European Commission

The Silver Economy

EXECUTIVE SUMMARY

A study prepared for the European Commission DG Communications Networks, Content & Technology by:

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Executive summary

An ageing population

Europe's population is ageing as a result of falling birth rates and higher life expectancy, which will bring a number of challenges but also represents an important economic opportunity for Europe's businesses. Older citizens[1] are increasingly shaping economies, constituting a large and growing segment in many areas of consumption, and the expansion of this demographic is expected to boost demand in many sectors.

The so-called Silver Economy[2] is a concept that has caught the attention of policy makers and economic operators alike, and this promise of more growth and jobs is a powerful rejoinder to the more typical anxieties about worsening dependency ratios. The Silver Economy is a balancing factor, and one that will be profitable to businesses as well as connected to a positive and socially inclusive identity for older adults in Europe.

The recent World Bank report on Golden Aging[3] also took a positive view on developments, and argued that ageing societies are not pre-destined to experience stagnation or a decline in living standards. Individuals and firms change their behaviour in response to changing conditions, and policy can help or hinder adaptation to demographic shifts. It is clear the behavioural changes that will help reduce dependency ratios and sustain productivity will most likely not happen automatically. A supportive policy environment, with the right incentives and support measures will be key to facilitate this transition.

This report

This report was commissioned by the European Commission to support the development of Silver Economy in Europe. Technopolis Group in partnership with Oxford Economics conducted the study which comprised the following methodological steps: (i) Estimating the current and potential size of the EU Silver Economy based on statistical data and our impact model; (ii) Mapping major policy initiatives, at the national and regional level, to demonstrate the variety of sectors, geographic coverage and potential for socio-economic impact in Europe; (iii) Developing 10 case studies of the most promising opportunities, using online ideation with the stakeholder community to identify, categorise and prioritise the main determinants of opportunity areas; (iv) Formulating policy recommendations focusing on how best to foster the Silver Economy in Europe; and (v) Validating findings with a cross-section of stakeholders via a participatory workshop.

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[1] This study defines 'older people' as all those people that are aged 50 years and over. This is a large cohort that comprises a heterogeneous mix of people, and where data allow, we have further delineated the segment into more discrete groups, including for example, older people still in work and those over the age of retirement.

[2] Silver Economy is the part of the general economy that are relevant to the needs and demands of older adults. Consistent with the earlier Oxford Economics definition, this report defines Silver Economy as the sum of all economic activity that serve the needs of people aged 50 and over, including the products and services they purchase directly and the further economic activity this spending generates. Thus Silver Economy encompasses a unique cross-section of economic activities related to production, consumption and trade of goods and services relevant for older people, both public and private, and including direct and indirect effects.

[3] Golden Aging: Prospects for Healthy, Active and Prosperous Aging in Europe and Central Asia (2105) Available at: http://www.worldbank.org/en/region/eca/publication/golden-aging

This report provides an overview of the potential of Europe's Silver Economy through to 2025. Several sectors are projected to grow strongly, even assuming current dynamics. However, there are evident sticking points, which are acting as a brake on market-led developments, and which warrant a coordinated policy response, in order to support new approaches and fully realise the economic potential for Europe.

These market imperfections include information failures whereby industrial actors and service providers have been slow to recognise the impact of changing demographics and shifting consumer needs on their markets. In particular, providers do not fully understand the distinct buying behaviour of this admittedly large and heterogeneous group of older consumers and the implications for their products and services to this expanding market segment. Many innovative solutions introduced in the market are not progressing further from niche products as a result of market uncertainties, pricing issues and established business models. However, according to the Annual Global CEO Survey 2016[4], industry leaders recognise demographic changes and technological advances as megatrends that will shape business success in the next five years.

The main objective of this report is to capture the potential of the Silver Economy in Europe and to provide the European Commission with key information and a reference framework for the development of a Silver Economy strategy for Europe. The strategy will seek to boost economic growth in Europe by focusing on those particular market opportunities where there are evident barriers, and there is a potential for policy makers to help overcome those failures. Although intended to aid the Commission in their development of a European strategy, this information will also be relevant to other policy makers in European member states and regions as well as industry decision makers.

