

**Nesta...**



# **FIVE HOURS A DAY**

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**SYSTEMIC INNOVATION FOR  
AN AGEING POPULATION**

Halima Khan  
February 2013

## About Nesta

Nesta is the UK's innovation foundation. We help people and organisations bring great ideas to life. We do this by providing investments and grants and mobilising research, networks and skills.

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# FOREWORD

**The statisticians now tell us that life expectancy is rising by around five hours a day,<sup>1</sup> or nearly three months each year. This is a startling achievement – the result of better healthcare, better environments, fewer wars and a multitude of other factors – and one that is set to transform everything from employment to welfare and the norms of family life.**

It's already transforming how we think about the shape of our lives – one rule of thumb suggests that we should think of our chronological age as equivalent to a decade younger in our parents' lives. Today's 60 year old may be thinking and feeling more like a 50 year old a generation ago. Longer lives mean many more opportunities to live, to learn and to enjoy, and an end to the 20<sup>th</sup> century's vice of what Michael Young called 'chronologism': the assumption that education, work and retirement should all be prescribed according to our chronological age.

But we also know that the extra years of life will not always be healthy. Disability-free life expectancy isn't going up any faster than life expectancy, which means that every society will have a large, and growing, number of people living with long-term conditions and disabilities. That's why it's also right to acknowledge the scale of the challenges that ageing brings; how to fill the extra years usefully; how to provide care; how to reshape housing, or urban design, how to rethink savings and pensions so that people aren't left impoverished at the end of their lives.

For as long as I can remember people have talked about ageing as a prompt for innovation. But most of that innovation is still directed along conventional lines: innovation in new drugs or medical treatments; innovations in the design of pensions or finance for long-term care; and innovations in assistive technologies.

All of these matter, and are likely to matter even more. But so far we haven't seen anything like the benefits that might have been expected from the vast investments made in relation to dementia or finance for long-term care. As this report sets out, other kinds of innovation



are needed, and these are likely to gain in prominence. These include innovations in mobilising community support for vulnerable older people; innovations that focus more on how technologies are used than on the technologies themselves; innovations in how jobs are organised. Some of the most important innovations may come at the intersection of all of these – innovations in whole systems rather than just in discrete products and services.

This won't be easy. It may involve new ways of organising money – rewarding better outcomes rather than just funding activities. It may involve new ways of organising care – with the individual at the centre of a network of circles of support. And it may involve new roles – straddling the boundaries between the formal world of government and doctors on the one hand, and the informal world of friends and family on the other.

Nesta, as the UK's innovation foundation, is already involved in supporting some of the most interesting projects that are seeking answers – from new models of care, to support for entrepreneurship in later life – and we're committed to expanding our work in this field.

Hopefully this report will provide readers with new insights. But we hope it will also prompt others to join with us as partners. It's still common to hear ageing talked about as a crisis or even a timebomb. But it's also a prompt: to realise the most from the extraordinary good fortune of living at a time when so many have the prospect of many extra years of life. No society in history has ever experienced anything comparable to today's patterns of ageing. That can feel scary. But it's also why we have no choice but to create, to be bold, and to imagine afresh.

**Geoff Mulgan**

Chief Executive, Nesta

# 1 EXECUTIVE SUMMARY

**With life expectancies increasing by five hours a day and Baby Boomers entering their later years, our assumptions about ageing and who is ‘old’ are fundamentally challenged. Moving beyond chronology as a way of understanding age will be a key shift as we move to an older society. And we need to innovate to enable us to adapt to an ageing population, including recreating our social institutions and creating ways for people to help one another to harness the opportunities of an ageing society and enable all of us to age better.**

## What impact will ageing have?

We’re all ageing, but not in the same way. Our socio-economic status is a stronger determinant of how we age than our chronological age. And understanding the diversity and dynamism of ageing is vital to the innovation needed to successfully transition to an older society.

Ageing is often talked about in terms of burden, crisis and conflict between generations. There are significant issues of income redistribution between generations and a decline in the ‘working age’ population, but the debate often misses the actual or potential contribution of older people. It also misses the social opportunity to build everyday connections within and between generations.

There are a host of other impacts of an ageing population which are less debated, including what it will feel like to be a teenager living as a ‘minority’ in age terms, or a 30-something politician accountable to more older than younger people. And what happens when younger generations face crises of peak oil created by previous generations? This leads to discussions of intergenerational conflict and questions of what an intergenerational social contract could look like.

An ageing population also challenges how we currently live our lifespans. Arguably we squash too much into the middle – education, family, career – and leave too much ‘spare’ time at the end in ‘retirement’. Now may be the right time to create more flexible ways for living over our entire lifespans.

### What’s the imperative?

There’s a gulf between current innovations for an ageing population and what people say they want. Research on what older people want and the factors contributing to improving lives suggest the following vision for older people in a successfully ageing society:

- To have a **purpose** – feeling useful and valued as an employee, volunteer, mentor, entrepreneur, employer, hobbyist or source of advice with a cup of tea. In a formal role, or informally amongst friends and family, inside or outside the labour market.
- To have a **sense of well-being** – living as well as possible with health conditions, being physically active and emotionally resilient. It’s also about happiness, choice, control, intimacy and personal relationships.
- To feel at **home and connected to others** – feeling at home wherever we’re living – in a care home, shared housing or in our own home. It’s about living where we want to live, being as independent as possible and also connected to a supportive social network.

There are four ways in which the current approach to innovation in ageing is not supporting this vision and the imperative for a new approach:

#### 1. **Social innovation lags behind technological innovation**

Dramatic advances in medical research from regenerative medicine to diagnostics to genetic research has made possible what was recently only in the realms of science fiction. Yet our social institutions – such as social care and the labour market – feel increasingly archaic, inflexible and out-of-step. These institutions were created under

different demographic conditions and so we're using yesterday's tools for tomorrow's problems. We need to rebuild our social institutions to take account of extending lifespans and the changing demands of people in the second half of life.

In our everyday lives we also need more opportunities to help one another. A techno-fix approach won't be sufficient; we need to create a whole new set of social opportunities to interact with and support one another to build our collective social resilience, from picking up some extra shopping to sharing our home. These opportunities recognise that we are all stronger from positive social interactions and that it should be easier for people to act on their impulses to engage with and help others in their daily lives.

## **2. We are defining ageing by what it is not**

Old age tends to be defined by what it is not. Retirement is not working. Ageing is seen as decline and dependence. Yet older people are more likely to set up successful new businesses, provide unpaid care for their peers, to be happier and better off than their younger counterparts. The ageing population should be seen as an opportunity, not just a challenge, and we should recognise the value of older people in terms of:

- People as assets: so that the skills, experience and strengths of older people are recognised and older people are not defined solely by their 'needs'; and
- People as architects: so that older people can be active players and co-creators in developing solutions.

## **3. We are over-relying on top-down structural change**

Ageing is a complex issue with financial, cultural and political implications. Much of the current debate focuses on top-down macro issues such as pensions and care, and assumes a policy fix is sufficient. But it's clear we actually need change on a number of different fronts: markets as well as policies, behaviours as well as products, and in our social norms as well new technologies. In short, we need to innovate across the whole system and social change – including a stronger social fabric – will be as important as technical progress.

#### 4. We lack evidence of what works

There is plenty of evidence of what is important in terms of ageing well, including moderate levels of exercise, eating well, social connectivity and reducing alcohol and smoking. However, we lack evidence of what interventions can achieve key outcomes. We need intensive experimentation and innovation in these fields to build evidence of what reliably works in sustained behaviour change and creating the conditions to ageing well.

#### Why systems are important

Systems thinking means being explicit about the multidimensional nature of change. It's about recognising the connection between change in different domains. And it's about being systematic about how to achieve that change. Systems change is the result of fundamental shifts across a number of domains including new technologies, products and services; new business models and recalibrated markets; political leadership and a policy context that creates the conditions for change; and new social norms and behaviour change to create a movement for change. We propose that we are part way through systemic change on ageing.

#### Achieving systems change

We need significant change on a number of fronts to transform how we live in an ageing society. Some of the changes needed to adapt to an ageing population can be done in relative isolation and do not require systems-level changes, such as a company using inclusive design principles in its product design. But some types of change are systemic in nature because to be solved they require change across multiple domains, such as:

- **Social places:** mobilising people to help one another so that older people can live well and independently for longer.
- **People powered health:** bringing the social into the medical by combining clinical expertise with self-management and peer support to improve health outcomes.
- **Purposeful work:** new employment options that enable people to work purposefully and enjoyably in the second half of life.
- **Plan for life:** creating a sense of opportunity as we enter the second half of life – a chance to take stock, reskill, plan ahead for later years, connect with others and live more healthily.
- **Living room:** enabling older people to live where they want through new housing models which combine high quality accommodation with friendships and support.

We now want to test our thinking on what it will take to achieve systemic change to support an ageing society. The main mechanisms of change will include **alliances** of key organisations; **systematic experimentation** to develop, test and scale radically-improved solutions; **policy innovation** to transform the conditions for change; development of an **innovation infrastructure** including institutions to orchestrate knowledge; and **local demonstrators** to explore the impact of a set of interventions.

