are now **launching a programme to mentor companies working on technology for older people**, with several start-ups due to receive **$250,000 investment from HAX** a Silicon Valley Accelerator.

**Office for Civil Society** have been involved in establishing **Social Impact Bonds (SIBs)** - a relatively new type of investment vehicle, designed to bring socially orientated capital to fund investment into public services to deliver better outcomes and reduce cost. SIBs aim to demonstrate the **value of investing in prevention to reduce demand for public services**.

Recent government backed SIBs have supported the development stage of projects and co-invested alongside social investors. The latest is **Life Chance Fund** which included a call for projects that impact on older people's services and on health and wellbeing. Funded projects include supporting people with management of multiple long-term health conditions and projects to reduce unplanned admissions and frequent GP attendances.

**Connected Places Catapult (formerly Future Cities Catapult)** have established a new programme on housing which will focus on the challenges and opportunities for innovation across the sector, including one on an 'ageing society'. This will be developed further in 2019 and will form a key theme within their Housing Innovation Week in September, with specific attention on the role of technology in supporting independent living.

## Local initiatives

Partly driven by the development of Local Industrial Strategies, local areas across the UK are developing plans for local innovation and development, with several considering their role in relation to the Ageing Grand Challenge. Greater Manchester has recently published their

Local Industrial Strategy, with a focus on seizing the opportunities of an ageing population.

Various other innovation pilots/demonstrations have been established around health and ageing in recent years. For example, NHS Test Beds play an important role in developing and testing new technological innovation alongside businesses and testing how they operate in a wider, but local system.

## Strengths and challenges within the current landscape

This review of current initiatives is not exhaustive but provides an indication of the breadth of organisations, issue areas and funding and investment mechanisms that are active in healthy ageing.

We have a reasonably significant amount of activity incubating and accelerating emergent businesses around ageing, which has highlighted a clear interest amongst entrepreneurs in realising the opportunities of an ageing society. However, there are few that have reached a point where they have a strong proof of concept and are attractive to venture funds.

There has also been some growth in the number of social investors and venture capital funds (VCs) developing ageing initiatives – reflecting the latent market opportunity that certain funds and investors are identifying. The recent growth in innovation functions and programmes within ageing organisations is also notable. It reflects a growing recognition among experts of the need for new approaches, products and services to enable us to realise the opportunities of our longer lives.

There are also promising signs of a growing recognition that capitalising on the opportunity of our longer lives requires innovations beyond health and social care – but this is yet to have been translated into, and reflected by, the innovations and businesses that are being developed and scaled.

Whilst this increase and shift in interest and activity is notable, it is not without its challenges and limitations.

Few of the larger funders/VCs have managed to establish funds or initiatives of significant scale yet, which is indicative of the various challenges to supporting and developing large-scale ageing innovation. There also remains scope to stimulate this market further – an extremely small amount of VC is directed towards ageing-related investments.

To date, many of the current programmes that are or have been delivered have also been short-term and limited in scope.

## Limited scope

There is limited scope particularly amongst ageing organisations, with the funds and programmes focused on specific issue areas. For example, the ILC/Just Group 'Innovating for Ageing' awards focused on vulnerable consumers/financial inclusion, whilst the Alzheimer's Society Accelerator focuses on improving quality of life for those living with dementia. Whilst this creates a much-needed clarity of objective, these programmes are by design not structured to deal with the wider complex, multi-faceted issues around ageing.

The majority of UK investments into age-related services to date have been into established and largely asset backed markets like care homes. There is emerging interest in new businesses offering solutions (primarily new digital products), but again these are often focused on specific problems. Scanning undertaken by Northstar Ventures highlighted that the vast majority of new and established ventures are focused on 'care & wellness' or FinTech. Again, **these innovations tend to operate mainly in the space of management of decline and vulnerability, as opposed to prevention or mitigation**.