This report presents:

- A baseline estimation of the potential size of the European Silver Economy and its projected expansion over the 10-year period 2015-2025, in terms of the value of overall consumption and how this contributes to economic activities in various sectors
- A review of the challenges and opportunities for growing the Silver Economy in Europe
- A summary of 10 case studies (eight sectoral and two cross-cutting initiatives) of areas where there is a potential for strong growth going forward, subject to further policy support to help overcome evident market failures
- Conclusions and recommendations for the Commission and other stakeholders, setting out a series of suggestions as to how best one might foster the Silver Economy

This main report is supplemented by an annex, which presents

- An overview of Silver Economy-related policy initiatives across Europe
- The 10 case studies, in full.

[4] 19th Annual Global CEO Survey (2016) Available at: https://www.pwc.com/gx/en/ceo-survey/2016/landing-page/pwc-19th-annual-global-ceo-survey.pdf

Findings

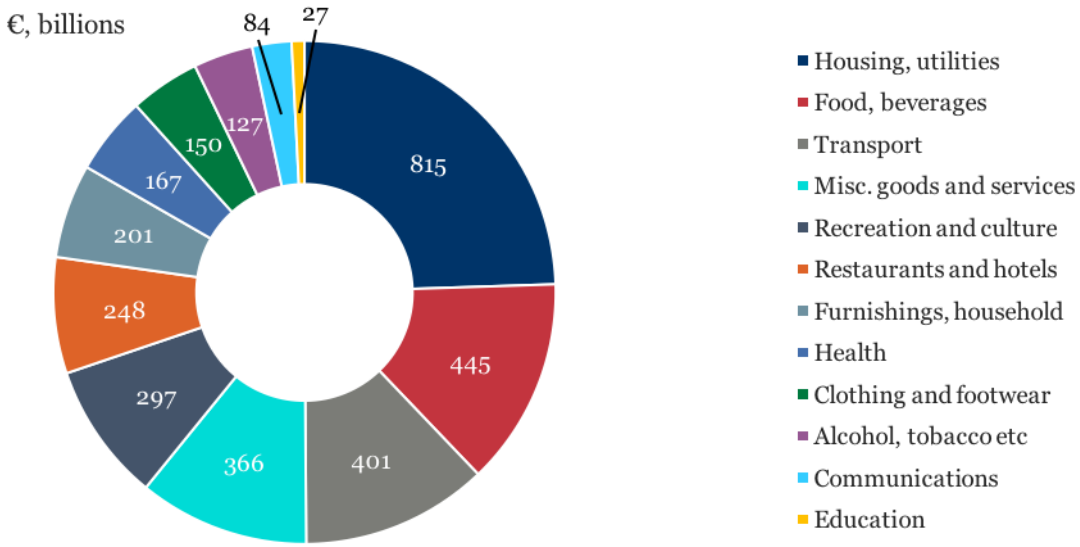
In 2015, there were some 199 million individuals aged 50 years and over, or 39% of the total population in the European Union (EU). The most recent projections suggest that figure will rise to 222 million, by 2025, and will account for 43% of the total population.

Our analysis estimated a baseline value of €3.7 trillion (2015) for Europe's Silver Economy, primarily comprising private expenditure by older people on various goods and services, from housing to recreation. Just over 10% of this total figure relates to public expenditure for the benefit of older people, through for example the 'consumption' of healthcare services provided free at the point of delivery. Looking ahead, official population projections suggest the Silver Economy will expand steadily over the next 10 years, across the EU. The baseline forecast for the Silver Economy is to expand by approximately 5% per year up to 2025, to €5.7 trillion.

The analysis has demonstrated that the Silver Economy can play a vital role in supporting activity in a hugely diverse range of sectors across EU member states. Older people constitute a relatively more important fraction of total demand in several core markets, including housing, food and household goods and services. The over-50s accounted for 54% of health-related services in 2015, fully 15 percentage points higher than their share in the total population. At the opposite end of the spectrum, there is education services where older people consumed substantially less than their share, accounting for around 28% of total consumption. Their share of consumption sits close to their share of the population (39%) across the majority of other markets.

