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D4 Report on SHAFE policies, strategies and funding

International Interdisciplinary Network on

Smart Healthy Age-Friendly Environments | NET4Age-Friendly

COST Action 19136 (2020-2024)

EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

Funded by the European Union

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EXECUTIVE SUMMARY

The objective of Working Group (WG) 4 of the COST Action NET4Age-Friendly is to examine existing policies, advocacy, and funding opportunities and to build up relations with policy makers and funding organisations. Also, to synthesize and improve existing knowledge and models to develop from effective business and evaluation models, as well as to guarantee quality and education, proper dissemination and ensure the future of the Action. The Working Group further aims to enable capacity building to improve interdisciplinary participation, to promote knowledge exchange and to foster a cross-European interdisciplinary research capacity, to improve cooperation and co-creation with cross-sectors stakeholders and to introduce and educate students SHAFE implementation and sustainability (CB01, CB03, CB04, CB05).

To enable the achievement of the objectives of Working Group 4, the Leader of the Working Group, the Chair and Vice-Chair, in close cooperation with the Science Communication Coordinator, developed a template (see annex 1) to map the current state of SHAFE policies, funding opportunities and networking in the COST member countries of the Action. On invitation, the Working Group lead received contributions from 37 countries, in a total of 85 Action members. The contributions provide an overview of the diversity of SHAFE policies and opportunities in Europe and beyond. These were not edited or revised and are a result of the main areas of expertise and knowledge of the contributors; thus, gaps in areas or content are possible and these shall be further explored in the following works and reports of this WG. But this preliminary mapping is of huge importance to proceed with the WG activities.

In the following chapters, an introduction on the need of SHAFE policies is presented, followed by a summary of the main approaches to be pursued for the next period of work. The deliverable finishes with the opportunities of capacity building, networking and funding that will be relevant to undertake within the frame of Working Group 4 and the total COST Action. The total of country contributions is presented in the annex of this deliverable.

Table of Contents

List of contributors 6
1. Introduction | Why SHAFE is needed 7
1.1 SHAFE origin and objectives 7
1.2 Working on the realisation of SHAFE 8
1.3 SHAFE mid-term goals 10
1.3.1 Housing / Built Environments 11
1.3.2 Social Participation 12
1.3.3 Communication and Information 12
1.3.4 Health and Community Services 13
1.3.5 Further integration of citizen-centred care 13
1.4 United Nations Sustainability Development Goals 13
1.5 EU policy on SHAFE 14
2. Mapping SHAFE 16
2.1 Mapping SHAFE policies per country/region 16
2.2 Mapping relevant stakeholders and policy makers 16
2.3 Mapping partners' ecosystems interesting for NET4 17
2.4 Mapping funding opportunities interesting for NET4 consortium 18
2.5 Mapping relevant business models and sustainability means 18
2.6 Facilitators, the Learning Repository and the Exploitation Booster Mechanisms 18
3. Conclusions and further actions 20
4. ANNEXES 21
4.1 ANNEX 1 – Template country inventory 21
4.2 ANNEX 2 – Country contributions 22
1. Albania 22
2. Austria 23
3. Belgium 25
4. Belarus 28
5. Bosnia and Herzegovina 29
6. Bulgaria 37
7. Croatia 41
8. Cyprus 44
9. Czech Republic 46
10. Denmark 47
11. Estonia 49
12. Finland 50

13. Germany 57
14. Hungary 59
15. Iceland 64
16. Ireland 71
17. Italy 76
18. Japan 78
19. Kosovo 82
20. Latvia 84
21. Lithuania 86
22. Moldova 87
23. Montenegro 92
24. Netherlands 94
25. North Macedonia 97
26. Norway 98
27. Poland 101
28. Portugal 104
29. Romania 114
30. Serbia 118
31. Slovenia 123
32. Spain 126
33. Sweden 133
34. Switzerland 134
35. Tunisia 136
36. Turkey 137
37. United Kingdom 137

4.3 ANNEX 3 - Points of focus and positions 140

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1. Introduction | Why SHAFE is needed

1.1 SHAFE origin and objectives

The journey of SHAFE (Smart Healthy Age-Friendly Environments) started with the naivest enthusiasm, as all small things start. Thanks to so many committed organisations and individuals in Europe, a very small conviction and dream has grown into a solid movement. And even into a new word: SHAFE. This only happens when ideas make sense and come in the right historic time. The meaning and notion of SHAFE as a holistic approach that promotes the alignment of policies and strategies is a unique roadmap for the implementation in and across Europe.

To introduce the NET4Age-Friendly mapping of policies and models, an introduction that refers to the concept and evolution of the SHAFE concept, as well as its implementation in specific projects is needed.

Smart, adaptable and inclusive solutions can help improve and support independent life throughout the course of life, regardless of age, gender, disabilities, cultural differences and personal choices.

A holistic approach that optimizes social and physical environments, supported by digital tools and services, allows to provide better health and social care, promoting not only independent living, but also equity and active participation in society. This approach follows the United Nations' line-up, with the Sustainable Development Goals (in particular Objectives 3 and 11), stating that sustainable environments for all ages represent the basis for ensuring a better future for the entire population and addressing most of the growing issues of the ageing population.[1]

The challenges of different sectors, such as ICT, the building industry and urban planning and the health and social care, as well as those of citizens and their communities are interlinked. Responding to these challenges will foster awareness and support for the creation and implementation of smart, healthy and inclusive environments for present and future generations that enable them to learn, grow, work, socialise and enjoy a healthy life, benefiting from the use of digital innovations, accessibility solutions and adaptable support models in the European context.

The community is the physical, social and cultural ecosystem closest to people, built on relationships of trust, sharing, solidarity and intimacy, where people find social, cultural and identity references, socialise and live their daily lives. The objective conditions of the environment (pollution, accessibility, mobility, safety, comfort) affect the quality of life and wellbeing of citizens, particularly in the context of climate change and thus affect the whole community circle.

Thus, we foster actions that promote partnerships between technological and digital innovation, architecture, urban planning, social studies and health sciences to design and simulate communities of belonging that leverage on the potential of each sector to promote the existential dignity of all persons, regardless of their age, gender, health, social, educational, economic, cultural and identity conditions, as well as the levels of development of the region where they live.

This is SHAFE. This new concept was created since 2017, based on the desire to implement Smart Healthy Age-Friendly Environments (SHAFE) across Europe, fostering happier and healthier people in all communities. This idea took shape and became a solid movement.

[1] https://sdgs.un.org/goals (Accessed: October 1st, 2021).

SHAFE began as a Thematic Network[2], approved by the European Commission, to draw policy makers, organisations and citizens' attention to the need of better alignment between health, social care, built environments and ICT, both in policy and funding and delivered a Joint Statement and a Framing Paper in December 2018 to the European Commission and Member States.

After this, SHAFE evolved to a European Stakeholders Network in 2019, which currently has over 170 partner organisations and is coordinated by Carina Dantas and Willeke van Staalduinen. This is followed by the installation of COST Action 19136 International interdisciplinary network on smart healthy age-friendly environments (NET4Age-Friendly) in 2020.

The Stakeholders Network was working to achieve better COOPERATION and IMPLEMENTATION, as the major challenges for the next period, as stated in the Position Paper released in 2020, with recommendations that aim to promote healthier environments for all citizens and make environments accessible, sustainable and reachable for all, with the support of ICT.

The pandemic has uncovered the major opportunities and benefits of turning digital. However, single digital solutions are not the panacea to all the societal challenges. Citizens across different age groups also need personal human contact; they need to meet, to talk to each other, to hug and to love. Digitalization cannot replace this human need but can be a powerful vehicle to support people. The scenario during 2021 is an opportunity for the digital revolution to be well thought and implemented, if all the adequate challenges are well considered and tackled.

The Smart Healthy Age-Friendly Environments Network thus focus on the narrative, debate, disclosure and knowledge translation of solutions to optimize the physical and social environments of individuals in a concerted manner.

From the early concept, several projects have been implementing SHAFE in the field: NET4Age-Friendly is one of the most recent.

1.2 Working on the realisation of SHAFE

Since the launch of SHAFE as thematic network in 2018, several initiatives and projects took place since then. Besides the approval of SHAFE as COST Action CA19136 International interdisciplinary network on smart healthy age-friendly environments, other projects related to SHAFE were approved.

Erasmus+ is the EU's programme to support education, training, youth, and sport in Europe in multinational consortia. These areas are key to support citizens' personal and professional development. High quality, inclusive education and training, as well as informal and non-formal learning, ultimately equip participants of all ages with the qualifications and skills needed for their meaningful participation in a democratic society, intercultural understanding, and successful transition in the labour market. Within the frame of Erasmus+, training and education is developed to empower facilitators to implement smart healthy inclusive environments in their community. Projects such as "Hands-on SHAFE"[3], "Educational game BIG"[4], "Bridge the Gap!"[5], and "DESIgn for all methods

[2] https://en.caritascoimbra.pt/shafe/ (Accessed: October 1st, 2021).
[3] www.hands-on-shafe.eu (Accessed: October 1st, 2021).
[4] www.big-game.eu (Accessed: October 1st, 2021).
[5] www.bridgethegap-project.eu (Accessed: October 1st, 2021).

to cREate age-friendly housing" (DESIRE)[6] supported by the Erasmus+ programme include adult learners in the field of inclusive environments.

"Hands-on SHAFE" aims to deliver online training packages for informal learning experiences and hands-on tools to improve the skills of people of all ages and especially seeks to enable persons with lower skills or qualifications to choose and implement SHAFE in their own homes or neighbourhoods. In this way, the project fosters and promotes social inclusion for people of all ages and genders, including people with cognitive or physical impairments or disabilities. It also aims to enable citizens to become innovators and trailblazers in their own neighbourhoods or to become entrepreneurs in the field of SHAFE services and products.

The educational game "Building Inclusive environments for all Generations" (BIG) elaborates further on the training about SHAFE by developing an online game. The player can meet and solve the challenges of characters during the play, such as inaccessible housing for a wheelchair, loading goods in a car while taking care of a child, or visiting a restaurant with impaired sight. The project will also develop a workshop methodology to use the game in joint training settings.

The "Bridge the Gap!" project focuses on the training of older people to create and improve their own living environments to support independent living and participation in society. On the one hand, the training offers traditional means to advocate their interests. On the other hand, it will focus on the capacity building of older adults to use digital skills to improve their social and digital participation. Such digital actions include accessing social media, building online advocacy accounts, or sharing photos to express to stakeholders and decision-makers specific local needs to improve the local living environment.

The DESIRE project is developed by an international partnership involving four countries working on a design for all (D4ALL) concept applied to age-friendly housing. DESIRE aims to provide professionals in the building industry as well as furniture and home furnishings sector with the tools and skills to apply D4ALL methods as an integral part of the design process, with the aim to create or adapt age-friendly housing as a solution for the well-being, comfort and autonomy of older adults or people in situation of dependency at home. The project will develop an innovative training course on D4ALL to meet the emotional, cognitive, and social needs of older adults while driving new opportunities in the habitat sector, fostering interactions and knowledge exchange in the design process between cross-cutting fields such as science, social sciences, and arts.

Within the Interreg Europe programme of funding, another SHAFE initiative was granted: the EU_SHAFE project (2019-2024).[7] The EU_SHAFE project will improve policies and practices in 6 European regions by developing a comprehensive approach to Smart Healthy Age-Friendly Environments (SHAFE). Through a 'learning by sharing' methodology, this robust multi-disciplinary and intersectoral consortium will build a four-helix European community to exchange experiences and practices to improve multilevel policy instruments. The consortium will create a cooperative, inclusive ecosystem between public authorities, European networks and user's associations, embedding their experience and skills with research & design knowledge from academia and SMEs for the growth of community-based services and "ageing at home" around Europe. EU_SHAFE will invest in policy design and adaptation of regional instruments derived from ETCF (R&I priorities) and ESF (Social Inclusion), through the creation of a large Euro-local network of stakeholders that will work together in ecosystems towards a common model – a White Paper on SHAFE. Select and re-design concrete and

[6] www.projectdesire.eu (Accessed: October 1st, 2021).
[7] https://www.interregeurope.eu/eushafe/ (Accessed: October 1st, 2021).

scalable interventions in the area of social innovation for SHAFE, that may be implemented as realistic innovative models for the future.

1.3 SHAFE mid-term goals

As referred in the SHAFE Position Paper released in 2020[8], it is important to acknowledge the serious societal challenges in current times, especially those related to demographic change and the COVID-19 pandemic, implying it is not possible anymore to work in silos or to keep positions for individual interest. Before any other role, we all are citizens and we have a duty as researchers, academics, policy makers, practitioners, industry and business to work together in a bid for a better world.

SHAFE will aim to continue providing its contributions, most of all to maintain and continue to collate and collaborate the innovative contributions from its partners with the view of a shared vision: to implement Smart Healthy Age-Friendly Environments around Europe and promote happier and healthier people in all communities.

SHAFE focuses on the following areas:

CITIZENS

- To be digitally skilled
- To be aware and understand the benefits and challenges on the sharing of their data
- To be engaged in healthier lifestyles (including through increased health literacy)
- To participate and engage (in the democratic life)
- To maintain or improve as much as possible their social networks and relationships

ENVIRONMENTS

- To retrofit and adapt the housing stock
- To foster accessible and adapted public spaces and transport
- To implement climate neutral solutions
- To promote health & wellbeing in the workplace

HEALTH AND CARE

- To promote reliable, safe and accessible big data
- To implement robust and interoperable digital infrastructures
- To foster integrated, personalized, affordable and person-centered solutions (new pathways)
- To implement guidelines and long-term funding solutions/business models
- To train care professionals on digital skills.

By 2022, the Stakeholders Network on SHAFE aims to achieve mainly COORDINATION and IMPLEMENTATION of SHAFE solutions including dealing with public health emergencies such as pandemic outbreaks, specifically the following higher-level goals:

[8] https://en.caritascoimbra.pt/wp-content/uploads/sites/3/2020/10/SHAFE-Position-Paper-011020.pdf. (Accessed: October 1st, 2021).

- ✓ Promote training of formal and informal caregivers (communities) on SHAFE, creating a toolkit and implementing training actions in multiple countries (building on the Erasmus+ project hands- on-SHAFE main outputs);
- ✓ Raise awareness on the need to enhance prevention, social care, building infrastructure and environment conditions in order to move Health and Wellbeing provision to the home and towards community and personalized prevention — to a Health and Wellbeing value-based approach (through COST Action NET4Age-Friendly);
- ✓ Jointly develop sustainable business cases with insurance companies and investors and support public authorities and health and social care providers on implementing SHAFE, especially regarding building or restructuring the built environment to include ICT solutions with integrated health and care provision and safe human interrelations, to foster future investments on smart healthy environments (building on the ElPonAHA Innovation to Market (I2M) and DigitalHealthEurope project findings, through the ECHAIIiance);
- ✓ Organise education and raise awareness of urban planners, architects and ICT-developers in general to focus on PEOPLE and PLACES and focus research on lifelong learning, evidence-based design, smart healthy environments and empowerment, and social distancing (with SHAFE and ElPonAHA stakeholders).

POLITICAL MEASURES TO IMPLEMENT IN SHAFE ECOSYSTEMS:

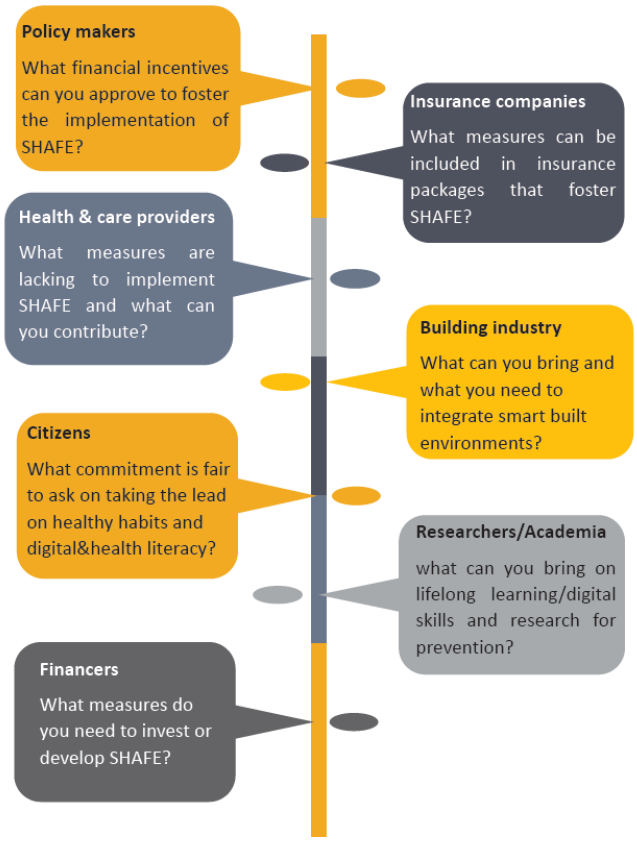


Figure 1 - measures per stakeholder group to realise SHAFE

1.3.1 Housing / Built Environments

In the field of Housing/Built Environments (urban and rural), inequal conditions of living highlight the importance of providing housing with the necessary conditions for adult people to stay in their homes as they age, namely through:

- ✓ Access to adapted residences or financial and technical support for adaptation and requalification works;
- ✓ A sufficient supply of adaptable housing;
- ✓ Increased energy efficiency of housing and equipment;
- ✓ Introduction of eco-psychological perspectives of planning and managing built environments;
- ✓ Prioritizing and pointing out people in social and financial needs, promoting more favourable environments.

