THE YOUNG FOUNDATION

Innovating better ways of living in later life

Context, Examples and Opportunities

Carmel O'Sullivan, Geoff Mulgan and Diogo Vasconcelos

Working paper

social innovation exchange

THE YOUNG FOUNDATION

CISCO

FUNDAÇÃO CALOUSTE GULBENKIAN

Introduction

In this paper we look at the changing facts of ageing as both a challenge and an opportunity. We focus in particular on the many ways in which societies are innovating better ways of living longer, better ways of providing support and we explore the role that *social* innovation can play in ageing societies. No society has yet 'solved' the challenges of ageing, and no past societies have provided comprehensive models to copy. Instead we have no choice but to innovate, experiment and learn fast. In the paper we survey many dozens of examples of innovation from across the world, including:

- New ways for **older people to remain active**, as volunteers or in providing mutual support

- New models **of service delivery and care** that contribute to greater independence

- New environments that **can improve everyday life**

- New ways of **mobilising trusted networks** to provide support of all kinds

As we show, there are rich examples of innovation in all of these fields, many combining technologies and service design, new models of housing and models of care, formal support and informal support.

Innovation in this context sees older people not as a burden but as a valuable resource; it enables their contribution, seeing them as active participants and not passive consumers; and it focuses on capabilities as well as needs. Underpinning all of this is a focus on improving the quality of life for older people, emphasising a shift away from an exclusive focus on health and pensions to a more holistic focus on wellbeing.

The most interesting innovations for better ageing look not only at how we can provide services *for* the elderly, but how we can facilitate platforms for collaboration between public, private and civil sectors, enabling the elderly themselves to participate in developing *their own* solutions. We describe some of the ways in which innovation in these areas could be organised more systematically and more effectively. Providing better solutions matters to people of all ages; it matters particularly in regions with rapidly ageing populations, such as Europe and Japan. Yet as a field of innovation it remains relatively underdeveloped. There are many promising but few proven models for innovating on the crucial interface of technology, service design and public engagement. Yet this is the critical field to which attention is likely to turn in the years ahead. Our hope is that this paper will be useful to practitioners as well as policy makers. We offer it as a prompt and a work in progress.

The facts

The facts about our ageing society are well rehearsed. In recent months, issues of public debt, pensions and the costs associated long-care have come to the fore, highlighting for everyone that the ageing of society represents one of the major challenges for the 21st century. Fertility rates are falling, longevity is increasing and older people are living longer and mainly healthier lives. People aged 65 and over will soon outnumber children under 5 for the first time in history. By 2040, more than 1 in 4 Europeans is likely to be at least 65 years of age, and 1 in 7 is likely to be at least 75 years old. In North America it is forecast that 1 in 5 people will be aged over 65 by 2040[1].

Projections

Most countries show a steady increase in longevity over time. In particular the number of *oldest old* is rising; the world's population aged over 80 is projected to increase 233 percent between 2008 and 2040, compared with 160 percent for the population aged 65 and over and 33 percent for the total population of all ages[2]. The changing demography is set to have major implications for the way we work, family and intergenerational relationships, social networks as well as the delivery of health, social services and welfare support.

The European Commission estimates that the share of the 60+ population will have grown from 20% of the total EU population in 1995 to 25% in 2020. The 80+ population is expected to double until 2050. [3] In global terms, the 25 "oldest" countries in the world (excluding Japan) are all in Europe, making Europe the world's oldest region.[4] And while developed nations have relatively high proportions of people aged 65 and over, the most rapid increases in older population will be in the developing world - more than 80% of the increase in older people in 2008 was seen in developing countries. By 2040, the developing world is projected to be home to more than 1 billion people aged 65 and over – 76% of the world total.

Budgetary projections point to sizeable fiscal challenges. On the basis of current policies, age-related public expenditure is projected to increase on average by about 4.75 percentage points of GDP by 2060 in the EU - and by more than 5 percentage points in the euro area. Most of the projected increase in public spending over the period 2007-2060 will be on pensions (+2.4 p.p. of GDP), health care (+1.5 p.p. of GDP) and long term care (+1.1 p.p. of GDP). [5] In the US, the Congressional Budget Office forecast that total spending on health care will rise from 16% of GDP in 2007 to 25% in 2025, 37% in 2050 and 49% in 2082.[6]

While continual increases in life expectancy, especially at older ages, have been the norm in most countries worldwide, the quality of that longer life has become a central issue for wellbeing. In many parts of the world healthy life expectancy (i.e. expected years of life in 'good' or 'fairly good' health) is significantly lower than

overall life expectancy. According to the OECD, in Australia, Canada and Finland, the number of elderly people with severe disability would more than double by 2030 under the assumption that that current rates of disability remain constant. In most other countries covered in the study, the number of disabled elderly people would grow by 40% to 75% by 2030. [7] Longer lives can be expected to lead to increasing numbers of people at older ages with a disability, in need of long-term care.

Dependency ratios and beyond

Another way of looking at these demographic changes is the older dependency ratio (ODR). This indicator has played an important role in shaping current discourse about ageing. The ODR is the number of people aged 65 and over for every 100 people aged 20 to 64. It varies widely, from just six in Kenya and seven in Bangladesh, to 33 in Italy and also Japan. The UK has an ODR of 26, and the US has 21. The European Commission estimates that there are currently 4 working persons for 1 retired, this ratio will evolve towards two workers for one retired in 2050[8].

But the dependency ratio can be very misleading. It overlooks the potential contributions of those over 65 by seeing them only as dependent. And it ignores changing capabilities. Increasing life expectancy means that many people over 65 live active lives, and are willing and able to work and participate in their communities. For example, recent research in the UK and US highlights the energy and contribution of older entrepreneurs. [9] Contrary to popularly held assumptions, the highest rate of entrepreneurial activity belongs to the 55-64 age group. In every single year from 1996 to 2007, Americans between the ages of 55 and 64 had a higher rate of entrepreneurial activity than those aged 20-34. In effect, the ODR is no longer a relevant indicator for designing policies and services to meet the needs of an ageing population.

Active ageing and diverse capabilities

The way that we think and talk about ageing is slowly changing. This has become especially obvious in the increasing emphasis on active ageing. From the 1970s-1990s, much of the debate on ageing was dominated by economics and concerns about the financial burdens of an ageing population. However, we are now seeing a shift, from a focus on the economics of ageing, to a focus on maximizing and improving the wellbeing of older people. [10] The terms 'active ageing' and 'productive ageing' are now commonplace in policy discourse. The World Health Organisation talks of active ageing as involving "opportunities for health, participation and security, in order to enhance the quality of life as people age". [11] This change can be seen as representing a movement away from a deficit model of old age, to one focusing on capabilities, recognising that society as whole can benefit from older people's experience and wisdom, and indeed their skills.

Another shift is taking place in relation to capacities. Old age has the highest concentration of various incapacities. But our societies are increasingly aware of how many people of all ages have limited capacities; from sight to mobility – and how we need to reshape cities, transport and services to cater for a population with very varied abilities. Designing cities and services better suited for an ageing population will deliver benefits for many who aren't old.

Part of the challenge is the sheer heterogeneity of needs and wants. The generation now turning old is very different from previous ones: baby boomers are more likely to place a high value on independence and autonomy. They are generating new needs and calling for new types of answers. Some are redefining old age not as a period of disengagement and decline but as a period of flourishing, liberated from the responsibilities of middle age. Others are recreating extended family ties in new ways, often stretching over many countries. And some are rediscovering ideas of old age as a period of guardianship and civic responsibility.

The world's older population has been growing for centuries. What is new is the accelerating pace of ageing and the availability of a much wider range of possible responses. The world's older population grew by an average of 870,000 people each month during this year. Projections 10 years from now suggest that the annual net increase will be around 23 million, an average net monthly gain of 1.9 million people. In 1990, 26 nations had older populations of at least 2 million and by 2008, 38 countries had reached the 2million mark. [12] Such figures highlight the challenges of ageing societies but also the scale and scope of opportunities. Everywhere, the growth of older populations means that social institutions will have to adapt to changing demographics.

The legacy of Michael Young: post-chronologism

Michael Young wrote prolifically on the issue of ageing, and much of his work prefigured current debates. He believed that societies with a much larger older population would need to radically reform many of their institutions and to change their assumptions. He observed older people being stigmatized as weak, slow, sick and dependent even when they had much to offer. He advocated longer working lives, at a time when the quality and nature of work was changing changing. He advocated new ways of mobilising older people, new ways of educating older people, and new ways of renewing social contacts and support. He particularly argued against 'chronologism' (the idea that chronological age should determine rights and duties). Young pointed out that the 20th century added over a quarter of a century to average life expectancy and that it would be necessary to move towards a society

where people were judged not by their age but by their capabilities and needs. This would mean a shift in attitudes and expectations and a need to shed negative stereotypes that portrayed older people as a burden on society.