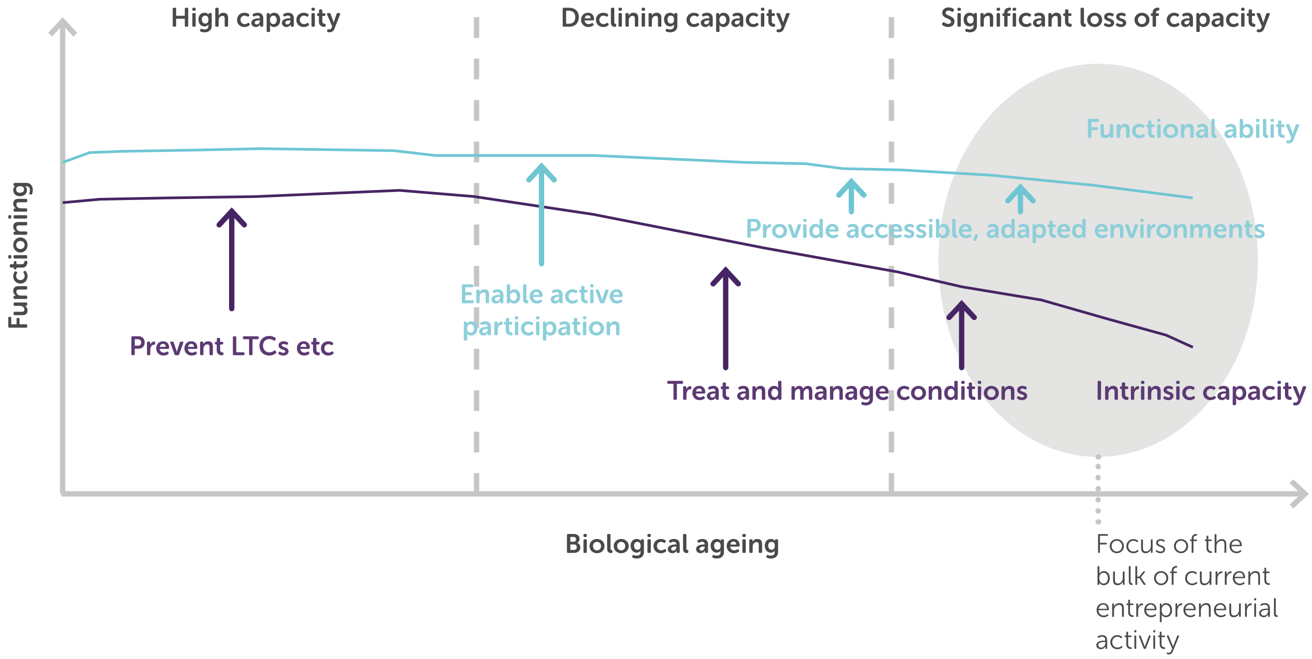


***Diagram two: decline in intrinsic / functional capability over time Adapted from WHO World Report on Ageing and Health (2015). Source: Ageing Better Healthy Ageing Challenge Fund Framework.***

Some initiatives are taking a wider view of 'ageing' rather than focusing on 'older people'. UnLtd/Design Council, 4Gen Ventures and Zinc have included a wider range of areas for innovation – looking at more upstream interventions such as work and employment, preventing ill health and building housing for the future.

For example, emerging propositions such as 4Gen Ventures are looking at more systemic and digitally enabled solutions focused on delivering a better quality of life in older age.

They acknowledge the lack of investor literacy around ageing and are adopting the term "age-tech" as a descriptor for a broad grouping of services that connect older people with services and encourage better wellbeing enabled by technology.

These programmes do have a wider focus and combine preventative, mid-life interventions with those focused on care and later life. However, there remains limited attention on how these broad areas for innovation interrelate and how they will achieve systematic impact.

Overall, there also **remains limited dedicated attention to upstream interventions and areas for innovation**.

Businesses with the potential to scale will need to tackle the complexities that older people face across a range of issue areas - in managing formal and informal sources of support, multiple and long-term conditions and significant life transitions.

# A fragmented funding landscape

Ageing funds and investments also tend to operate at very specific stages of the development and investment pipeline[2]. Some, such as Zinc, are focused on idea stimulation. Others, such as Alzheimer's Society and ILC-UK have invested in early-stage development.

Whilst there are various sources of funding for early-stage development, to date there has been a **lack of high-quality, evidence-based and user-informed idea and venture development**.

There is a **significant gap in funding to support the scaling of ageing-focused ventures**. In particular, funding is needed to enable organisations to grow from early-stage to 'investment ready' ventures of sufficient scale and maturity to be operationally sound, commercially viable and proven to achieve impact.

Achieving this scale is a particular challenge for products and services that aim to achieve significant social as well as economic impact. **Positive social outcomes are not recognised in the prices paid for goods and services**, particularly in statutory commissioning. The prevailing venture capital business model also relies on supporting companies with the potential to achieve very large scale very quickly. Businesses attempting to address a complex social need while being perfectly viable, may not be strong bets for such a growth trajectory.

The answer may in part be **specialist funds focused on supporting innovations to achieve scale over a longer term**. Such funds will require investors willing to take a longer perspective and to value positive social outcomes rather than only focusing on high VC-style returns. An example that operates in another area of social investment is the **'Evergreen' fund run by Bridges Ventures**, which aims to build sustainable large scale businesses with a positive social impact. It has an investor base who see the value in – and are prepared to commit to - a longer term investment.

2 For further details of current funds and investments see: https://www.bigsocietycapital.com/latest/type/blog/our-investment-stratagey

There are significant opportunities to create a greater coherency to this funding landscape and to fill gaps in available funding. Possible approaches are detailed in section 3.