### Next steps

Nesta is already active in ageing through our Impact Investment Fund, People Powered Health programme, Ageing Well challenge prize, Innovation in Giving Fund and related work such as Health Knowledge Commons. Our next step is to discuss and test the ideas in this paper and prioritise our own areas of action. We want to be part of the shift that enables us to adapt to an ageing population. We'd like to know what you think. Drop us a line at [ageing@nesta.org.uk](mailto:ageing@nesta.org.uk)

## 2 WHAT IS AGEING?

The common perception of ageing is an image of quiet, incapacitated people sitting in care homes. There's a risk we now jump to a new stereotype of hyper-wealthy, hyper-healthy Baby Boomers reading tablet computers while pedalling in their home gym. The reality, of course, is much more complex and it's vital to understand the diversity and dynamism of ageing to innovate successfully.

### 2.1 THE MEANING OF AGE

Ageing seems to happen to other people a lot of the time. People in their 80s can be heard to say that they 'don't feel old'.<sup>2</sup> If our health is good, we might not think much about getting older. We celebrate our birthdays, but generally aren't good at planning ahead for later years.

But, in fact, it goes further than that. Our society resists ageing. We celebrate youth rather than maturity and seniority. The beauty and cosmetic surgery industries help 'combat' ageing. Older people are often treated as an 'other' and otherness quickly translates into prejudice.

At the most fundamental level, we find ageing uncomfortable because it reminds us of our own mortality and of the prospect of losing loved ones. And, in a society focused on youth (and scared of death), living with increasing numbers of older people doesn't feel very straightforward. We don't really know how to do it.

So, ageing is inextricably linked to our own mortality. But what about the ageing process itself?

We're all ageing, but not in the same way or at the same pace. There are different dimensions of ageing from physiological changes to cultural expectations, and these interact in powerful ways.

Our chronological age – the number of years we've lived – is not the same as our biological age – how old we are in terms of the physical and cognitive structure of our body and mind. This means a healthy 65 year old can feel younger than an unhealthy 30 year old. And how we age is deeply affected by a wide range of factors including our economic status, our health, behaviours, choices and opportunities earlier in life, as well as our genetic (and indeed epigenetic) inheritance.

Our socio-economic status is a stronger determinant of how we age than chronology. Poverty – and associated issues like housing – is a powerful driver of health which is a major contributor to how we experience ageing.<sup>3</sup> Older people who are disabled are more likely to be from lower socio-economic groups.<sup>4</sup>

Ageing is also a cultural and social process; we age in a particular context with our individual perspectives and life experiences. There is evidence that people who think negatively about ageing have poorer outcomes themselves as they age.<sup>5</sup> Loneliness kills in the

If you are on your own, and not in contact with anyone, little by little you start to become slower and depressed. But the more involvement you have when you are older, the better for you and it will continue to keep you alive for as long as you can. ”

**Maude, East London resident,  
78 years old**

sense that there is a significant relationship between loneliness, health and mortality.<sup>6</sup> And our experience of ageing is affected by our skills, education, religion, gender, sexuality and so on; it is notable that the older population is more ethnically and culturally diverse than ever before.<sup>7</sup> Some older people ageing ‘out of place’ may regret not growing old ‘back home’ and experience difficulties in terms of the cultural expectations of ageing. Overall, our economic status and social context deeply affect how we age.

There are also differences between generations in terms of the life events and social contexts which have been experienced. This is not about fixing ‘types’ to particular ages but understanding that the ‘who’ in ageing is changing all the time, with implications for how we understand ageing. Norms which regulate intergenerational relationships – such as respect and deference – also change over time and are the site of contest, rebellion and challenge. And there are ‘cohort effects’, including evidence of a decline in the centrality of the ‘work ethic’.<sup>8</sup>

Our current oldest old are part of the ‘Greatest Generation’ whose lives have been dominated by war – born around the First World War and serving and living through the Second World War. While the generation below them – currently in their 70s and 80s – were part of the ‘Air Raid Generation’ who grew up during the Second World War and were also the counter-cultural generation that brought us jazz and rock and roll.

The soon-to-be-old Baby Boomers, currently in their 50s and 60s, are the largest generation in size and constitute the dominant political and cultural class of the moment. A particular feature of this generation is its extreme diversity in terms of digital engagement. While some Baby Boomers created the Internet – the original ‘digital makers’ – there are many of the same generation who have never been online. There may never be a generation as digitally diverse again.

And, in turn, the older generations of the future will have different experiences and expectations. Their experience of ageing may be dominated by different issues, such as extreme weather associated with climate change or major shifts to cope with peak oil. And so it goes on.

So, ageing is in its very nature, a dynamic and evolving issue. More kaleidoscopic than beige. And far from one-size-fits-all. In the context of an ageing population, now is the time to challenge our assumptions about ageing, what it means to age and who is 'old'. It was Michael Young who called for the end of 'chronologism'<sup>9</sup> – basing our judgements on people's age rather than on their skills and experiences. Moving beyond chronology will be a key shift as we transition to an older society.

Age today

**0-10****Generation  
Always-On  
2001+**Such as...  
Martha Payne<sup>10</sup>Digital  
connectivity

Age today

**30-40  
40-50****Generation X  
1965-1982**Such as...  
Kate Moss  
Zadie Smith  
Zac Goldsmith  
Yvette Cooper  
Damon Albarn  
Alain de Botton  
Jamie OliverThatcherism  
Chernobyl  
Berlin Wall  
Personal computers  
Dot-com revolution  
AIDS

Age today

**10-20****Generation Z  
or Millennials  
1995-2000**Such as...  
Justin Bieber  
Daniel Roche<sup>11</sup>  
Tavi Gevinson<sup>12</sup>  
Cameron Cohen<sup>13</sup>Digital natives—never  
known world without  
the Internet  
Born in boom times

Age today

**20-30****Generation Y  
1983-1994**Such as...  
Mark Zuckerberg  
Usain Bolt  
Lady Gaga  
Pussy Riot  
The Simpsons  
Jack Wilshere  
Emma StoneDigital revolution  
Social networking  
Neoliberal politics  
Global financial crisis  
Climate activism

Age today

**50-60**  
**60-70**

**Baby Boomers**  
**1945-1964**

Born after WWII  
Swinging 60s  
Feminism  
Black rights  
Vietnam  
Moon landing  
Oil crisis and Suez



Such as...  
Tony Blair  
Hillary Clinton  
Tim Berners-Lee  
Richard Branson  
Jennifer Saunders  
Martin Amis  
Nigella Lawson

Age today

**90+**

**Greatest Generation**  
**1904-24**

Such as...  
John F Kennedy  
Iris Murdoch  
Kathleen Ferrier  
Robert Oppenheimer  
Francis Crick  
Simone de Beauvoir  
Roald Dahl



Born around  
World War I  
Served in WWII  
Suffragette  
movement  
Great Depression



Such as...  
Marilyn Monroe  
Bob Dylan  
Stephen Hawking  
Judi Dench  
Margaret Thatcher  
Vivienne Westwood  
Neil Armstrong

Age today

**70-80**  
**80-90**

**Air Raid Generation**  
**1925-45**

Childhood in  
World War II  
Cold War  
Decolonisation  
Jazz  
Rock and Roll



## 2.2 WHAT IMPACT WILL AGEING HAVE?

An ageing society has a whole range of implications from the day-to-day patterns of how we live, to how we understand what it means to age. In public debate, ageing is often discussed in terms of burden, crisis and conflict.

The impact most often talked about is the challenge of redistributing income between generations. A falling working-age population supporting a growing older population undermines the current model of pensions. The challenge is great, but describing older people as an 'economic burden' fails to acknowledge their potential to remain economically productive, and fails to reflect the valuable non-paid work older people do, such as looking after grandchildren or volunteering.

# 3.2

People of working  
age for every person  
of pensionable age in

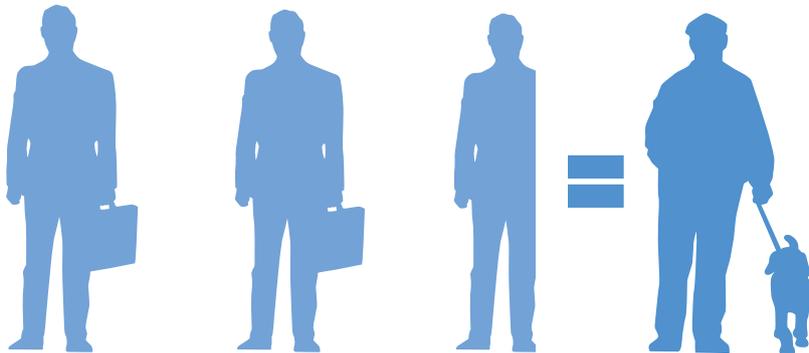
# 2008



This ratio is  
projected  
to fall to

# 2.8

by  
**2033**<sup>14</sup>



The social and economic implications of this [ageing population] phenomenon are profound, extending far beyond the individual older person and the immediate family, touching broader society and the global community in unprecedented ways. ”

**Ban Ki-moon,  
UN Secretary General**

Increasing numbers of older people living with at least one long-term condition will be another significant impact, both on individual and family lives and on the wider health and care system. Fewer working-age people available to care for older people often raised in this context. Although this argument fails to reflect that older people already provide a significant amount of informal care to one another.<sup>15</sup> Age UK estimate that it is the equivalent of one billion hours a year, worth £6.3 billion.<sup>16</sup>

Then there are a host of other impacts of an older society, some of which are less debated.

How will political priorities change with shifting demographics? Will we see a different set of political decisions in the future – ones that put a different value on the demands of older people? How will markets adapt to more of their consumers being older? What will it feel like to be a teenager living as a ‘minority’ in age terms? Or a 30-something politician accountable to more older than younger people? What happens when younger generations face crises of peak oil and climate tipping points created by previous generations?