While challenging assumptions about what growing old means, Young also saw possibilities. In this spirit he helped establish the University of the Third Age (as well as the Open University) and LinkAge, bringing together older people without grandchildren and young people without grandparents. Grandparents Plus, a charity which champions the vital role of grandparents and the wider family in children's lives, is an example of another organisation inspired by Michael Young's thinking. He saw the opportunities to develop solidarities between young and old, and argued that this would help reduce ageism inherent in society. [13] Since its re-launch in 2006 the Young Foundation has been closely involved in age-related work on many fronts (since Annex 1 for examples of current Young Foundation work on ageing).

Needs, capabilities and wellbeing

When starting to think about innovation for an ageing population it is important to have clarity about needs and wants: what do older people need, and what are they able to do for themselves or for others? Recent Young Foundation research has investigated these issues[14]. In the UK it has been shown that most material needs have been substantially met with significant improvements in housing, access to energy, food and income. There are still some pockets of severe deprivation, including malnutrition. But these are much less stark than in the past.

There are of course extensive physiological and medical needs – and a great deal of innovation is underway to arrest physical ageing, to promote mobility and to make it easier to live with long-term conditions. But our research has also highlighted the significance of older peoples' psychological needs. Psychological needs are those needs which are fundamental to mental health and non-physical wellbeing. Our analysis shows that older people in the UK (10.5 million) are at greater risk of feeling less competent and a lack of control over their lives. Half of all people aged 75 and over live alone (the figure has reached 50% for the first time since the year 2000). [15] Nearly half of all older people (about 4.6 million) consider the television as their main form of company.[16] Over 500,000 older people in the UK spent Christmas Day alone in 2006. Twelve per cent of older people (over 1.1 million) feel trapped in their own home. Furthermore, 17% of older people have less than weekly contact with family, friends and neighbours[17.] Primary qualitative research with older people, mainly in London, confirmed these findings. Loneliness, isolation, lack of suitable public transport and fear of unfamiliar public spaces characterized their everyday experiences.

As people age they are more likely to encounter major stressors such as relocation, bereavement and the onset of illness. A person's ability to deal with these will have much to do with their emotional resilience and their adaptability. However, far more

attention has been paid to the implications of physical limitations of old age rather than to emotional components.

Wellbeing in old age

Wellbeing does not have to diminish in older age. In the 'u-shaped curve' of happiness, wellbeing on average reaches its lowest point in the mid-to-late forties and then climbs.[18] A physically fit seventy-year-old is on average as happy as someone of twenty, and ageing is a positive experience for the majority of people. [19] [20]

Research from Canada shows that among the over 65s the activity that brings greatest satisfaction is paid work – significantly more enjoyed than going to the cinema or dining out. This is a reminder that being valued is one of the most important sources of wellbeing. [21]

As society ages one of the main issues will be to *maintain* people's health, wellbeing and ability to lead active lives. Work, education and volunteering are important in this regard and continuous development and maintenance of capabilities, skills across all stages of the life cycle is key. Education is designed for children and young people but adults need and want to learn as well. One period of education at the beginning of life is no longer sufficient to support a successful working life and must be extended adequately. Education and learning have to be considered from a life span perspective as well.

Organisations will need to adapt to facilitate an older workforce. A core aspect of the working life cycle approach is to design work systems for a highly diverse workforce, including older people. Employers and organisations across the world are finding new ways of supporting people to remain active in the workforce as they grow older; this requires innovative thinking around human resources, organisation forms and technology. Independence is not necessarily the absence of help and support, but the capacity to make choices, and to contribute socially and economically

Looking at the process of ageing through a wellbeing lens means building social networks across and between generations; exploring models such as co-housing where people live collectively; giving attention to both housing and wider neighbourhood facilities and design; and developing opportunities for older people to take personal control, challenging preconceptions of older people as passive recipients and promoting their engagement as active citizens.

The key areas of challenge and opportunity

One in four babies born today will live to be a hundred and can expect up to 40 years of retirement. [22]   What needs to change to ensure those extra years of life are as happy and productive as possible? Here we summarise the key elements of the agenda, before turning to specific innovations in more detail.

The evolving debate about ageing has increasingly focused on the following critical fields of challenge and opportunity.

1. **Pensions and income** – Almost every country will face difficulty in financing pensions in the future. This is being addressed in various ways, either through later retirement ages, higher requirements or encouragements to save, and campaigns to raise awareness about the links between current saving and future income.   Yet in many countries there is evidence that people are in denial, and politicians feel that they lack the authority to fully address changing realities and needs. Although economic growth can mitigate the pressures, with longer lives there comes an inescapable need either to save more or to work longer. Many countries made the mistake of encouraging older workers out of jobs in the 1980s and 1990s in order to make way for younger people. We now know that the net effect of such measures was often to increase unemployment for both groups.   More efforts are now being made to encourage people to stay active and productive for longer. There is little doubt that retirement ages could be, and will be, both higher and more flexible.

2. **Housing** – We can now assume that many people will live for many decades after retirement, probably with changing abilities and impairments. This may require much more flexible homes that can adapt to changing needs. And it may imply a norm of several moves in old age, rather than a single move from the family home to residential care, with a wider range of options including co-housing and varieties of supported housing.   There are many good examples of supportive co-housing that combines some shared facilities with some private ones, but few of these are provided on a large scale. A related shift is towards housing policies that encourage extended families to stay closer together. Singapore provides a $50,000 grant to children who move to within 1km of their aged parents.

3. **Everyday support** - In traditional societies older people could rely on family and friends to help out with everyday needs, from shopping and help around the house to conversation. In more atomised, urban societies these networks may be less reliable. So attention has turned to how supports

of this kind can be provided better, sometimes by paid professionals, sometimes by volunteers, sometimes through time banks and exchanges. There are obvious advantages for older people themselves – but also for public budgets since getting this right can reduce pressures on hospital admissions and primary care.

4. A related issue is how to innovate to bring about better **social interaction**, and how to make it easier for circles of support to be organised around older people. These will bring with them new ways of organising and guaranteeing trust (for example, helping an older person know that it's the right person coming through the front door). The relative isolation of older people is driving innovation around the creation and sustaining of stronger networks of support, often using technology. One example is Netcarity which is being piloted around Europe and distributes key information – about visitors, mood, condition – to selected family members. Other projects are developing the role of concierges to play a more active role in looking out for older people, and ensuring that they are not ignored (including sometimes paying a small sum to younger old people to play these roles part-time).

5. **Care** – Older people's demand for care services can be expected to grow significantly over the coming decades. Yet currently the sector faces severe labour shortages.   Finance is part of the issue – and the balance between finance through insurance, public systems or private payment. There is a need for both intensive care and low level support (for example shopping, DIY, cleaning). The sector is expected to grow to 1.5 - 2% of GDP in the near future, roughly equivalent to agriculture in the most developed countries. This is a field of intense policy debate as well as practical experiment ranging from new ways of providing help – such as Handy Help charity in UK or Fixer Sven in Sweden - to time exchange systems like Japan's Fueai Kippu, care tickets.

6. **Work** – New policies have encouraged people to work longer, reversing previous trends. Legislation has addressed age discrimination and fixed retirement ages. Pension reform has moved away from final salary schemes so as to encourage more people to scale down their responsibilities and time commitments rather than moving straight from work to retirement. Several countries are looking into different routes for people making the transition from labour force participation to retirement. Some of these different routes include working part-time or leaving career jobs for transition jobs. And in many countries there has been a strong growth of self-employment and business start ups amongst the over-60s.   Some countries have created dedicated organisations to place older people in jobs: Japan has pioneered Silver human resource centres providing temporary jobs in Japan and in

Korea, the Hope Foundation has developed the Happy Senior project encouraging 40-60 year olds to take up roles in NGOs.

7. **The needs of carers** – 1 in 8 adults in the UK (around six million people) are carers. By 2037, it's anticipated that the number of carers will increase to 9 million. The needs of carers as well as those they care for are set to become more prominent, and there has been some innovation around respite, providing holidays for carers.