Housing, food and transport dominate expenditure, accounting for around €1.6 trillion (53%) of older people's private consumption in 2015. There are however multiple pan-EU markets with annual income in excess of €150 billion, from clothing to restaurants and furnishings. The Silver Economy therefore plays a vital role in supporting activity in a diverse range of sectors across the EU.

Figure 1 Distribution of private consumption expenditure in the European Silver Economy, 2015



In 2015, it is estimated that the Silver Economy contributed over €4.2 trillion in GDP and sustained over 78 million jobs across the overall EU economy. This would be equivalent to 29% of EU GDP and 35% of the Union's employment. If ranked among sovereign nations, the European Silver Economy would be the third largest economy in the world, behind only the USA and China. We forecast the contribution of the European Silver Economy to GDP will reach €6.4 trillion and 88 million jobs by 2025. This would be equivalent to 32% of EU GDP and 38% of the Union's employment. Nevertheless, due to the globalised nature of modern supply chains, the European Silver Economy also creates opportunities and business for firms outside of the EU, with an estimated revenue of €780 billion generated for firms in the rest of the world, in 2015.

Our baseline forecasts assume Europe's Silver Economy will expand as a result of demographic change and a long-run GDP growth, with markets naturally responding to the changing balance of consumption. However, while that assumption may hold when it comes to the expansion in the provision of hotel rooms or established household goods, there are many areas of the Silver Economy where markets are only just developing (e.g. domestic robotics) or otherwise do not work particularly efficiently (e.g. assisted living). With strong macroeconomic rationale and policy stimulation, the Silver Economy will grow through a broad range of novel concepts and areas of interest, from connected health to smart transport. It will rewrite the rules about market drivers in existing sectors as well as create wholly new industries, at the intersection of demographic and technological change, with major export potential. Many of these areas will however need new standards and policy mixes to facilitate their growth and earlier realisation of their benefits for older people.

The ten case studies developed have been selected on their potential for growth of the market sector and ideas obtained through extensive stakeholder consultation, covering a broad spectrum of opportunities: connected health, integrated care, robotics, tourism, built environment and smart home solutions, tools/apps for data analytics for active and healthy ageing, higher education sector, driverless cars, entrepreneurship for older people, and an interactive platform to fast-track product and service development.

Connected health	Europe's national health services are expected to invest heavily in connected health systems over the next 10 years, from patient records to online prescriptions. The roll out of these all-encompassing digital systems is also expected to drive the market for new health-related software applications, mHealth devices and mHealth services. Market research companies are forecasting dramatic growth over the next 10 years, largely driven by the public sector in search of efficiency savings, however private consumption is also expected to become more prominent. Europe's software and tech firms should benefit from this rapid expansion, however competition from Japan and the US to name but two will be fierce.
Robotics and games	The European market for domestic robots and other devices for assisting older people is rather small at present, and was estimated to be worth about €13m in 2016. However, the technology is developing rapidly and it is likely that this market will begin to grow more strongly in the next 5-10 years, albeit probably in the public and third sectors before it is taken on by private individuals. The market for artificial intelligence-based applications is likely to emerge first and grow quickly, driven by leading players like Amazon and Google. The development of applications specifically for older people is likely to progress more slowly, as a result of developers' perceptions of the conservatism and price sensitivity of these markets. Europe has considerable strengths in software and underpinning research, with