This very quickly leads to discussions of intergenerational conflict – the so-called war between the generations. This debate currently focuses on the soon-to-be-old Baby Boomers.<sup>17</sup> Many argue that this generation has benefited relatively well during their working lives and that, not only may their expectations of financial provision at retirement be difficult to meet, but that there are generations beneath them that feel less well served in terms of employment, housing and pensions.

Others take a different view and interpret the Baby Boomer blame game as another manifestation of age discrimination. The story that this cohort ‘stole the future’ of younger ones reinforces negative attitudes towards older people and underestimates the potential for change and reform – there is no ‘fixed pie’ to be divided between the generations.

These debates could potentially converge with a focus on the responsibilities as well as the rights of older people. Or, even further, that all generations – older and younger – have a duty to respect and provide for other generations in financial and in-kind ways. It could become the call for a new intergenerational social contract. But the debate at the moment seems to reinforce the sense of battle between generations rather than the goal of uniting around shared responsibility.

And, last but not least, an ageing population has implications for the way that we live our life course. Our current pattern doesn't fit well with lifespans of over 100 years. At the moment we have a burst of intensive education, followed by full-time work and child-rearing, followed by retirement. In the context of longer lives this arguably squashes too much into the middle and leaves too much 'spare' time at the end.

We need to find ways of remaining active – physically, mentally and economically – in the second half of life from 50 onwards. What we learned aged 15 is unlikely to be sufficient 80 years later, so learning needs to be on-going. Given the importance of a child's early years, perhaps we should focus on our children in our 30s and 40s and come back to work in our 50s and 60s? Work could be divided more flexibly across the life course to enable us to work in different ways at different ages. And what about relationships: could your marriage last a 100 years? The implications of longer lives are dizzying and we are only at the beginning of understanding them.

We are all facing an unprecedented health challenge from dementia as the population ages, but the challenge of finding effective treatments is one we cannot underestimate. ”

**Sally Davis, Chief Medical Officer**

## Population shifts

**In terms of our current demographic shift, there are three intertwined changes going on. Firstly, at an individual level, we're living longer. A quarter of babies born in 2012 will live to see their 100th birthday.**

At least a quarter of babies born in 2012 will live to see their

**100th birthday**<sup>18</sup>

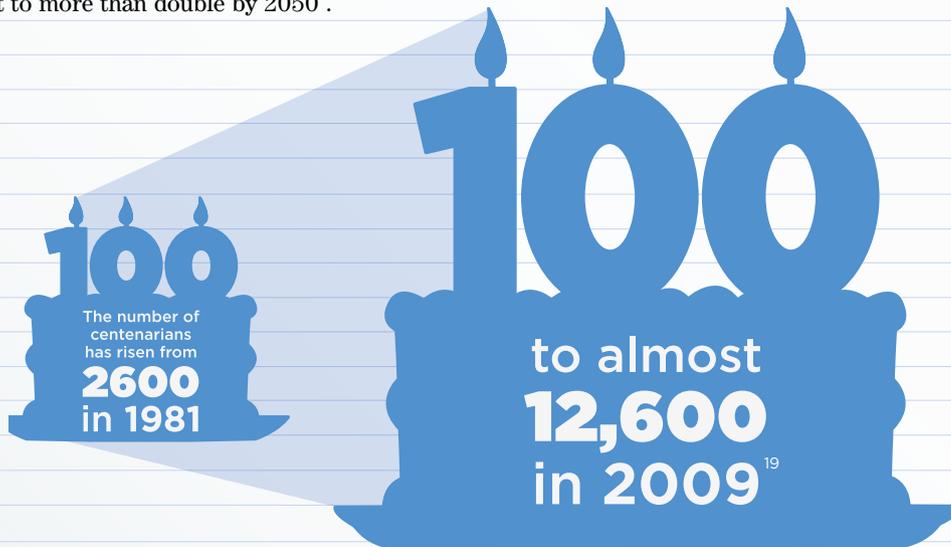


The second change is at the population level. We have a post-war population bulge that is working its way through the life course – the cohort is currently 50 to 60 years old. This particular dimension of ageing is not permanent, therefore, but it means that for the next 50 years or so, we expect to have a relatively aged population as well as a population living longer than ever before

These two changes – living longer and a large older cohort – also combine with a third element – migration. The impact of migration to counteract population ageing is often over-

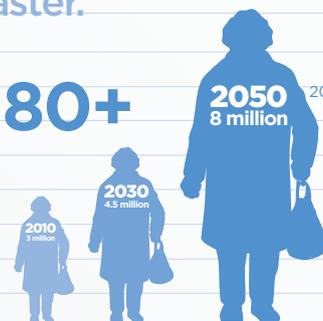
stated as migrants themselves age. But migration does affect the age structure of the UK as young migrants balance the ageing UK-born population. London's population, for example, is made more youthful both by internal migration (young people moving in and older people moving out) and by international migration (international migrants are overwhelmingly young adults).

Overall, these three trends are combining to create an increasingly aged population profile for the UK. And, especially, a larger population of the 'older-old'; the number of centenarians has risen from 2,600 in 1981 to almost 12,600 in 2009 and the proportion of over-80 year olds in the UK is set to more than double by 2050 .



As this happens the proportion of older, old people will grow even faster.

**UK population 80+**

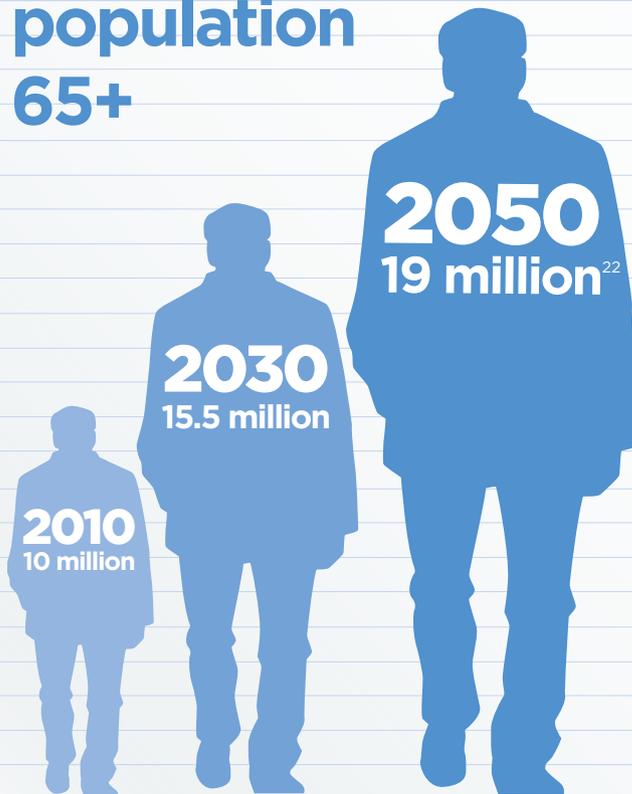


## An ageing world<sup>21</sup>

**It's not just the UK, or Europe, the global population is also ageing.**

- The number of older people has tripled over the last 50 years; and will more than triple again over the next 50 years, to an estimated two billion people in 2050.

## UK population 65+



- In some countries – such as Japan, Greece, Italy, Spain and Austria – more than two in five people will be 60 or over by 2050.
- Europe is currently the world's major area with the highest proportion of older people and is projected to remain so for at least the next 50 years.
- But the older population is growing at a faster rate in less developed regions – by 2050 nearly four-fifths of the world's older population will be living in less-developed regions.
- By 2050, 33 countries are expected to have more than ten million people over 65, including five countries with more than 50 million older people: China (437 million), India (324 million), USA (107 million), Indonesia (70 million) and Brazil (58 million).

According to the UN, overall global population ageing is:

- **Unprecedented;** without parallel in human history.
- **Pervasive;** a global phenomenon affecting everyone but with countries at different stages of the process and with different paces of change. Countries that started the process later will have less time to adjust.
- **Enduring;** we will not return to the young populations of previous generations.

## Are we ageing more healthily?

**Overall in the UK, we're experiencing a 'compression of morbidity', which means people are spending more of their lives in very good or good health. But our experience is not the same across England, Wales, Scotland and Northern Ireland.**

For England, people aged 65 were living, on average, more healthy years in 2010 compared with 2005. However, for Scotland and Northern Ireland, their population experienced an expansion of morbidity, particularly for men. This means that the number of years lived in good or very good health actually declined.

And, overall, we are ageing with more long-term conditions (conditions that cannot, at present, be cured, but which can be controlled with treatment, such as diabetes, asthma and dementia). Sixty per cent of over 65 years olds in the UK report having a long-term condition. As the older population increases, the number of older people with a long-term condition is expected to rise from three million to 18 million by 2025. Health and social care services will need to meet this increase in demand, focusing more on early detection and better prevention, as well as approaches which help older people to better self-manage their conditions and live healthier lives, bringing the social into the medical.<sup>23</sup>

## A good death

**Every year, half a million people die in the UK. But discussions about death and particularly about ‘dying well’ are rare. In fact 71 per cent of us have not discussed our end-of-life wishes with anybody.**

Around three-quarters of deaths follow a period of chronic illness, such as cancer or heart disease, where people need access to end-of-life care. In the UK, approximately 60 per cent of people die in acute hospital, although nearly 74 per cent would actually prefer to die at home. The way we die has improved markedly in the last century, yet the institutionalised ways we cope with dying are out of kilter with how most people aspire to live at the end of life.