In this area, the emerging needs and requirements of retrofitting existing buildings adds to the building demands of new housing structures with climate change resilience.

The creation of support infrastructures for alt citizens, including older people in the face of extreme climate phenomena, and the promotion of a landscape architecture of urban space that allows a higher life quality for citizens must also be added.

Outdoor spaces and buildings, such as meeting places, shops, public transport and restaurants have to be accessible, affordable and safe to enable people to meet each other and socialise, to travel or to buy their daily shopping. The coronavirus outbreak brings the society to think of new and innovative building concepts in which safe social distancing and social meetings still can take place.

The houses need to be considered as a potential space for work and life 24 hours a day.

This can be the perfect storm to organize new building standards and retrofitting programmes that will allow also for a better ageing at home and in the community.

1.3.2 Social Participation

In the field of Social Participation, the challenges refer often to:

- ✓ Attracting new residents to tow density territories, especially those unbalanced in terms of ageing and demography;
- ✓ Enhancing mid-level professions essential for training caregivers and workers in social care;
- ✓ Reorganisation of and training according to current and future territorial needs;
- ✓ Promotion of the civic participation and advocacy of potentially vulnerable groups, such as older adults, socially and economically disadvantaged, migrants and refugees, amongst others.

Social participation is a right that should be promoted and protected but also a duty of citizens to promote social cohesion, a more participatory democracy and the development of adequate societal transformation.

It is essential to engage a broader range of European population in policy decisions, including the adequate use of resources and the definition of the priorities of investment.

To this aim, also more territorial balance is needed; adequate training and literacy enhancement are some of the most relevant activities to progress. awareness raising and intergenerational initiatives can also boost a more participatory engagement.

1.3.3 Communication and Information

In the field of Communication and Information, expressed needs are associated with:

- ✓ Effective appropriation of information by all types of target audiences, regardless of their age, educational background, training, level of literacy or possible difficulties and disabilities.
- ✓ Citizens having access to “good Information” through the most appropriate means or tools.
- ✓ Quality health promotion, namely through cognitive stimulation, as well as increased digital literacy.

This also implies that it is necessary to gain greater understanding of various topics including:

1) the effects of increased use of social media,

2) take a critical assessment on the societal mission of journalism,

3) understand the poor use of information.

These areas are of high societal relevance and need to be addressed because to promote health and healthy behaviour, adequate (governmental) information supply is crucial.

1.3.4 Health and Community Services

In the area of Health and Community Services several needs exist, namely the:

- ✓ Humanisation of health services, in particular the increase of medical appointments duration, better interaction between patient and professional, good adherence habits and more human and equipment resources;
- ✓ New healthcare delivery concepts that prevent isolation and lack of access, namely those that are sustainable and of high-quality; promote physical activity; that can provide solutions for pandemic or emergency situations; and reduce virus spreading to staff and other patients;
- ✓ The reinforcement of workers and services in general, and in the area of mental health in particular, especially for children and the ageing population.

1.3.5 Further integration of citizen-centred care

- ✓ Integration of SHAFE key elements in built healthcare assets;
- ✓ Person-centred life-course approach of health promotion.

The urgency to promote better and greater articulation between primary and community care partners must be addressed. This is specifically aimed towards greater prevention for less treatment. At the level of challenges, greater innovation has been proposed at the home care level, with the introduction of differentiated services. However, there is still a road to go through regarding palliative and long-term care, with a view to facilitating the adequate environment with less waiting lists. Additionally, there is still a need for greater articulation of health and social policy agendas. Furthermore, there is a need for flexibility in the delivery of services and cooperation agreements that allow innovation to engage.

1.4 United Nations Sustainability Development Goals

Figure 2 - SHAFE / NET4Age-Friendly recognised by the United Nations as a good practice

SHAFE / NET4Age-Friendly recognised by the United Nations as a good practice[9]

The United Nations launched an Open call for good practices, success stories and lessons learned by all stakeholders in the implementation of the Sustainable Development Goals and the 2030 Agenda.

More than 700 submissions were reviewed by a team of experts from United Nations entities and "**SHAFE implemented through NET4Age-Friendly**" **was one of the recognized good practices from all over the world**.

SHAFE and NET4Age-Friendly are international networks that engage all levels of society with the intrinsic aim of promoting the development of local, regional or national inclusive ecosystems (composed of a quadruple helix of citizens, public authorities, companies, and researchers) which interact and coordinate at the international level. This strategy allows them to literally become viral, by exponentially increasing the networking, the dissemination and knowledge exchange among scientists, business, public, local administrations, policy makers, professionals, and citizens. This brings an inspiring and fruitful new way of cooperation that fosters knowledge and promote grassroot implementation at a broader scale, combining top-down and bottom-up perspectives.

The meaning and notion of SHAFE as a holistic approach that promotes the alignment of policies and strategies is a unique roadmap for the implementation in and across Europe. When we acknowledge the serious challenges, especially those related to demographic change and the COVID-19 pandemic, it is not possible anymore to still work in silos or to keep positions for individual interest. Before any other role, we all are citizens and we have a duty as to work together in a bid for a better world. COVID has not directly impacted the implementation of SHAFE, *au contraire*, the inclusive environments proposed by NET4Age-Friendly would be adequate solutions to minimise the effects of the pandemic and relieve the pressure on health and care systems.

1.5 EU policy on SHAFE

The demographic trends that have been ongoing worldwide are deeply influencing the organisation and delivery of social and health services, in the effort of addressing the growing complexity of citizens' needs and to further complicate the challenge, the current Covid-19 pandemic has been increasing the risk of exclusion, poverty, inequalities in the access to health, social care, other public services and, moreover, increasing the digital divide.

Europe has been making an unprecedented effort for a concerted action towards a more Equal EU and this implies supporting collaborations to develop and implement a shared vision to strengthen EU research and innovation, and bringing together all the relevant actors at European, national and regional levels, across different policy areas to handle these societal challenges and involve all levels of the innovation chain.

The life-course approach that is at the heart of SHAFE is now embedded in the European Green Paper on Ageing[10], that focuses on a life-cycle approach and on individual and societal implications of ageing. Innovations are a key enabler for accessibility, sustainability, integration and equity of social and health services: hence the need to ensure adequate, multidisciplinary approaches to education and

[9] https://sdgs.un.org/partnerships/shafe-implemented-through-net4age-friendly (Accessed: October 1st, 2021).
[10] https://op.europa.eu/en/publication-detail/-/publication/d918b520-63a9-11eb-aeb5-01aa75ed71a1/language-en (Accessed: October 1st, 2021).

learning of the professional workforce across sectors, and life-long learning to foster intergenerational solidarity and fairness between both young and old.

The same approach is reflected in the EU4Health 2021-2027 strategy[11]: our vision for a healthier Union, the response to improve the resilience of European Health systems. Such program coherently supports international cooperation through its 10 objectives, that focus on disease prevention and health promotion, preparedness for cross border health threats, strengthen health data and accelerate the digital transformation. New knowledge and evidences will be generated, as a basis for the development of informed political and strategic interventions translating the good practices and tools into services for the citizens.

A life course, proactive approach, overcomes the boundaries of the health sector and spans in the environment where we live and thrive: hence the pillars of the European planning for 2021-2027, focusing on the "twin transitions": green and digital, where advances in robotics and smart tech are going to speed up the circular economy and implement the European Green Deal from recovery to social innovation.

[11] https://ec.europa.eu/health/funding/eu4health_en (Accessed: October 1st, 2021).

2. Mapping SHAFE

SHAFE policies refer to the coordinated efforts to implement Smart Healthy Age-Friendly Environments across Europe, fostering happier and healthier people in all communities. Such policies need a synergic action at the locoregional, national and international levels in order to achieve better alignment between health, social care, built environments and ICT, both in policy and funding.

Four main mapping strategies were retrieved when developing WG4 works and collecting the country reports. These areas will be further explored in the following three years of the Action:

2.1 Mapping SHAFE policies per country/region

Despite the Joint Statement and a Framing Paper in December 2018 to the European Commission and Member States was delivered by a large community of stakeholders, there is currently a large variety of policies at the local, regional and national levels. The President of Portugal supported SHAFE in 2018, and a Portuguese national network on SHAFE was established. The holistic approach that highlights SHAFE policies also occurs in Ireland, Spain, the United Kingdom and Japan, where age-friendly policymaking is part of national or regional policy. Other countries have local age-friendly policies, such as The Netherlands, Iceland and Poland. In these and many other countries, municipalities became a member of the World Health Organisation Global Network on Age-friendly Cities and Communities (1100 members worldwide). Finally, other involved countries seem not to have a stable set of policies and holistic approaches.

Concluding, every country develops policies of single or multiple outcomes of SHAFE. These outcomes are to promote independent living, foster participation and social inclusion and secure healthy ageing is found in many policies that partners report. The concerted, multifaceted approach of SHAFE is not clear yet to find in most countries, however some cross-sectoral developments are already taking place. Partners describe the involvement of Ambient Assisted Living solutions in projects, funding and pilots to promote independent living. This approach brings together smart solutions and living environments. Combat isolation or support participation of individuals in society are often joint initiatives from municipalities, housing organisations, welfare institutions and volunteers'' organisations at local level. Healthy ageing is part of various public health programmes in many countries.

2.2 Mapping relevant stakeholders and policy makers

As indicated by the contributors, the main players in the field of SHAFE are local and national authorities. In countries with a strong regional focus, such as Spain and Italy, regional authorities play the most important role on SHAFE. Sometimes, as is the case in Portugal, non-profit organisations define policies on social, digital and healthy issues.

Coordination between national and regional policies need to be further explored and described in order to complement the different roles of public and private organisations.

2.3 Mapping partners' ecosystems interesting for NET4

Half of the countries report to have one or more ecosystems that are related to SHAFE and/or interesting for NET4. Most of the ecosystems are local or regional.

To improve the capacity of NET4Age-Friendly members on building and maintaining ecosystems, a webinar was organised by Action members from the ECHAlliance: How to build and nurture a regional/national ecosystem. The webinar gathered around 70 participants, on the 29th April 2021.

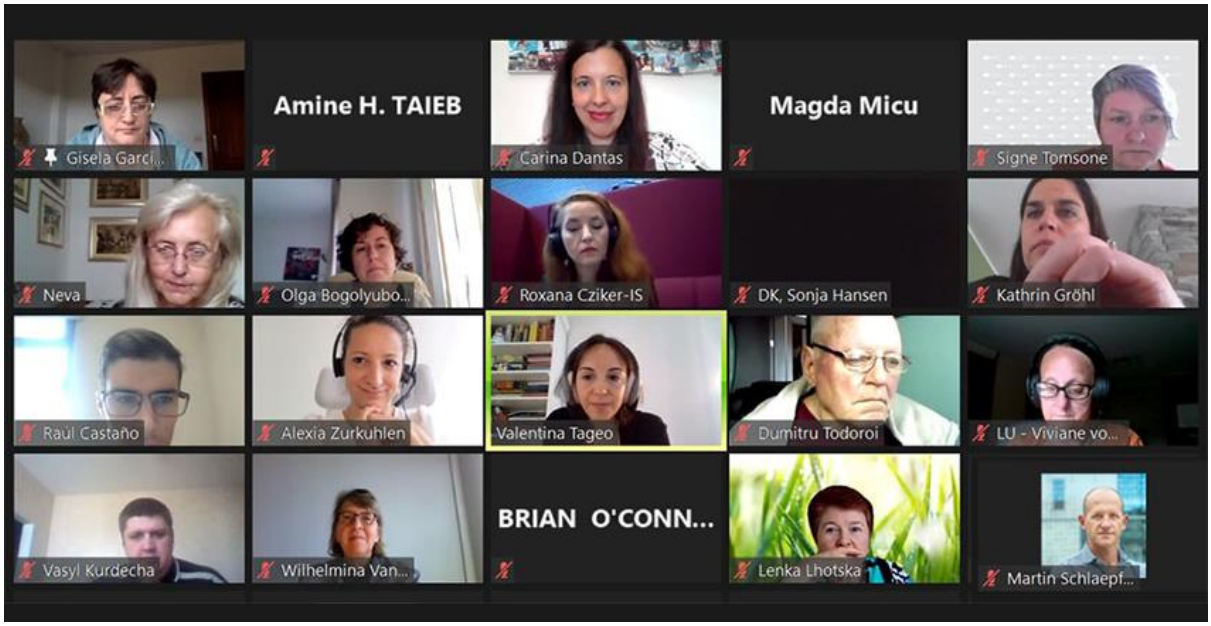


Figure 3 - Webinar How to build and nurture a regional/national ecosystem

The main aim of this session was to provide the Action participants with the adequate strategy, tools and exemplary cases that support them to promote local, regional and national ecosystems in their countries, that help to implement SHAFE solutions. The session was hosted by Carina Dantas (Chair) and Willeke van Staalduinen (Vice-Chair) and started with the inspirational talk of Brian O'Connor, ECHAlliance Director, "What is an ecosystem and how to build it, grow and connect", reminding participants that the needs of local stakeholders should be at the cornerstone of any ecosystem. Following this introduction, Alexia Zurkuhlen (Digital Health Rheinland - Germany) and Gisela Garcia-Alvarez (Health Cluster Galicia - Spain) presented their ecosystems, how they were born, governed, organised and also provided excellent recommendations on how to promote successful examples in other regions and countries. In the next slot of the session, Valentina Tageo presented the main conclusions of the work developed on "Enablers and challenges to implement and scale up solutions - the role of ecosystems", based on the outcomes of the DigitalHealthProject and started the discussion with ecosystem representatives and the participants, especially grassroot organisations of different EU countries, on what needs to be enhanced and promoted, namely in what concerns digital literacy and digital infrastructure. More information available in the brochure "Supporting demand and supply for scaling up digital health and care solutions" https://digitalhealtheurope.eu/results-and-publications/supporting-demand-and-supply-for-scaling-up-digital-health-and-care-solutions/.
Willeke Van Staalduinen closed the webinar with a highlight of the key points: listen to users and plant the seeds to collect beautiful flowers.

On August 11th, 2021, the Action organised a webinar on the building of social networks, using social media such as LinkedIn and Facebook. 30 participants shared their information on how they built up

their existing networks, how they maintain them and which challenges they face. Good profiling in social networks is another asset to attract people to maintain networks.

2.4 Mapping funding opportunities interesting for NET4 consortium

At local, regional and national levels, contributors identified several opportunities for funding. For example, funding of active and healthy ageing, digitalisation programmes, among others. At the European and international level, there is an extensive list from the results of the Scientific Questionnaire, including Interreg, Horizon Europe, Erasmus+.

2.5 Mapping relevant business models and sustainability means

Just a few examples of potential business models were shared by partners. Most of the contributors did not mention any model. Other contributors sometimes doubted what is meant by business models.

Most common business model is the CANVAS model. This model invites organisations to identify the main partners, key activities, human and financial capital, value propositions, network, business channels and co-creators.

SWOT analyses (Strengths, Weaknesses, Opportunities and Threats) are additional models that can be used to (jointly) define the organisational or departmental strategy and tactics.

An extended SWOT analysis is the so-called SWOART: Strengths, Weaknesses, Opportunities, Aspirations, Results and Threats. Making use of data delivery it becomes feasible to identify the results that come out of Weaknesses and Strengths. Also it support to define the Aspirations for Opportunities and Threats.

2.6 Facilitators, the Learning Repository and the Exploitation Booster Mechanisms

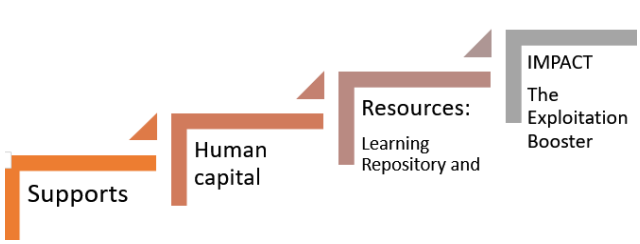
With the support of a Virtual Mobility Grant, WG4 Members have harmonized the initial results and build up new mechanisms for further exploitation of the work so far undertaken. 11 clusters of focus areas have been created in order to organize further discussions and actions taken.

Based on the information provided, especially through the country reports and to be used as a starting point, the areas of interest and excellence as well as identified needs were thus anchored and grouped into 11 clusters. After extended discussions with each country's representatives, and in the next Grant Periods, refinements and updates will be added to achieve the final form of the clusters and areas oof interest, which will also be opened to further discussions with other Working Groups, namely for knowledge sharing and success and failure stories.

The collaboration across 46 countries was also activated by employing two tools:

1) The NET4Age-Friendly Learning Repository and

2) the NET4Age-Friendly Exploitation Booster.



The Learning Repository is built with the aim to develop an online Learning Repository to exploit the outcomes from the mapping of the age-friendly country ecosystems:

Figure 4 - The Learning Repository structure

Specific objectives:
SO1. To build up a repository where relevant information on the ecosystem exists.
SO2 The possibility to add more relevant research reports, studies and analyses relevant to SHAFE and to organize it in a coherent manner.
Based on the experience with guiding and developing the Annexes of the present deliverable, countries and regions have displayed the same challenges, different contextual factors and generally they orient towards the same pillars of the age-friendly ecosystem.

Thus, based on the mapping of the SHAFE ecosystem at country level, 3 cluster topics have been developed:

- Cluster 1: It comprises the evidence-based strategies, programs and platforms at national level.
- Cluster 2: It comprises evidence of a strong dialogue between science and technology, having as points of focus: smart housing, centres of expertise, specific support tools and others as such.
- Cluster 3: Mechanisms which increase social participation and inclusion of the older adult communities.