## New entrants vs established entrepreneurs

Feedback from funders and investors suggests that a lot of entrepreneurial activity in relation to ageing is from new entrants rather than established entrepreneurs. Currently ageing innovation is not attracting proven entrepreneurs - with established ventures and business models - at scale.

As noted above, compared to other areas such as FinTech, investors have reported that there also tends to be less quality deal flow with ageing innovations – fewer promising propositions are being developed and coming through to investors. There is a need for more quality ideas-generation and stimulation to ensure that quality, high-impact and commercially viable propositions are being developed.

Perceptions of ageing and the older consumer market may be contributing towards this limited interest amongst more established entrepreneurs and larger industry players. Ageing may still be seen by some as a stigmatised, limited and unattractive market to enter.

## Systems change challenges

Supporting healthy ageing requires a systemic response – no single product or service can provide the answer alone. To bring about lasting change, we need to see **shifts within and across a range of systems** including health, care, education, work, housing and transport. This is achieved by altering the structures and supporting mechanisms behind these systems, including their policies, routines, relationships, resources and values (Khan. H, 2013).

Partnerships with organisations that understand the environment in which products and services are seeking to play a part in are critical to supporting businesses in adapting to this complex wider landscape.

However, a venture-led approach, with a focus on product and service innovation, can cause challenges in achieving shifts in the system. Achieving this wider impact is rarely within the gift of a single entrepreneur.

There are interesting lessons to be learnt from the more established initiatives that have pursued holistic, systemic approaches to tackling healthy ageing.

Design Council's 'Transform Ageing' programme was specifically aimed at system-shifting innovation. Important system actors, such as the South West Academic Health Science Network, were deeply involved in the programme from the outset to help achieve this ambition.

Whilst proximity to system actors could help to stimulate more responsive and feasible innovations, the programme found that entrepreneurs typically do not, and often cannot, spend time or money trying to understand and work with shifting the system. They tend to be much more focused on immediate impact and product/service development and often struggle to measure or evaluate their systemic impact or potential. There is a question as to whether entrepreneurs are best placed to, or should be responsible for, achieving these wider systemic shifts at all.

The programme also found that achieving wider **influence within the system requires time** – within the three-year course of the programme the 'seeds were sown' but a much longer time period is needed to embed and realise systemic impacts.

# Section Two: Market opportunities and challenges

Ageing Better's **Healthy Ageing Framework** identified seven themes for the Challenge Fund. These are areas where we see the clearest role for the Challenge Fund in stimulating innovation and encouraging private sector entry to deliver on the healthy ageing mission.

Realising the opportunities of our ageing population and creating the social, fiscal and economic impact that the Challenge Fund seeks to generate will involve working across a broad range of markets and stakeholders.

This will involve both market-creation and the shifting and opening of existing markets to new customers. It will also involve demand-creation, where consumer demand for certain products and services will need to be cultivated. Take for example age-friendly homes:

- There is a **market failure in the development of new, accessible homes**. Currently policy and incentives are focused on first-time buyers. Older buyers and their needs are overlooked. Developers do not see the financial case for developing more accessible homes. New methods of design and innovation in construction and engineering are required to make accessible homes cost-effective and viable, and policy changes to enforce lifetime standards are needed (London's higher standards for accessible new builds are a good example of regulation driving market shifts).
- There is a **partial market failure in relation to aids and adaptations**. The market is dominated by a small number of manufacturers who produce lower-cost, unattractive adaptations. The main purchasers are local authorities who bulk buy adaptations, with a smaller self-purchase market. There are some examples of attractive adaptations, but these often have a price premium attached. We need to **shift the market towards more attractive, affordable and less stigmatising products** for direct to consumer sales.
- We need to shift current markets by **repurposing existing, mainstream smart home technologies**, which could support people to live independently as they age, rather than developing specialist products for this market. New entrants, which focus on co-designing and applying existing technologies to suit the needs and priorities of older consumers, are needed.
- There is a **lack of consumer awareness of the products that could help them live independently in their home**. Inclusive products such as eye-level ovens and lever taps exist but they are often seen as attractive design features rather than functional necessities. Consumer awareness and demand for these products needs developing.

Business to Business (B2B), Business to Consumer (B2C) and Business to Government (B2G) markets also need to be considered across all the themes. Appendix One provides some examples of the relevant markets and challenges across each theme.

# Challenges and issues to consider

Whilst the specific opportunities, market shifts required and barriers to change vary across and within the seven themes, there are some consistent challenges that need to be addressed in order to realise the market opportunities around ageing.

## Developing the right products and services

There is a disparity in the services and products that are needed and wanted to help achieve the ambitions of 'healthy ageing' and those that are being developed.

### Age-related stereotyping

Age-related stereotyping is an important contributor to the widespread failure of industry to respond to and capitalise on the opportunities of our ageing population.