8. **Education** – Governments currently see little economic return in financing lessons for 70 year olds. But education has a marked impact on capabilities, confidence and social networks: much innovation is underway in specific tools to maintain mental ability, as well as in broader educational programmes.   The Education and Health Promotion for the Elderly Programme (PEPSAM) at the National University of the Northwest of Buenos Aires Province (UNNOBA) in Argentina for example, engages people of retirement age who return to study. Other examples include the University of the Third Age, which has now spread to many countries, and Vital Mind, an EU funded project dedicated to the research and development of new tools that help maintain cognitive brain fitness.

9. **Age readiness** – Few people in their 40s and 50s want to focus on their prospects for old age. But increasingly we will need to ensure that we are 'age ready' – prepared in terms of attitudes, expectations, skills as well as finance.

10. **End of life care** – Recent decades have seen ever more debate about end of life care and how we handle death.   There has also been innovation – from hospices to alternative funerals and cemeteries, and public information campaigns to encourage people to better prepare for their own death. A good example is Pilotlight Australia's *Dying to Know,* a publication that opens up conversation about death. It gives advice on eco-friendly funerals, online headstones and 'emotional wills'. Given that very high proportion of health spending goes on the last six months and even the last few days of life, the pressures towards helping people handle their deaths in ways that emphasise experience and wellbeing rather than a rigid adherence to the clinical imperative to keep people alive as long as possible are likely to grow.

11. **Leisure** – Rising spending power in the hands of fit and healthy older people has greatly expanded the leisure sector and the provision of products and services aimed at older people.   Public provision is also changing – aimed at older people with less spending power.   A good example of

innovation in this field is the specialist outdoor gyms for older people introduced in Germany, partly influenced by China.

12. **Volunteering** – Many countries have introduced programmes to encourage older people to volunteer. These include large programmes, funding to cover expenses and travel as well as time banks and exchanges. Well known models from the US include the Experience Corps – where older people mentor younger people – and the many initiatives under Civic Ventures (see Annex 3).

13. **Intergenerational projects** – Many countries have become concerned about a weakening of links across the generations. Thousands of projects have tried to bring young and old together, for example around oral history, the arts or befriending.   An interesting example is the 'Adopt-a-grandmother' scheme in Poland that links lone mothers to grandmothers.

14. **Urban design** – Programmes like the World Health Organisation's Age Friendly Cities initiative have encouraged and recognised those cities that have made themselves more age-friendly adapting buildings, transport and planning rules. Interesting examples also include Laguna woods, the first city exclusively for older people in the US and the Marjala suburbs in Finland, designed for all ages but suited to multiple abilities

15. **Transport** – For many older people mobility can often be a challenge. Adapting public transport to be more age-friendly is one response, as are publicly provided minibuses or taxies. There are many creative ideas for helping older people to improve mobility at relatively low cost. The ITN service in the US for example provides a cheap car transport service for older people, partly using volunteers. The Green Flag scheme is a related idea, not yet implemented, for recruiting volunteers who would fly a green flag on their car indicating willingness to give short lifts to older or disabled people. Such a scheme would use mobile phone networks to verify drivers' identities to assure users that drivers have come to help.

16. **Technology** – Substantial private and public investment has gone into technological solutions to meet the needs of an ageing population. Huge sums have been invested in telemedicine, including remote monitoring of conditions, alarms, and even textiles that monitor conditions. The current Whole System Demonstrators projects in Swindon and Newham, in the United Kingdom, are the world's largest randomised control trials of a mix of assistive technologies. Other fields include technologies such as Medicate monitoring taking prescriptions as well as the field of Ambient Assisted Living.

What is the role for social innovation?

Many of the issues listed above are being addressed by policy-makers using the traditional tools of government: law, public spending programmes, entitlements and regulations. But in many of these fields top-down solutions are difficult because of a lack of clear evidence about what works. That's why we argue for more systematic experiment and learning to discover what works through experience, building on the pioneering innovations that are already underway in many fields.

Social innovation is the process of designing, developing and growing new ideas that work to meet pressing unmet needs. We specifically define social innovations as innovations that are social both in their ends and in their means. They are new ideas (products, services and models) that simultaneously meet social needs (more effectively than alternatives) *and* create new social relationships or collaborations. In other words, they are innovations that are both good for society *and* enhance society's capacity to act.

Innovations that meet this definition can come from all sectors, often on the interface of different sectors. In our recent survey of social innovation methods from around the world The Young Foundation identified many which had addressed ageing issues. They range from time exchanges for carers in Japan to volunteering programmes in the US and care villages in the Netherlands to specialised parks for older people in Germany. Some have been prompted by new knowledge and science; some by older people themselves; and some by creative professionals and social entrepreneurs.

The most exciting social innovations not only provide services *for* the elderly, but also enable older people themselves to develop *their own* solutions. Combining technological and social approaches will be critical. If used strategically communication technologies, based on high-speed broadband connectivity, can help create new platforms for support, enabling people to communicate in new ways, and improving health and care.

No one organisation or single person is able to innovate alone. Social innovation is about collaboration and its success in meeting the needs of an ageing society will require multiple stakeholders to work together. It will involve a move from closed systems of innovation to open ones. Prompting innovation in this space will involve incorporating the insights of design thinking and ethnographic research. The latter is paramount to really understanding the lives of elderly people. For both the public and private sector learning to develop and value these skills is critical for innovation.

The Stages of Innovation

Our work researching methods of social innovation, identified six main stages for innovations[23].

- The first is the **systematic use of prompts**. In the field of ageing, some of these are already widely used: formal data and research; petitions and political claims; new scientific knowledge (for example about dementia). But there has been relatively little use of methods such as positive deviance; analysis of 'failure demand' (for example looking at hospital readmission rates as a prompt for better innovation in services for recently discharged older people).

- The second is **the systematic use of creative methods** to widen the menu of options that can be tested. Some of these come from the arts, some from technology and some from design. Again, relatively few of these have been applied to ageing issues, though there is a growing use of public prizes, models like Social Innovation Camps and user-led design projects.

- The third stage is **testing, piloting and prototyping**. There are many pilot projects and some formal randomised control trials around services for older people. We see particular virtue in many faster models of rapid prototyping that try ideas out on a small scale and adapt them fast in the light of experience.

- From there, **innovations need to be sustained in policies, programmes or business models**. Social enterprises are increasingly playing a role here. We also look at some of the creative new organisational forms, including new forms of cooperatives and mutuals that may be best placed to provide services.

- **Scaling and growth** can come in many forms, either through the growth of individual organisations, or through looser diffusion. Some of the most important organisations in this field are federations. A key role is played by public commissioning and the development of knowledge about what works. Commissioning models that give due weight to the experience of older people are critical. Most currently commission either for health activities and outputs or for activity based provision to older people in relation to care; few commission for outcomes.

- Finally our analysis of methods looks at **how systemic change is organised**, usually with a combination of law, regulation, new mindsets and new business models. Often this involves new 'scripts' and fundamentally changed models of behaviour. We expect ageing to be a particularly important field of systemic change, and this is already happening with healthcare moving away from being a series of actions done to patients towards more self-management supported by doctors, hospitals and

information providers; and with finance moving more towards personal budgets that can be used to assemble tailored packages of service and support.

Some sets of methods cut across these different stages. So finance for innovation may be best organised in a series of steps, from very small grants for promising ideas, through larger grants, loans, equity and quasi-equity for models as they grow in scale.

An ageing population will also present economic opportunities for businesses and society as a whole. The findings of market research on so called 'silver markets' is extremely relevant and may help speed up the incentives for innovation in this space. The ageing population, combined with the potential increase in the relative spending power of older consumers, may create growth in markets for health products and services in recreation and cultural activities. Market-based research points to significant business opportunities in these areas[24].

In what follows we concentrate on a few key fields where we see the greatest need and potential for social innovation:

- **Connected ageing**: way of using technology in creative ways to support and engage older people

- **New models of care**: that combine formal and informal support

- **Age-friendly environments**: the kinds of housing design, residential care design and design in the built environment that best promote independence and feelings of community

- **Trust**: innovations that support trust and confidence

Connected Ageing

Communication technologies will never be the definitive answer to the problems of ageing. But there are areas where technology can provide ways to improve care, safety and to reduce isolation.   In previous decades much was invested in very costly smart homes. But now much of the most useful innovation is coming from relatively cheap technologies: videoconferencing over Skype and social networks like Facebook. Some families already use a closed Facebook group to co-ordinate care for an older member of the family. [25] Meanwhile internet usage and confidence amongst the over-60s has grown sharply.