	some capabilities in hardware in two or three member states.
Integrated care	The global market for ICT solutions for healthcare monitoring in private homes is expected to grow from nearly €11b in 2016 to roughly €32b by 2021. This is expected to develop quickly across much of Europe too (Northern Europe), with older citizens very much in the mix, albeit mostly for the younger and more affluent members of the wide Silver Economy cohort. More active promotion and demonstrations may help accelerate diffusion across the wider population of older citizens Europe has a strong industrial base in this sector, and is competitive globally, however US still dominates.
Smart homes	Smart home solutions have come of age and are increasingly common in new homes and they are being adopted by older people in increasing numbers, for pleasure or convenience in many cases, but also for more fundamental tasks. Home automation can help older people to live longer at home, independently. Smart home technology also relates to developments in domestic robotics (domotics) and to connected health, through the integrated care model. The smart homes market is a tiny fraction of the total European house-building market at present, however, the demand for smart home technologies is growing and is widely expected to be installed in many tens of millions of homes (across all age groups) by 2025.
Active and healthy lifestyle	The global wearable technology market could grow from €29b in 2016 to over €39b in 2018 to over €96b by 2023 and €144b by 2026m[5] which includes the following products: Smartwatches, Fitness trackers, Smart eyewear, Smart clothing, Medical devices, and other infotainment devices.
Silver tourism	European tourists aged 65+ spend on average €53 per day and €66b per year, 16% of total tourism expenditure in the EU28.[6] Globally, the 50+ population spend €109b per year on sectors directly related to tourism, close to 3% of GDP, and contributing to 100,000 jobs and inducing further economic growth in other sectors of the economy.[7]
Age-friendly universities	The global value of the connected education market could be as high as €431b by 2020, comprising of primary, secondary (€64b), higher and tertiary (€198b), and the business, corporate, vocational e-learning market (€168b)[8]. The estimated spend on higher education for older people ranges from €2m, in relation to spending on specific modules in some EU countries (e.g. in the Czech Republic) to more than €200m in relation to enrolment in full time education programmes in the UK.
Driverless cars	Autonomous vehicle technologies are developing quickly, with European car manufacturers and regulators in the forefront of developments internationally. The technologies are of especial relevance to older people, many of whom have to cope with various small impairments, which can make driving a little harder, and a little less confident. Assistive technologies are widely available in premium models, but will diffuse to lower cost models in time. Higher levels of vehicle intelligence are some years away still, however, older consumers are likely to be early adopters and should be centrally involved with development and testing.

[5] Wearable Technology 2017-2027: Markets, Players, Forecasts, IDTechEx. Available at: http://www.idtechex.com/research/reports/wearable-technology-2017-2027-markets-players-forecasts-000536.asp

[6] World Tourism Day. Eurostat News Release 183/2016. Available at: http://ec.europa.eu/eurostat/documents/2995521/7664325/4-26092016-AP-EN.pdf/59bc5872-a0e0-4666-99b3-073a82672e71

[7] The Silver Dollar – Longevity Revolution Primer, Bank of America-Merril Lynch (2015) Available at: https://ec.europa.eu/research/innovation-union/pdf/active-healthy-ageing/merrill.pdf

[8] Megatrends: Connected living, PwC (2016) Available at: http://pwcmegatrends.co.uk/mylifeconnected/education.html

	The global market for fully and partially autonomous vehicles is rather small at present, but is expected to grow steadily over the next 10 years, and is then expected to increase rapidly as the technology and infrastructure matures, from about €39b in 2025 to nearly €71b in 2035.

Figure 2 presents a schematic of the likely development of these new and emerging market sectors, as they progress from small niche through to a mainstream and ultimately mature technology. This is a variant of Rogers' innovation adoption curve, which allows one to reflect on the kinds of measures one might take to bring forward the tipping point and the point in time when mainstream adoption begins in earnest.