There remains a **strong association of ageing with ill health and decline**, both by producers and consumers. This has resulted in innovation activity focusing on treatment and management of severe decline in capacity, rather than prevention or positive promotion of active, healthy living.

This significantly limits commercial innovation. Products and services aimed at more severe declines and/or much older people are addressing a relatively small market, characterised by one-off, often crisis purchases by consumers. Other main purchasers of these products include health, care and social housing providers, who often have highly constrained buying power. This end of the market is therefore dominated either by very large actors with strongly established brands (e.g. stairlifts), or very small ones with tight margins and precarious business models.

Furthermore, many current services and products could provide valuable solutions for people approaching and in later life. However, older consumers are not accessing health and fitness products or smart home technology – for example - at the same rate as younger consumers. Negative associations with ageing have likely contributed to the very strong marketing and branding orientation of these products towards young people and youth. **Marketing and branding must become more age-inclusive to stimulate demand**.

### Affordability

Despite a significant net spending power, there are **significant inequalities in wealth and health** amongst people in later life.

There is a potential **tension between inclusion and commercialisation**. Due to the lack of suitable, patient capital (investment without expectation of quick return on investment) as highlighted in section one, a route to financial viability for many ventures is to develop **'premium products'** that attract a higher-paying customer. This 'trickle down' approach is limited and often ventures struggle to reach sufficient scale to penetrate the mass market. Without the right incentives they often remain in the more profitable, and often easier, high-end consumer market.

The extent of health and wealth inequalities is such that to achieve any meaningful impact in public health or public finances, it is essential to reach people across the socioeconomic spectrum. **Shifting mainstream markets towards inclusivity and producing affordable products and services with mass-market appeal is vital**. Developing appropriate funding and investment mechanisms to enable this is key.

### Tech-enabled vs tech-led

With the significant advances in technological innovation in recent years, and the growing interest of tech-focused rather than ageing-focused organisations in ageing innovation, there is a risk that emerging innovations are tech-led rather than tech-enabled. This also lends itself to the VC search for 'unicorns', which are invariably tech-based companies.

However, whilst digital innovations can be disruptive and have high growth potential, they are **not always appropriate** - particularly in the case of audiences for whom the technological interface itself may be a barrier.

Take for example **mHealth technologies**, a market which has rapidly grown in recent years. Research identifies that these **platforms are not well designed for older adults** (Wildenbos, G. Peute, L. Jaspers, M, 2018). Evidence also suggests that the main users of health apps are individuals who are younger, well-educated, report excellent health, and have a higher income (Carroll, J.K.A, 2017). We would therefore need to see a significant shift in these markets and their customer base if it is to support the ambitions of equitable, healthy ageing.

**Innovation in non-technological solutions is needed** or else we risk exacerbating inequalities further. Nearly 5 million over 55s are offline and many will remain so in future years (Centre for Ageing Better, 2018). At the same time, co-design of technological functionality and their interfaces must become the norm.

**Digital innovation will be part of the solution across all the seven ISCF healthy ageing themes but will rarely be the only one**. In many instances, the technological innovation does not have to be customer-facing. Digital innovation can often be an effective enabler of improved service provision – for example using data to understand and identify target consumers. There is significant promise in exploring the B2B and B2G customers for digital innovation.

## Understanding markets and routes to unlocking them

There are a range of different markets and interventions required, both to create and shift markets and to stimulate demand.

### Defining and understanding the consumer market

Particularly in B2C markets there are significant challenges in defining and understanding the consumer.

Older consumers are a highly diverse group. The needs, interests and capabilities of a 55-year-old and a 95-year-old are rarely the same, and often aren't the same for two 55-year-olds. This diversity must be reflected in the range of products and services developed. Better **market research and customer segmentation**, which recognises the diversity of the over 55s age-group is essential.

'Older consumers' are also not a self-identifying group. Typically, individuals do not define themselves by their age. Specifically targeting 'over 50s' or 'older consumers' will always exclude a large portion of the population, despite them objectively falling within those categories. Nine in ten (88%) people believe that brands should focus on needs and interests rather than age, while four in five **(83%) agree that age neutral and inclusive brands feel the most modern and relevant** (Age of No Retirement, 2018).

### Specialist market vs mainstream market shifts

**Shifting markets towards the development of inclusive products and services is essential** to reach the scale and speed of impact that the fund aims to achieve. Inclusive design involves improving design for everyone – regardless of age or ability. Often, the best approach is **not to develop a specialist market** – rather it is to shift the mainstream. This has been accomplished in recent years in other areas, for example with the move towards eco-friendly design and manufacturing.

Other **established and growing areas of industry and innovation could also usefully be steered towards ageing**. FinTech is a good example of an area where current innovations to support saving and money management could be usefully applied to the context of our longer lives – in particular, when saving for and managing money in retirement. However, little attention has been paid to this as an opportunity to date.