The fields of technological development fall into three main categories:
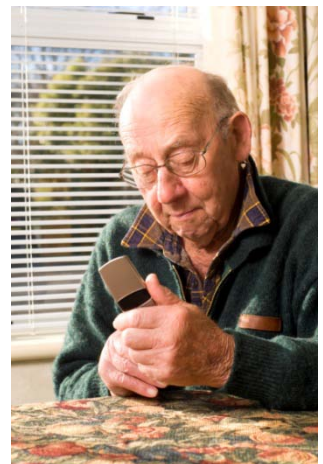
- **Assistive technologies** are devices or systems that allow an individual to perform a task that they would otherwise be unable to do, or increases the ease and safety with which the task can be performed. The use of assistive technologies within the home is increasing and can help people remain independent for longer. These range from ergonomically designed kitchen utensils to internet ready computers and ambient technologies (see Annex 4).

- A second category covers **technologies for self-management**, particularly in health, enabling older people to take control of the personal health and health care management. Many healthcare services are beginning to develop location independent models - taking chronic disease management into the patients' home, instead of relying solely on outpatient appointments in hospitals and clinics, is one example. Wide adoption of solutions such as home and mobile telehealth and telecare can do much to increase care effectiveness and overcome the limitations of time and place.

- A third category is **social technologies** that primarily work to structure circles of support, recreating in virtual space the sorts of informal networks that in the past surrounded older people. A good example of this is Tyze; an online service that uses the potential of the internet to cross boundaries of informal and formal care. It makes it easy to contact friends, family, neighbours and caregiver and helps with scheduling appointments. Some of the most promising developments in this area are those that combine technological and social approaches. Cisco's work in this area has shown how the intelligent deployment of communication technologies, taking advantage of highspeed broad band connectivity can yield results. Combining technological innovations with social insight can help improve health and social care, and extend the participation of older people in social and economic activities (see Annex 2 for more on Cisco's work in this area)

The European Union's Ambient Assistant Living Programme (AAL programme) aims to join together national technology research activities in the field of information and communication technologies for independent living and includes the three categories mentioned above. It has a strong focus on how the diffusion of technological innovation.

An interesting example, funded under the AAL project, is Smart Home for elderly people in Scotland. More than 2,100 elderly people use home safety services based on smart homes which support tele-monitoring of health data and safety and security. An in-depth assessment has shown that a large group of respondents living at home, both older people and informal carers, reported the positive impact of the smart technology in prolonging their independence and quality of life. Analysis suggests that significant cost benefits of up to 25% could be achieved compared to the expense of a place in institutional care.

Despite these achievements there are several systemic barriers that prevent the widespread diffusion of such technologies. A lack of integration between different sectors – health, social and housing- presents a major barrier. Within the health system in particular the lack of structures and processes to support continuity of care

and integration of care between the different players and levels (hospital and primary care, general practitioners and so on) are an important limiting factor for home telehealth. [26]

The field of connected ageing is in a state of flux, with constant experimentation, but with surprisingly few settled or proven models. While there is a lot of activity there is a need to move from technology invention to innovation; as well a need to bring together the insights from technological innovation and service innovation.

New models of care

World Health Organisation (WHO) data has highlighted that chronic conditions such as cardiovascular disease, pulmonary disease and diabetes (which are most prevalent in the over 60s) account for more than 50% of health care expenditures in most countries, and as much as 80% in some. [27]

All existing health systems were set up to deal with different kinds of health challenges, primarily acute diseases and prevention of serious infection. The bulk of sunk investment reflects these past priorities and the dominance of the general hospital. Most health experts agree that the care models currently in place in most countries are simply not sustainable in the face of changing needs. Healthcare is increasingly about the day-to-day management of conditions rather than occasional cures or operations. It depends more on a partnership between the patient and carers.

Around these needs for healthcare (and the constant monitoring of conditions, receipt of treatments, and attending to appropriate diet and exercise) there are also a wide range of other kinds of care need. Older people value support that enables them to live in their own homes - that 'little bit of help' with cleaning, DIY, gardening, taking care of pets, transport or befriending. Such 'low level' interventions can help maintain older people's independence and quality of life, as well as enhancing their ability to 'age in place'.

Rising demands and limited resources have meant ever tighter rationing for publicly funded care, with points systems targeting resources for the most acute needs. As a result, dependence on informal support has tended to grow. There are already over 6 million informal, unpaid carers in the UK. Of those, less than one million receive government support for performing social services that, if provided by the state would cost £23 billion. [28] In 2008, 8 in 10 adults who received long-term care at home in the US obtained it exclusively from family, friends and volunteers. Informal care networks will increase in importance as care budgets are squeezed and traditional family structures continue to change

across Europe and the rest of the developed world. Initiatives that bridge formal care and informal care look likely to become key to providing more effective care, including better support for informal caregivers within families and from the not for profit sector.

Older people frequently reciprocate social support as well as receive it. A longitudinal study of ageing looking at the experience of the ageing population in Bangor Wales from 1979 to 1999 found that 'the majority of elderly people are capable, competent adults who give as well as receive'. They help each other with shopping, gardening, lifts, domestic help, and care of keys or pets. The question is whether access to help continues for those no longer able to give it. In his classic study of older people in Bethnal Green, Townsend pointed out that rather frail elders continued to reciprocate help by cooking meals or caring for grandchildren. Another recent study of old women in an urban deprived area in northern England shows that even the very old and housebound have the potential to help. Many of the women involved in the study benefited from the concern of their peers about each other's health. Reciprocity was evident: talking, telephoning and keeping in touch were forms of help that even a sick person can give. [29]

Homeshare initiatives have been set up in several European countries, New Zealand and Australia. The idea is simple: providing housing in exchange for help in the home. Projects like this help develop intergenerational contact and provide the type of low- level can improve quality of life.

New models of care that are truly person-centred are also being developed for people with higher support needs. Torbay Integrated Care Project offers a holistic programme of care support and has successfully combined health and social care. The project focusing on delivering services for older people closer to home and combines telehealth services, immediate intervention for those at greatest risk and re-enablement follows a stay in hospital. A recent evaluation of Torbay's care model has shown a reduction in the average number of daily occupied hospital beds used from 750 in 1998-90 to 528 in 2008-09. [30]

Torbay's results show the benefits to individuals, and the savings that can result from well-designed interventions. By bringing health and social care together, pooling budgets and setting up integrated teams of front line staff, it has been possible to reduce the use of hospital beds and provide more services to people in their own homes.

Age Friendly Environments

More and more older people will need homes where they can live independently for longer and that offer them a better quality of 'home' life. Research suggests that older people would prefer to continue living in their existing home. The most common reason for people who were considering a move was that their home was inappropriately adapted for their (often progressive) mobility difficulties and health problems. An older person's housing needs can vary greatly depending on their care needs. The key challenge is that accommodation needs to be flexible enough to meet older people's health and housing needs as these needs change over time. Involving older people meaningfully in the design will be an all-important part of this process.

While there is currently a flurry of research investigating specific design elements which can improve the liveability of homes for all, at present the rhetoric seems to be far ahead of the practice. However, there are some excellent examples emerging from across the world.

One interesting example related to housing design is co-housing. This model mixes individual and communal living and self-management and allows older people to be part of a community. Each living unit (maybe a flat or a cottage) will contain all the facilities necessary for independent living (kitchen, bathroom, living rooms, bedrooms). There are also communal areas where residents are encouraged to take part in a range of community- based activities. This type of housing development has achieved popularity in the Netherlands and Denmark but interest is growing elsewhere.

Another example is the design of living spaces to suit the needs of people with dementia. The use of contrast is vital role in signposting areas for people with dementia. Flooring should be in plain colours with the edge of each step in a contrasting primary colour to help people make sense of their surroundings. Light switches need to be easily recognisable; toilet doors need to stand out if they are painted to contrast against their background. [31] But designing age-friendly environments extends beyond housing and also includes the design of outdoor and public spaces as well as transportation and even product design.

The World Health Organization (WHO) recently undertook a project to identify the characteristics that make a city more "age-friendly". The WHO worked in collaboration with 33 cities across the globe to identify and disseminate best practice which resulted in a set of guidelines. [32]

A city's landscape, buildings, transport system and housing contribute to mobility, healthy behaviour, social participation and self-determination. But it can also exacerbate,fear, isolation, inactivity and social exclusion. An age-friendly city emphasizes enablement rather than disablement; it is friendly for all ages and not just "elder-friendly". Small things can make a big difference. There should be enough public seating and toilet facilities; dropped curbs and ramps to buildings should be standard features; and lights at pedestrian crossings should be safely timed.