Figure 2 Roadmap for market developments, 2015-2025

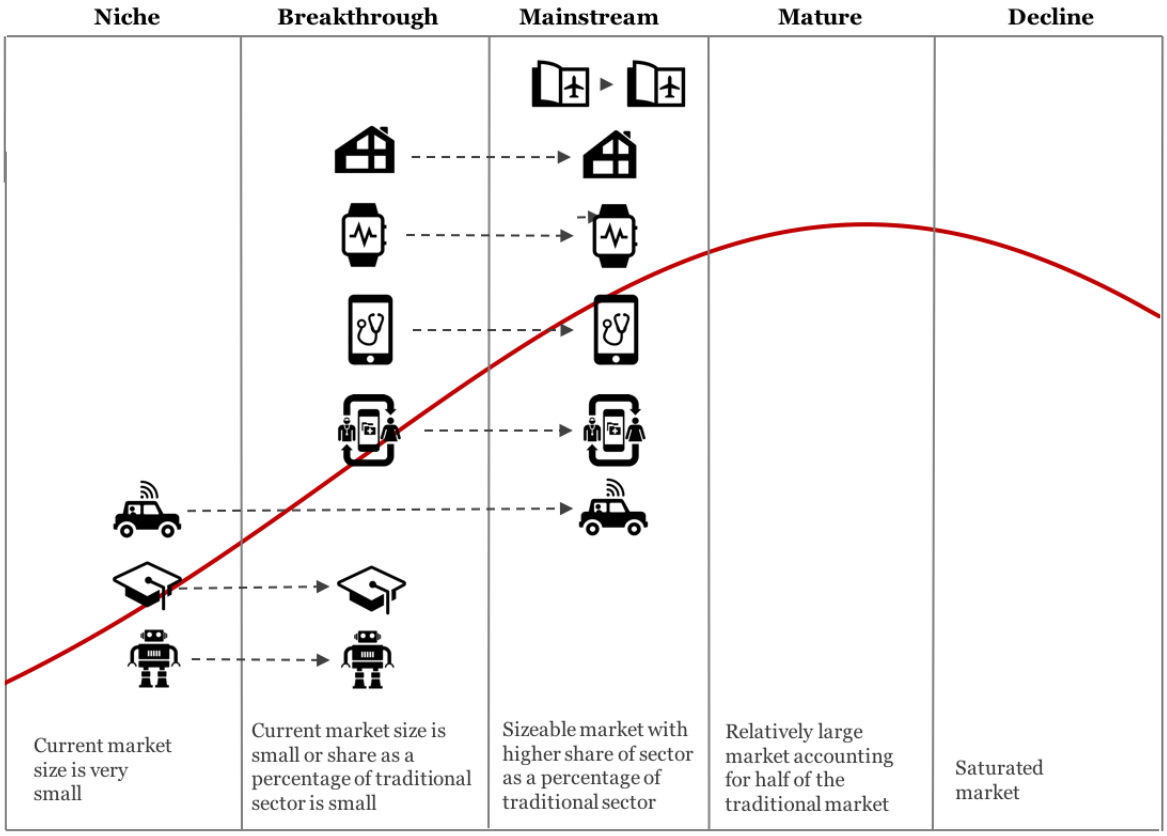
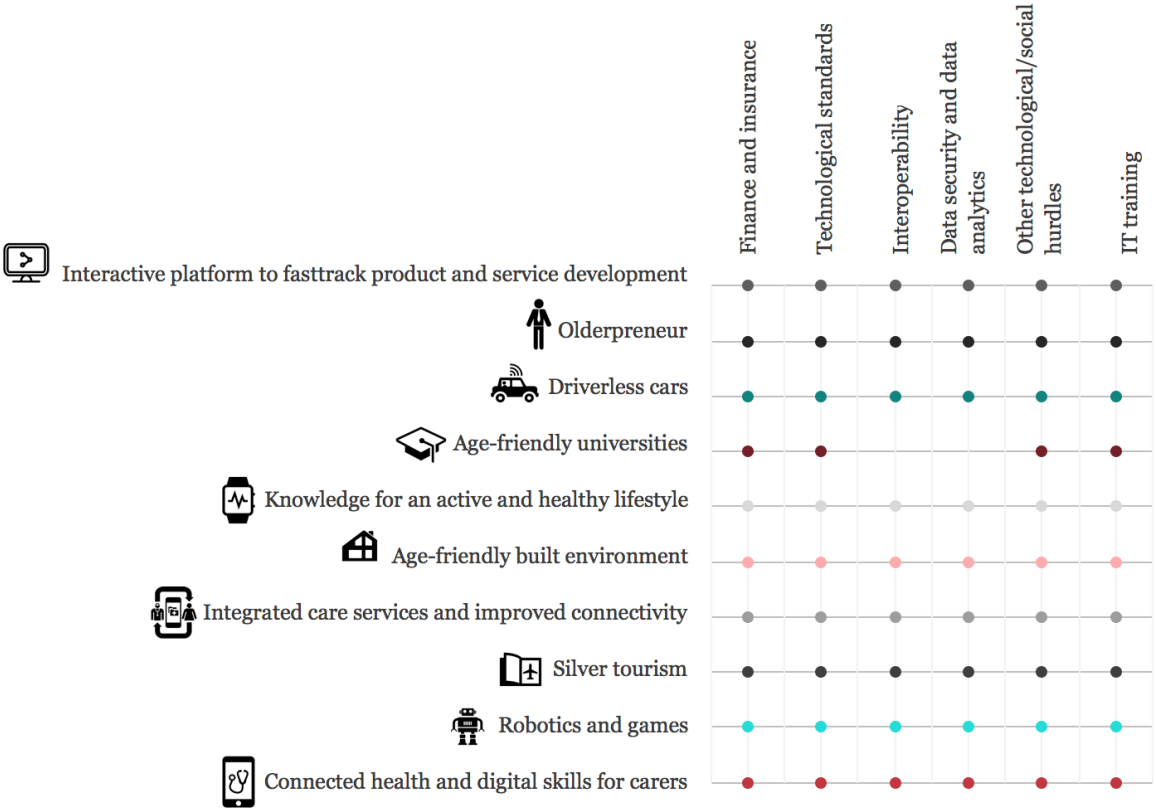