TOPICS	SUB-TOPICS	COUNTRIES/MEMBERS
STRATEGIES	Legislation	Croatia, Finland, Hungary, Iceland, Japan, Montenegro, Spain.
	Working Documents	Bosnia and Herzegovina, Croatia, Czech Republic, Norway, Portugal, UK.
	Platforms	Austria, Denmark, Romania, EU.
TECHNOLOGY AND SCIENCE	Programs	Croatia, Hungary, Iceland, Ireland, Japan, Portugal.
	Support Services	Croatia, Czech Republic, Denmark, Hungary, Netherlands, Norway, Spain.
	Networking	Bosnia and Herzegovina, Czech Republic, Finland, Ireland, Italy, Moldova, Netherlands, Norway, Portugal, Romania, Spain, UK.
	e-Health	Austria, Belarus, Cyprus, Denmark, Netherlands.
	Digitalisation	Germany, Iceland, Norway, Spain.
	Centres of Expertise	Belgium, Hungary, Iceland, Lithuania.
	Research	Cyprus, Finland, Hungary, Moldova, Poland, Portugal, Spain, Sweden.
	Housing	Austria, Belgium, Denmark, Finland, Hungary, Spain.
LOCAL AND OLDER ADULT PARTICIPATION	Small Scale Initiatives	Belgium, Norway.
	Seniors' Participation	Austria, Belgium, Finland, Germany, Iceland, Ireland, Spain, UK.

Source: Virtual Mobility Report, November 8th, 2021

3. Conclusions and further actions

From the inventory we learned that SHAFE in partner countries shows a shattered picture. Many countries work on topics of independent living, healthy ageing, digital transformation and social participation. Income support to older adults and economy opportunities are additional findings. Holistic approaches as the SHAFE concept (or the WHO AFE concept) stands for, is not very often found in the reports.

We recommend to the COST Action members of NET4Age-Friendly the following actions:

1. ***Partners invest in the creation of networks with the quadruple helix and maintain ecosystems.*** Being a member of NET4Age-Friendly also includes the building of networks and ecosystems at local, regional or national level. We will continue to offer to learn how to build up networks with citizens, housing companies, urban planning, health and social care. Each MC member is asked to report once per year about the progress.

2. ***Create small groups of buddy or mentor system for creating ecosystems.*** Deliver support to members to build and maintain local, regional or national ecosystems or networks and jointly explore opportunities from holistic approaches. This will be coordinated by the training school organiser and will become part of the training schools.

3. ***Business modelling to identify opportunities on SHAFE.*** In the second year of the Action we pay much attention to the capacity building on business modelling in the field of SHAFE. We will start with webinars about the topic, and organise training schools on this theme.

4. ***Funding opportunities will be further sustained.*** The initial inventory of partners' knowledge of funding opportunities will be further exploited in the second year of the Action. We will organise webinars on the topic and funding will become part of the training schools.11 clusters of focus

4. ANNEXES

4.1 ANNEX 1 – Template country inventory

D4. WG report on policies, funding opportunities and networking - M9 (end of July 2021)

Name contributor and country:

(National, regional, local) policies on Smart Healthy Age-Friendly Environments
For example: legislation and policy measures to realise SHAFE, inclusive design for all, improve participation and social inclusion, foster healthcare and social care, eHealth and smart home technology measures

[Give an outline what (national, regional or local) policies in your country are to achieve smart healthy age-friendly environments and related topics]:

1. Who do you identify as relevant stakeholders and policy makers in your country?
In the following domains:

	Local	Regional	National
Health			
Social			
Built environment			
Digitalisation			
Development			
Education			
Research			
Other: please specify			
Other: please specify			

2. (National, regional, local) ecosystem on SHAFE you are involved in your country
For example: (informal) cooperative structures or bonds consisting of citizens, public authorities, companies, non-governmental organisations, health and social care providers, research and academia working on SHAFE, inclusive design for all, participation and social inclusion, care provision and ICT implementation

[Name of the ecosystem]:

[Describe shortly the partners of the ecosystem]:

[When appropriate: please provide links]:

3. (National, regional, local) funding opportunities on SHAFE in your country
For example: national or local governmental funding programmes, research funded programmes, citizen participation programmes, ICT development and implementation funding

[Describe shortly the funding opportunities that could be of interest for NET4 current and future (national) partners]:

[When appropriate: please provide links]:

4. Examples of relevant business models, sustainability means and strategies to address and implement SHAFE
Evidence-based for SHAFE (colleting the activities to populate the canvas)
[Please can you share any examples?]:

4.2 ANNEX 2 – Country contributions

1. Albania

Contributors: Odeta Durmishi Manahasa, Fabio Naselli

(National, regional, local) policies on Smart Healthy Age-Friendly Environments:

Under the Ministry of Health and Social Protection[12], there is the Department of Government Social Services[13]

Relevant stakeholders and policy makers

	Local	Regional	National
Health	Institute of Public Health	-	Ministry of Health and Social Protection, Health Insurance Institute,
Social	Municipality	-	Ministry of Health and Social Protection
Built environment	Municipality, Private housing enterprises and developers City planning/urban planning	-	Ministry of Infrastructure and Energy
Digitalisation	-	-	Digital Alliance Telecom and cable providers Ministry Infrastructure and Energy
Development	Municipality	-	
Education	Provincial Health Directorate	-	Ministry of Education, Sport and Youth
Research	Provincial Health Directorate	-	Ministry of Education, Sport and Youth
Cultural venues			
Sporting venues	-	-	-
Other: please specify			

(National, regional, local) ecosystem on SHAFE of the partner: NA

(National, regional, local) funding opportunities on SHAFE:

Social Services for older people are realized through:

- Social care services provided in public service centers such as community centers, residential centers, day care centers or at home and funded by the State Budget and local budgets of local government bodies.
- Social care services provided in non-public (for-profit and non-profit) service centers.

Monthly payments are made to individuals aged 65 and over by the Ministry of Health and The Social Protection Municipalities provide free urban transport*ation and free health care for older people.*

Local/ National Strategy: To ensure a wider participation of older people in community life, to reduce the level of loneliness and social isolation among older people. For

[12] https://shendetesia.gov.al/ (Accessed: 15 October, 2021)
[13] http://www.sherbimisocial.gov.al/ (Accessed: 15 October, 2021)

this, local governments build local support plans / policies for older people, within local social plans and mechanisms for the participation of older people, especially women, in the decision-making process.

2. Austria

Contributors: Martin Kampel, Jennifer Lumetzberger (TU Vienna, Computer Vision Lab)

- eHealth initiative: information and communication strategy for a modern Austrian healthcare system (recommendation), 2007
- IHE Initiative: Association for promoting the integration of IT and medical technologies in the Austrian health care system
- HEALIX: communication infrastructure for IT applications in the healthcare system
- ELGA: electronic health records
- eHealth strategy board: control group for coordinating and accompanying actors in health and social system.
- AAL Austria

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

Relevant stakeholders and policy makers

	Local	Regional	National
Health			Dachverband der Sozialversicherungsträger (umbrella organisation of the social insurance institutions); Bundesministerium für Soziales, Gesundheit, Pflege und Konsumentenschutz (Federal ministry for social, health, care and consumer protection); österreichisches Rotes Kreuz (austrian red cross), Vamed
Social	Fonds Soziales Wien, Wiener Sozialdienste Alten- und Pflegedienste		Providers of statutory social security, providers of healthcare services, Federal Ministry of Social Affairs, Health, Care and Consumer Protection (BMSGPK), Caritas, Lebenshilfe, Diakonie Österreich, Hilfswerk, Licht ins Dunkel, Kolping, Volkshilfe, Austrian Senior Citizens 'Council
Built environment			Strabag, Porr, Wienerberger
Digitalisation			Bundesministerium "Digitalisierung und Wirtschaftsstandort" (Federal ministry of

			digitalization and economy) [14] ; Digital Austria[15]
Development	Alysis, casenio, cogvis, Digitaal Life, Doro, ELDAT, ilogs, Philips, telecare systems		
Education			Bundesministerium für Bildung, Wissenschaft und Forschung[16] (Federal ministry of education, science and research)
Research	Medical University Vienna, Vienna University of Technology, University of Technology Graz, University Innsbruck, AIT, FH Wiener Neustadt, FH Campus Wien, FH Burgenland, FH Joanneum, Carinthia University of Applied Sciences FH Oberösterreich, FH St. Pölten, FH Technikum Wien, FH Vorarlberg	Salzburg Research	Bundesministerium für Bildung, Wissenschaft und Forschung[17]; Austrian Interdisciplinary Platform on Ageing (ÖPIA)[18];
Other: please specify			
Other: please specify			

(National, regional, local) ecosystem on SHAFE of the partner

AAL Austria[19]

Pilot regions of AAL[20]

Currently, innovative AAL solutions are being or have been installed in about 1000 Austrian households and residential units, tested in everyday use and scientifically evaluated.

In the benefit programme, the Austrian Research Promotion Agency FFG funds test regions with the aim of developing system solutions that enable smart home applications in terms of comfort and lifestyle elements as well as support and care. The underlying processes of the services are to be taken into account. These system solutions will be evaluated in larger benefit test regions, especially in urban environments and with interfaces to Smart Cities technologies and services. Not only will the actual use of the solutions be evaluated, but also the social added value.

- WEST AAL test region[21]
- 24hQuAALity
- Fit4AAL
- gAALaxy
- i-evAALuation
- moduLAAR
- multimodAAL
- regionAAL
- Smart VitAALity
- WAALter
- ZentrAAL

[14] https://www.itsv.at/ (Accessed: 15 October, 2021)
[15] https://www.digitalaustria.gv.at/ (Accessed: 15 October, 2021)
[16] https://www.bmbwf.gv.at/en.html (Accessed: 15 October, 2021)
[17] https://www.bmbwf.gv.at/en.html (Accessed: 15 October, 2021)
[18] http://www.oepia.at/en (Accessed: 15 October, 2021)
[19] *Ibidem*
[20] https://www.aal.at/pilotregionen-3/ (Accessed: 15 October, 2021)
[21] https://www.west-aal.at/ (Accessed: 15 October, 2021)

(National, regional, local) funding opportunities on SHAFE

FWF: Austrian Science Fund[22]

FFG: Austrian Research Promotion Agency[23], e.g. benefit programme[24]

WWTF: Vienna Science and Technology Fund [25]

The Austrian Research Promotion Agency FFG funds test regions with the aim of developing system solutions that enable smart home applications in terms of comfort and lifestyle elements as well as support and care.

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE N/A

3. Belgium

Contributors: Deborah Lambotte, Stefan Danschutter

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

- The decree 'local social policy'
- (Art. 4 and 7)[26] supports municipalities in the realisation of a local social policy and stimulates municipalities to adopt a leading role. Municipalities are encouraged to develop a well-supported, integral and inclusive (local) social policy, in cooperation with local actors and the local population. In order to realise a good local social policy, the municipalities need to formulate policy objectives in relation to the local needs and involve and stimulate participation of their citizens in policy preparation and implementation. Therefore, the majority of Flemish municipalities have a local advisory council for older adults.
- The region of Flanders is responsible for the policy on health care provision within and outside health care institutions (with the exception of that which is explicitly reserved for the federal government), preventive health care and the recognition of health care professions. à Agency for Care and Health[27]
  - Policy on preventive healthcare[28]
  - The development of the Flemish social protection[29]
  - Primary care[30]
  - Home care[31]
  - Mental health care[32]
  - Policy on health care professions[33]

[22] https://www.fwf.ac.at/en/ (Accessed: 15 October, 2021)
[23] https://www.ffg.at/en/content/information-technology-overview (Accessed: 15 October, 2021)
[24] https://www.ffg.at/programm/benefit (Accessed: 15 October, 2021)
[25] https://www.wwtf.at/index.php?lang=EN (Accessed: 15 October, 2021)
[26] https://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1029068&param=inhoud&ref=search&AVIDS=
[27] https://www.zorg-en-gezondheid.be (Accessed: 15 October, 2021)
[28] https://www.zorg-en-gezondheid.be/beleid/preventieve-gezondheidszorg
[29] https://www.zorg-en-gezondheid.be/beleid/vlaamse-sociale-bescherming (Accessed: 15 October, 2021)
[30] https://www.zorg-en-gezondheid.be/beleid/eerstelijnszorg (Accessed: 15 October, 2021)
[31] https://www.zorg-en-gezondheid.be/beleid/thuiszorg (Accessed: 15 October, 2021)
[32] https://www.zorg-en-gezondheid.be/beleid/geestelijke-gezondheidszorg (Accessed: 15 October, 2021)
[33] https://www.zorg-en-gezondheid.be/beleid/gezondheidszorgberoepen (Accessed: 15 October, 2021)

- Elderly care à residential care decree[34]
- Policy on hospitals[35]
- (E)caring Flanders [36] – informatisation/digitalisation

The majority of Flemish municipalities have a local advisory council for older adults. The advisory council can signal local difficulties and challenges to the local government.

- Flemish policy notes 2019-2024: welfare, public health, family and fighting reduction.
  This policy paper contains the major strategic choices of the Flemish Government in the area of welfare, public health, family and poverty reduction for the period 2019-2024[37].
- Flanders Housing Policy Plan[38]
- The set-up of funding programmes for municipalities, healthcare organisations, housing organisations, regarding social housing, independent living, dementia prevention programmes, etc.

Several centres of expertise such as:

- Fall and fracture prevention[39]
- Dementia[40]
- Healthy Living[41]
- Informal care[42]

Centres of expertise relevant to age-friendly environment:

- Fall and fracture prevention
- Dementia
- Healthy Living
- Informal care

Flemish Agency Accessible Flanders (Inter) with a number of core topics:

- Building and surroundings, mobility, policy and events
  - Adaptable housing[43]
  - Age-friendly housing[44]
  - Accessibility[45]

Due to the institutional fragmentation, Brussels has a very complex landscape when it comes to policy on smart healthy age-friendly environments. The best solution is to contact a local partner who can help you find the right information, the knowledge centre Housing, well-being and care is such a partner with numerous publications on the topic[46]

In the Walloon region much of the information can be found via AVIQ (l'agence pour une vie de qualité). A detailed overview of their actions requires further research.

[34] https://www.zorg-en-gezondheid.be/beleid/ouderenzorg (Accessed: 15 October, 2021)
[35] https://www.zorg-en-gezondheid.be/beleid/ziekenhuizen (Accessed: 15 October, 2021))
[36] https://www.zorg-en-gezondheid.be/beleid/ezorgzaam-vlaanderen (Accessed: 15 October, 2021)
[37] https://publicaties.vlaanderen.be/view-file/32263 (Accessed: 15 October, 2021)
[38] https://www.wonenvlaanderen.be/woonbeleidsplan-vlaanderen (Accessed: 15 October, 2021)
[39] https://www.valpreventie.be (Accessed: 15 October, 2021)
[40] https://www.dementie.be (Accessed: 15 October, 2021)
[41] https://www.gezondleven.be (Accessed: 15 October, 2021)
[42] https://www.mantelzorger.be (Accessed: 15 October, 2021)
[43] http://www.meegroeiwonen.info (Accessed: 15 October, 2021)
[44] http://www.dezilverensleutel.be (Accessed: 15 October, 2021)
[45] https://www.toegankelijkgebouw.be (Accessed: 15 October, 2021)
[46] www.kenniscentrumwwz.be (Accessed: 15 October, 2021)

Relevant stakeholders and policy makers

	Local	Regional	National
Health	Municipalities and its organisations	Agentschap Zorg & Gezondheid Kenniscentrum Wonen, Welzijn, Zorg (FL) AVIQ – l'agence pour une vie de qualité	FOD Volksgezondheid
Social	Municipalities and its organisations	Vlaamse Ouderenraad Vereniging van Vlaamse Steden en Gemeenten Departement Welzijn, Volksgezondheid en Gezin	
Built environment	Municipalities and its organisations	Agentschap Wonen-Vlaanderen Inter Vlaams Expertisecentrum Toegankelijkheid CaWaB – Collectif Accessibilité Wallonie-Bruxelles	
Digitalisation		FlandersCare	mHealthBelgium
Development			
Education		Universities and Universities of Applied Sciences and Arts Collective research centers (BBRI, Sirris,…) Strategic research centers (IMEC, VITO,…)	
Research		Universities and Universities of Applied Sciences and Arts	
Other: please specify			
Other: please specify			

(National, regional, local) ecosystem on SHAFE of the partner

- HOGENT University of Applied Sciences and Arts
  Research centre 360° Care and Wellbeing[47]
- Blue Health Innovation Center[48]
- In4Care[49]
- Licalab[50]
- Innovage[51]
- Wallonia e-helath living lab[52]
- Health house[53]

(National, regional, local) funding opportunities on SHAFE

- Fonds Wetenschappelijk Onderzoek[54]:

[47] https://www.hogent.be/onderzoekscentra/360-zorg-en-welzijn/ (Accessed: 15 October, 2021)
[48] https://www.bhic.care/nl (Accessed: 15 October, 2021)
[49] https://www.in4care.be (Accessed: 15 October, 2021)
[50] https://www.licalab.be/nl (Accessed: 15 October, 2021)
[51] http://www.innovage.be (Accessed: 15 October, 2021)
[52] http://well-livinglab.be (Accessed: 15 October, 2021)
[53] http://www.health-house.be/en (Accessed: 15 October, 2021)
[54] https://www.fwo.be/en/ (Accessed: 15 October, 2021)

- Koning Boudewijnstichting[55]:
- Innoviris.Brussels[56]:
- Agentschap Innoveren & Ondernemen[57]:
- Growfunding[58]:

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE N/A

4. Belarus

Contributors: Tamara Sharshakova, Nikolai Gapanovich-Kaidalov, Ekateryna Shcherbakova, Evgeny Voropaev, Natali Dmitrieva

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

Today about 2 million older people live in Belarus. Of these, more than 127,000 are single. The state has always taken care of older people.