Universal Design (UD) or inclusive design is described as "the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design" and as such does not encourage the creation of products exclusively for older groups or for those with disabilities. Adopting universal design in planning or product creation means that spaces, services and products can be accessed and enjoyed by everyone while at the same time creating a good society to grow old in. This is an innovative approach to maintaining independent living for more people regardless of age or ability. [33]   As a leader in this arena, Japan is actively engaged with the UD philosophy and in 2010 introduced u-Japan strategy to promote universal design.

Universal design principles are being applied outside of home building to consumer products and services. An interesting example of a very successful product innovation using UD is the Nintendo Wii gaming system. The system has created a new market where older adults, who had not previously been consumers of

videogames, are now able to engage in a trans-generational social game that has been shown to improve quality of life. However it should be noted that UD principles can be problematic in that they homogenize very disparate groups of people and needs, especially when applied to products with global reach.

Mobilising trusted networks

Later life can often be marked by a loss of social capital. Even if retirement is delayed, individuals will leave employment at some point. Various initiatives have been developed to tackle the isolation experienced by older people. Some of the examples (see Annex 7) offer members of the older person's network effective practical and emotional support (e.g. Tyze and Integrated Transport Network). While we are still learning about what can be done to repair, build and mobilise social networks, the ability of older people to trust and rely on other individuals will be key to achieving positive outcomes. Points at which they seek support or answers to difficult problems often occur at points of vulnerability or transition. Several studies emphasise the significance of trusted, informal routes to securing information and help in these situations. [34]

There are three main fields of innovation in relation to networks:

- The first is **providing access to services** or people with guarantees that they are trustworthy for example local authorities creating brands, or social enterprises, with access to local plumbers or builders etc. In parts of Shanghai now provide free help with household repairs to all citizens over 80.

- **Circles of support** can provide mutual trust such as Southwark Circle. It introduces members to each other and to local, reliable neighbourhood helpers who provide help with practical tasks. As well as offering practical support it acts as social network for teaching, learning and sharing.

  The Leeds Link-Age Plus is another project that aims to provide trusted social routes to getting information – a technically-literate mediator accesses information from web-based sources on behalf of a less- able older person. As 'infomediaries' they interpret the information ensuring it is personally relevant. The value attached to trusted sources of advice and support is based on three principles: that one did not have to constrain ones request within defined service parameters (is it a health problem or is a social services problem?); that one could trust that the problem would remain confidential; and that its meaning for the individual would be acknowledged and respected. [35]

- **Technologies for trust in the home** – such as finger print identifiers on front doors, or monitoring devices enabling older people to allow others to enter their home with confidence and safe in the knowledge that they have come to help. Recent Young Foundation research[36] with older people living in London highlighted that safety and security were major concerns for those living alone. Fear and lack of trust is a key factor preventing older people from letting other unfamiliar people in to their home.

Conclusion

It is clear that ageing is set to become key priority on political agendas across the world. But still a lot more needs to be done to build awareness

There has been some progress, particularly at EU level. The European Union's strategy for smart, sustainable and inclusive growth - *Europe 2020 program* – highlights ageing as core priority; the *Innovation Union*, Europe's science and innovation plan, aims to refocus R & D and innovation policy on several pressing issues, including ageing, and encompasses a broader vision of innovation.

Attitudes and perceptions must change at every level so that older people are seen as capable contributors. Change will be pioneered by the ageing baby boomers, a generation in the process of redefining the meaning and experience of old age.

The fact that populations are ageing fast represents an extraordinary story of success, mainly attributable to improvements in day- to- day environments (clean water, air, physical safety) as well as advances in medical science. Every success brings with it new challenges. In this short paper we have outlined some of the fields where innovation is happening, and most needed, to turn the achievement of longer lives into an achievement of better lives as well. Families, communities, towns and cities will all need to change to keep up with the pace of demographic reality. Infrastructures and services like housing, transport, education, health and social care provision will need to adapt to a *large percentage* of older adults. There is a clear need to develop new large scale innovations but also a need to research more systemically the type of small scale innovation that is already taking place and how it might be 'scaled up'. Growing old is not the same across the world. What can we learn from elsewhere? What are they doing right? It is important to keep in mind that in developing responses to these challenges there needs to be move away from placing responses to demographic changes solely on policies, or practical initiatives for 'older people'. They need to be reframed as issues that are of concern to everyone. A cultural shift as well as a structural change will be required. Crucial to all of this will be giving older people a stronger voice and power in the decisions that will affect their lives.

Annex 1: The Young Foundation – Current Ageing Projects

Drawing its inspiration from Michael Young's ideas, the Young Foundation, and its predecessor organisations, have a long history of contributing innovative ideas to the debate about ageing as well as developing practical projects to address the needs of an ageing population (for example Grandparents Plus and University of the Third Age).

Since its re-launch in 2005/2006 the Young Foundation has been closely involved in age-related work on many fronts (described in more detail below). The Mapping Unmet Needs project looked at older people and their life transitions as well highlighting the isolation and exclusion they often suffer. [37] Other research projects investigating civility and community cohesion have highlighted intergenerational tensions and the need for more dialogue between different generations. We have been involved in projects looking at the housing needs and housing transitions amongst the older population[38].

Building on our research, the Young Foundation has also developed several practical projects: cognitive behavioural therapy for the elderly, a telephone befriending service, relationship counselling for couples where one partner has dementia, a web-site to enable peer-to-peer support for adults who experience anxiety and stress over their parents' ageing, as well as providing solutions to help make the vision of personal budgets a reality.

A number of recent Young Foundation initiatives have combined research with developing and designing services for older people:

- Jim Ogg (Young Foundation Fellow) has been involved in research focusing on the residential strategies and housing decisions among the baby boomer generations in Paris, London and Wales

- *Local Wellbeing Project*: *Increasing Emotional Resilience for Older People* - Using cognitive behavioural therapy (CBT) this project focuses primarily on the design and delivery of an emotional resilience programme for older people and testing how these types interventions impact on their wellbeing.

- *Older Adults Relationships Intervention Project (in development)* – This project is a joint venture with the Tavistock Centre for Couple Relationships and support couples where one partner has dementia. The end goal is to design a training package that can be rolled out nationally and delivered by frontline mental health and social care staff.

- *A Friend Indeed* – This project involved a daily phone call from a specially trained volunteer to members of the over 70+ age group who have just come home after a stay in hospital.

- *Support -My- Parent* – Support-my-parent is a web-site to developed to enable peer-to-peer support for the millions of adults who experience anxiety and stress over their parents' ageing.

- *Plan my care* – Plan my care has worked in partnership with the Young Foundation provide solutions to help make the vision of personal budgets and self-directed support a reality for all involved.

- *Maslaha* – Maslaha is a Young Foundation initiative which aims to help Muslims deal with the everyday dilemmas of living in western society. Maslaha's health work aims to tackle the underlying causes of poor access and poor management of illnesses which can arise from distrust and misunderstanding. Their work on diabetes has involved an interactive website and DVD that has provided information in a way that is accessible to older people. The project received an award in early 2010 from Diabetes UK.

- *Future Communities Consortium* – involving several local partners explores the different ways in which new housing developments can become communities that work for all residents in the long term. This initiative aims to make sure that social networks and neighbourliness are encouraged by design, community infrastructure and community development processes.

- *Institute of Health Design (in development)* - The International Academy for Design & Health is a global, interdisciplinary knowledge community dedicated to the stimulation and application of research and looks at the interaction between design, health, science and culture. The organisation is currently exploring the potential of locating a hub in London with the Young Foundation.

- *The Good Gym* – Winner of Social Innovation Camp in 2008. This project pairs runners with isolated, less-mobile people in their area. Runners will jog to their house, deliver something nice, have a brief chat and be on their way again

- *Vertex Partnership* - The Young Foundation and Vertex are piloting a new county-wide service for older people in Hertfordshire called FIRST CONNECT. More than 20 community agents will work with over than 3000 older people over the next year, making assessments of their needs across the board (from mental health, to debt management, smoke alarm fitting, health trainers and adapting the property) and commission the relevant service providers. This is a new way of working for the local government, local health services and the voluntary sector to meet the needs of older people who are normally off the radar of service providers.

social innovation exchange

THE YOUNG FOUNDATION

CISCO

FUNDAÇÃO CALOUSTE GULBENKIAN

Annex 2 – Cisco Internet Business Solutions Group – Ageing well in a connected world

Cisco's, Internet Business Solutions Group (IBSG) provides advice to governments, NGOs and major companies who seek to innovate and improve radically, helped by new technologies. IBSG combines social and technological innovations to develop new models and find solutions to social needs. One example of this work is the IBSG's Ageing Well in a Connected World initiative, which addresses how today's unprecedented communication possibilities can have impact society most effectively.