Discussions about end of life – from coping with chronic illnesses, to dying at home or even funeral arrangements – often happen too late, or not at all. The national coalition of Palliative Care Services campaign under the banner ‘Dying Matters’. They aim to change public attitudes and behaviours around dying, death and bereavement by encouraging more people to talk about palliative care. They suggest that many older people could have a better end-of-life experience, and millions could be saved by the public purse by reducing unwanted hospital beds, if more people were able to access palliative care at home.

## 3 WHAT'S THE IMPERATIVE?

**There's a significant gulf between what's happening in innovation on ageing and what people say they want. This gap needs to be addressed, as we are failing to adequately adapt to an ageing population, with important financial, social and political implications.**

Based on research of what older people want and what factors contribute the most to improving older people's lives, we think it is possible to set out some clear goals:

### Older people want:

- To have a purpose.
- To have a sense of well-being.
- To feel at home and connected to others.

Achieving these goals would enable us to adapt successfully to an ageing society. In fact, we all need a purpose, to have a sense of well-being and to feel at home and connected to others; which reinforces the earlier point that we don't become different people when we get older - our needs will change but we're also the same in many ways.

However, we are not yet realising this vision and we don't think we will be able to realise it without a different approach to innovation and ageing.

There are four ways in which the current approach to innovation in ageing is not working and why there is a clear imperative for a new approach:

## 1. Social innovation lags behind technological innovation

We are now in the realms of science fiction when it comes to cutting-edge genetic research; scientists have found the ‘ageing genes’ that may unlock the very ageing process itself. There are a whole range of devices being developed such as biosensors. But while these advances are critical, new devices and pills will only get us so far. We need to address under-investment in the social dimensions of ageing.

Our social institutions – such as social care and the labour market – feel increasingly archaic, inflexible and out-of-step with the new demographic reality. We are using yesterday’s tools for tomorrow’s problems as these categories and institutions date from earlier eras, different demographic conditions, and speak to the priorities of the time. We need to rebuild our social institutions for the expanding lifespans and changing demands of future older people.

The labour market is built on assumptions of shorter lifespans when people could expect three healthy years at retirement and the concept of retirement is insufficient for the several decades of reasonably healthy life we can now expect beyond 60. We cannot – for older people’s own mental, physical and economic well-being, as well as for the wider economy – have a majority of the population economically inactive for almost half of their lifespan. It just doesn’t add up. We need to find creative and flexible ways to enable people over 50 to stay connected to the labour market, in ways that suit their needs and aspirations.

Our approach to social care is also failing. Our state-funded care system delivers rationed social care in short, impersonal transactions; while self-funders face an expensive and relatively un-transparent care market. The model of getting a frail older person up,<sup>24</sup> washed and dressed in a 15 minute slot is increasingly being recognised as unacceptable. We need to fundamentally rethink social care, not just tweak the existing system. The Dilnot Commission forms an important part of the jigsaw but the present system is not just financially unsustainable, it’s arguably socially unsustainable in that it creates low paid, under-valued jobs which fail to adequately respect either the care worker or the person being cared for.

### Age-old innovation

Ageing and innovation is not a new combination. Indeed, our ageing population is the direct result of innovation:

- Innovations in public health radically increased life expectancy from the 19<sup>th</sup> century onwards with new sewerage systems and mass public vaccination programmes.
- Revolutionary innovations in clinical medicine increased life expectancy through antibiotics, heart surgery, chemotherapy and beyond.
- And medical innovations enabling fertility control, such as the contraceptive pill, has also contributed to the relatively aged population.

So, our increased lifespans and the demographic shift are the triumph of innovations across science and technology over the past century or two.

And the scientific horizon continues to stretch out: there are scientists identifying 'ageing genes' that they hope could unlock the very fundamentals of how we age.<sup>25</sup> An endeavour which holds out the prospect of combating not just age-related disease, but the very ageing process itself.

So, ageing and innovation – particularly science and technological innovation – have a very long history and an interesting future as well.

Despite some reform at the margins, the dominant model of healthcare is structured for the 20<sup>th</sup> century priorities of combating infectious disease. We need to fundamentally re-orient healthcare in the context of the long-term conditions challenge and recognise that, at its

core, long-term conditions are a social challenge.<sup>26</sup> Social in terms of the behaviour change needed to improve people's diet and exercise, in terms of addressing the social context of presenting symptoms (including social isolation having the equivalent impact to smoking 15 cigarettes a day)<sup>27</sup>, and in terms of changing social norms around health services, so that both professionals and patients become less dependent on formal clinical settings. We will not be able to solve long-term conditions through the traditional, technical armoury of the NHS – professionals, kit and pharmaceuticals combined with efficiency savings. We need to bring the social into the medical.

## 2. We are defining ageing by what it is not

Old age tends to be defined by what it is not. Retirement is not working, not contributing. Ageing is perceived as decline and dependence. Measures of economic growth focus on the 'dependency ratio' that older people create, assuming they are no longer productive.<sup>28</sup> And all too often older people are defined by what faculties or functions they no longer have, rather than the assets and capabilities they possess.

This focus on dependency, challenges and costs is misleading. Older people are more likely to set up successful new businesses,<sup>29</sup> provide unpaid care for their peers,<sup>30</sup> to be happier<sup>31</sup> and better off than their younger counterparts.<sup>32</sup>

The UK's ageing society need not be seen as an unremitting problem, but rather as an opportunity with challenges to address.

Older people around the UK tell us that they are keen to look after their neighbours, to contribute their skills to teaching the next generation, to continue to learn, earn and do business, and to have control over their finances and care arrangements rather than having things done to them. Older people are in fact much more of an asset than a burden to society. So, solutions for ageing need, at their heart, to work with:

“Don't panic. An ageing population is good news... for growth and for childcare.”<sup>33</sup>

**Professor Danny Dorling,  
University of Sheffield**

- **People as assets:** so that the skills, experience and strengths of older people are recognised and older people are not defined solely by their ‘needs’.
- **People as architects:** so that older people are active players and co-creators in developing solutions.

These principles are about creating solutions that are aligned with what older people want and need, incorporating their lived experience. It’s about building solutions around the specific demands of particular groups of people, avoiding the failures of a one-size-fits-all approach. This is not to neglect the support that some older people need but instead to value and respect the contribution of older people, whatever their circumstances. It’s also about creating solutions that are not branded ‘ageing’ but which meet the needs of people in the second half of their life, people who may not identify at all with being ‘older’.

We suggest these principles become the default setting when devising solutions with older people. The principles are core to approaches of social innovation and inclusive design and bringing these two domains closer together would enable more older people to create their own future.<sup>34</sup>

### 3. We are over-relying on top-down structural change

Ageing is a complex issue with financial, cultural and political implications. So we need to take account of the different aspects of change needed to shift us to radically improved outcomes. Much of the current debate on ageing focuses on macro debates such as the care crisis and looks for technical solutions. But it’s clear that we actually need change on a number of different fronts – bottom-up as well as top-down, markets as well as policies, behaviours as well as products, and in our social expectations as well as through new technologies. In short, we need to innovate across the system.

The macro debates on policy issues such as care and pensions will continue, but more needs to be done to link these with emerging innovations at the grassroots level, many of which are creating new models of social action to enable people to help one another more easily. These innovations recognise that a techno-fix approach won’t be sufficient; we need

to create new aspects of everyday life and how we interact with one another. We need social change that recognises the responsibilities we have to one another and to enable people to act on their impulses to support and engage with other people.

The macro debates also need to be more explicit about the different kinds of change needed to shift outcomes. So that it's not just a case of new products and services, or recalibrated markets, or political leadership, or cultural change – it's about all of these things, together.

#### **4. We lack evidence of what works**

There is plenty of evidence of what is important in terms of ageing well, including moderate levels of exercise, eating well, social connectivity and reducing alcohol and smoking. It's clear, for instance, that relatively minor changes in levels of physical activity could shift the overall population mean in a way that would significantly reduce disability in later life, in aspects such as improved lung function. There is also a growing body of knowledge on the importance of meaningful social connections in overall well-being, with significant relationships between social isolation, ill health and mortality.

However, we lack evidence of what interventions best achieve these outcomes. What interventions are most impactful in terms of people losing weight or stopping smoking or being more physically active? We need intensive experimentation and innovation in these fields both to create impactful interventions and to build evidence of what reliably works in sustained behaviour change and creating the conditions for ageing well.

#### **So, this is what is needed to help us adapt to an ageing society:**

- Social innovation as well as technological innovation.
- People as assets and architects.
- Ageing as a system.
- A strong evidence base of how to age well.

We think that by taking account of these issues, we will be in a much better position to adapt well to an ageing society, and get us closer to the vision set out above. There are already some promising innovations that model an approach to ageing innovation based on the future, not on the past – some of these are set out in the next section.

### 3.1 OLDER PEOPLE WANT TO HAVE A PURPOSE

This is about feeling useful and valued – as an employee; volunteer; mentor; entrepreneur; employer; hobbyist or source of advice with a cup of tea. Whether it's in a formal role or informally amongst friends and family, inside or outside of the labour market – we all do better when we have a purpose in life – something to focus on and something we feel we can usefully contribute to.

So we need more diversified models of work and more effective ways of enabling older people to stay purposeful in whatever they choose to do – whether that's start-ups or sewing or samba.