This poses its own challenges in relation to marketing, in that it **expands the target customer group for products and services** to 'everyone'. However, as our population ages and our needs and abilities across our life course continue to diversify, this is a challenge that must be addressed. We will continually fail to effectively meet demand if we attempt to segment and target consumers based on age and marginalise higher-need groups into specialist markets.

To develop appropriate and desirable products, and to market them effectively, there must be greater **involvement of people in later life** in the co-design and development of products and services.

### Local authorities and statutory services as consumers and intermediaries

Local authorities and statutory health and care providers are important consumers, producers and partners for innovation.

They play an important part in 'demand creation' by acting as a **referral route and source of information and advice** for products around health, connections and the home. Social prescribing offers a particular opportunity here. Local authorities can also play an important role in **enabling residents to access markets they are unfamiliar with**. Not all authorities provide an intermediary service, but there are examples of individuals acting as community navigators, or connectors via online "market places" that enable residents to locate services (e.g.mycareinbirmingham).

Local authorities and health and social care providers should also play a significant part in the **re-designing or adapting of new models of accessing support** – such as in developing and providing early-access models of mental health support for those living with a cognitive impairment, or in the access of effective, timely workplace health-related adjustments.

They are also significant **consumers of products and services** in relation to the common complaints of ageing, age-friendly housing and living well with cognitive decline. As such, they need to be considered as key partners in the development and delivery of these new models of working.

There are many good examples of innovation at a local level, but often these innovations struggle, and largely fail, to scale. There are a range of challenges to accessing this market, detailed further below.

#### *Lack of funding*

Statutory health and local authority services are chronically underfunded, limiting their ability to purchase anything above minimum-cost products and services. This lack of funding also contributes to the challenges around **capacity/capability to innovate and scale** promising approaches.

#### *Fragmented purchasing*

The Centre for Health and the Public Interest (Smith., J, 2015) estimated that in 2015 there were about **53,000 contracts between the NHS in England and the private sector**, including contracts for primary care services with 211 different Clinical Commissioning Groups. It is therefore extremely challenging to sell into the statutory sector, and extremely hard to achieve scale given the need for repeated negotiations of new contracts across different areas.

## Systems integration and innovation

As noted previously, achieving the ambitions of healthy ageing requires a systemic response – no single product or service can provide the answer alone. This means recognising that change has to happen across multiple different sectors. It also means being systematic about how to achieve that change.

The enablers and barriers of healthy ageing are multiple - we need better products and services across our homes, workplaces, transport, education systems, health sector and more. They are also connected. For example, in sustaining physical activity, a lot of the products and services exist which (with some tweaking in design and delivery to ensure inclusivity) could support people to stay fit and well in later life. However, to reach consumers at scale better referral routes through other touch points, such as GPs and hospitals, are needed. We also need to ensure that the wider built environment, our workplaces and transport provision, enable and encourage access to fitness and leisure services and support the maintenance of a healthy and active lifestyle beyond these.

Within each theme, investment will also be needed in innovations which run across a number of domains, including new technologies, products and services and new business and financing models. These need to be combined with wider shifts in social norms and behaviour change, supported by the wider political leadership and policy context under the Industrial Strategy Ageing Society Grand Challenge.

A repeated issue across the themes is that many of the products or services referenced already exist, but they aren't realising their full potential impact. Sometimes this is due to poor marketing or design, particularly for B2C markets. However, in many cases, the **problem lies not with the individual product, but with the system and services within which it operates**.

Take for example remote monitoring, which has been a major focus of 'age tech' innovators in recent years. Most functionality of home monitoring products can now be provided by mainstream consumer-facing connected home devices. The innovation gap is not about the tech, it is about **developing service and system models which this technology can plug into**, so that there is some way of responding to alerts or unusual patterns of monitoring data. In the emerging consumer-focused market, the products rely on the informal caregiver as the point of response – however, this has clear limitations with the reliance on informal carers. Better systems which enable lower-cost support/response services would be hugely beneficial.

**Innovations in delivery models** enabling lower-cost delivery at scale are also vital across a range of themes if the Challenge Fund is to achieve the aim of reducing inequalities. Technology has a clear role to play here. **New financing models** could also unlock significant opportunities.

Many of the potential products and services will also operate in highly inter-dependent systems that need either different sources of funding depending on the financial means of the consumer, or the support of other intermediaries (for example, employers, care providers, developers) to achieve viability and scale.

For example, in supporting health at work, models that better align incentives between providers of occupational health support, employers and employees (e.g. insurance-based products, co-financing or risk pooling models) could unlock a significant workplace health market. For commissioned services, new models such as Social Impact Bonds (SIBs) could also help to unblock challenges to scaling.