- *Law of the Republic of Belarus on Social Protection of Disabled Persons in the Republic of Belarus No. 1224-XII of November 11, 1991 [Amended as of November 16, 2010]*. That is meant to ensure the wellbeing of older adults[59].
- Law of the Republic of Belarus of July 18, 2011 No. 300-Z "On applications of citizens and legal entities"[60];
- Decree of the President of the Republic of Belarus of October 15, 2007 No. 498 "On additional measures for dealing with applications of citizens and legal entities"[61];
- Directive of the President of the Republic of Belarus of December 27, 2006 No. 2 "On debureaucratization of the state machinery and improving the quality of support of vital activities of the population"[62];
- Resolution of the Council of Ministers of the Republic of Belarus of July 23, 2012 No. 667 "On some issues of dealing with applications of citizens and legal entities"[63]
- CONCEPT of e-Health Development of the Republic of Belarus for the period up to 2022[64]. E-health is the use of electronic communication technologies for health needs: patient care, training of health workers, detection of diseases and monitoring of public health trends. Approved by the Order of the Ministry of Health of the Republic of Belarus of 20.03.2018. No. 244

Relevant stakeholders and policy makers

	Local	Regional	National
Health			Ministry of Public Health

[55] https://www.kbs-frb.be/en (Accessed: 15 October, 2021)
[56] https://innoviris.brussels (Accessed: 15 October, 2021)
[57] https://www.vlaio.be/nl/subsidies-financiering (Accessed: 15 October, 2021)
[58] https://www.growfunding.be/nl (Accessed: 15 October, 2021)
[59] http://law.by/document/?guid=3871&p0=V19101224e (Accessed: 15 October, 2021)
[60] http://www.pravo.by/document/?guid=3871&p0=H11100300 (Accessed: 15 October, 2021)
[61] http://www.pravo.by/document/?guid=3871&p0=p30700498 (Accessed: 15 October, 2021)
[62] http://www.pravo.by/document/?guid=3871&p0=p00600002 (Accessed: 15 October, 2021)
[63] http://www.pravo.by/document/?guid=3871&p0=C21200667 (Accessed: 15 October, 2021)
[64] http://rnpcmt.belcmt.by/files/Site/CONCEPT_E-Health.docx (Accessed: 15 October, 2021)

Social			Ministry of Labour and Social Protection
Built environment			Ministry of Natural Resources and Environmental Protection
Digitalisation			Ministry of Communication and Informatization, Ministry of Information
Development			Ministry of Economy
Education			Ministry of Education, Ministry of Culture
Research	Universities of Applied Sciences and Universities are located in bigger cities		
Other: please specify			
Other: please specify			

(National, regional, local) ecosystem on SHAFE of the partner

SHAFE did not work in Belarus before.

(National, regional, local) funding opportunities on SHAFE

Funding opportunities on SHAFE in Belarus are limited by State Budget and university budget.

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE N/A

5. Bosnia and Herzegovina

Contributors: Jasmina Baraković Husić, Sabina Baraković

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

Areas of interest to Smart Healthy Age-Friendly Environments (SHAFE) are defined by the legislative framework at all levels of government in B&H. Laws at the state level, laws at the both entities levels (i.e., the Federation Bosnia and Herzegovina and the Republika Srpska), laws at the level of the Brčko District and laws at the level of cantons in Federation Bosnia and Herzegovina have been adopted. Of all the laws, the seniors are the focus of the following laws[65]: (i) Family law, (ii) Laws dealing with pension and disability insurance, (iii) Laws on retirement, (iv) Laws on labor and social security of the unemployed, (v) Law on protection from domestic violence, (vi) Law on prohibition of discrimination, (vii) Law on rights, obligations and responsibilities of patients , (viii) Law on social protection, (ix) Law on health insurance and protection, (x) Law on medicines and medical devices, and (xi) Regulations and decisions in the field of health rights.

The Legal Framework for Smart Healthy Age-Friendly Environments

[65] https://epale.ec.europa.eu/en/node/163078 (Accessed: 15 October, 2021)

1. **The laws on state level of government**[66]
    a. Law on Amendments to the Law on Prohibition of Discrimination. Official Gazette BiH, 66/16.
    b. Law on Freedom of Access to Information in Bosnia and Herzegovina. Official Gazette BiH, 28/00, 45/06, 102/09.
    c. Law on Medicines and Medical Devices. Official Gazette of BiH, 58/08.
    d. Law on Basics of Road Traffic Safety in Bosnia and Herzegovina. Official Gazette BiH, 6/06.
2. **The laws and decisions on the entity level – Federation Bosnia and Herzegovina**[67]
    a. Law on Pension and Disability Insurance. Official Gazette of the Federation of BiH, 13/18.
    b. Law on Amendments to the Law on More Favourable Retirement of Defenders of the Defence-Liberation War. Official Gazette of the Federation of BiH, 90/17.
    c. Law on Modifications and Amendments to the Labour Law, Official Gazette of the Federation of BiH, 32/00, 29/03.
    d. Law on Protection from Domestic Violence. Official Gazette of the Federation of BiH, 20/13.
    e. Law on Patients' Rights, Obligations and Responsibilities. Official Gazette of the Federation of BiH, 40/10.
    f. Law on modification of the Law on Mediation in Employment and Social Safety for Unemployed Persons, Official Gazette of the Federation of BiH, 55/00, 9/08.
    g. Law on the Fundamentals of Social Protection, Protection of Civilian Victims of War and Protection of Families with Children. Official Gazette of the Federation of BiH, 36/99, 54/04, 39/06, 14/09, 45/16.
    h. Law on Health Insurance. Official Gazette of the Federation of BiH, 30/97, 7/02, 70/08, 48/11.
    i. Low on Health Care. Official Gazette of the Federation of BiH, 46/10, 75/13.
    j. Law on Medicines. Official Gazette of the Federation of BiH, 109/12.
    k. Law on Patients' Rights, Obligations and Responsibilities. Official Gazette of the Federation of BiH, 40/10.
    l. Decision on determining the basic package of health rights. Official Gazette of the Federation of BiH, 21/09.
    m. Decision on health care standards and norms from compulsory health insurance. Official Gazette of the Federation of BiH, 5/03, 18/04, 57/07, 53/08, 6/11, 104/13.
    n. Decision on the List of Essential Medicines Necessary for Health Care Insurance within the Standards of Compulsory Health Insurance in the Federation of Bosnia and Herzegovina, Official Gazette of the Federation of BiH, 56/13, 74/14, 94/15, 12/16, 25/17.
3. **The laws and decisions on the entity level – Republika Srpska**[68]
    a. Law on Social Welfare. Official Gazette of Republic of Srpska, 37/12, 90/16.
    b. Law on Pension and Disability Insurance. Official Gazette of Republic of Srpska, 134/11, 82/13, 103/15.
    c. Law on Health Care. Official Gazette of Republic of Srpska, 18/99, 58/01, 62/01, 106/09, 44/15.
    d. Law on Health Insurance. Official Gazette of Republic of Srpska, 18/99, 51/01, 70/01, 51/03, 57/03, 17/08, 01/09, 106/09.
    e. Law on Medicines. Official Gazette of Republic of Srpska, 19/01.

[66] https://www.parlament.ba/home?lang=en (Accessed: 15 October, 2021)
[67] http://www.fbihvlada.gov.ba/english/zakoni/ (Accessed: 15 October, 2021)
[68] https://www.narodnaskupstinars.net/ (Accessed: 15 October, 2021)

f. Rulebook on exercising the right on assistance and home care. Official Gazette of Republic of Srpska, 2/14.

4. The laws of Brčko District[69]

a. The Law on Health Care of the Brčko District B&H, Official Gazette of Brčko District B&H, 38/11, 9/13, 27/14, 3/15, 50/18

b. The Law on Health Insurance of the Brčko District B&H, Official Gazette of Brčko District B&H, 01/02, 02/08, 07/02, 19/07, 34/08, 34/19, 19/20

c. The Family Law of the Brčko District B&H, Official Gazette of Brčko District B&H, 23/07

d. The Law on Social Welfare of the Brčko District B&H, Official Gazette of Brčko District B&H, 01/03, 04/04, 19/07, 02/08, 21/18, 32/19, 20/20

Relevant stakeholders and policy makers

	Local	Regional	National
Health	Health centres	FBIH: Ministry of Health RS: Ministry for Health and Social Welfare Nursing homes (*)	
Social	Retirement homes (***) Adult day-care centres (****) Centres for healthy ageing Home care and assistance centres (*****)	FBIH: Ministry of Labor and Social Policy RS: Ministry for Labour, Veterans and Disability Protection Humanitarian organisations (**) Gerontology centres (******)	
Built environment	Municipal services for urbanism, physical planning and environmental protection	FBIH: Ministry of Spatial Planning RS: Ministry of Physical Planning, Construction and Ecology	
Digitalisation			Ministry of Communications and Transport
Development	Municipal services for economy and local development	FBIH: Ministry of Development, Entrepreneurship and Crafts RS: Ministry for the Economy and Entrepreneurship	
Education		FBIH: Ministry of Education and Science RS: Ministry for Science and Technology, Higher Education and Information Society	Ministry of Civil Affairs
Research		FBIH: Ministry of Education and Science RS: Ministry for Science and Technology, Higher Education and Information Society	Ministry of Civil Affairs
Other: Tourism	Tourist communities	FBIH: FBiH Ministry of Environment and Tourism RS: Ministry of Trade and Tourism	
Other: Human rights			Ministry of Human Rights and Refugees

Note: Local domain refers to municipal level. Regional domain implies cantons and entity levels in case of Federation Bosnia and Herzegovina (FBIH), and entity level in case of Republika Srpska (RS). National domain refers to state level of Bosnia and Herzegovina.

[69] https://skupstinabd.ba/ba/zakon.html (Accessed: 15 October, 2021)

(*) The establishment of nursing homes, their operations, financing, and is governed by the cantonal regulations on social protection and falls under the competence of the cantonal ministries of social protection.
(**) Humanitarian organisations that provide assistance and protection to vulnerable persons, particularly to the older persons, are Red Cross Society[70], Caritas[71], and Merhamet[72].
(***) Retirement home ensures its beneficiaries housing, meals, care, putting the clothes on and taking the clothes off, health care, cultural and entertainment, recreational, occupational and other activities, social care and other services depending on their needs, abilities and interests.
(****) Adult day-care centres provide satisfaction of basic needs for adults with disability and older persons through day-care.
(*****) Home care and assistance centres provide housework and home care the old and the infirm in their homes.
(******) Gerontology centre monitors, studies, evaluates and reports on social and health needs, and provides services directed on improving institutional and non-institutional care for older persons, coordinates activities of stakeholders within the social protection for older persons system, cooperating with other sectors and training and educating those who provide care for older people.

(National, regional, local) ecosystem on SHAFE of the partner

Non-governmental organisations

Non-governmental organisations (NGOs) in Bosnia and Herzegovina represent a wide array of interests and undertake various activities including distribution of humanitarian assistance, human rights and government monitoring, research and policy development, service provision, etc. NGOs show a wide range of capacities and ways of working, but a relatively small number of professional NGOs has emerged in the larger urban centres[73]. These organisations have been benefited from sustained financial support from foreign donors. For example, The United Nations Population Fund in Bosnia and Herzegovina (UNFPA) and the NGO Partnership for Public Health are working together to build the capacity of the existing network of Centers for Healthy Aging in Bosnia and Herzegovina[74].

The United Nations Population Fund in Bosnia and Herzegovina (UNFPA) and the NGO Partnership for Public Health are working together to build the capacity of the existing network of Centers for Healthy Aging in Bosnia and Herzegovina.

Although there are NGOs that can claim to represent the interest of their stakeholders at the state or entity levels (e.g., development of community, social policy and protections, civil society influence on public policy, etc.), the most of them are comprised of small, voluntary community-oriented associations working at the municipal or cantonal level (e.g., women's organisations, blind groups, disease-specific groups, etc.). Only small number of NGOs at the municipal or cantonal level have received international project funding or benefited from inclusion in NGO capacity building

[70] https://ckfbih.ba/ (Accessed: 15 October, 2021)
[71] https://www.caritas.ba/ (Accessed: 15 October, 2021)
[72] https://www.merhamet.ba/ (Accessed: 15 October, 2021)
[73] https://www.intrac.org/wpcms/wp-content/uploads/2016/09/Praxis-Paper-9-Civil-Society-Capacity-Building-in-Post-Conflict-Societies-Bill-Sterland.pdf (Accessed: 15 October, 2021)
[74] https://eeca.unfpa.org/en/news/older-people-regularly-visiting-unfpa-supported-centres-live-healthier-longer-lives-new-study (Accessed: 15 October, 2021)

programmes. NGOs engaged in service provision are dominant, but only a few of them carry out work aimed at influencing government policy or amending legislation.

There is no country strategy for cooperation between government and NGOs at either the state or entity level. NGOs report that relations with municipal authorities are most productive and relevant for their work[75]. In order to formalise cooperation between government and NGOs, a number of advances have been made, driven by foreign actors such World Bank, Swiss Agency for Development and Cooperation (SDC), United Nations Development Programme (UNDP), United States Agency for International Development (USAID), etc.

NGOs in Bosnia and Herzegovina are organized into NGO networks based on geographical location or interest. One example is Informal Network of NGOs for the Protection of the Rights of older people - "FOR DIGNIFIED AGING"[76].

According to abovementioned, the NGOs partners in Bosnia and Herzegovina are government organisations at all levels (as mentioned in the answer to question 2), as well as international organisations including:

- United Nations Development Programme (UNDP)[77]:
- United Nations Population Fund in B&H (UNFPA)[78]:
- United States Agency for International Development (USAID)[79]:
- Organisation for Security and Co-operation in Europe (OSCE)[80]:
- World Bank[81]:
- CARE International[82]:
- Austrian Development Cooperation (ADC)[83]:
- Swiss Agency for Development and Cooperation (SDC)[84]:
- Regional Cooperation Council (RCC)[85]:

Research and academia working on SHAFE

Informal Network of NGOs for the Protection of the Rights of older people - "FOR DIGNIFIED AGING".

Research and academia ecosystem is responsibility of two Entities (i.e. Federation Bosnia and Herzegovina and Republika Srpska) and the Brčko District. In Federation Bosnia and Herzegovina, this responsibility

[75] https://www.intrac.org/wpcms/wp-content/uploads/2016/09/Praxis-Paper-9-Civil-Society-Capacity-Building-in-Post-Conflict-Societies-Bill-Sterland.pdf (Accessed: 15 October, 2021)
[76] http://dostojanstvenostarenje.org/ (Accessed: 15 October, 2021)
[77] https://www.ba.undp.org/content/bosnia_and_herzegovina/en/home.html (Accessed: 15 October, 2021)
[78] https://ba.unfpa.org/en (Accessed: 15 October, 2021)
[79] https://www.usaid.gov/bosnia (Accessed: 15 October, 2021)
[80] https://www.osce.org/mission-to-bosnia-and-herzegovina (Accessed: 15 October, 2021)
[81] https://www.worldbank.org/en/country/bosniaandherzegovina (Accessed: 15 October, 2021)
[82] https://www.care-international.org/where-we-work/bosnia-and-herzegovina (Accessed: 15 October, 2021)
[83] https://www.entwicklung.at/en/ (Accessed: 15 October, 2021)
[84] https://www.eda.admin.ch/deza/en/home/countries/bosnia-herzegovina.html (Accessed: 15 October, 2021)
[85] https://www.rcc.int/flagships/3/human-capital (Accessed: 15 October, 2021)

is further delegated to ten Cantons. This leads to highly fragmented ecosystem consisting of several management subsystems (i.e., the Cantons in Federation Bosnia and Herzegovina, the level of Federation Bosnia and Herzegovina, the level of Republika Srpska, Brčko District, state level of Bosnia and Herzegovina). At the state level, the responsibility for research and academia ecosystem is located within the Department for Education, Science, Culture and Sport of the Ministry of Civil Affairs[86]. At the entity level of Federation Bosnia and Herzegovina, the responsibility for research and academia ecosystem is allocated to each of the ten Cantons which can delegate specific functions to the Federal Ministry of Education and Science[87], which is responsible for coordination among them. At the level of Cantons, ministries of education and science are responsible for education and academia ecosystem. There are ten ministries which size and capacity to perform functions differ from canton to canton (Una-Sana Canton, Posavina Canton, Tuzla Canton, Zenica-Doboj Canton, Bosnian-Podrinje Canton Gorazde, Central Bosnia Canton, Herzegovina-Neretva Canton, West Herzegovina Canton, Sarajevo Canton, Canton 10). At the entity level of Republika Srpska, the responsibility for research and academia ecosystem is allocated to Ministry for Science and Technology, Higher Education and Informatics[88]. This Ministry is responsible for relevant policies, administrative and other expert tasks related to science and research activities, incentive to basic and applied research, innovation, development and improvement of technology, planning, preparation of programs and agreement on scientific and technological cooperation, etc. In comparison to both Federation Bosnia and Herzegovina and Republika Srpska, Brčko District has the smallest and the most concentrated model of this sector. The responsibility for research and academia ecosystem is allocated to the Department for Education within the District Government[89].