Figure 3 presents a schematic illustrating the idea that all of these new or emerging Silver Economy opportunities will need to contend with several major challenges before they can hope to progress from niche to mainstream. These market failures encompass classic information asymmetries and network failures, which warrant public intervention.

Figure 3 Overview of challenges for market development



Many of these new opportunities have the potential to reshape private consumption patterns over time, with the potential for differential growth rates within and between broad market sectors. For example, a more active and healthy older population may lead to higher expenditure in areas like recreation or transport and less in others, assuming there is no substantial increase in overall private expenditure. Equally, we may see major changes within markets, as for example, more generic food products lose out to functional and healthier fare.

In summary, the needs and demands of older people to live healthier, longer active and independent lives and their willingness to expend on new market solutions will underpin, together with adequate policy support, a growing European Silver Economy and provide new jobs and growth in future.

Existing initiatives and Case for new multi-policy approach

There are multiple examples of national or regional initiatives across Europe relating to many areas of interest for Silver Economy, however, these are often relatively small initiatives, possibly pilot schemes that may not be rolled out more fully. Even the more established schemes would typically be found in two or three countries only, rather than being more widely distributed. This patchiness reflects local differences to some extent, but for the most part, it seems that the initiatives are emerging bottom up and there is relatively limited information exchange or cooperation among member states. We see a *prima facie* case for a series of EU level actions that will allow policy makers and practitioners to understand what

their counterparts are doing in other countries, which would facilitate mutual learning (about effectiveness) on the one hand and develop a shared agenda and joint actions on the other.

Elsewhere, challenges have been a focus for EU and member state actions for very many years, but persistent and possibly expanded attention is warranted. As a case in point, stakeholders remarked on the need for greater interoperability across devices, services and systems in order to see the emergence of connected healthcare systems, which link healthcare providers with the wider population and particularly older people and their carers.

There is already significant ongoing work on developing standards and joint initiatives among policy makers and industry across Europe. Indeed, DG CONNECT has been at the centre of these activities along with other Directorate Generals of the Commission. A Taskforce was recently established to take health and digital policies further and closer, and transform health and care in the European digital single market.[9] For example, there are a number of policy initiatives underway for ageing well with ICT, including work on independent living, robotics and age-friendly housing.[10] The European 'Blueprint' reflects a shared policy vision of European policy makers, civil society, professional organisations and industry. In total, the network of Reference Sites represents an overall investment commitment of over €4 billion (2016-2018) in the deployment and scaling-up of digital innovation for active and healthy ageing.[11]

There is however a much needed role for policy makers to better coordinate across broader policy areas and between the EU, its member states and regions. This activity combined with a concerted investment effort is expected to set the fledging European Silver Economy on a positive trajectory that should deliver benefits earlier and at a larger scale. The cost of not acting is harder to determine. It is clear, however, that many other countries identified the ageing population as a major market opportunity, which will lead to fierce global competition. Consumers will buy products from outside of Europe if European businesses fall behind and miss the window of opportunity. On a positive note, an unlocked Silver Economy in Europe will use indigenous supply chains and provide a steady platform for increased exports for businesses.

Building on the work of this extensive study, a new multi-policy approach is proposed structured around five high-level recommendations. These relate to priority areas, each one of which has the potential to boost Europe's Silver Economy – consumption and economic output – by hundreds of millions of Euros each year, within 5-10 years.