# Section Three: Implications for the Healthy Ageing Challenge Fund

The Healthy Ageing Challenge Fund will deliver a portfolio of investments that will support delivery of the challenge.

The roundtable held with social investors, venture capital (VC) firms, ageing organisations and representatives from central government to explore current limitations and future opportunities around healthy ageing innovation confirmed the need for a portfolio approach. A wide range of investment gaps and areas within and across the themes were identified, which the Challenge Fund could seek to address through a balanced, flexible investment approach.

The roundtable discussion also identified a key question to address: **how can the Challenge Fund help make the UK the best place to start a business or invest in ageing-focused products and service?**

Building upon the strengths and opportunities within the current ecosystem, and through addressing some of the current barriers to innovation and scale, the following areas have been identified as ones where the Challenge Fund could have greatest impact. However, these recommendations also apply more broadly to others interested in supporting healthy ageing-focused investment and innovation.

## Creating an attractive, effective innovation ecosystem

There are a series of relatively low-cost activities that could help create an attractive and effective innovation ecosystem in the UK. Some activities identified in the roundtable include:

- Supporting partnerships between academia, research and technology organisations, innovators and industries to support more effective knowledge exchange and development

 

- Supporting partnerships between innovators and the creative and design industry
- Providing access to data and consumer insight for industry and innovators
- Supporting wayfinding or navigating through the various funding sources and mechanisms at different stages of the development and investment pipeline
- Building momentum and interest in the ageing innovation agenda and the Challenge Fund through 'super conferences' or other activities.

## Understanding and stimulating demand

Although there is a good understanding of the seven themes where the Challenge Fund could have the greatest impact, less is known about the potential response to - or demand for - these solutions. For example, in some areas, such as inclusive home products or workplace adaptations, whilst there is a 'need' for innovation, we know less about the potential consumer demand for these products and what works in stimulating this (for example, will better products create demand alone or will specific marketing strategies be required? If so, what marketing approach works?) **Work to both understand consumer demand and guidance on how to stimulate it**, is needed.

## Early-stage development support and funding

The roundtable confirmed that there is clear scope to **improve the quality and efficacy of current early-stage innovation activity** and recognised the value of steering this towards **prevention, inclusivity and user-informed design**.

A broader movement is needed to challenge age-stereotypes and shift understanding of 'ageing' to ensure appropriate, aspirational products and services are developed. The **marketing of innovation funds and programmes should explicitly address this issue – with clear signalling of the importance of developing aspirational, inclusive products and services**.

**Stimulating evidence-based, user-led design is vital**. This process is important both for the development of new products and services, but also for enhancing and building upon existing products and services. Supporting and incentivising partnerships with groups that represent the voice of lived experience and with the wider creative and design industry is particularly important here.

There was also an identified need for better sources of **early-stage development funding**. Funding that supports higher financial risk, high social impact ventures is vital. Investments with a **higher risk appetite** are needed. However, they must be accompanied by effective impact evaluation methodologies to ensure that these ventures are achieving the high-impact they promise.

**Specific investments in supporting the development of low-cost products and services**, possibly through blending funding with other commercial or philanthropic sources, are also important in addressing inequality.

# Creating 'investment-ready' ventures

There is a gap in funding for socially-minded ventures to scale and a fragmented market for many ageing-related innovations.

More sources of **patient capital**, or alternative funding models, which enable higher-impact, slower-return ventures to scale and achieve commercial viability is needed.

Investments that **incentivise the entrance of key industry players** (such as large retailers, manufacturers, financial services) and programmes of support and funding that create channels for new and more established ventures to reach the mainstream market are needed.

Demonstrating impact and social and economic returns will also be essential in enabling innovations to become investment-ready – **effective evaluation structures** need to be established to enable this.

# Sustainable impact

Innovation and investment programmes must consider how they can have sustainable impact that lasts beyond the term of their funding. This is particularly important for the Challenge Fund. It is important that the fund **avoids fostering grant-dependency** by blending funding with other sources, such as the current VC funds being established (for example, as the **Arts Impact Fund** has done) or by arranging the funding to lever in external capital from others.

Wider efforts to **build market confidence** through high-quality evaluation and demonstration of impact and financial return will also help to achieve a longer-lasting shift in market activity.

# Systems change

To enable a cross-sector, systemic approach, a focus on outcomes is essential. **Mission driven** programmes of investment are needed – focused on achieving outcomes for people, rather than the development and scaling of specific technologies or products. The ambition of 'scaling' should therefore be about **scaling the impact of a product or service, not simply about achieving scale in terms of units and financial return**.

Achieving this scaled impact will require shifts in:

1) How we design and develop products and services

2) How we fund and deliver products and services, with new operational and financing models

3) Public policy, regulation and public attitudes to ageing

To enable this, we need **investment in a range of innovations** – including technologies, products, services, new financing models and new business models - as well as to clearly define the basis on which impact will be defined and valued.