According to abovementioned, partners of research and academia ecosystem are government organisations at cantonal, entity, and state level, where the last one is responsible for coordination of international activities through various programmes (e.g., Erasmus+[90], Horizon 2020[91], IPA, etc.), projects, associations etc.

(National, regional, local) funding opportunities on SHAFE

The complex constitutional structure of Bosnia and Herzegovina has caused differences across the country in relation to collection of funds, distribution mechanisms, budgeting procedures, and development of specific financial schemes.

SHAFE can be funded from the budgets of various government levels (the State, the Entities, the Cantons, Brčko District, and municipalities) that contribute in various proportions. The following government organisations could finance the SHAFE at:

The state level:

- Ministry of Civil Affairs
- Ministry of Human Rights and Refugees
- Ministry of Communications and Transport

[86] www.mcp.gov.ba (Accessed: 15 October, 2021)
[87] www.fmon.gov.ba (Accessed: 15 October, 2021)
[88] www.vladars.net (Accessed: 15 October, 2021)
[89] http://www.vlada.bdcentral.net/ (Accessed: 15 October, 2021)
[90] www.erasmusbih.com/index.php (Accessed: 15 October, 2021)
[91] https://ec.europa.eu/info/research-and-innovation/strategy/international-cooperation/bosnia-and-herzegovina_en (Accessed: 15 October, 2021)

The entity levels:

- Federation Bosnia and Herzegovina
  - Ministry of Labour and Social Policy, Ministry of Health, Ministry of Education and Science, Ministry of Development, Entrepreneurship and Crafts, Ministry of Spatial Planning
- Republika Srpska
  - Ministry for Health and Social Welfare, Ministry for Science and Technology, Higher Education and Information Society, Ministry for Labour, Veterans and Disability Protection, Ministry for the Economy and Entrepreneurship, Ministry of Physical Planning, Construction and Ecology

The state level of government deals with the coordination of international projects towards the two entities and Brčko District. These can be European Union (EU) assistance programs through Instrument for Pre-Accession Assistance (IPA) funds and relevant international organisations, embassies, etc.

The entity level of government has the most significant competence, as well as available funds to support SHAFE. The abovementioned ministries on the entity level have the best opportunity to plan and allocate domestic budget to address certain SHAFE issues.

Additionally, there are increasing opportunities for small scale funding from municipal or cantonal level of governments, membership subscriptions, fees for services, charitable giving in the community, etc. This assistance is rarely planned and criteria and distribution mechanisms vary from case to case, which produces inequality across the country.

Despite all levels of government are active in supporting SHAFE through some kind of grant aid, funding is highly dependent on international organisations being the foreign supporters as described below.

International organisations (Examples of foreign donors)

- World Bank[92]:
  - Finances the "Health Sector Enhancement Project (HSEP)" in order to repair, reconstruct and furnish the primary healthcare facilities with the aim to improve the family medicine model.
  - Finances the "Reducing Health Risk Factors in B&H" project, which aims to reduce the risk factors of non-communicable diseases.
- United Nations Population Fund (UNFPA)[93]:
  - Support the opening of Centres of Healthy Aging in cooperation with Federal Ministry of Health in order ensure healthy ageing and protect mental health and physical activity. (It also supports the "Sexual and Reproductive Health" programme in order to strength the capacities of governments to provide integrated sexual and reproductive health services with a focus on vulnerable populations.)
- Swiss Agency for Development and Cooperation (SDC)[94]:
  - Finances the project of "Strengthening of Nursing in B&H", where one of the activities is establishment of the polyvalent patronage nurse (PNN) service that is important for providing the services for the seniors and long-term care.

[92] https://www.worldbank.org/en/country/bosniaandherzegovina (Accessed: 15 October, 2021)

[93] https://www.unfpa.org/ (Accessed: 15 October, 2021)

[94] https://www.eda.admin.ch/deza/en/home/countries/bosnia-herzegovina.html (Accessed: 15 October, 2021)

- Finances the project "Mental Health Project in B&H", which focuses on improvement of capacities of the competent institutions in order to improve the mental health of the entire population.
  - World Health Organisation/ Europe Office:
- Implements the project of "Strengthening and Advancing Modern and Sustainable Public Health Strategies, capacities and services to improve population health in B&H" in order to reduce burdens with non-communicable diseases and ensure better health outcome for the B&H population.

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE

Below are listed activities being performed in different domains to contribute to the implementation of SHAFE in Bosnia and Herzegovina[95].

Lifelong learning

The Ministry of Civil Affairs of B&H[96] works on establishment of basic principles, coordination and harmonisation of the plans of entity-level authorities and definitions of strategies at the international level. At the state level, the following documents have been adopted in the field of lifelong learning:

Projects of the foreign donors relevant for the SHAFE ecosystem to ensure healthy ageing, to protect mental health, to strengthen nursing services, improve mental health and to reduce risk factors.

1. "Principles and Standards in the field of Adult Education in B&H", which presents a legal basis for the action of educational and other authorities at all levels of government in Bosnia and Herzegovina. The principles and standards defined in this document determine the principles and standards for building, developing, implementing and coordinating the policies and legislation that govern the field of adult education in Bosnia and Herzegovina and for monitoring, evaluating and analysing the state of play in this field.
2. "Strategic Platform for Development of Adult Education in the Lifelong Learning Context in B&H, for the period 2014-2020", which presents a legal framework and basis for the action and cooperation of the authorities at all levels of government in B&H with the aim to adopt and fully implement the necessary strategic and/or development documents regarding adult education.
3. "Action Plan for the Development and Implementation of the Qualifications Framework for Adult Education in B&H for the period 2014 -2020", which represents a plan for key activities for the development and implementation of the qualification's framework in Bosnia and Herzegovina.

Living conditions

[95] https://unece.org/fileadmin/DAM/pau/age/country_rpts/2017/BIH_report.pdf (Accessed: 15 October, 2021)

[96] Source: www.mcp.gov.ba (Accessed: 15 October, 2021)

According to the Law on Urban Planning and Construction published Official Gazette of Republika Srpska, 40/13, the Rulebook was enacted on the requirements for planning and designing facilities for free movement of children and persons with reduced physical capacities. This Rulebook refers not only to old persons, but it determines access to buildings, designing of buildings, planning of the spaces of public roads and pedestrian areas, etc.

Social inclusion

The Central Election Commission of B&H[97] enacts regulations that determine the way and procedure of developing the part form the Central Voters Register for voters who are tied to their home due to old age, illness or disability. These guidelines prepared as inclusion measure for vulnerable groups for elections in B&H focus on "target groups within a target group" (e.g., in the target group of women, the focus should be on older women).

Social policy

At the state level, there is no common social policy. The Ministry of Civil Affairs of B&H coordinates the activities in the field of social policy and coordination with relevant entity authorities. This Ministry of coordinated the project "Support to the Social Service Providers and Enhancement of the Monitoring Capacities" (EU SOCEM 2015 - 2017) with the aim to improve the social protection of socially vulnerable groups, and improve monitoring, reporting and promoting human rights. The project was financed by the EU in B&H and implemented in the social welfare services in 12 municipalities in Federation Bosnia and Herzegovina and Republika Srpska.

Mental Health

Within the Ministry of Civil Affairs of B&H, the Regional Health Development centre on Mental Health in South East Europe (SEE) operate as part of the South East Europe Health Network (SEEHN)[98]. This centre has contributed to the improvement of reforms in mental health in the region (including B&H) by following international guidelines and documents.

6. Bulgaria

Contributors: Mariyana Lyubenova, Alexandre Chikalanow

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

Research in Bulgaria focused on several categories, studying in further details the demographic composition of the country, including predictions for the next 30 years; the quality of life of older people, particularly in comparison to other European citizens, the pension system and its progression over time; the economic development of the country; the capabilities and limitations of the healthcare system; the logistics behind the National Health Insurance and the main Private Insurance companies currently on the market, as well as Patronages and Charities which also attend to the needs of the elders.

Based on the findings of this analysis, we can deduce that the country is facing the same difficulties regarding its ageing population as other members of the Union and can benefit from solutions which aim to improve the quality of life of its citizens and focus significantly on preventative healthcare and healthy lifestyle, as this is particularly not prevalent in Bulgaria, where the policies of the country, and

[97] https://www.izbori.ba/Default.aspx?Lang=6 (Accessed: 15 October, 2021)
[98] http://seehn.org/bosnia-herzegovina/ (Accessed: 15 October, 2021)

the spending of the National Health Insurance are not driven in the direction of pre-care, but rather entirely directed towards treatment of chronic illnesses and other diseases (post-care).

Due to the economic hardships the country has been through since World War II, many of the public hospitals and clinics are not maintained well and lack the funds to invest in digitalisation, which restricts the sharing of data and the communication with older people, who are also not as tech savvy as some of their western contemporaries.

This is why such digital solutions, though incredibly needed, might be slow to get established on the market and older people could require additional time to get used to and acquainted with, the various proposed devices. Furthermore, the financial limitations and low spending power of the citizens allows only for the most cost effective services, if they are to be sustainable long term, which is why, based on this study, it is recommended that the project rolls out simple (basic) and very affordable solutions at first, until trust is gained and consciousness is shaped more in line with the preventative efforts AgeWare is focused on, and more information becomes available on the use of digitalisation to prolong longevity. As each generation becomes more comfortable with navigating new technology, such solutions are expected to pick up speed and become more popular, especially if they focus on providing accurate and reliable data and work on building a brand which inspires trust and confidence in the community.

1.1 Participation of older people in the population and life expectancy

- The current population of Bulgaria is 6 882 242according to last population census at 2021[99]
- Average life expectancy both genders 75.3 females 79.1 males 72.1[100]
- 55-64: 13.15% (male 433,943 /female 482,784)
- 65 years and over: 20.06% (male 562,513 /female 835,065) (2020 est.)[101]

1.2 Retirement age

For retirement in 2021, women need to be aged 61 years and 8 months to have a period of social insurance cover of 36 years. For men the age is 64 years and 4 months and a period of social insurance cover of 39 years.[102]

1.3 Insurance

National insurance contributions

National insurance contributions include social security and health insurance contributions.

The aggregate rate of social security contributions is 24.7% to 25.4%, of which 14.12% to 14.82% is payable by the employer and 10.58% is payable by the employee.

The aggregate rate of health insurance contributions is 8%, of which 4.8% is payable by the employer and 3.2% is payable by the employee.

The total national insurance contribution rate (social security and health insurance) is 32.7% to 33.4, of which 18.92% to 19.62% is payable by the employer and 13.78% is payable by the employee.

The above rates are applicable to Bulgarian nationals, as well as to EU/EEA nationals who are subject to Bulgarian social security contributions (i.e. who have not obtained a E101/A1 certificate of coverage issued from their home country social security authorities). Non-EU/EEA nationals are also subject to these contributions under certain conditions, except for health insurance contributions. If they have a permanent residence permit for Bulgaria, they will be subject to health insurance contributions, too.

The minimum monthly insurance base for freelancers is BGN 650 for 2021. The maximum monthly insurance base for freelancers is BGN 3,000 for 2021.

For individuals working under employment agreements or as managers or controllers of companies, the minimum insurance base depends on the economic activity of the insurer as well as on the

[99] https://www.worldometers.info/world-population/bulgaria-population/

[100] https://www.worldometers.info/demographics/bulgaria-demographics/

[101] https://countrymeters.info/bg/Bulgaria

[102] https://ec.europa.eu/social/main.jsp?catId=1103&langId=en&intPageId=4437

profession and grade of the insured person. The minimum base varies between BGN 650 and BGN 1,763. The maximum monthly insurance base is limited to BGN 3,000.[103]

1.4 Insurance pillars

In 2000 the foundations were laid of the three-pillar pension insurance system in Bulgaria. The three-pillar system combines the advantages of the pay-as-you-go system (the state system of pension insurance – 1st pillar) and the capital-based systems (Supplementary Mandatory – 2nd pillar, operating through the universal and professional funds, and the supplementary voluntary pension insurance – 3rd pillar).

To the state social security system (1st pillar), supplementary mandatory pension insurance was added the 2nd pillar - supplementary mandatory insurance, that works through the universal and professional pension fund. The supplementary voluntary pension insurance (3rd pillar) functions through voluntary pension funds. Thus, in addition to the state pension you can get a pension from the funds for supplementary pension insurance and pensions, based on the capital principle[104].

1.4.1 State Social Security

Pillar 1 of the pension system is managed by the state. The Budget of the State Social Security is determined by the State Social Security Budget Act and is in force for one calendar year (from January 1st to December 31st). In the Act, the budgets of the several funds - “Pensions”, "Pensions Unrelated to Work", “Accidents at Work and Occupational Diseases”, “General Disease and Maternity” and “Unemployment” - are specified. The overall amount of the insurance contributions for insured employees in 3rd category of labour for all insurance risks is 22.3% of the social security income (for persons born before 01.01.1960), and 17.3% for those born after this date, since 5% of their insurable income is directed to supplementary mandatory pension insurance.[105]

1.4.2 Supplementary mandatory pension insurance

Pillar 2 – supplementary mandatory pension insurance was set up to provide a second pension in addition to the pension for the State Social Security.

The second pillar works through universal and/ or professional pension funds, which are set up and managed by private pension insurance companies. The insurance contributions are determined by law and are collected together with the insurance contributions for the state social security[106]

1.4.2 Supplementary Voluntary Pension Insurance (SVPF)

Pillar 3 of the pension insurance system in Bulgaria is a voluntary form of pension insurance. It is an option for a third, additional pension. Contributions to a voluntary pension fund will help you accumulate amounts in an account of your own. If you add the third pillar to the other two pillars you are free to dream about the things you want for yourself after retirement. Supplementary voluntary insurance works on a capital principle. If you are 16 and over, you can insure yourself or be insured. Insurance may be individual, by an employer, or to the benefit of a third party.

[103] https://taxsummaries.pwc.com/bulgaria/individual/other-taxes

[104] https://www.nnbulgaria.com/en/pension-insurance/pension-insurance-system (Accessed: 15 October, 2021)

[105] https://www.nnbulgaria.com/en/pension-insurance/pension-insurance-system/pillar1 (Accessed: 15 October, 2021)

[106] https://www.nnbulgaria.com/en/pension-insurance/pension-insurance-system/pillar2 (Accessed: 15 October, 2021)

Just like the mandatory voluntary insurance, the amount of the pension mostly depends on the amount of the funds accumulated on the individual account of the insured person [107]

1.5 Support organisations

1.5.1 Red cross

Red Cross Bulgaria is a "humanitarian volunteer organisation, working according to its Statutes and the principles of the International Red Cross Movement, committed to providing support to vulnerable people victims of crisis and disasters in order to improve their life and dignity and relieve their suffering."[108]

1.5.2 Charities

Red Cross Bulgaria is a "humanitarian volunteer organisation, working according to its Statutes and the principles of the International Red Cross Movement, committed to providing support to vulnerable people victims of crisis and disasters in order to improve their life and dignity and relieve their suffering."[109]

1.5.3 Private Patronage

Private Patronage is a new service, offered for the first time, to help older people in Sofia and the surrounding area. It includes delivery of a lunch menu, or a lunch and evening menu to the home. Private patronage helps people who, for social or health reasons, cannot afford fresh food every day.

Relevant stakeholders and policy makers

Bulgaria			
	Local	Regional	National
Health	Hospitals, Clinics, four medical universities – Sofia, Plovdiv, Varna and Pleven. One medical faculty in Sofia University.	28 Regional Health Inspectorates	Ministry of Health[110] Regional Health Inspectorates[111]
Social	Municipalities – Social Patronage	28 Regional Agencies for Social Assistance	Ministry of Labour and Social Policy [112] Agency for People with Disabilities[113]
Built environment	Municipalities, Local government units, local developers and construction companies, local public and private houses for aging persons.	28 Regional Development Agencies	Ministry of Regional Development and Public Works [114]

[107] https://www.nnbulgaria.com/en/pension-insurance/pension-insurance-system (Accessed: 15 October, 2021)
[108] https://www.redcross.bg (Accessed: 15 October, 2021)
[109] http://patronaj.net (Accessed: 15 October, 2021)
[110] https://www.mh.government.bg/ / (Accessed: 15 October, 2021
[111] https://www.mh.government.bg/en/ministry/secondary-authorizing-officers/regional-health-inspectorates/ (Accessed: 15 October, 2021)
[112] https://www.mlsp.government.bg/ (Accessed: 15 October, 2021)
[113] http://ahu.mlsp.government.bg/home/
[114] https://www.mrrb.bg/ (Accessed: 15 October, 2021)

Digitalisation	Municipalities, local government units, private IT companies	28 Regional MTITC Agencies	Ministry of Transport, Information Technology and Communications – MTITC[115] Ministry of Education and Science
Development	Municipalities, local government units, local private companies	28 Regional Development Agencies	Ministry of Regional Development and Public Works[116] Ministry of Economy[117]
Education	Municipalities, local government units, local and public and private schools and universities	28 Regional inspectorates of Ministry of Education and Science	Ministry of Education and Science[118]
Research	Municipalities, local and state Universities,	28 Regional inspectorates of Ministry of Education and Science	Ministry of Education and Science[119] Bulgarian Academy of Science[120]

(National, regional, local) ecosystem on SHAFE you are involved in your country

List of relevant international projects, where we have participated or currently participate:

- FP7 ICT "Experiential Living Labs for the Internet of Things" – ELLIOT.
- H2020 ACTIVEAGE: ACTivating InnoVative IoT smart living environments for AGEing well (SofiaPilot)[121], AgeWare
- H2020 Cross4Health project (cross4health.eu).
- H2020 BOWI: Boosting Digital Innovation in Europe (bowi-network.eu), BOWI - AgeWare.