Recommendations for future policy directions

1. Continue to support the concept of healthy ageing

Around 60% of older people never exercise[12] despite the fact that healthy and active lifestyles are known to be important for body and mind, keeping chronic illnesses at bay, and living

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[9] Taskforce on Health and Digital policies. Available at: https://ec.europa.eu/digital-single-market/en/blog/taskforce-take-health-and-digital-policies-further

[10] Policies for Ageing Well with ICT. Available at: https://ec.europa.eu/digital-single-market/en/policies/ageing-well-ict

[11] Blueprint on Digital Transformation of Health and Care for the Ageing Society. Available at: https://ec.europa.eu/eip/ageing/blueprint_en

[12] Sport and Physical Activity. Special Eurobarometer Report 412 (2014) Available at: http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_412_en.pdf

more independent and healthy life years. There is a continued need to support 'champions' to raise awareness of the benefits of an active and healthy lifestyle (and the risks of inactivity) and help change behaviour, not forgetting to also address those in their 40s already. Our case study on **Knowledge for an active and healthy lifestyle** demonstrate that there must be a technological and social readiness to act. Importantly, however, Europe could strengthen the connection between recreation and physical and cognitive activities more generally, and the case developed for **Silver Tourism** should be particularly appropriate to promote in the future.

2. Continue to support the digital revolution in health and care

Connected health and social care will benefit older people disproportionately, and while there are many actors in the public and private sectors busy developing integrated solutions, there is less attention given to the role older citizens may play in accelerating deployment of these new health and care systems.[13] It is therefore important to promote digital skills and training directly among older people and their caregivers. In addition, enhanced monitoring and data sharing across private homes, care homes and hospitals will lower costs and enhance quality of care. Our case studies on **Connected health** and **Integrated care services and improved connectivity** show the vast size of this opportunity and underline the need that health and social care become joined up through the digital agenda.

3. Promote the active participation of older people in the labour market

Europe 2020 singled out the need to retain more older people in the workforce past retirement age, in order to help deal with the problem of a shrinking workforce. Working for longer may have other benefits too, including increasing people's disposable income and improving wellbeing. From this perspective, there is a triple economic benefit: reducing skills shortages and wage inflation; increasing purchasing power and decreasing healthcare costs. Businesses can benefit from the experience of older people, through direct employment, executive mentoring or even equity investment. Moreover, there has been an increase in the numbers of older people launching their own businesses, where they make use of their commercial experience, personal financial resources and extensive social capital. A more flexible and age-friendly workplace and the availability of phased retirement would therefore enhance participation of older people in the labour market. **Age-friendly universities** could usefully contribute to reskilling or support career change for older people, while our **Olderpreneur** case study shows a number of specific actions that could be taken to enhance the social-economic contribution of older people.

4. Continue to support innovation of products and services targeted towards independent living in age-friendly neighbourhoods and cities

Automation of everyday life activities would greatly benefit older people. Smart homes have been predicted for more than 20 years, yet relevant technologies have so far largely failed to take off in mainstream residential housing. There is a sense that the proliferation of smart

[13] Flash Eurobarometer 404 on digital health literacy (2015) found that older people were very much less likely than the population overall to use the Internet and online resources to help manage their own health. Available at: http://ec.europa.eu/commfrontoffice/publicopinion/flash/fl_404_en.pdf

devices and the explosion in mobile apps may represent a turning point. With the great majority of older people preferring to stay in their existing homes, a shift from health and social care settings to smart homes will provide economic rationale for public support. Our case study on the development of an **age-friendly built environment, including smart home solutions and robotics** provide relevant information on market prospects, useful examples and more detailed possible policy actions. In addition, older people will benefit predominantly from advances in automation of vehicle technology as it will enhance their social inclusion and mobility. Our case study on **driverless cars** expands on the potential market size, while emphasises that the needs of older and more frail people must be taken into account so that the full potential of this emerging sector can be exploited. Support from policy makers are thus necessary so that the legal and ethical framework and cross-industry standards reflect the needs of all consumer segment, including those of the older people.

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