And the tables are turning when it comes to employment and work. Older workers have been discriminated against; seen at obstacles preventing younger people getting on; out of touch with new technologies and new ways of working. But older workers are now increasingly critical to the overall economy – to drive economic growth, to maintain the working population level, to create jobs for younger people and to support themselves financially in their later years. And there is evidence that job performance does not decline with age.<sup>35</sup> So we need to come up with new models of work that are more flexible and adaptable and which enable older people to learn new skills as well as use their existing ones.

Sainsbury's were amongst the vanguard of UK companies to create new flexible pension and retirement packages a few years ago, allowing workers to work for longer whilst claiming part of their pension to maintain income levels. And Ernst and Young are among a number of City firms that actively encourage 'boomeranging', older workers who retire and then return as a consultant.

Elsewhere there are a small but growing number of opportunities for professional and highly-experienced older people to apply their skills. The Happy Senior Project in South Korea and Encore Careers in the US both support the over 50s or early retirees to develop future roles in NGOs (see page 34). In the UK, NEDexchange help companies find non-executive directors from retired professionals. SCORE (Service Corps of Retired Executives) is an American programme that enables business professionals to mentor small business owners.

We now need to scale and diversify these models into other sectors and types of work – so it is not just something for high-flyers. The Amazings is a new social business that enables people over 50 to share and pass on their skills (see page 34).

But it's also about activities which give older people a sense of purpose – whether that's learning a language, gardening or running a local group. Not all older people will want or be able to take up paid work. But having a sense of purpose beyond the labour market will be critical to the well-being of many older people right through their older years. Many older people already volunteer informally but schemes like the USA's Experience Corps, which promote volunteering as 'civic duty' are becoming popular in Europe too (see page 35).

“ Sometimes I miss the work routine and the company of fellow employees. I felt a sense of challenge and achievement. I have to get that now through other opportunities. ”

**Tom, East London resident, 67 years old**

### Case study: **Encore Careers, USA**

#### **Enabling older people to transition into a second or an 'encore career'**

Encore Careers retrains and matches thousands of older people (50 years plus) each year who want to transition out of the corporate sector and into a second or an 'encore career', often in the non-profit or public sector. Encore careers combine personal fulfilment, social impact and continued income, enabling older workers to put their passion to work for the greater good in the second half of life.

The US-based organisation also supports older people to start new social enterprises or charities which use innovative new approaches to tackle some of society's most pressing challenges like homelessness, isolation and obesity. For more information see: [www.encore.org](http://www.encore.org)

### Case study: **The Amazings, UK**

#### **Enabling older people to share their skills with others**

The Amazings enables people over 50 to share and pass on their skills. Started in East London by Sidekick Studios, the Amazings was born out of a single, simple idea. Society has always learned from its elders. But somewhere along the way we have lost that connection between generations, which means losing rich, valuable and rare skills.

They have created a marketplace through which older people can offer their skills in one-to-one tuition or group classes. Participants pay for the experience which means the older people can use the scheme as a way to earn money or donate the earnings to charity, as well as a way to feel more connected and valued locally.

Launched in 2011, the Amazings is supported through the Innovation in Giving Fund, managed by Nesta and backed by the Cabinet Office. For more information see: [www.theamazings.com](http://www.theamazings.com)

### Case study: **The Experience Corps, USA**

#### **Enabling older people to volunteer as tutors for children most in need**

The Experience Corps places retired older people into elementary schools across the USA to support struggling students from disadvantaged backgrounds. There are currently nearly 2,000 tutors providing literacy coaching and homework help to more than 20,000 students. Teachers select the students that would most benefit from 1.5 hours of consistent tutoring each week. And the results of the recent randomised control test shows that it's working – pupil reading age is increasing amongst those who receive tutoring.<sup>36</sup>

Experience Corps currently spends c.\$67 per student per year, including a payment to some of the tutors. For more information see: [www.experiencecorps.org](http://www.experiencecorps.org)

### Case study: **Men in Sheds, Australia and UK**

#### **Enabling older men to make friends, learn new skills and have a sense of purpose**

Originally developed in Australia, this programme creates an opportunity for men of all ages to meet and make things together in a relaxed setting designed to feel like a shed. 'Sheds' around the country are equipped with woodwork tools and managed by volunteers who put on a range of activities, often around designing, recycling and making. The 'sheds' provide a space for men to meet up to use their existing skills, learn new skills or just put the world to rights over a cup of tea.

There are Men in Sheds projects around the country including some organised by Age UK, funded by the Big Lottery Fund, targeted at engaging older men who are often less connected in groups than women. The model has been successful at connecting men who may not normally go to organised activities, as well as supporting older men who feel isolated or are going through major life changes such as bereavement. For more information see: [www.meninsheds.org.uk](http://www.meninsheds.org.uk)

## 3.2 OLDER PEOPLE WANT TO HAVE A SENSE OF WELL-BEING

This is about living as well as possible with physical and cognitive conditions. Being physically active and emotionally resilient. It's about understanding and managing our health as well as we can. Having any care needs met in a personal and dignified way. It's also about happiness which increases with feelings of choice and control. It's about recognising the importance of personal relationships, intimacy and sexuality to older people.

There is a long spectrum of health and care needs from walking the dog to personal care to complex clinical interventions and surgery. What's clear is that we need to enable older people to remain as in control as possible with real choice, to be supported to manage their care needs and data as independently as possible and to mobilise their own experience and support networks, as well as those of formal care and health institutions. Tyze (see page 37) is a good example of an online innovation to help patients manage and co-ordinate their own formal and informal care and data, and group consultations may help patients share tips and encouragements for managing pain or long-term conditions.

Caring schemes like Care4Care which draw on the time of neighbours to support older people locally are promising (see page 38). Wigan Council are going one step further, looking to change the whole system of local social care provision. Backed by Nesta and the Local Government Association through the Creative Councils programme, Wigan is piloting a new economic model for social care based on harnessing underutilised and untapped resources within the local community, fuelled by a community currency.<sup>37</sup>

I lost my husband three years ago. The first year, I didn't like to go out because I was depressed. But when I came to [the volunteer centre], I found my family. I found support. When I come here, I feel like the people I meet are my family. And finally I have my place. I love it.”

**Mary, East London resident,  
81 years old**

This part of the vision is as much about keeping mentally and physically active and emotionally supported as it is about long-term institutionalisation and pharmaceuticals. It's about prevention as much as cure. It's about recognising that everyone – even those of us with high support needs – have assets to build on, skills to be harnessed and preferences to be respected.

We also need to recognise when repeat visits to a GP can be reduced by prescribing a be-friending scheme rather than drugs (see the Social Prescribing case study on page 38). We need to connect across health, care and public health and support professionals to collaborate with older people to age well. So this is about changing mainstream clinical practice as well as generating more diverse models of care.

It's about solutions that are aligned with everyday life – homely, dignified, personal and based on trust and sustained relationships.

### Case study: Tyze Personal Networks, Canada and UK

#### **Mobilising communities to provide care**

Tyze Personal Networks is an online tool that allows people with care needs to plan and organise their care. The online platform allows people to share information with a private group so that different types of care can be scheduled more effectively – from informal care from family and neighbours to more formal care from the state, or medical appointments and interventions. Everybody in the network has access to everything from scheduling appointments and storing personal care plans to planning social events, uploading photos, sharing stories and sending messages.

Tyze Personal Networks is based on the idea that people who are supported by a caring network have better health, perform better in work and education – in short they have a higher quality of life. Already active in Canada, Tyze Personal Networks has now launched in the UK with the support of the Innovation in Giving Fund, managed by Nesta and backed by the Cabinet Office. For more information see: [www.tyze.com](http://www.tyze.com)

### Case study: **Care4Care, UK**

#### **Mobilising communities to provide care**

Care4Care is a timebanking scheme which encourages neighbours to care for older people in their community, in exchange for a time credit. A community co-ordinator matches volunteers with older people that have requested support. Local people then volunteer with, for example, helping with the shopping, driving or personal care etc. Each hour's volunteering is reciprocated with a time credit that can be 'banked' for their own care in the future or exchanged for care of a family member or relative elsewhere.

The scheme was designed by Professor Heinz Woolf and is currently being piloted in the Isle of Wight by the Young Foundation. It is supported through the Innovation in Giving Fund, managed by Nesta and backed by the Cabinet Office. For more information see: [www.care4care.org](http://www.care4care.org)

### Case study: **Social Prescribing, UK**

#### **Bringing public health, health and care closer together**

Social prescribing encourages medical professionals to 'prescribe' non-clinical interventions, like volunteering or exercise, instead of or alongside medical interventions. It was established by GPs who noticed that social, rather than medical, interventions would help some of their patients. Nesta's People Powered Health programme has supported Newcastle West Clinical Commissioning Group to use social prescribing to patients with long-term conditions. Patients are referred to community health trainers who broker connections with activities from cooking classes to community gyms, gardening clubs to benefit advice services. The service has helped build confidence in older patients as well as improving activity levels.

For more information see: [www.nesta.org.uk/areas\\_of\\_work/public\\_services\\_lab/people\\_powered\\_health](http://www.nesta.org.uk/areas_of_work/public_services_lab/people_powered_health)

### 3.3 OLDER PEOPLE WANT TO FEEL AT HOME AND CONNECTED TO OTHERS

It's important to feel at home, wherever we're living – in a care institution, shared housing or in our own home, even if we're receiving visits from carers carrying out domiciliary care. It's also about living where we want to live, being as independent as possible and also being connected to a supportive social network. It's about getting out and about and feeling safe. It's about friendships and connections that are enjoyable and also a source of reciprocal support. It's about housing that is good quality and which enables us to live our everyday lives as well as possible.