These need to be combined with wider shifts in public policy and regulation, along with shifts in social norms and behaviour change. The Challenge Fund could usefully input into these broader shifts by feeding insights into barriers and required policy changes into the broader Industrial Strategy Grand Challenge on Ageing.

To explore some of the more complex interdependencies within and across themes/sectors, there is value in **investing in some place-based responses** which can provide opportunities to explore and evidence how a local ecosystem of public and private organisations can support the development and scaling of market-led solutions. Development of partnerships and mechanisms and frameworks for collaboration will be essential, and sufficient resource needs to be assigned to establishing these.

It is also important to recognise that some of the barriers to achieving wider impact within systems are simple issues around capacity and awareness. Funding that resources organisations to have the capacity to work differently and more collaboratively could be a helpful way of enabling spread and scale of impact.

# Conclusion

There has been promising growth and interest in activity around ageing innovation and investment in recent years. However, **the ventures developed are often limited in scope, developed in isolation of one another and rarely reach significant scale**.

There are significant gaps in the current investment ecosystem and a need for much greater collaboration between different programmes and funds established to promote healthy ageing. To shift people's experience of ageing and later life we need to take a much more systematic approach to supporting the development and scaling of interventions across the wide range of areas for action to support healthy ageing.

The Challenge Fund can complement existing activity, unlock new opportunities and stimulate shifts in the market that individual funds and investments alone cannot achieve. It is important that the Challenge Fund explores opportunities for investments that are improvement-oriented, as well as those that are focused on more transformative processes.

# Appendix One: Examples of market challenges relevant to each ISCF Healthy Ageing theme

| | **Missing markets** (no/ minimal supply of products) | **Market shift** (wrong quantity, price etc.) | **Demand creation** (lack of consumer demand) | **Analysis** |
|---|---|---|---|---|
| **Sustaining physical activity** | | The health and fitness industry is not reaching older consumers at scale. While there have been some promising shifts, we need more inclusive, accessible and affordable services. **B2C**<br><br>mHealth services are not well designed for older adults and do not reach older, lower income consumers, as well as those in poorer health. **B2C** | Scope to increase interest/ demand through:<br><br>More inclusive marketing strategies for the health and fitness industry. **B2C**<br><br>Enabling new routes in to accessing health and fitness services/ products (collaboration with health and social care services is essential). **B2G**<br><br>Bringing health and fitness services to places where older people are. **B2B**<br><br>Supporting access to/ usage of digital services | Scope for incremental innovation in improving existing provision. There are opportunities to nudge/ shift the industry to market a more inclusive mainstream offer. UK Active and others are looking to address this – so may not require any govt. intervention.<br><br>Scope for stimulating more targeted, co-designed digital interventions for older users.<br><br>Demand creation is a key issue to address in this theme. |

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| **Age-friendly homes** | Insufficient numbers of accessible homes are being built. Policy focus is on first time buyers. Developers unconvinced by business case for accessible homes.<br><br>There is an opportunity to stimulate new methods of design, engineering and construction to drive down costs of accessible development. **B2B** | Home adaptations are poorly designed and undesirable. The market is dominated by few suppliers and desirable adaptations often have a high price premium and don't make it to the mainstream retail market. **B2C, B2G**<br><br>Potential to stimulate a market in equipment and furniture loans to overcome issues around high capital cost for short duration use in adaptations (e.g. IKEA). **B2B, B2C**<br><br>Rather than develop bespoke, specialist products, there is an opportunity to repurpose existing mainstream technologies (smart home, voice assistance) to support independent living. **B2C** | Consumers aren't accessing existing inclusive products at scale (lever taps, eye-level ovens etc). Greater awareness of existing products/ benefits, as well as better marketing to destigmatise 'age-friendly'/ inclusive products, is needed. **B2C** | There are multiple distinct, relevant markets with different drivers and opportunities.<br><br>Quite significant shifts/ disruptions are needed in relation adaptations, with high impact potential but not necessarily significant commercial return. Scope for government intervention to disrupt market and enable new entrants. Potential seed markets in retirement/ care homes for these products.<br><br>Greater impact would be had through shifting mainstream retailers to inclusive products– need to incentivise retailers to engage with this market. Need to also address issues around consumer demand/ awareness of products. We don't know what consumer potential is or how to unlock it.<br><br>Largest impact opportunity lies in shifting developers/ architects to inclusive design incl. fixtures and fittings. |