7. Croatia

Contributors: dr. Andrej Grgurić, andrej.grguric@ericsson.com; Hrvoje Belani, hrvoje.belani@miz.hr; dr. Vanja Vasiljev, vanjav@uniri.hr; Igor Ljubi, igor.ljubi@racunarstvo.hr; Marija Džida, marija.dzida@pilar.hr.

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

NATIONAL:

The National Council for the Retirees and older people has been an advisory body for a number of years in Croatia. Through the National Council for the Retirees and older people, senior persons are able to be included in creating and evaluating age-related policies.
Legislative and policy framework in place in Croatia:

- Social Welfare Act (Official Gazette (hereinafter: OG) 157/13, 152/14, 99/15, 52/16, 16/17, 130/17),
- Health Care Act (OG 100/18),

[115] https://www.mtitc.government.bg/ (Accessed: 15 October, 2021)
[116] https://www.mrrb.bg/ (Accessed: 15 October, 2021)
[117] https://www.mi.government.bg/ (Accessed: 15 October, 2021)
[118] https://www.mon.bg/ (Accessed: 15 October, 2021)
[119] *Ibidem*
[120] *Ibidem*
[121] www.activageproject.eu (Accessed: 15 October, 2021)

- Compulsory Health Insurance Act (OG 80/13, 137/13),
- Act on Protection of Persons with Mental Disabilities (OG 76/14),
- Act on the Croatian Register of Persons with Disabilities (OG 64/11)
- Professional Rehabilitation and Employment of Persons with Disabilities Act (OG 157/13, 152/14, 39/18),
- Ombudsperson for Persons with Disabilities Act (OG 107/07),
- Ombudsperson Act (OG 76/12),
- National Strategy for Equalization of Opportunities for Persons with Disabilities 2017 – 2020 (OG 42/17),
- Social Welfare Strategy for older people in the Republic of Croatia for the period 2017 – 2020

The Anti-Discrimination Act was adopted (OG 85/08, 112/12). There are no different regulations or practices related to the age of persons with disabilities in Croatia. Persons with disabilities are not divided according to age groups but according to the degree of functional impairment; hence, there is no difference in treatment of the older people with disabilities compared to other age groups.

The Register of Persons with Disabilities of the Croatian Institute for Public Health on March 4, 2019, contained the following records: 247,772 adults (65+) of which 131,993 (53%) of male and 115,789 (47%) of female sex.

191,509 older persons with disability (65+) were certificated in the Croatian Pension Insurance Institute and are entitled to some of disability rights from that field.

According to the processed data of the Register and the Reference Centre of the Croatian Ministry of Health for the Protection of the Health of older people, in the year 2016 there were 511,064 persons with disabilities, 42.6% of them of age 65 and over. Of the 217,841 older persons with disabilities, 49.7%, were in the early old age (65-74 years) 35.7%, in middle old age (75-84 years) and 14.6% in the deep old age (85 and over).

The Croatian Health Insurance Institute (hereinafter: CHII), compliant to Compulsory Health Insurance Act conducts and regulates compulsory health care insurance.

Under the conditions prescribed by the Social Welfare Act, persons with disabilities and older people can also acquire other rights from the social welfare system that are not necessarily related to the health condition of the person.

Ministry dealing with Family and Social Policy provides various support services, such as:
-providing community-based housing (more than 1,000 service users included),
-assistance at home, personal assistant (over 1,700 users of service, including people over the age of 65),
-a sign language interpreter (employing 80 interpreters of the sign language who provide service to older people with hearing impairment),
-assistant with healthy vision (35.5 assistants employed who provide service to older people over 65 years, as well).

The National Program on Palliative Care Development in Croatia 2017-2020 (hereinafter: National Program), adopted by the Government of the Republic of Croatia (hereinafter: GoC) on 18 October 2017, includes activities for the further development of palliative care systems according to established palliative care needs, in accordance with the White paper on standards and norms for palliative care in Europe, with the further establishment of organisational

forms and mutual linking of palliative care stakeholders, continuing palliative care education, adopting national guidelines and recommendations for palliative care provision and development, and suggestions for improving palliative care for patients and their families.

REGIONAL and LOCAL:

- According to the Social Welfare Act local and regional self-government units are obliged to participate in the social welfare of the population in their area in accordance with their financial and other possibilities. Each local and regional self-government unit issues its own general regulations on social welfare in a way that autonomously defines priorities in its jurisdiction.
- In October 2020 in Zagreb the 2020-2024 Strategy for Improving the Quality of Life for Older Persons was presented: "The 30-measure strategy, which was presented on the occasion of the International Day of Older Persons, observed on 1 October, will be implemented in six fields: social protection, healthcare, lifelong learning, various aspects of free time, human rights, and civil society, said Romana Galic, the head of the city department for social protection and persons with disabilities."[122]
- Local government units establish gerontology centres (usually in the homes for older people), in which non-institutional or daily care for older people, including those with disabilities, is organized.
- Reference Centre of the Croatian Ministry of Health for the Protection of the Health of older people has started educating the formal and informal caregivers for persons suffering from Alzheimer's disease and other kinds of dementia (dementia is becoming more and more common form of disability and is a major burden for the affected families).
- In the homes for older people, a program of 4 levels of geriatric health care is implemented, which enables the categorization of individual gerontology of insured person with the implementation of measures and procedures and activities.
- A mobile gerontology-dental team was established in the City of Zagreb to improve the availability of oral health care for elderly.
- The Economics of Ageing in Croatia, University of Zagreb Faculty of Economics and Business[123]:
- Legal Protection of Older Persons (Including Older people with Mental Disorders) From the Croatian Perspective: Why We Need a Special UN Convention on The Rights of The Older Persons:
    - S. Roksandić Vidlička i S. Šikoronja, "PRAVNA ZAŠTITA STARIJIH OSOBA, OSOBITO S DUŠEVNIM SMETNJAMA, IZ HRVATSKE PERSPEKTIVE: ZAŠTO NAM JE POTREBNA KONVENCIJA UN-A O PRAVIMA STARIJIH OSOBA", Zbornik Pravnog fakulteta Sveučilišta u Rijeci, vol.38, br. 3, str. 1101-1129, 2017. [Online][124].

Relevant stakeholders and policy makers

	Local	Regional	National
Health	+	+	+
Social	+	+	+
Built environment	+	+	+
Digitalisation		+	+

[122] https://www.total-croatia-news.com/news/47052-older-persons (Accessed: 15 October, 2021)
[123] https://www.efzg.unizg.hr/UserDocsImages/MGR/ssmolic/ESTARENJA/brosura_eng_preview_03-12-2014.pdf
[124] https://doi.org/10.30925/zpfsr.38.3.7 (Accessed: 15 October, 2021)

Development			+
Education		+	+
Research			+
Other: please specify			
Other: please specify			

(National, regional, local) ecosystem on SHAFE of the partner NA

(National, regional, local) funding opportunities on SHAFE. EUROPEAN FUNDS FOR CROATIAN PROJECTS

- Examples of relevant business models, and sustainability means; Activities to address and implement SHAFE; Strategies

8. Cyprus

Contributor: Dr. Areti Efthymiou

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

- The eHealth activities are in an early stage in Cyprus. Usually, they are developed as part of research initiatives by universities and private sector.
- In 2015 the eHealth legislation was approved by the Cypriot government. In 2019 the government established the national eHealth authority (Chair: Christos Schizas**,** schizas@ucy.ac.cy)
- In an early stage, as a public initiative towards this domain, the electronic medical record system was tested at the Nicosia and Famagusta General Hospitals and there is a plan for an organised digital system to monitor hospital internal processes and regional eHealth networks: including aspects of telemedicine, smart homes, and ambient assisted living services.
- In the same framework, two municipalities in Cyprus have initiated the process to be part of the healthy cities network[125], but still the process is not completed.
- Many projects are part of academic initiatives and only a handful of cases are focusing on older adults:
  - TILEPROMITHEAS – Transforming care for those in intensive care units (Dr Theodoros Kyprianou, kyprianou.t@unic.ac.cy
  - SHAPES_Smart and Healthy Ageing through People Engaging in Supportive Systems (University of Nicosia- research foundation (Andreas Andreou (UNRF), Constandinos X. Mavromoustakis (UNRF)
  - Cherries responsible Healthcare Ecosystems- Open call for Cyprus (Mr. Moyses Moyseos (EUBIC CyRIC): m.moyseos@cyric.eu)
  - Centre of excellence
    - HealthXR (Dr Maria Matsangidou, matsangidou.m@gmail.com)
  - eHealth Lab – University of Cyprus (Constantinos Patichis pattichi@cs.ucy.ac.cy, Christos Schizas**,** schizas@ucy.ac.cy
    - Integrated National eHealth Ecosystem

[125] healthy cities network (Accessed: 15 October, 2021)

- Long Lasting Memories (Dr Marios Neofytou mneoph@cs.ucy.ac.cy)

At the moment, there are no public eHealth services targeting older adults or Smart Healthy Age-Friendly Environments in Cyprus.

Types of services for older adults are:
1) The multipurpose centre in Nicosia provides activities for older adults e.g., home care, transportation, breakfast, coffee and lunch, physiotherapy and exercise, art courses, lectures, cooking, health assessment (sensory tests), excursions and consultation[126]
2) day centres (social welfare services)
3) nursing homes (social welfare services)
4) home care (social welfare services)

Working document summarizing the area of assistive technologies and the possibilities of their use in social, health and informal care systems (Pracovní dokument shrnující oblast asistivních technologií a možností jejich využití v systémech sociálních, zdravotních a v systému neformální péče).

Relevant stakeholders and policy makers

	Local	Regional	National
Health			Ministry of Health
Social			Ministry of Labour, welfare and social insurance
Built environment			Ministry of Internal affairs- construction department
Digitalisation		University departments eHealth Lab Cyprus Neuroscience and Technological Institute	Ministry of Health National eHealth Authority
Development			Ministry of Energy commerce and industry
Education			Ministry
Research		University departments	Directorate General for European Programmes, coordination and development Research and Innovation Foundation

(National, regional, local) ecosystem on SHAFE of the partner: N/A

(National, regional, local) funding opportunities on SHAFE

- *Cherries responsible Healthcare Ecosystems- Open call for Cyprus (Mr. Moyses Moyseos (EUBIC CyRIC): m.moyseos@cyric.eu)*
- https://www.research.org.cy (New funding programmes for Research and Innovation with a budget of €15 million- Press release 15 April 2021)
  - Horizon
  - AAL (Iria Loukaidou, iloucaidou@research.org.cy)
- https://www.erasmusplus.cy/IDEP-Dia-Biou-Mathisis (ΙΔΕΠ)
- Directorate of European Investment funds[127]

- Examples of relevant business models, and sustainability means

[126] https://www.nicosia.org.cy/el-GR/municipality/multipurpose-centre/ (Katerina Koni, Katerina.Koni@nicosiamunicipality.org.cy

[127] https://www.fundingprogrammesportal.gov.cy/easyconsole.cfm/page/progsearch/rand/0.620599258747 (Accessed: 15 October, 2021)

- Activities to address and implement SHAFE Strategies

9. Czech Republic

Contributors: **Lenka Lhotská, Lucie Vidovićová**

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

Digital Czech: In its Resolution No 629 of 3 October 2018, the Czech Government approved the cross-sectional strategic document Digital Czech Republic, which deals with all the effects of digitization on the economy and society. It is a set of concepts that create the conditions for the long-term prosperity of the Czech Republic. Its content can be defined as follows: "Strategy of Coordinated and Comprehensive Digitization of the Czech Republic 2018+". "Digital Czech Republic" covers three pillars (partial strategies) that form one logical unit. It covers areas ranging from the interaction of the Czech Republic in the European Union in the digital agenda, through digital public administration to the preparation and interaction of the Czech Republic's society and economy for digitization[128].
Policies in the making:

Working document summarizing the area of assistive technologies and the possibilities of their use in social, health and informal care systems (Pracovní dokument shrnující oblast asistivních technologií a možností jejich využití v systémech sociálních, zdravotních a v systému neformální péče)[129].

Ministry of Labour and Social Affairs Preparation for Ageing[130] – an expected strategy for 2021 – 2025 (not published yet).

Relevant stakeholders and policy makers

	Local	Regional	National
Health	general practitioners	regional governments, hospitals; senior advocacy groups	Ministry of Health
Social	social services municipalities	regional governments, NGOs, senior advocacy groups	Ministry of Labour and Social Affairs
Built environment	municipalities	regional governments Prague Institute of Planning and Development (and similar in other big cities)	Ministry of Labour and Social Affairs Ministry of Regional Development
Digitalisation	municipalities	senior advocacy groups	Ministry of Industry and Trade
Development	municipalities	regional governments	Ministry of Regional Development
Education	schools (primary, secondary), senior advocacy groups	universities, senior advocacy groups	Ministry of Education, Youth and Sports, universities
Research	municipalities	Universities	Technological Agency (TAČR), universities, Academy of Sciences

[128] https://www.mpo.cz/en/business/digital-society/digital-czech-republic--243601 (Accessed: 15 October, 2021)
[129] http://www.podporaprocesu.cz/pracovni-dokument-shrnujici-oblast-asistivnich-technologii-a-moznosti-jejich-vyuziti-v-systemech-socialnich-zdravotnich-a-v-systemu-neformalni-pece/ (Accessed: 15 October, 2021)
[130] https://www.mpsv.cz/seniori-a-politika-starnuti (Accessed: 15 October, 2021)

Business	local start-ups and SMEs & companies	local start-ups and SMEs	Companies

(National, regional, local) ecosystem on SHAFE of the partner

- The Voice of Rare Disease Patients in Europe – the Czech Republic[131]
- ECHAlliance [132] : ECHAlliance Ecosystems are geographically focused, permanent, multi-stakeholder partnerships committed to break down silos, transform health and social care and create economic growth. For the last ten years with the support of the European Commission, we've developed a methodology and approach on how to set up and manage and connect ecosystems in 55+ global locations.
- The Czech Republic representation[133]

(National, regional, local) funding opportunities on SHAFE

- **Technologická agentura ČR (TAČR)** - funding agency for the cooperative projects[134]
- **Czech Health Research Council** @ Ministry of Health[135]
- Operational programs, EU Funds - Operační programy[136]
- Ministry of Industry and Trade – funding opportunities:
- https://www.mpo.cz/cz/podnikani/dotace-a-podpora-podnikani/
- https://www.mpo.cz/cz/podnikani/dotace-a-podpora-podnikani/optak-2021-2027/

Examples of relevant business models, and sustainability means

Activities to address and implement SHAFE

Life90 / Gerontological Institute (Život 90) a regional and local community centre, providing various types of services, educational and cultural activities and respite care. They are pioneers in the provision of emergency red button for older adults supported by the 24/7 telephone support and supervision. Via their Gerontological Institute they are involved in various types of senior advocacy and policy lobbing. In cooperation with the Masaryk University and Czech Technical University in Prague CIIRC they are testing the humanoid robot Pepper for the community usage and active ageing support[137].

10. Denmark

Contributor: Sonja Hansen

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

- Assisted Living Technology (Velfærdsteknologi & Hjælpemidler)[138]
- Smart Aarhus Smart Aarhus (English)[139]

[131] https://www.eurordis.org/member_search?country=Czech+Republic (Accessed: 15 October, 2021)
[132] https://echalliance.com/ (Accessed: 15 October, 2021)
[133] https://echalliance.com/?s=czech+republic (Accessed: 15 October, 2021)
[134] www.tacr.cz (Accessed: 15 October, 2021)
[135] http://www.azvcr.cz/en (Accessed: 15 October, 2021)
[136] https://www.esfcr.cz/ (Accessed: 15 October, 2021)
[137] www.zivot90.cz (Accessed: 15 October, 2021)
[138] www.velfaerdsteknologi-aarhus.dk/english (Accessed: 15 October, 2021)
[139] https://smartaarhuseu.aarhus.dk/ (Accessed: 15 October, 2021)

- Local Government Denmark English (kl.dk)[140]
- Ministry for Health – www.sst.dk Health and wellbeing – a good life [141]
- Senior Housing Seniorboliger - OK-Fonden[142]

Relevant stakeholders and policy makers[143]:

	LOCAL	REGIONAL	NATIONAL
HEALTH	x	X	x
SOCIAL	x	X	
BUILT ENVIRONMENT	x		
DIGITALISATION	x	X	x
DEVELOPMENT	x	X	
EDUCATION	x		x
RESEARCH	x	X	x
OTHER: PLEASE SPECIFY			
OTHER: PLEASE SPECIFY			

National, regional, local) ecosystem on SHAFE of the partner

- APP's Café – older people and other's meet for helping each other with all kind of APP'sAppsCafé[144]
- Electronically Care and Social System – messages and documents can be sent between the region/hospitals and the municipalities/elder care system
- Digital Health Strategy in Denmark. Cooperation in an integrated network focused around citizens.
- House for Generations – Big building with flats with many digital solutions and facilities for both older people and families, students and a kindergarten live together Generationernes Hus (aarhus.dk).
-
- Vito – App for older people to find solutions/technologies for having a good life/wellbeing in their homes and on own conditions [145] eHealth Platform Columna – joint Clinical Information System across the Region Central Denmark's 17 hospitals[146]
- Region Central Denmark, 19 municipalities, companies, universities.