The focus on independent living needs to be balanced with a focus on sociable living so that older people aren't trapped in their own homes. There is evidence of loneliness and isolation amongst older people, yet we know how important social connections are for enjoyment, companionship and support. And these connections have real impacts on emotional and mental well-being and health.<sup>39</sup> Meals with Mates – a gathering of like-minded older people over good food – creates these connections (see page 41).

We need connections to solve problems, drawing on our networks for advice on local handymen or to access informal care. The Circles movement, piloted in Southwark, builds on this insight to create local membership organisations that create networks around older people (see page 42). Many of the key innovations in this area build social fabric both for its own sake but also as a means of enabling people to live independently for longer. A key innovation priority is to create and scale more effective brokerage systems so that people can help other people more easily.

Technology can also help create interactions, particularly for those who are housebound or who have reduced mobility. Skype and a raft of social networks have brought friends and family into the front rooms of some older people. There are a few technologies entering the market aimed at connecting older people virtually with one another and with family such as Intel's 'Virtual Tea Room'. Other platforms enable assets of the local community to be shared, like StreetBank and TACSI's Sharing Zone Company applies the idea to older people in particular.<sup>40</sup>

But many older people still struggle to live well in the physical, let alone virtual, fabric of their local community. CABE and other public design agencies have long advocated the need for better public spaces for older people – from easy access to parks, toilets and spaces to sit, to improved signage and street furniture.<sup>41</sup> We need vibrant connected neighbourhoods which support older people to be active social and civic members. Newcastle and Manchester<sup>42</sup> are amongst a cluster of pioneering local authorities making local communities places which will help older people to age well.

Our housing stock is not at all well suited to an older population. There are many unanswered questions here: how can the existing housing stock be adapted for an older population including to Lifetime Homes standard, what's the role of specially designed housing and how can inclusive housing be affordable and available? Extra care housing remains small in numbers. Co-housing and other shared-housing models, such as those where younger people 'house share' in return for companionship and housework, could form part of the answer but remain much more common outside of the UK (see page 43).

### Case study: Meals with Mates, Australia

#### **Using good food to build connections and reduce the number of older people eating alone**

About 90,000 South Australians eat and live alone. Research tells us that eating alone is not only an isolating experience which increases feelings of loneliness, it also leads to poor eating habits which reduces older people's nutritional intake and weakens immune systems. In 2011 The Australian Centre for Social Innovation (TACSI) began prototyping Meals with Mates, a series of gatherings of like-minded older people over good food, to try and counteract this trend. Each gathering is unique – it might be based on a fondness for a certain type of food, a TV show or a shared experience, and it may be hosted in an older person's home or a local pub or restaurant – but all build social connections and avoid older people eating alone. Local convenors (volunteers) find new hosts, and connect older people with similar interests to form new gatherings.

Meals with Mates is one of six prototypes based on co-design principles, and launched by TACSI to deliver 'great living' in South Australia.<sup>43</sup> For more information see: <http://greatliving.tacsi.org.au>

### Case study: Southwark Circle, UK

#### **Creating local communities of support**

Southwark Circle is a membership organisation that mobilises public, private and voluntary resources to meet the everyday needs of older people in the area and build up stronger local networks. Locals can join the Circle as a Member (older person) or as a Neighbourhood Helper. Members get to be part of a growing social network, to take part in events and to access a free phone number to get recommendations for anything from a trustworthy, local builder to the best mobile phone plan, and to buy tokens that can be exchanged for slots of time from Neighbourhood Helpers. Neighbourhood Helpers sign up to the Circle to contribute as much or as little time as they want, either voluntarily or at London Living Wage.

Southwark Circle was launched in 2009, after being co-designed and tested by 250 older people and their families, alongside Participle, Southwark Council, Sky and the Department for Work and Pensions. The Circle model has now been replicated in Nottingham, Hammersmith and Fulham, and Suffolk, as separate CICs and supported by a local authority partner. It is now being scaled across the country with approximately 20 others in the pipeline at different stages of business planning. For more information see: [www.southwarkcircle.org.uk](http://www.southwarkcircle.org.uk)

### Case study: Shared Lives Plus, UK

#### **New models of care at home**

Shared Lives Plus is the UK network for family-based and small-scale ways of supporting adults with specific needs (e.g. dementia or a disability). Shared Lives carers share their family and community life with someone who needs some support to live independently. This ranges from a few hours support with shopping for a local older person, through to having an older person come to live with you. The premise of the scheme is to match people who enjoy spending time together, so that Shared Lives starts to feel like family, not a service.

Shared Lives Plus also runs Homeshare, matching older people in need of companionship or support to carry on living in their home, with someone who needs accommodation and is willing to give help. There are currently 11 Homeshare schemes in the UK.

Shared Lives Plus was established 20 years ago to support people and communities in creative ways. For more information see: [www.sharedlivesplus.org.uk](http://www.sharedlivesplus.org.uk)

## 4 WHY SYSTEMS ARE IMPORTANT

**This agenda is, above all, about recognising that we cannot remain where we are. It's about recognising that we're in uncharted waters and we need to redesign our structures and models of living. It's about innovating our social structures as well as investing in technological innovation. It's about acknowledging that for a challenge as complex as ageing, we need change on a number of different fronts.**

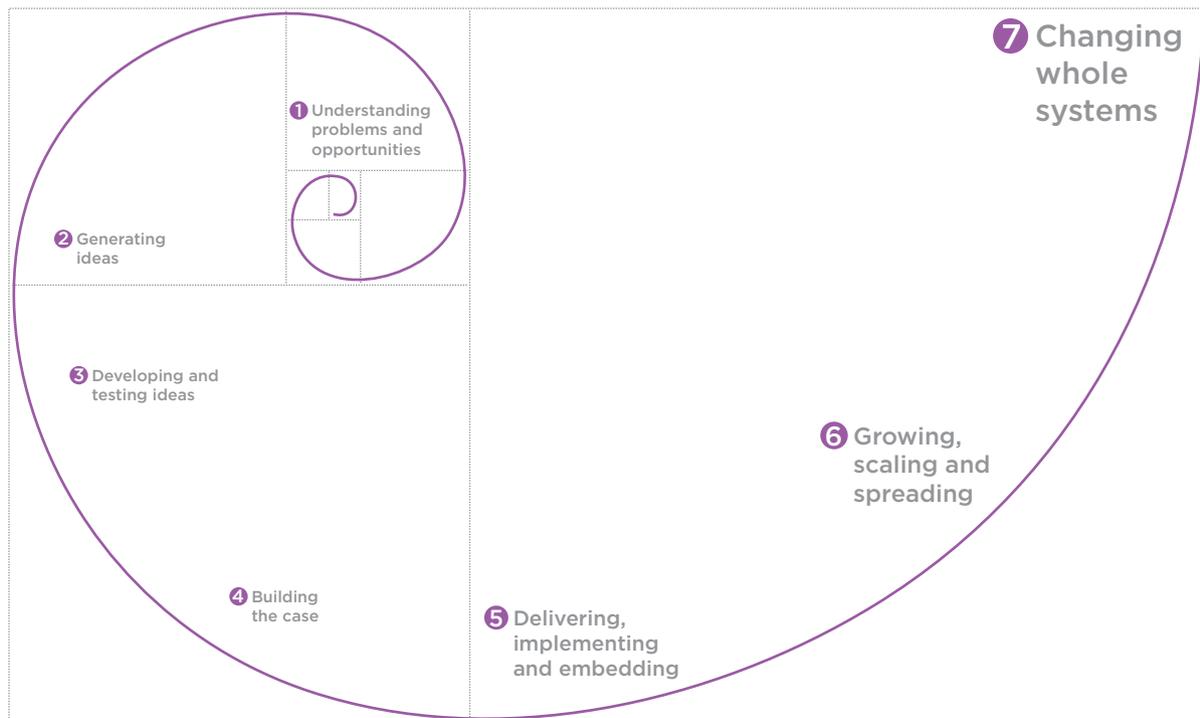
We need to better align policy changes – the wiring of the system – with the growth of promising innovations that are emerging from beneath. We need to find ways of realising the vision through connecting the emergent with the established and through transforming how we live. This requires systems thinking and action of a kind that has not happened in the past around ageing.

Systems thinking means being explicit about the multidimensional nature of change. It's about recognising the connections between change in different domains. And it's about being systematic about how to achieve that change.

Systems change recognises that, for a challenge as large and complex as ageing, we need to take deliberate action on a number of different fronts simultaneously. It's not just about new policy or new products or opening new markets or people changing what they do. It's about all these things, together.

From an innovation point of view, systemic change represents the last and most ambitious stage of the innovation process.

**Systemic change:** Nesta's spiral of innovation, adapted from the *Open Book of Social Innovation*, charting the stages of innovation from a prompt for a new solution through developing an organisation to systems change.<sup>44</sup>



The innovation process starts with re-framing the issue based on the formal evidence base, informal insights from users and practitioners and creative thinking techniques. An idea or set of ideas are then generated to address the issue and these ideas are tested and refined through a range of processes such as prototyping, which aim to build the case for delivery and implementation. Successful ideas then grow and become incorporated into organisational forms and sometimes, ultimately, 'whole systems' change.