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| **Work and health** | New products to assess functional capability, re-design work/ the workplace/ workplace adjustments, assistive technology or mechanisms to assist improved management of support. **B2B**<br><br>The workplace health and fitness industry is largely limited to a private sector 'wellness' industry with limited evidence of impact/ effectiveness.<br><br>There are a lack of evidence-based interventions, as well as a lack of involvement from health and fitness/ leisure sectors in the design and delivery of services. **B2B** | Need improved mechanisms and pathways for referral between NHS, providers and employers. **B2G/B**<br><br>Occupational health for SMEs - need new business and financing models to access the SME market. **B2B** | Low usage of existing services such as Access to Work, suggests that awareness raising is needed amongst employers/ees. **B2C/G**<br><br>Generally, demand exists but there are some issues in disclosure of health conditions to employers. Employment practice needs to change to make workplace health support/ adjustments more 'acceptable' and remove associated stigma. | There are significant gaps in the current market and an opportunity for govt. intervention to stimulate innovation to fill these.<br><br>Models of workplace health support do not reach the scale needed to meet demand, nor do they meet the needs of growing numbers of SMEs/self-employed individuals.<br><br>There are some promising tech developments in exo-skeletons and workplace technology but these are not being effectively deployed within workplaces. |
| **Managing common complaints of ageing (foot health, hearing loss, sight loss and incontinence)** | Lack of quality statutory provision for footcare, largely high-price private or third sector. B2C<br><br>Lack of products to prevent issues or minimise decline – e.g. products for early stage sight or hearing loss, or aiding self-management of foot health. **B2C** | Existing products (footcare, hearing) are unattractive with a price premium on attractive products. Need to repurpose existing products with, and for, older users. **B2C, B2G** | Improved marketing to reduce stigma – particularly around incontinence – required to stimulate demand. **B2C**<br><br>Better information/ awareness raising and routes to accessing products. NHS are a key customer for products and route for information provision. **B2C/G** | Few companies dominate market share on specific products e.g. hearing aids, keeping costs high. Opportunities for incremental innovation and shifting manufacturers and retailers towards affordable, attractive design is necessary. Clear commercial opportunities in reaching lower/ middle income consumer needs.<br><br>Some significant shifts required in marketing and culture/ attitudes around hearing loss, incontinence etc. to fully unlock market potential. |

 

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| **Age-friendly places** | Develop new products around accessible, intelligent transport solutions (MaaS, Door to Door, AV, e-bikes).<br><br>Possible Future of Mobility/ Healthy Ageing joint challenge. **B2C**<br><br>Lack of products and services to help increase accessibility and legibility of public realm. Better design from outset also required. **B2C** | Need new low-cost designs or new financing models for developing and maintaining walkable streets/ neighbourhoods. **B2G**<br><br>Potential to promote more intergenerational co-living – e.g. students using spare space in older people's homes in return for support/ care for better mutual outcomes. **C2C, B2B** | Improved understanding/ awareness raising surrounding benefits/ effectiveness of cohousing/ co-living. **B2C, C2C** | Re-design of public realm requires more transformational innovation and systemic shifts and multi-stakeholder collaboration – architects, local authorities, developers, financial services.<br><br>Opportunity in consumer market for new products/ services to assist mobility and in shifting existing innovations towards inclusive design (significant opportunity around Future of Mobility grand challenge). |
| **Living well with cognitive impairment (significant overlaps with Age-friendly places and homes)** | Lack of products and services to help increase accessibility and legibility of public realm. Better design from outset also required. **B2C**<br><br>New models of care/ referrals to enable early access to mental health support for people living with dementia and carers. **B2G** | Repurpose existing mainstream technologies (smart home, voice assistance) to support independent living, rather than develop bespoke, specialist products. **B2C**<br><br>New services and business models to assist in lower-cost provision of care support. **B2C, B2G** | Improving awareness of, and increasing access to, existing products and services through consumer channels and NHS/ social care. **B2C, B2G** | Overlaps with previous themes around creating more supportive environments but with clear opportunities for targeted marketing/ outreach.<br><br>Public and statutory services are an important producer and customer of new products/ services but clear limitations / challenges to engagement. |

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| **Supporting social connections** | New use of data for identifying those at risk of isolation, facilitating early intervention and prioritisation. **B2G, B2B** | New products, services and business models to assist lower-cost provision of peer support/ community-based models. – **B2G, B2B**<br><br>More inclusive culture/ leisure experiences for older consumers **B2C** | Improve information provision around local services/ organisations/ events. **B2B, B2C** | Potential consumer market opportunities in inclusive culture/ leisure experience.<br><br>Beyond this, consumer market opportunities are limited. A lot of platforms already exist around supporting people to develop and maintain connections online – focus needs to be on how to enable face to face connections and funding the services that enable this.<br><br>Public and statutory services and the third sector are important players – although this is a difficult and fragmented market to sell into. |

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CENTRE FOR AGEING BETTER

COMMUNITY FUND

The Centre for Ageing Better received £50 million from The National Lottery Community Fund in January 2015 in the form of an endowment to enable it to identify what works in the ageing sector by bridging the gap between research, evidence and practice.