The Regional Ecosystem
- APP's Café
- Electronically Care and Social System
- House for Generations
- Vito – App
- eHealth Platform Columna
- Region Central Denmark

(National, regional, local) funding opportunities on SHAFE

- Innovations Fund Denmark About Innovation Fund Denmark | Innovationsfonden

[140] https://www.kl.dk/english/ (Accessed: 15 October, 2021)
[141] https://www.sst.dk/da (Accessed: 15 October, 2021)
[142] https://ok-fonden.dk/boliger/seniorbolig/ (Accessed: 15 October, 2021)
[143] Please contact sonha@aarhus.dk for further information
[144] aarhus.dk (Accessed: 15 October, 2021)
[145] https://vito.nu/ (Accessed: 15 October, 2021)
[146] https://systematic.com/healthcare/solutions/care/columna-cura/ (Accessed: 15 October, 2021)

- Industrial Fund[147]

Life90 / Gerontological Institute (Život 90) are pioneers in the provision of emergency red button for older adults supported by the 24/7 telephone support and supervision.

- Velux Foundation
- Tryg Fund[148]
- Nordea Fund[149]
- Markedsmodningsfonden[150]
- PPI Fund Aarhus Municipality Velfærdsteknologisk OPI-pulje (aarhus.dk)

11. Estonia

Contributor: Kadi Lubi (TalTech)

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

The main foundations on aging politics were adopted on 1999 and were based on the document of United Nation's 1st Global Aging Assemble (from 1982) followed by the update on 2002.

- Preparation of Estonian national development plan 2013-2020 for active aging was initiated in 2012. The objective if this document was to form age-friendly society and secure the quality of life and equal opportunities for elderly.
- Demographic developments and issues of aging population are the areas of concerns also on the Welfare Development Plan 2016–2023[151]
- Estonian government has already initiated the next Welfare Development Plan 2023-2030 at the end of 2020.
- Still, Estonia holds 3rd highest place after Latvia and Bulgaria (44.6%) of old population at risk of poverty or social exclusion (data from 2019[152]).
- Social services are provided by municipalities and by the state.
- Since Estonia is aging population, reforms on retirement age started on 2017 and gradual increase is ongoing until 2026, when people born on 1961 retire at age 65. Starting from 2027, the age of retirement will start to depend on average life expectancy and the basis for calculations will be the life expectancy of 65-years old people i.e., in case life expectancy increases, the retirement age will increase. However, the annual increase is max 3 months and confirmed 2 years prior the change.
- Due to that, the goals of above-mentioned documents are also related to supporting and securing retraining opportunities. However, although Education Development Plan 2021-2035 outlines the lack of systematic approach among risk groups, including elderly[153], the document does not provide solutions to this problem. Therefore, it may conclude that

[147] https://industriensfond.dk (Accessed: 15 October, 2021)
[148] http://trygfonden.dk (Accessed: 15 October, 2021)
[149] http://nordeafonden.dk/ (Accessed: 15 October, 2021)
[150] http://markedsmodningsfonden.dk/ (Accessed: 15 October, 2021)
[151] https://www.sm.ee/en/development-programme-and-plan-action-ministry . (Accessed: 15 October, 2021)
[152] https://ec.europa.eu/eurostat/web/income-and-living-conditions/visualisations (Accessed: 15 October, 2021)
[153] https://www.hm.ee/sites/default/files/haridusvaldkonna_arengukava_2021-2035_10.07.2020.pdf (Accessed: 15 October, 2021)

although problems are acknowledged, the initiatives are fragmented and lack systematic and concrete action-/implementation plans.

Additional information on older people in Estonia

Protection of older people is the responsibility of Ministry of Social Affairs[154]

Lifelong learning for older people[155]

Relevant stakeholders and policy makers

	Local	Regional	National
Health	+ Municipalities	+ Regional (tertiary) healthcare institutions	+ (Ministry of Social Affairs, Minister of Health and Labour)
Social	+ Municipalities	+ (The Association of Estonian Cities and Municipalities (AECM))	+ (Ministry of Social Affairs, Minister of Social Protection, Social Insurance Board)
Built environment	+		+
Digitalisation		+	+
Development	+	+	+
Education	+	+	+
Research			+ (R&D organisations, incl. Universities)

(National, regional, local) ecosystem on SHAFE of the partner N/A

(National, regional, local) funding opportunities on SHAFE

Research funding by Estonian Research Council[156]:

Funding schemes: principal investigator comes from positively evaluated Estonian R&D institutions (regardless of a citizenship or country of origin).

Other funding opportunities (e.g. ERC, Horizon) can be explored.

Examples of relevant business models, and sustainability means: NA

Activities to address and implement SHAFE Strategies: NA

12. Finland

Contributors: Katja Valkama and Minna Zechner

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

- *Act on Supporting the Functional Capacity of the Older Population and on Social and Health Services for Older Persons* 2012/980. That is meant to ensure the wellbeing of older adults, that they get support they need and are given the chance to influence decision that influence their lives[157].

[154] https://www.sm.ee/en/aged (Accessed: 15 October, 2021)
[155] https://epale.ec.europa.eu/et/blog/teadlik-vananemine-kui-elukestev-ope (Accessed: 15 October, 2021)
[156] https://www.etag.ee/en/funding/research-funding/ (Accessed: 15 October, 2021)
[157] https://www.finlex.fi/fi/laki/ajantasa/2012/20120980 (Accessed: 15 October, 2021)

- *The Disability Services Act* 380/1987[158] The principles of Finnish policy concerning people with disabilities are equal rights, participation and the necessary services and support. Public services and a barrier-free environment are designed for everyone. When general services prove insufficient, special ones are arranged according to the legislation - such as services concerning housing, institutional care, assistive devices, transport, personal assistant, and interpretation. The aim is to support the functional capacity of people with disabilities and their individual autonomy.
- *Government Degree on Accessibility of Buildings* 241/2017[159]. The aim of the degree is to promote equality between people. Equality requires functional facilities. The regulation lays down minimum accessibility requirements, but there is nothing to prevent us from doing better. According to the UN Convention on the Rights of Persons with Disabilities, accessibility is a human right. Accessibility is also a prerequisite for the realisation of many other human rights. There is a guide to help authorities to make sure that the build environment is accessible Esteetön rakennus ja ympäristö [Accessible building and environment][160]
- Quality recommendation to guarantee a good quality of life and improved services for older persons 2020–2023 aims to guarantee a good quality of life and effective high-quality services for all older persons who need them. The proposed measures attempt to lay the foundation for an age-friendly society. (Sosiaali- ja terveysministeriö & Suomen Kuntaliitto (2020) Laatusuositus hyvän ikääntymisen turvaamiseksi ja palvelujen parantamiseksi 2020–2023[161].
- *Act on offering digital services* 306/2019[162]) aims to advance the availability of public or publicly funded digital services. Other aims include advancing the quality, information security and accessibility of contents and this way better the equal accessibility of digital services. The Regional State Administrative Agency (Aluehallintovirasto) offers instructions for digital accessibility[163]
- *Act on the Status and Rights of Social Welfare Clients* 812/2000[164] and *The Act on the Status and Rights of Patients 785/1992*[165] stipulate the legal principles under which patients and clients of social welfare services must be treated. Medical patients and clients of social services have the right to appropriate and high-quality service from social and health care services. Options for treatment or measures to be taken must be explained openly and in an understandable manner. Patients and clients of social services must be treated in a manner that does not infringe on their human dignity, convictions, or privacy. If clients feel that they have been treated improperly by social and health care services, or if they need advice about their rights, they can consult the Patient Ombudsman or Social Ombudsman. Complaints are handled by municipalities, Regional State Administrative Agencies, the National Supervisory Authority for Welfare and Health (Valvira), the Parliamentary Ombudsman, and the Chancellor of Justice of the Government.
- The National Supervisory Authority for Welfare and Health (Valvira) operates nationwide in guiding and overseeing social care. Valvira operates under the Ministry of Social Affairs and Health, and is charged with the supervision of the social and health care, early childhood

[158] https://www.finlex.fi/fi/laki/ajantasa/1987/19870380 (Accessed: 15 October, 2021)
[159] https://finlex.fi/fi/laki/ajantasa/2017/20170241 (Accessed: 15 October, 2021)
[160]file:///C:/Users/k5000799/AppData/Local/Temp/Esteet%C3%B6n%20rakennus%20ja%20ymp%C3%A4rist%C3%B6.pdf (Accessed: 15 October, 2021)
[161]https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/162455/STM_2020_29_J.pdf?sequence=1&isAllowed=y
[162] https://www.finlex.fi/fi/laki/alkup/2019/20190306 (Accessed: 15 October, 2021)
[163] https://www.saavutettavuusvaatimukset.fi/ (Accessed: 15 October, 2021)
[164] https://www.finlex.fi/fi/laki/ajantasa/2000/20000812 (Accessed: 15 October, 2021)
[165] https://www.finlex.fi/en/laki/kaannokset/1992/en19920785 (Accessed: 15 October, 2021)

education and care, alcohol and environmental health sectors. Valvira provides licensing for social and health care providers and offer guidance to the Regional State Administrative Agencies to achieve harmonised licensing, guidance and supervisory practices throughout Finland[166].

- My Kanta Pages [167] are open to everybody with Finnish personal ID code and means of identification. It is Electronic Patient Record system where individuals can see their own health records and prescriptions, request a prescription renewal and save your/their will and organ donation testament. The pages will extend in the coming years to include client data archive for social welfare services, enabling centralised electronic archiving of social welfare client data, as well as active use and permanent storage of the data[168] .
- The Finnish Ministry of Social Affairs and Health has regularly commissioned national surveys on e-health and e-welfare to monitor state of the art and trends in e-health and e-welfare in Finland to gain evidence for development. The latest report is from 2019. (Tuulikki Vehko, Salla Ruotsalainen, Hannele Hyppönen (eds.) E-health and e-welfare of Finland. Checkpoint 2018. Helsinki: National Institute for Health and Welfare (THL)[169]).
- The health and social services reform that has been going on for years, aims to develop public healthcare and social welfare. Responsibility for the organisation of health and social services will be transferred from several hundreds of municipalities to 21 counties or welfare regions. Health and social services will be developed during the health and social services reform as part of the Future Health and Social Services Centres programme with the following aims that are attempted to be enhanced by digitalization: Improve equal access to services and the timing and continuity of services; shift the focus of activities from heavy services to preventive and proactive work; raise service quality and effectiveness; ensure the multidisciplinary and interoperable nature of services and curb the growth of expenditure[170] .
- Government program for advancing digitalisation. The goals to be reached in 2023 include: good quality digital services are available for citizens and business; those doing business need to deal with less paperwork with authorities and more is handled digitally and support for digital activities is available across the country also for those in business[171] .
- ARA The Housing Finance and Development Centre of Finland grants subsidies for improving the housing conditions of groups with special needs. This aims to increase the offering of reasonably priced rental housing suitable for such a purpose. Special-needs groups include homeless people, refugees, students, people with mental health or substance abuse problems, disabled people, people suffering from memory illness and old people in poor physical condition. The maximum subsidy amounts are scaled according to the recipients, with the subsidy percentage increasing according to the number of exceptional arrangements required to support the group's housing. The maximum percentages are 15, 25, 40 and 50 % of approved investment costs. ARA also provides subsidies for the renovation of homes for elderly or disabled people, accessibility subsidies and subsidies for building lifts[172].

[166] https://www.valvira.fi/web/en/front-page (Accessed: 15 October, 2021)
[167] https://www.kanta.fi/en/web/guest/my-kanta-pages (Accessed: 15 October, 2021)
[168] https://www.kanta.fi/en/web/guest/professionals/client-data-archive-for-social-welfare-services (Accessed: 15 October, 2021)
[169] https://www.julkari.fi/bitstream/handle/10024/138244/RAP2019_7_e-health_and_e-welfare_web_4.pdf (Accessed: 15 October, 2021)
[170] https://soteuudistus.fi/en/frontpage (Accessed: 15 October, 2021)
[171] https://vm.fi/digitalisaation-edistamisen-ohjelma (Accessed: 15 October, 2021)
[172] https://www.ara.fi/en-US/Housing_finance (Accessed: 15 October, 2021)

- *The Home Municipality Act* (Kotikuntalaki 201/1994)[173] stipulated support for independent living in the community of residence but restricted the freedom of mobility of persons with special needs to move to another municipality where better services may be available. The law was revised (1377-1378/2010) and enacted in 2011 to allow mobility of all persons to seek for better services in another municipality. In such a case, the home municipality pays for the services.
- Home services are provided according to the Social Welfare Act 1301/2014 regulates the service provision to home settings[174].
- Technology supporting smart ageing and care at home programme (KATI) is a governmental programme and implements Hyteairo's home living measures and is part of the horizontal programme on ageing. The Wellbeing and Health AI and Robotics Programme (HyteAiRo) is a joint national programme between all parties on communication and development since 2018. Ministry of Social Affairs and Health published 2.10.2020 horizontal programme on ageing to support good health and functional capacity of older people. https://thl.fi/en/web/thlfi-en/research-and-development/research-and-projects/technology-supporting-smart-ageing-and-care-at-home-programme-kati-
- The National Non-Discrimination and Equality Tribunal is an impartial and independent judicial body appointed by the Finnish Government.[175] The Tribunal supervises compliance with *the Non-Discrimination Act* 1325/2014 and *the Act on Equality between Women and Men (Equality Act)* 609/1986 both in private activities and in public administrative and commercial activities. However, the mandate of the Tribunal does not cover matters related to private life, family life or practice of religion. The function of the Tribunal is to give legal protection to those who consider they have been discriminated against or victimised.
- In the beginning of 2021, there is going on strategic national work for common national and global principles and guidelines on the production, acquisition, mobility, opening up, sharing, use, maintenance and storage of information. Since digital, networked ICT environment and information space of the 2020s will be global, complex, vulnerable, and receptive to chaos. The focus of the planned information policy covers a diverse array of information and knowledge, from datasets to information material and notions of all kinds. In utilising information, the aim is to promote people's wellbeing, democracy, and a socially, economically, culturally and environmentally sustainable society. The constantly evolving technology benefits people in their lives and provides tools for applying, using and creating information (Kauhanen-Simanainen, Anne (2020) Tietopolitiikalle kestävä suunta – Murrosten ajassa eteenpäin. Helsinki: VM[176]).
- There is need keep in mind certain specific groups of individuals when considering SHAFE, namely the indigenous Sami people, the minority group of Roma, ageing migrants, ageing prisoners, those without permanent dwellings and those who suffer from mental health and substance abuse problems.

Relevant stakeholders and policy makers[177]*:*

[173] https://www.finlex.fi/fi/laki/ajantasa/1994/19940201
[174] https://www.finlex.fi/fi/laki/ajantasa/2014/20141301 (Accessed: 15 October, 2021)
[175] https://www.yvtltk.fi/en/index.html (Accessed: 15 October, 2021)
[176] https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/162582/VM_2020_80.pdf?sequence=1 (Accessed: 15 October, 2021)
[177] At present organising of the public services in the responsibility of municipalities, the shift to counties of welfare regions is supposed to take place in the beginning of 2023. Therefore, one of the most essential local

	Local	Regional	National
Health	Municipalities*		Ministry of Social Affairs and Health, Finnish Institute for Health and Welfare
Social	Municipalities		
Built environment	Municipalities		Ministry of Environment
Digitalisation	Municipalities		
Development	Municipalities		Association of Finnish Local and Regional Authorities (AFLRA, Kuntaliitto).
Education (we considered the post compulsory education only)	Adult education centres exist in most bigger towns. Universities of Applied Sciences and Universities are located in bigger cities		Ministry of Education and Culture
Research	Universities of Applied Sciences and Universities are located in bigger cities	Universities of Applied Sciences and Universities are located in bigger cities	VTT is a research institution owned by the Finnish state. It advances the utilisation and commercialisation of research and technology in commerce and society.
Non-governmental organisations			Carers Finland, Finnish Pensioners' Federation, Age Institute, The Finnish Association for the Welfare of Older People, Federation for Housing Health
Other: please specify	Church parishes		
			The Finnish Foundation for Technology Promotion supports education and research in the field of technology in Finland.
			The Confederation of Finnish Construction Industries RT (CFCI) is the joint interest organisation of building contractors, special contractors and the construction product industry.

(National, regional, local) ecosystem on SHAFE of the partner

Minna's networks are mainly research oriented: Minna is a member of the Finnish Society for Growth and Ageing Research[178] the Social Policy Association in Finland[179] , University of the Arctic two working group (Social work and Ageing and Gender in the Arctic[180],). She is also involved in CareSam® network of researchers, health and social care professionals across Sweden, Denmark, Finland, Poland and Lithuania which aims to stimulate and increase knowledge about issues on ageing and care[181] . Also, Sosnet, Finnish National University Network for Social Work[182] is part of her activity. Minna is further

stakeholders are municipalities and their different sectors such as: housing, social and health services, land use, public traffic and so forth.