Combining technological and social approaches, solutions such as home and mobile telehealth and telecare, together with a cohesive and citizen-based approach, can do much to increase care effectiveness, increase personal control and overcome the limitations of time and place. An example of CISCO's success in using technology innovatively to meet the needs of an ageing population is Cisco's HeathPresence at George Pompidou European Hospital Paris. The Health Presence is a communication and cooperation platform which offers an alternative to traditional treatment services by providing remote access to specialist opinions over a totally secure network. The project was created to address the issue of increased demand for health care, due to an ageing population.

The technology offers the following features:

- Cisco TelePresence technologies enable high-quality interaction between those involved (high definition monitor and camera, spatial audio, life-size images).

- Professional tools to enhance medical consultations (remote medicine equipment that functions via IP such as vital signs equipment, hand-held camera, otoscope, digital stethoscope, etc.)

- Cisco's Unified Communications and Call Centre technologies enable video, voice and medical data sessions to be established on a secure IP network between the patient station and that of the medical team. These sessions can be transferred, put on hold and routed according to the required profile of medical expertise - just as simply as a phone call.

Cisco has also developed new arrangements that help attract and use the untapped talents of older people, such as flexible work options from a local workplace like a smart work centre; age-friendly, home-based, and mobile work arrangements; and a portal service that matches volunteers with older peoples' needs.

social innovation exchange

THE YOUNG Y FOUNDATION

CISCO

FUNDAÇÃO CALOUSTE GULBENKIAN

Other programmes have been to develop that prove the power of networked communication:

- In Almere (Netherlands) video is being used in different forms to enable community participation and improve well-being by helping older citizens share a passion such as fitness, music, work.

- In Andalucia, Spain a network for informal carers has been developed to obtain relevant services effectively and efficiently help carers live their fulfilling lives.

Annex 3: Active Ageing - Examples

Name of project/initiative/organisation	Description
University of the third age (YF) http://www.u3a.org.uk/	U3As are self-help, self-managed lifelong learning co-operatives for older people no longer in full time work, providing opportunities for their members to share learning experiences
Civic Ventures (USA) http://www.civicventures.org/	Civic Ventures works to define the second half of adult life as a time of individual and social renewal by engaging older people in a range of volunteering and work opportunities post retirement.
Experience Corps (USA) http://www.experiencecorps.org/about_us/welcome.cfm	Members tutor children who need basic literacy skills; they *mentor* students who count on them for guidance; they partner with classroom teachers to make schools better places to learn
PRIME (UK) http://www.primeinitiative.co.uk/2008/01/10/mature-entrepreneurs-come-of-age/	PRIME (The Prince's Initiative for Mature Enterprise) helps people over the age of 50 set up a business for themselves.
Silver Human Resource Centres (Jap) http://longevity.ilcjapan.org/f_issues/0702.html	Community-based work for elderly people who want temporary short term jobs after retirement.
Workability Finland http://news.bbc.co.uk/1/hi/world/europe/4006973.stm	Encouraging companies to be innovative and flexible enough and to keep ageing workers motivated and productive.
Intergenerational community centres (Malta) (Hoff, A. (2009). Tackling Poverty and Social Exclusion of Older People – Lessons from Europe. Oxford Institute of Ageing)	An intergenerational project bringing together older people and children in community centres. These centres developed close links with schools in the communities and encouraged mutual exchanges between pupils and older people.

social innovation exchange

THE YOUNG FOUNDATION

CISCO

FUNDAÇÃO CALOUSTE GULBENKIAN

Name of project/initiative/organisation	Description
Kilburn Older Voices Exchange (UK) http://www.camden.gov.uk/ccm/content/council-and-democracy/having-your-say/older-voices/kilburn-older-voices-exchange-kove.en;jsessionid=3973534FEEC3DB1DD439DD17D1A48A1C	This forum offers a collective voice for older people living in Kilburn & West Hampstead, and it is a good example of getting local older people involved in current issues.
Parliament for the Elderly (Cyprus) (Hoff, A. (2009). Tackling Poverty and Social Exclusion of Older People – Lessons from Europe. Oxford Institute of Ageing)	The Parliament for the Elderly meets once a year, with the President of the Parliament, the Minister of Health, and the Minister of Labour and Social Insurance.. Major issues faced by the elderly are discussed and debated. The Ministers are bound to implement some of the decisions.
Happy Senior Project– Hope Institute (South Korea)	The Happy Senior Project is designed to support early retirees between the ages of 40 and 60 to develop future roles in NGOs. The project is based on the idea of helping early retirees find meaningful roles in their communities.

Annex 4: Connected Ageing - Examples

Name of project/initiative/organisation	Description
Ageing Well in a Connected World programme - (Netherlands, USA, Spain etc) Cisco IBSG (2009, 2010)	Initial projects include: Almere, Netherlands – use of video to enable community participation and well-being, Corporation of National and Community Service, USA - Using technology to invigorate national volunteer programmes, and match supply and demand Andalucia, Spain - using to technology to create network of support for carers
Smart Work Centres (Netherlands and globally) – Cisco IBSG Boorsma et al (2009) Connected Urban Development programme	Smart Work centres are being rolled out, first in the Netherlands, now globally, to provide accessible office environments close to home that link to employers.
Netcarity (EU funded project, being piloted in Trento, Italy and Eindhoven, Netherlands) http://www.netcarity.org/About.11.0.html	Developing technology to enable homes to electronic furniture which controls and integrates data from devices in rooms around the house. The box will coordinate services and information coming into the home, and distribute data to family members, carers and local authorities. Information collated includes: intrusion alerts, mood status of the homeowner, activity status of the homeowner, a list of recent visitors
Intel Virtual Tea Room http://www.e-healthinsider.com/news/5058/intel_to_open_%E2%80%98virtual_tea_room%E2%80%99	Social networking pilot to encourage older people who are house-bound or socially isolated to engage in social activity. It uses a tablet – designed for use by people inexperienced in technology– to help older people remain connected with friends, family and other members of their community (currently being piloted).
Blackpool Vita Line (UK) http://www.blackpool.gov.uk/Services/S-Z/Vitaline	A 24 hour link to a Blackpool based call centre for the older population. The telephone comes complete with an emergency pendant that can be worn around the neck or clipped to a belt.

social innovation exchange

THE YOUNG FOUNDATION

CISCO

FUNDAÇÃO CALOUSTE GULBENKIAN

Name of project/initiative/organisation	Description
Smart Card Braknell Forest and Derbyshire (UK) http://www.bracknell-forest.gov.uk/online-smartcard.htm	People over 60 can use the card to access the library, free bus services, sports clubs, and get discounts from over 100 local businesses. Derbyshire has a similar scheme, and includes discounts at over 1,400 local businesses that have signed up to using the card.
Elderly Citizens Line (Portugal)	A free telephone help line set up to provide the elderly with information on benefits and services.
DOC@HOME http://www.docobo.co.uk/ArticlePage.aspx?articleId=6&topParentId=7	Home care and remote monitoring system for people with special needs allowing expert advice to be generated *ex situ* based on the collected data.
MEDICATE http://www.ist-world.org/ProjectDetails.aspx?ProjectId=5744cef86f9e433b8c39e18d4f6b1b5b	Medicate involves control, identification and delivery of prescribed medication. Hardware was developed for home use to store the medication, to dispense it appropriately and to provide a reminder to the patient in the event of non-compliance.
Vital Mind http://www.vitalmind-project.eu/	Advanced interactive mental training for elderly people using ICT
HERMES http://www.fp7-hermes.eu/project-summary.html	Cognitive care and guidance for active ageing - achieved through an assistive technology
I2Home http://www.i2home.org/	Innovative interaction with home appliances
Easyline Plus http://www.easylineplus.com/index.html	Intelligent home appliances for an ageing population

Name of project/initiative/organisation	Description
Share it http://www.ist-shareit.eu/shareit	Enhanced navigation with smart wheelchairs and walkers
Wealthy http://www.wealthy-ist.com/	Wearable health care system
Ofseth http://www.ofseth.org/	Optical fibre sensors embedded into technical textile for healthcare monitoring
Talking Mats www.talkingmats.com	'Talking Mats' is a low-technology communication framework that was developed to help people with communication difficulties to express their views. It uses a simple system of picture symbols and a textured mat that allow people to indicate their feelings about various options within a topic by placing the relevant image below a visual scale.
Bio tex http://www.biotex-eu.com/	Bio sensing textiles to support health management.
BT Internet Rangers (UK) http://www.btinternetrangers.co.uk/	Links school pupils to sheltered housing residents to provide mentoring and support with technology.
Forum 50+ (Poland) Hoof, A. (2008) Tackling Poverty and Social Exclusion of Older People – Lessons from Europe.	Young people teach older people how to use computers..
Whole System Demonstrator – Swindon and Newham UK http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_100946	The project is looking at how technology can help people manage their own health while maintaining their independence. The WSD programme is believed to be the largest randomised control trial of telecare and telehealth in the world to date.