Systemic change is orders of magnitude bigger than single innovative ideas or organisations. It is not just the successful scaling of individual innovations, it's the result of fundamental shifts across a range of domains, based on a novel understanding of the challenges or opportunities presented. Systemic change requires shifts across four key areas:

- **Product and service innovation:** new technologies, products and services to meet demand in new ways across public and private markets;
- **Market innovation:** new business models, organisational forms and recalibrated markets to enable new solutions to be developed;
- **Political innovation:** political leadership combined with new policies, regulations and infrastructure to create the conditions for systemic change; and
- **Cultural innovation:** new social norms and behavioural change to drive new demands and to create a social movement for change.

And these domains of innovation need to be facilitated through systems leadership and engagement – a move away from top-down, command and control leadership models to more collaborative and alliance-building models of change, that engage stakeholders across multiple sectors and build momentum for new ways of living.

An example of systemic change which has already happened is the transformation of how we deal with waste, from a system focused overwhelmingly on landfill to a highly differentiated system of recycling, reuse and reduction. This has taken several decades to achieve but now puts us in a much better position to be able to meet long-term objectives on resource use.

We want to help the equivalent system shift on ageing over the next few years. And we propose that we are part way through systemic change on ageing, from a system where older people were relatively over-institutionalised, over-medicalised, under-valued and

without a variety of fulfilling roles and supportive social networks, towards a society which seeks to maximise the opportunities, as well as address the challenges, of an ageing society.

Below is a sketch of the four domains of systems change and what we've achieved in each of them. This is an illustrative summary, not an exhaustive analysis, but, hopefully it provides a useful starting point to test where opportunities may lie to effect change.

### PRODUCT AND SERVICE INNOVATION

A number of promising new products, services and technologies but many remain at small scale against a backdrop of steeply rising demand.

### MARKET INNOVATION

A significant gap between what public and private markets provide and what older people want. Greater demands for formalised care than we can sustain as a society.

### POLITICAL INNOVATION

Some positive shifts in policy but an incremental approach and lack of political leadership.

### CULTURAL INNOVATION

Social norms and behaviour change needed to value, engage and mobilise older people and rethink roles across the generations.

## 4.1 PRODUCT AND SERVICE INNOVATION

**Overview: there are promising new technologies, products and services to meet the demands of older people but the overall market seems under-developed and there is insufficient use of existing, pervasive technologies or ways to mobilise informal sources of support.**

Despite a great deal of research and development focused on devices that can support older people to live more independently, the older people's devices market appears relatively underdeveloped.

Evidence on the effectiveness of assistive living technologies – particularly telehealth care – are mixed but positive for some key outcomes.<sup>45</sup> Overall, when compared with the fast-moving tech market in other sectors, the ageing-focused devices market seems a great deal slower, with parts of it dominated by a relatively small number of firms. Devices aimed at older people seem either over-spec'd and therefore expensive and complicated, or under-spec'd and patronising.

There appears to be a missing market that uses low-cost, pervasive technologies to enable older people to stay more independent. This market needs a wave of new entrants, co-designing with older people and applying existing technologies to suit their lives. Perhaps it could learn from the frugal innovation field, where creativity is combined with community insight to generate low-cost, appropriate solutions.<sup>46</sup>

Other potential technological and product-oriented fields are opening up, including those applying diagnostics to primary care and domestic settings. Biosensor devices could enable older people to generate robust clinical data themselves, for example, via a hand-held ultrasound, potentially reducing the costs of healthcare and enabling better self-management.<sup>47</sup> Population genetics could lead to better screening of conditions such as Alzheimer's. And there is work on developing games, based on neuroscience, that delay the onset of Alzheimer's followed up by GP-based screening done via a tablet.<sup>48</sup> There

are also moves towards more ‘continuous lifestyle’ monitoring of health conditions, ‘smart homes’, and new platforms to share health data such as Patients Like Me.

Other innovations are focused more on mobilising social innovations including informal relationships and support between citizens. Solutions here include platforms that foster the giving of time to help with low-level care needs such as befriending, shopping and household tasks, such as Care Bank in Windsor and Maidenhead. Other platforms co-ordinate care (e.g. Tyze and Grouple); share assets and skills (e.g. StreetBank, ITN USA); facilitate user insight (e.g. Find Me Good Care<sup>49</sup>); and create choice in how care is provided (e.g. care.com in the US and PA pool). A few emerging options could enable older people to remain living in a mixed community setting, such as homesharing, co-housing and the placements with families.

However, many of these new products, services and technologies are small in scale and reach and do not yet operate at the scale needed to meet demand.

## 4.2 POLITICAL INNOVATION

**Overview: there is a lack of overall political leadership on ageing and changes to the policy context are too incremental to achieve significant impact.**

There has been a great deal of policy and legislative activity relevant to ageing, much of it trying to create conditions aligned to the vision set out here, such as independent living. However, there appears to be an overall lack of political leadership and mobilisation around the agenda relative to the scale of the challenge.

Some examples of recent change include the in principle Government support of the Dilnot Commission, moves to simplify the law on social care, planned increases in the State Retirement Age, and the scrapping of Default Retirement Age, which made it illegal to issue retirement notices based on age. Age discrimination legislation has been expanded and from June 2012, employees have been automatically enrolled into their company's pension programme, based on insights from behavioural economics. There has also been an emphasis on cognitive conditions and particularly dementia, through the 'dementia challenge' and NHS challenge prize. And policy developments on long-term conditions, end-of-life care, housing standards and the planning framework.

However, despite all this activity, there remain significant challenges to the extent to which the policy environment provides the conditions to adapt well to an ageing population. Labour market participation has increased amongst older people but the state-defined pension age is still the biggest predictor of disengagement from the labour market.<sup>50</sup> In social care, the current funding system remains inadequate and there needs to be radical change in how social care is delivered as well as funded.<sup>51</sup> Most people still die in hospital despite wanting to die at home. The current healthcare model is financially unsustainable and the institutional split between health and social care remains a major barrier. The Government has dropped the target for all eligible service users to have personal budgets by April 2013. It appears that without advocacy support, particularly for those with cognitive impairments, and without virtual as well as cash budgets, personal budgets remain relatively unattractive to older people.

Overall, there is insufficient political leadership on ageing for a challenge so large and complex. The ageing agenda in Westminster is split across several departments and funding streams, with no clear ministerial responsibilities. Other places have opted for dedicated capacities – Older People’s Commissioners in Wales and Northern Ireland, an Office for Seniors in New Zealand and ministers in Canada and Ireland. And at a local level, there is evidence that while local areas recognise ageing as a challenge, they are struggling with how to deliver for an ageing population.<sup>52</sup>

So while there has been significant reform of the policy and regulatory environment and some good building blocks in place, there is still a long way to go for the political and policy environment to support the vision set out here.



**66%** of us would like to die **at home**, but less than **20%** do.<sup>53</sup>

### 4.3 MARKET INNOVATION

**Overview:** there appears to be a significant gap between what older people want and what is available to them through both private and public markets. There appears to be a failure of markets to fully align with older people's demands – markets are adapting but too slowly and unevenly.

Private markets in ageing-related consumer goods remain underdeveloped and markets overall appear to remain skewed towards younger consumers. Marketeers are less motivated by targeting older consumers and a perception remains that older consumers lack disposable income or prefer to save.<sup>54</sup> Yet the spending power of the silver economy is estimated to grow significantly and recent work has dispelled the myths surrounding older consumers.<sup>55</sup>

A few large-scale employers are leading the way in retaining and supporting their older workforce, to balance falling 'working-age' populations and reap benefits such as lower turnover and less absenteeism.<sup>56</sup> B&Q and Ernst and Young are among a small number of high-profile businesses emphasising the value of older workers but overall it feels like an early-stage trend.

Currently 1 in 5 older workers are self-employed and the over 65s are the fastest growing age group for self-employment, growing by

It is estimated that the spending power of the silver economy will grow



48 per cent last year. About a third of over-50s setting up new businesses were motivated by working beyond official retirement age.<sup>58</sup> Older entrepreneurs are also more successful; 70 per cent of their start-ups last more than three years compared with 28 per cent for younger entrepreneurs.<sup>59</sup> And Nesta has found that people in their 50s and 60s without previous experience of business can be supported to set up and run sustainable micro-ventures.<sup>60</sup>

Some models are emerging that enable older people to have more flexibility or work for longer (e.g. The Amazings, Encore Careers); and there is some support for older entrepreneurs through PRIME and UnLtd. However, more needs to be done to explore models of work which are attractive to different segments of the older people's population, particularly non-professional groups.

Public markets in ageing are highly rationed, particularly in publicly funded care where 85 per cent of funding goes to people with substantial and/or critical needs.<sup>61</sup> Markets in health and care often respond via fragmented services to acute needs based on a deficit model of need. Emphasis on choice and control have highlighted gaps in the social care market between what people want and what is supplied,<sup>62</sup> for those receiving statutory services and those who self-finance. The private care market has been criticised for lack of transparency, choice and quality.<sup>63</sup> Financial products to support social care have had limited success in the UK and internationally.<sup>64</sup>

Housing supply is highly restricted and there is increasing recognition that housing and care markets need to align if we are to support an ageing population.<sup>65</sup> Poor or inappropriate housing costs the NHS an estimated £600 million<sup>66</sup> and the lack of care-ready properties build the case for more.<sup>67</sup> There are some innovative models for intergenerational house sharing, co-housing, designated housing such as Care Villages and technologies to help people stay at home longer but there is a long way to go to meet demand. Overall, markets – both public and private – remain misaligned with the demands of older people, despite a strong economic and social rationale.