Independent Age/Gulbenkian, UK Older people, technology and community (2010)	Supporting initiatives that address isolation and loneliness in old age though a coalition of practitioners and experts, and projects.
Sophie Project (Germany)	SOPHIA recruits and trains volunteers who in turn support individual clients. They offer a range of service packages, including: 'basic' - 24/7 availability of a service-centre by telephone; 'security' - a personal alarm service utilising an intelligent wrist band; 'contact' – uses video telephone contacts established via an ordinary TV set with the service centre or any other party. The SOPHIA Foundation's has been successfully mainstreamed and is currently being deployed in different parts of the country by means of a franchise model
HOME (KOTIIN) (Finland)	This project aims to generate, develop, test and productise TV-based guidance and advice services and interactive programmes (CaringTV), which will enable the elderly and their caretakers to manage at home.

Annex 5: New Models of Care

Name of project/initiative/organisation	Description
Housing for Help (Wohen fur Hilfe, Germany and Austria) http://homeshare.org/germany.aspx	Householders provide low-cost accommodation to their homesharer. The homesharer is usually a student and they help with household chores in exchange for accommodation.
Adopt an Older Person (Austria) Hoof, A. (2008)	A project specifically for older Austrians who have no next of kin living locally in rural areas. The person in need of care lives with a farmer's family. The elderly person receives family care and can continue to live in a rural area while the farmer no longer relies on the agricultural business as the main source of income.
Adopt a grandmother (Poland) Hoof, A. (2008)	Two particularly vulnerable groups in Polish society - lone mothers and old people living in institutional care - are matched. The lone mothers who takes part in this scheme visit an older person on a regular basis. The lone mothers come with their children to visit these 'grandmothers'.
A Friend Indeed (YF) http://launchpad.youngfoundation.org/fund/hia/portfolio/project/case-study- friend-deed	A daily phone call from a specially trained volunteer to members of 70+ age group who have just come home after a stay in hospital.
SPECAL (*Specialized Early Care for Alzheimer's*) (UK) http://www.specal.co.uk/	The SPECAL method (Specialized Early Care for Alzheimer's) works by creating links between past memories and the routine activities of daily life in the present. A person with dementia will experience random and increasingly frequent memory blanks relating to recent events. Feelings, however, remain intact, as do memories of past events and both can be used in a special way to substitute for more recent information that has been lost.
Torbay– Integrated Model Care (UK)	The focus of the Torbay pilot is integrated care for older people with the following elements: - the use of telecare services and remote monitoring to support people to remain independent for as long as possible - intermediate intervention identifying older people at greatest risk of admission - acute care, ensuring that older people are cared for in a timely, dignified and clinically evidenced manner when they require an acute hospital stay - reenablement, ensuring that people are helped to regain independence following a hospital stay or crisis

Name of project/initiative/organisation	Description
The Joint Supportive Communities (Israel) http://www.jdc.org/jdc-glossary.aspx	Supportive Communities: community-based assistance for Israel's senior citizens. Each Supportive Community is run by a local coordinator and provides a basket of essential services. These include practical assistance with day-to-day needs and domestic concerns and social activities that improve their quality of life.
First Contact (Nottingham, UK)	This project enables older people to access preventative services through a single point of contact. When a staff member from any of the partner agencies visits someone at home they complete a checklist to find out if the older person has any particular needs for services such as a fire safety check, advice on money and entitlements, signposting to local groups or support to prevent falls.
Assisted Living Innovation Platform, UK (2009, 2010)	Series of projects under the banner of the UK Government's Digital Access Platform. This includes the "HealthHub" project, and a Framework for Assisted Living, which outlines the scope of consideration and high-level requirements for an architectural approach, to ensure interoperatbility, agility and good use of resources.

Annex 6: Age Friendly Environments – Examples

Name of Project/Initiative	Description
Berryhill Retirement Village, Stoke on Trent (UK) http://www.stoke.gov.uk/ccm/csd/csd/stoke-greeting-pages/b/berryhill-retirement-village.en;jsessionid=aVlTYHr0EJF_	Consists of 148 flats along a series of internal streets, housing mostly working class residents, in an area below the national average for health and wellbeing. Volunteering and keeping fit play a big part of community life.
Paperworth Trust, Foundations for Living, Huntington, Cambridgeshire (UK) http://www.papworth.org.uk/page.php?urlid=foundations_for_living	Paperworth Trust developed the project to include wheelchair accessible housing for 24 people built alongside the Saxongate Community Learning Centre, and including a support team to enable disabled people to become part of their local community. Saxongate provides a range of inclusive learning opportunities and advice on issues including employment and housing support.
The Peabody Trust: Darwin Court, Southwark, London (UK) (Welfare Housing Polices for Senior Citizens, EU Initiative, Best Practice Example, for more information please see, http://welhops.net/activities.asp) http://www.peabody.org.uk/media-centre/press-releases/eu-professionals-visit-southwark-for-housing-inspiration.aspx	The Darwin Court residential scheme in Southwark is designed to enhance quality of life and independence for older people through a mix of communal facilities and specialist housing. The building comprises 76 Lifetime Homes properties, 40 of which are supported by an on-site housing team. Shared facilities on-site include gardens and a ground-floor community resource centre offering health and fitness facilities. The building has health and leisure facilities for the local community, including a restaurant, a swimming pool, a healthcare suite, an IT suite and a multi-purpose room/dance studio for meetings and social events.

Name of project/initiative/organisation	Description
Hartfields retirement village, Hartlepool (UK) http://www.hartlepool.gov.uk/site/scripts/documents_info.php?documentID=1046	Self-contained homes designed for independent living. They offer the security of accessible services without the stigma of residential care. The apartments and cottages for sale or rent are in close proximity to purpose-built leisure facilities, and health and wellbeing services.
New Larchwood, Brighton (UK) http://www.southeastexcellence.co.uk/casestudies/urbandesign/?p_id=1179 Welfare Housing Polices for Senior Citizens, EU Initiative, Best Practice Example, for more information please see, http://welhops.net/activities.asp	The lower ground floor of New Larchwood serves residents as well as the local community with a range of communal facilities including a shop, health centre, entertainment centre, cafe and guestrooms with en-suite facilities for visitors who may want to stay over. A package of 24-hour on-site care and support is provided for those who need it.
Sonali Gardens, Tower Hamlets (UK) (Welfare Housing Polices for Senior Citizens, EU Initiative, Best Practice Example, for more information please see, http://welhops.net/activities.asp) http://www.housingcare.org/housing-care/facility-info-87490-sonali-gardens-tower-hamlet-england.aspx	Each home is designed, equipped and fully adaptable for the needs of elderly and disabled people. While many residents are Bengali Sonali Gardens doesn't cater exclusively for the Bengali community. In addition to facilities found in each flat, the scheme provides: a lounge on the ground floor and a dining room; an enclosed courtyard garden; a prayer room and washing room; several lounges with separate lounges for men and women; bi-lingual signage; Bengali art and furnishings; a restaurant preparing food that is reflective of the cultural needs and preferences of the residents
Luoshan Community Service Centre (Shanghai, China) http://www.socialinnovationexchange.org/node/78	The Luoshan Community Service Centre is currently the only open- style group house for elderly people in China, combining a service centre for youth with the service centre for elders. This creates an opportunity for the elders to engage and communicate with people outside the house. The centre provides of four services: a Services Centre for the Elders, a Service Centre for Youth, a 999 Hotline and a Community Education Service Centre.

Name of project/initiative/organisation	Description
Skewiel Trynwâlden, rural housing scheme (Netherlands) Croucher et al (2007) *Comparing models of housing with care for older people.* York: Joseph Rowntree Foundation	Created following the closure of a care home. Older people rent these apartments or continue to live in their own homes in the surrounding seven villages. Service brokers co-ordinate a range of housing, social care, health services to older people and others in the community. The apartments and villages are served by five multidisciplinary teams. A social services centre with a range of primary and welfare services, as well as a restaurant, respite care centre, crèche and playground serves the whole community.
Laguna Woods (Southern California, USA) http://www.lagunawoodsvillage.com/	Laguna Woods is a good example of a Continuing Care Retirement Communities. A continuing Care Retirement Community contracts in advance for a lifetime commitment from the Continuing Care Retirement Community to care for them, regardless of their future needs. Three Continuing Care Retirement Communities have come together to form Laguna Woods, the first city in the USA to be almost exclusively populated by older people.
Hearthstone Alzheimer Care (Massachusetts, USA) http://www.thehearth.org/aboutus.html	The environment has been designed so that it can give the person knowledge about how to use it properly, rather than relying on what they remember. Design characteristics include camouflaging exits leading to dangerous places; providing destinations at the end of pathways that encourage walking rather than aimless wandering; gardens designed therapeutically - contact with nature, natural light and seasonal change can help people orient themselves; and a sensual environment, promoting seeing, hearing, touching and smelling.
Park Benches, Bristol (UK) http://www.education.edean.org/pdf/Case006.pdf	These benches are specially designed so that they are comfortable and safe to use by the wide range of people passing through the park. For those wanting to sit and eat a sandwich the wide arms serve as a table, children can play on, and under the seat, and older less agile people can rest briefly or sit comfortably for longer periods.

Name of project/initiative/organisation	Description
Marjala, residential suburb of Joensuu, north-east of Helsinki (Finland) http://www.education.edean.org/pdf/Case010.pdf	The suburb has a projected population of 3,000 and is an experiment in large scale barrier-free design. A special set of building regulations was developed for the scheme to allow complete access and mobility both inside and out, with imaginative signage and way finding. By harnessing new information technologies it has been possible to develop alternative ways of providing services, in particular tele-care based around a co-operative day-care home, and to offer new work opportunities.
Dementia Friendly Design Toolkit http://dementia.stir.ac.uk/design_udit_tool_certificate_1	The Design Audit Tool contains a series of resources for carrying out a self-assessment of environments used by people with dementia. It is suitable for refurbishment projects or new buildings and is relevant across a range of settings, including day centres, wards, care homes and medical centres.
World Health Organisation – Age Friendly Cities Programme http://www.who.int/ageing/age_friendly_cities/en/index.html	The Age-friendly Environments Programme is an international effort by WHO to address the environmental and social factors that contribute to active and healthy ageing in societies. To support cities wishing to follow this approach, and to ensure the quality of the tools and interventions they use, WHO has now established the WHO Global Network of Age-friendly Cities

Annex 7: Mobilising Trusted Networks – Examples

Name of project/initiative organisation	Description
Tyze http://tyze.com/home	Online service that makes it easy to reach out to friends, family, neighbours and caregivers. The website builds a network of care – make plans and share stories.
Southwark Circle http://www.southwarkcircle.org.uk**/**	Membership organisation that helps older people take care of household tasks. It is a local organisation enhancing local resources through older people themselves and their neighbours
Leeds Linkage Plus	Working closely with six of the city's 40 Older People's Neighbourhood Network Schemes to develop their role as "gateways" sites, taking key information directly to where older people need it and want it – through the organisations they deal with, local shops, and their own homes. The project also has teams of older people who act as "peer" enablers, facilitating older people's access to the LinkAge Electronic Information Store website.
Men's Sheds Australia http://www.mensheds.com.au/index.php?id=home	Provides meeting places for men to meet and specialises in addressing the needs of men, their health and well being, their communities.
ITN - Integrated Transport Network (USA) http://www.itnamerica.org/	ITN provides rides with door-to-door, arm-through-arm service to thousands of seniors nationwide. It's a unique programs that allow older people to trade their own cars to pay for rides and enable volunteer drivers to store transportation credits for their own future transportation needs.
Fueai Kippu, Japan	'Caring relationship tickets' issued to citizens who care for elderly people nearby in exchange for others caring for their family members in another city.

[1] Kinsella, K and He, W. (2009) An Ageing World 2008 – International Population Reports. Washington: US Census Bureau

[2] ibid

[3] European Commission (2008) Demography Report: Meeting Social Needs in an Ageing Society.

[4] US Dept of Health & Human Services. (2008). *An Aging World 2008.* Washington D.C.: National Institute on Ageing.

[5] European Commission (2009) Ageing Report: Economic and budgetary projections for the EU-27 Member States (2008-2060)

[6] Congressional Budget Office, Congress of the United States (2009) The Long Term Budget Outlook

[7] Lafortune et al (2007) *Trends in severe disability among elderly people: Assessing the Evidence in 12 OECD Countries and the Future Implications.* Paris: OECD

[8] European Commission (2008) *Demography Report: Meeting Social Needs in an Ageing Society.*

[9] Strangler, D. (2009) The coming of the Entrepreneurship boom. Missouri: The Kaufmann Foundation

and Botham, R and Graves, A. (2009) The grey economy – How third age entrepreneurs are contributing to growth. London: Nesta

[10] See for example Sen, Stiglitz and Fitoussi (2009) *Report by the Commission on the Measurement of Economic Performance and Social Progress*

[11] World Health Organisation (2002) Active Ageing- A Positive Framework. Geneva: WHO

[12] Kinsella, K and He, W. (2009) An Ageing World 2008 – International Population Reports. Washington: US Census Bureau.

[13] For a list of current Young Foundation projects related to ageing see Annexe 1

[14] Mapping emerging and unmet needs is a two-year research programme, aiming to develop new insights into how the Britain's unmet and emerging needs can be prioritised and met.

[15] Office of National Statistics (2008) *General Household Survey 2006*, table 3.3 (GB)

[16] Spotlight 2006 survey (GfK NOP, 2006)

[17] Loneliness, Social Isolation and Living Alone in Later Life, C. Victor et al., 2003

[18] Blanchflower, D, and Oswald, A (2007) 'Is wellbeing u-shaped over the life cycle?' national Bureau of Economic Research working paper 12935.

[19] Andrew Oswald interviewed by Alk Jha, 'Happiness is being young or old, but middle age is misery', The Guardian, 29 January 2008

[20] Banks, J, Breeze, E, Lessof, C and nazroo, J (2006) Retirement, health and relationships of the older population in England: The 2004 English Longitudinal Study of Ageing (Wave 2)

[21] Michael Wolfson, Geoff Rowe and Andrew Sharpe (2009) *Good Life Time (GLT): Health, Income and the Time to Enjoy Them – A new framework and index for measuring social progress.* A presentation given at the 3rd OECD World Forum, Busan Korea

[22] HM Government (2009) Building a Society for Society for All Ages

[23] Murray, R, Caulier-Grice, J and Mulgan, G. (2009) *Social Venturing – ways to design, develop and grow social innovation.* London: The Young Foundation and NESTA: Murray, R, Caulier-Grice, J and Mulgan, G (2010). The Open Book of Social Innovation. London: The Young Foundation and NESTA

[24] http://www.bis.gov.uk/policies/new-industry-new-jobs/opportunities-for-an-ageing-population

[25] Jones, B and Hayden, J (2009) *Innovation in an Age-Integrated Society*: Inno Grips

[26] Empirica and WRC on behalf of the European Commission, Directorate General for Information Society and Media (2010) ICT & Ageing European Study on Users, Markets and Technologies

[27] *The World Health Report: Reducing the Risks. Promoting Healthy Life.* (2002) World Health Organisation.

[28] National Audit Office (2009) *Supporting Carers To Care*. London: The National Audit Office

[29]Gray, a (2009) 'The Social Capital of Older People' in *Ageing and Society* (29) 5-31

[30] Ham, Chris (2009) *Working together for health: Achievements and Challenges in the Kaiser NHS Beacon Site Programme,* Health Services Management Centre. Birmingham University

[31] http://dementia.stir.ac.uk/design_building

[32] WHO (2007) *Global Age-friendly Cities: A Guide*

[33] Jones, B and Hayden, J (2009) *Innovation in an Age-Integrated Society*: Inno Grips

[34] Godfrey et al., 2004; Margiotta, Raynes, Pagidas, Lawson, & Temple, 2003; Parry, Vergeris, Hudson, Barnes, & Taylor, 2004; Quinn et al., 2003

[35] Godfrey, M and Johnson, O. (2009) 'Digital Circles of Support: Meeting the information Needs of older' people in *Computers in Human Behaviour* (25) 633-642

[36] The Young Foundation (2009) *Sinking and Swimming: Understanding Britain's Unmet Needs*. London:The Young Foundation