## 4.4 CULTURAL INNOVATION

**Overview: we need new social norms and behaviour patterns to adapt well to an ageing population – by older people themselves, by people in public services and industry, and across the generations.**

Older people are often treated as passive recipients rather than individuals with preferences, assets and contributions to make. Older people are discriminated against, underestimated, patronised, excluded and the subject of direct abuse; 64 per cent of us think age discrimination is a serious problem in the UK.<sup>68</sup> We need to recognise the role of older people in industry, as consumers and contributors to product design; in services, as co-creators and deliverers; and in communities, as citizens rich in assets, skills and experience.

Older people's own behaviour will need to change, for example, in how they 'retire' and plan ahead for later years. We also need to change behaviour earlier in the life course. Small improvements in health behaviours across the population – such as regular walking and better eating habits – could shift the population mean and deliver significantly reduced disability in later life.<sup>69</sup>

We also need to mobilise social action across the ages to create a vibrant social fabric through more informal connections, sharing of skills, donations of time, offers of help, and a mindfulness of local friendships and relationships. Many of us would like to support older people who live near us – we need to

Societies with millions of talented, emotionally stable (older) citizens who are healthier and better educated than any generations before them, armed with knowledge of the practical matters of life, and motivated to solve the big issues; can be better societies than we have ever known. ”

**Psychologist,  
Dr. Laura Carstensen**

build and scale better mechanisms of brokerage to enable us to do just that. The Dementia Friends campaign is a good example and collaborative consumption could also provide an alternative, non-monetary exchange system that supports people to connect to one another. The Innovation in Giving Fund<sup>70</sup> is backing ventures that exchange informal care, home-cooked food and assets such as tools and cars. These sorts of innovations need to be tested, trialled and then scaled-up to make a significant impact on older people living well at home for longer.

There will also be some changes to the culture and orientation of the consumer goods markets with more attention to older consumers as this group grows in size and influence. The assumption that older people are content with unattractive, monotone products will be challenged and inclusive design principles should be applied more widely to create products that are attractive, accessible and available to people irrespective of age.

Our understanding of what influences behaviour has grown over the past decade.<sup>71</sup> We have greater insight into setting ‘defaults’ for example but we have much more to learn. One example is that we don’t yet know the relative contribution of physical activity versus social connectedness of a walking group. We need to harness the power of networks to shift entrenched patterns of behaviour such as excessive alcohol consumption across the life course. And, over time, we can develop tools that enable us to test hypotheses of large-scale behaviours. Agent-based modelling, which simulates the interaction of different population groups in computer models, is in its infancy but could potentially enable us to model behaviours more accurately at scale.

In the meantime, new service models, products and structures should usefully incorporate what we know about behaviour change to help achieve systemic change. And, overall, we should be aiming to increase our collective physical, mental, financial and social resilience through behaviours that reinforce positive outcomes related to ageing.

## 5 ACHIEVING SYSTEMS CHANGE

**So, despite recent progress, we remain part-way through systemic change on ageing. We need significant change on a number of different fronts to transform how we live with an ageing population.**

These changes include elements such as more systematic orchestration of horizontal support between family, friends, neighbours and communities; new markets with better adapted products and services and commissioning for outcomes; personal budgets becoming mainstream alongside traditional provider budgets; co-production as the norm for enabling people to live well with long-term conditions; and the excellent application of technology to enable older people to age well, using devices and platforms that are assistive, responsive, affordable and evidence-based.

Some of the changes needed to adapt well to an ageing population can be done in relative isolation; they do not require a full systems approach. Examples of these could include individual employers retaining their older workers better, improving our own health behaviours, a company using inclusive design principles in its product design, or an individual change to the regulatory system. So progress on these should move ahead – systems analysis does not mean everything is dependent on something else happening first.

However, there are some types of change which are systemic in nature. That is, they cannot be solved without significant change across multiple domains – political, cultural, technological and economic. It is these challenges which would benefit from a systems approach and we list some here:

- **Social places:** mobilising vibrant, socially-engaged neighbourhoods to enable older people to live well and independently for longer.
- **People powered health:** bringing the social into the medical by combining clinical expertise with self-management and peer support to improve health outcomes.
- **Purposeful work:** new employment models that enable people to work purposefully and enjoyably in the second half of life.
- **Plan for life:** creating a sense of opportunity about the second half of life – to take stock, reskill, plan ahead, connect with others and live more healthily.
- **Living room:** enabling older people to live where they want through new housing models which combine high-quality accommodation with friendships and support.

We're interested in testing our thinking on this and exploring other potentially systemic issues with the potential to significantly shift outcomes. Once the key systemic issues have been identified, the next set of questions rests on what kinds of interventions can be combined to help significantly shift these closer to the vision. What tactics are required? What alliances need to be built? What are the points of maximum leverage? Can certain interventions help to leap-frog into new models, compressing or eliminating painful transitions through earlier stages of change? Can we be smarter about change, learning from other sectors and contexts, to achieve significantly better outcomes?

Using people powered health as an example, systemic change will involve a combination of the following key trends:

**Product and service innovation:**

- New technologies and devices to support self-management.
- Services actively building social fabric in how they deliver services, such as brokering relationships between peers with similar conditions.

- New ways of capturing, refining and using health data, so that patients, clinicians, researchers, families and communities can access and interpret relevant health data generated from a range of different sources including smart phones, biometric sensors and telehealth equipment .
- Consultations that enable patients and clinicians to collaborate and connect to interventions that support long-term behaviour change.

**Political innovation:**

- Greater coherence across the public health, NHS and social care agendas, in political and policy terms with visible leadership that mobilises for change.
- Policymaking opened up to citizen involvement and real-time testing in experiments.
- Professional practice recognising the role of the citizen in achieving health outcomes and incorporating social as well as biomedical factors.

**Market innovation:**

- New markets covering formal care but also creating informal care and support networks between neighbours and between generations to help with tasks such as cleaning, shopping and fixing.
- New funding tools that are truly outcome-oriented and which involve users in the commissioning process – in terms of defining the goals as well as assessing the quality of impact.
- New pathways that connect acute, primary care and community-based providers to provide informal as well as formal support, connecting people and building valuable relationships.
- Use of personal health budgets to purchase healthcare tailored to people's lives.

**Cultural innovation:**

- Shifts in social norms so that older people are recognised as core members of the community with experience and expertise, not defined solely by their needs.
- People of all ages actively connecting with older people locally, building relationships and helping out with everyday tasks.
- Shifts in citizen and professional attitudes to reduce over-reliance on formal clinical settings and the expectation that 'health' happens in clinics.

And, if the big gains will come not just from policy, or from discrete innovations, but rather from smart application of systems thinking, then we need to think hard about how this might be achieved. These could be some of the mechanisms which could accelerate systems change:

**Alliances** of key organisations that recognise the same challenge, rally around a shared vision, have influence across key sectors and an appetite for real change. These alliances should reflect, at their core, the insights, priorities and perspectives of current and future older people. And they should work hard to do this authentically, beyond the small numbers of the already-involved, to using creative ways to tap into the great variety of people who have a stake in this agenda.

**Systematic experimentation** to develop, test and scale radically improved solutions. Critical to this will be generating useful and appropriate evidence, focused on demonstrating impact in real situations. It will also require a strong understanding of which methods of experimentation are most appropriate to different stages of innovation. And relevant here is the role of clusters to systemic change; what are the key relationships between complementary innovations and how can they be leveraged to increase overall impact?

**Policy innovation** to transform the conditions for change, build on behavioural insights and apply social innovation techniques to policymaking. The aim should be to embed outcomes throughout the policy process, to create locally-relevant solutions based on sound evidence with local stakeholders, and to combine policy and delivery into an iterative process that achieves significant impact and avoids the weaknesses of the traditional policy/delivery split.

**Innovation infrastructure** including developmental functions such as institutions with the capacity, timescales and resources to carry through genuinely systemic change – whether that be in terms of political change, or orchestrating knowledge or mobilising people to change their behaviours at scale.

**Local demonstrators** which take a whole population approach to explore the impact of a set of interventions. This type of whole place intervention would create an opportunity to apply systems thinking to specific locations, building on existing local work and generating an evidence base for how to make change happen.

## 6 NEXT STEPS

**This paper has set out our early thoughts on the impact of ageing on society and what that means in terms of innovation. We think the case is made for a systematic look at how we live in the context of changing demographics, with a priority on those issues which have most impact on older people's lives.**

We think we are part-way through systemic change on ageing and that change is needed on a number of different fronts to move forward – policy, products and services, markets and behaviours.

We think there are a number of different mechanisms that could be used to contribute to systems change – including using alliances to make significant headway on systemic issues through clusters of innovations, key pieces of developmental infrastructure and testing at scale in real places.

Nesta is already active in this field through our Impact Investment Fund, Ageing Well challenge prize, the ventures supported through the Innovation in Giving Fund and our practical programme on long-term conditions, People Powered Health. We also have previous relevant work including Age Unlimited focusing on older social entrepreneurs.

Our next step is to discuss and test further the ideas put forward in this paper and to prioritise our own areas of action – as an investor, innovation manager, centre of research and supporter of innovators.

We want to be part of the shift that enables us to adapt to an ageing population.

We'd like to know what you think. Drop us a line at [ageing@nesta.org.uk](mailto:ageing@nesta.org.uk)

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