[178] https://www.gerontologia.fi/finnish-society-growth-and-ageing-research (Accessed: 15 October, 2021)
[179] https://sosiaalipoliittinenyhdistys.fi/in-english/ (Accessed: 15 October, 2021)
[180] https://www.uarctic.org (Accessed: 15 October, 2021)
[181] https://caresam.mau.se/ (Accessed: 15 October, 2021)
[182] https://www.sosnet.fi/In-English (Accessed: 15 October, 2021)

involved in a project coordinated by the Lapland hospital District that implements social prescribing in certain Lappish municipalities[183] as well as GERIT-project Gerontological Social Work and complex needs of older adults which is implemented in cooperation with the University of Helsinki and University of Eastern-Finland[184] . Another project where Minna is involved: Understanding ageing, gender and ethnicity: Experiences from European Arctic (AGE-Arctic). It is a research network project with the partners from the University of Oulu, University of Helsinki, University of Jyväskylä, Finland; University of Umeå, University of Gothenburg in Sweden; UiT The Arctic University of Norway, Norway; NArFU (Arhangelsk), Murmansk in Russia; University of Akureyri, Iceland; University of Aarhus, Denmark; and University of Dalhousie, Canada. This project activities will be part of UArctic Thematic Network on Ageing and Gender in the Arctic. The purpose of the AGE-Arctic project is to explore ageing, gender and ethnicity through the lens of equality and social justice/human security[185]

Katja is a member of Finnish Association of Administrative Studies[186], board member of Finnish Society of Disability Studies[187] and board member of the Nordic Network on Disability Studies[188] She is also involved in several projects developing wellbeing technology supporting independent living for ex. AI, mHealth and Robotics renewing the wellbeing sector in Southern Ostrobothnia[189] She is participating actively to the social and health care reform in the region[190] and Seinäjoki University of Applied Sciences[191] is a part of a group of researchers in Gerda-project researching the older adults' wellbeing and living conditions every 5 years. Last dataset is from 2016 and the following survey will be implemented in 2021.

(National, regional, local) funding opportunities on SHAFE

Interreg Europe supports cooperation of public entities for regional development covering the entire Europe including Norway and Switzerland[192].

Structuralfunds.fi is an online service for parties applying for financing from the European Regional Development Fund (ERDF) and the European Social Fund (ESF), for the authorities and for all those interested in EU funding. The European Social Fund (ESF) is a structural fund, which provides Finland with support from the European Union. The aim of ESF funding is to support employment and employment opportunities by developing skills and service structures[193].

[183] https://www.lshp.fi/fi-FI/Sairaanhoitopiiri/Kehittaminen/Kehittamishankkeet/Linkki_lappilaiseen_hyvinvointiin (Accessed: 15 October, 2021)
[184] https://blogs.helsinki.fi/gerit-hanke/ (Accessed: 15 October, 2021)
[185] https://nordregioprojects.org/arctic-programme/understanding-ageing-gender-and-ethnicity-experiences-from-european-arctic-age-arctic/ (Accessed: 15 October, 2021)
[186] http://www.hallinnontutkimus.fi/node/8 (Accessed: 15 October, 2021)
[187] https://www.vammaistutkimus.fi/etusivu (Accessed: 15 October, 2021)
[188] https://nndr.org/board-2/ (Accessed: 15 October, 2021)
[189] https://www.seamk.fi/en/cooperate-with-us/rdi-projects/project-database/?RepoProject=441044 (Accessed: 15 October, 2021)
[190] https://www.epshp.fi/sairaanhoitopiiri/etela-pohjanmaan_sote-rakenneuudistus (Accessed: 15 October, 2021)
[191] https://www.seinajoki.fi/sosiaali-ja-terveys/tietoa-asiakkaalle-ja-potilaalle/hankkeet-sote/etela-pohjanmaan-tulevaisuuden-sote-keskus-hanke/ (Accessed: 15 October, 2021)
[192] https://www.rakennerahastot.fi/web/eay/interreg-europe (Accessed: 15 October, 2021)
[193] https://www.rakennerahastot.fi/ (Accessed: 15 October, 2021)

Academy of Finland funds high-quality scientific research, provide expertise in science and science policy and strengthen the position of science and research[194].

The Foundation for Municipal Development is an independent non-profit foundation. It funds research and development activities serving municipalities, publishes a magazine and books, discusses, and educates. The aim is to support municipalities and regions and improve their scopes for action. The foundation allocates funding on application for research and development projects as well as grants for researchers in all stages of studies and research. Funding is allocated twice a year, in June and December.

The Finnish Innovation Fund Sitra launches and implements projects together with the private, public and third sector, all aimed at increasing sustainable well-being in Finland. The range of the projects is broad, and includes those that run for several years as well as short-term trials. The projects that receive funding are related to Sitra's themes and the practical work we do (see Projects below). Our themes are Sustainability solutions, Fair data economy and Democracy and engagement[195].

NordForsk funds and facilitates Nordic research cooperation and research infrastructure[196]

STEA, The Funding Centre for Social Welfare and Health Organisations (STEA) operates in connection with the Ministry of Social Affairs and Health. Non-profit organisations can apply for grants from STEA for their work that promotes health and social welfare[197].

In addition, there are different foundations that offer funding for research. Many of them are found in this database.[198]

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE

The Finnish Innovation Fund Sitra defines itself as follows: Sitra is an accountable and independent future-oriented fund that is influential nationally and internationally and acts as a think tank, promoter of experiments and operating models and a catalyst for co-operation. In being accountable to Parliament, our future-oriented work is funded with returns on investments based on endowment capital received originally at the behest of Parliament[199].

The health and social services reform that has been going on for years, aims to develop public healthcare and social welfare. Responsibility for the organisation of health and social services will be transferred from several hundreds of municipalities to 21 counties or welfare regions. Since this changes the responsibilities between public actors, we see this also as an opportunity to include new approaches and value and practices.

[194] https://kaks.fi/about-the-foundation/ (Accessed: 15 October, 2021)
[195] https://www.sitra.fi/en/topics/project-funding/#project-funding (Accessed: 15 October, 2021)
[196] https://www.nordforsk.org/ (Accessed: 15 October, 2021)
[197] https://www.stea.fi/web/en/frontpage (Accessed: 15 October, 2021)
[198] https://www.aurora-tietokanta.fi/en/ (Accessed: 15 October, 2021)
[199] https://www.sitra.fi/en/ (Accessed: 15 October, 2021)

Hoivatilat Plc specialises in producing, developing, owning and leasing out day-care centres and nursing homes, as well as service blocks. We solve the spatial needs of growing municipalities and service companies looking for growth without them needing to make their own investments [200] . This is a problematic actor since it moves transnational funds, invests locally and takes the profits out of the country. These profits stem predominantly from municipalities that need the space for service provision. Municipalities use tax funds and Hoivatilat is a means to steer tax funds out of the country.

Eighth Ageing Report of the Federal Government is focusing on digitalisation as a strategy to improve the life quality of senior citizens in Germany, while it also includes measures to increase independence of the older adults, such as smart homes.

Seniors in Rhineland-Palatinate is targeting: self-determined living, staying mobile and active, living well, strengthening solidarity between generations and fostering social inclusion

Hypo is the only credit institution in Finland that specialises in housing[201].

Loppukiri (Final sprint) is a housing community in Helsinki for those aged 48 and over[202] .

ARA The Housing Finance and Development Centre of Finland grants subsidies for improving the housing conditions of groups with special needs. The maximum percentages are 15, 25, 40 and 50 % of approved investment costs. ARA also provides subsidies for the renovation of homes for elderly or disabled people, accessibility subsidies and subsidies for building lifts[203].

Participatory budgeting is a democratic process where the citizens can participate to the budgeting process in the municipality (The Act on Municipalities 410/2015)[204]

13. Germany

Contributors: **Sonja Müller and Kirsten Martin, empirica**

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

- National: Federal Ministry for Family Affairs, Senior Citizens, Women and Youth. *Achter Altersbericht der Bundesregierung* (Eighth Ageing Report of the Federal Government)
  - The main focus of this report is digitalisation as a strategy to improve the life quality of senior citizens in Germany.
  - These include measures such as supporting smart homes to increase the independence of older people, making internet available to all and promoting digital skills.
- Regional: Rheinland-Palatinate Ministry of Social Affairs, Labor, Health and Demography, *Aktionsplan der Landesregierung zur Politik für Seniorinnen und Senioren in Rheinland-Pfalz* (Action Plan of the State Government on Policy for Seniors in Rhineland-Palatinate)

[200] https://hoivatilat.com/ (Accessed: 15 October, 2021)
[201] https://www.hypo.fi/en/in-english/ (Accessed: 15 October, 2021)
[202] https://www.loppukiri.com/ (Accessed: 15 October, 2021)
[203] https://www.ara.fi/en-US/Housing_finance (Accessed: 15 October, 2021)
[204] https://finlex.fi/fi/laki/ajantasa/2015/20150410. More info https://lab.fi/sites/default/files/2020-02/osallistuvabudjetointi_ebook_0.pdf (Accessed: 15 October, 2021)

- This action plan targets the life quality of seniors Rheinland-Palatinate by targeting the 5 key areas: self-determined living, staying mobile and active, living well, strengthening solidarity between generations and fostering social inclusion. Financial support is provided for measures such as building renovation to support accessibility or offering fitness classes for seniors.

Relevant stakeholders and policy makers

	Local	Regional	National
Health			Bundesministerium für Familie, Senioren, Frauen und Jugend; Im Alter IN FORM
Social			Europäischer Sozialfonds für Deutschland;
Built environment		Landesberatungsstelle Barrierefrei Bauen und Wohnen: Rheinland-Pfalz	
Digitalisation		Medien Kompetenz Forum Südwest	Forum Informationsgesellschaft
Development			
Education			
Research			Institut für Soziale Infrastruktur – Sozialforschung; Bundesministerium für Bildung und Forschung; Deutsches Zentrum für Altersfragen

(National, regional, local) ecosystem on SHAFE of the partner you are involved with in your country

BAGSO – Bundesarbeitsgemeinschaft der Seniorenorganisationen (Federal Working Group of Senior Citizens' Organisations). Partners consist of a number of different senior citizen professional, political and social groups as well as non-profits working in fields relating to SHAFE[205].

(National, regional, local) funding opportunities on SHAFE in your country

- Region Baden-Württenberg: Quartiersimpulse- This funding programme supports municipalities that would like to implement age-friendly developments of neighbourhoods and urban districts[206].

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE

Regional Government Bodies

- Ministerium für Soziales, Gesundheit und Integration Baden-Württemberg
- Bayerisches Staatsministerium für Arbeit und Sozialordnung, Familie und Frauen
- Ministerium für Soziales, Gesundheit, Integration und Verbraucherschutz des Landes Brandenburg (MSGIV)
- Hessisches Ministerium für Soziales und Integration
- Mecklenberg-Vorpommern Ministerium für Soziales, Integration und Gleichstellung
- Niedersächsisches Ministerium für Soziales, Gesundheit und Gleichstellung
- Ministerium für Arbeit, Gesundheit und Soziales des Landes Nordrhein-Westfalen
- Reinland-Pfalz Ministerium für Arbeit, Soziales, Transformation und Digitalisierung
- Saarland Ministerium für Soziales, Gesundheit, Frauen und Familie
- Staatsministerium für Soziales, Sachsen
- Ministerium für Arbeit, Soziales und Integration Sachsen-Anhalt

[205] https://www.bagso.de (Accessed: 15 October, 2021)
[206] https://www.quartier2030-bw.de (Accessed: 15 October, 2021)

- Schleswig-Holstein, Ministerium für Soziales, Gesundheit, Jugend, Familie und Senioren
- Thüringer Ministerium für Arbeit, Soziales, Gesundheit, Frauen und Familie

14. Hungary

Contributors: Dr. Zoltán ALEXIN, Mrs. Andrea Ferenczi and Mrs. Ildikó Modláné Görgényi

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

The documents of the Hungarian aging policy are the National Strategy for Ageing (Resolution 81/2009 (X.2.) OGY) and the first Action Plan for Ageing (Government Resolution 1087/2010 (IV. 9.): some parts of which have been reconsidered in the meantime. Based on local specificities, municipalities work on the basis of their own aging strategies.

The National Strategy for Ageing identifies issues, dilemmas, answers, and long-term alternative proposals for the period up to 2034 as a comprehensive plan. The issues that arise in it go beyond the field of health and social care, all segments of social functioning - they affect housing, transport, culture, economic life.

The National Strategy for Ageing, in line with international documents, aims to promote the active, independent and independent living of the seniors, for which purpose it intends to implement coordinated governmental work. Following an extensive situation analysis, the strategy draws attention to key issues affecting the age group. It lists the loss of a partner, settlement inequalities, health status, lack of social capital, and income situation as risk factors. The management and elimination of disadvantages can be implemented with planned, conscious governmental coordination and social cooperation.

To this end, it sets the horizontal goal of reaching the social public, providing the widest possible continuous information, applying the principles of open communication and partnership, and shaping attitudes towards aging for all ages, along the following priorities:

- For aging and elderly persons to preserves their activity and independence, social prestige
- Safety and adequate quality of life, keeping the risk of disease low, preserving human dignity and promoting functional independence
- Lifelong development, striving for joy of life, preservation of autonomy and self-realization
- Social participation and inclusion, increasing community prestige
- Equal opportunities, positive reactions to social policy challenges of ageing and longevity, action against ageism.

In the consumer society, the seniors are affected by various purchases and consumer protection, but in connection with services, tourism, culture and education, sports are also closely related to this, they affect the ageing population. At the same time, in terms of changes in health and mental condition, they are also affected in the field of health care, social care, public catering services and environmental protection.

Current and future generations of ageing people who retain their activity and independence are valuable and, in many respects, undiscovered resources for the economy. It is therefore essential to maintain and improve their ability to work, to protect physical and mental health, and to support those who intend to stay in work. Current legislation is favourable for the employment of retirees.[207]

More legislation to protect the environment: - Act CXXII of 2019 on Entitlements to Social Security Benefits and on Funding These Services and - Act No. LXXXI of 1997 on social insurance pensions. The retirement age is 65 in Hungary. If a citizen has worked for more than 20 years, then he or she is entitled to receive a monthly pension. The source of this benefit is the Social Security Contribution and the Social Contribution Tax which must be paid by the employer (15,5% of the gross salary) and by the employee (18.5% of the salary). The tax is collected by the National Tax and Customs

[207] More legislation to protect the environment: - Act CXXII of 2019 on Entitlements to Social Security Benefits and on Funding These Services; - Act No. LXXXI of 1997 on social insurance pensions

Administration (https://en.nav.gov.hu) and transfers the money to the National Pension Fund (54%) and the National Health Insurance Fund (37,9%).

In addition, there is an additional pension system such as self-care. The citizen decides how much he or she undertakes to pay monthly for his/her separate pension as a private person.

- Act LXXXIII of 1997 on the benefits of compulsory health insurance[208]
- Government Decree 85 of 2007 on reductions in public passenger transport[209]
- Act LXXVIII of 1997 on the Development and Protection of the Built Environment[210]
- Act XXVI of 1998 on assuring equal opportunity for persons with disabilities[211]
- Act LIII of 1995 on the General Rules of Environmental Protection[212]
- Act CCXXII of 2015 on general rules of electronic administration and trusted services [213]
- Government Decree 451 of 2016 on detailed rules of electronic administration [214]

1.2. 2011. Charter of the Seniors - Establishment of the Council of older people No. 1712/2014 (XII.5.) government decision.

The Government established aforum where they can negotiate with the representatives of elderly ci tizens The Council comprises of twelve ministers or directors of government institutions and twelve representatives of older people. The president is the Prime Minister.

Includes the Hungarian Program of the European Year for Active Aging and Intergenerational Solidarity including: Active Ageing Conference, Generations at School, Let's Rest Together, Get a move, Mama, Day of Older Persons, Methodology Conference on Ageing, Cross-Border Cultural and Art Competition for the Seniors 2013, "Ki MIT TUD" – Who knows What -2013, 2015.) "Kor-Társ" Cohorts – Community Ageing Programs.

1.3. Legislation related to ageing:

• 1993. III. Act on Social Administration and Social Benefits;

[208] Hungary has a state-owned compulsory health insurance system. All employees are insured since they are paying the insurance fee from their salaries. In addition to them, children under 18 and pensioners (65+) automatically insured. Who does not work must pay a monthly 8000 HUF (~22 EUR), health insurance fee otherwise he or she is not entitled to receive free medical care.

[209] Since pensions are traditionally low in Hungary, the Government introduced free transportation on all different means of local public transportation (trams, buses, subways), and on all national railway and bus services. This benefit extends to all 65+ people from the EEA plus Switzerland

[210] The above law declares that all public buildings must be accessible for disabled people. New buildings meet this requirement, but the old ones not always. There is still a deficiency in transport. Many times, trams, subway carriages, and trains are not or hardly accessible by wheelchairs.

[211] The goal of this law is the inclusion of disabled citizens in the society and employment. It declares the right to rehabilitation, access to public information and services including transportation services.

Act 47 of 1997 on Health Data Processing and Protection

Chapter III/A. of this law established the national Electronic Health Record system (EESZT), which collects every bit about patients reported by the state-owned medical service, pharmacies, and private clinics. Reporting is obligatory for all contributors. Citizens can login and access their own documents [internet access and the e-Government registration are needed]. The system started to work in November 2017.

[212] The aim of the law is to establish a harmonious relationship between man and his environment, to ensure a high level of coordinated protection of the environment as a whole, as well as its elements and processes, and to ensure sustainable development.

[213] Hungary develops its electronic administration system. The above law defines the major services, their functions, and requirements. The electronic administration system connects citizens with the offices (authorities) but connects different public institutions, public authorities together. Many times, citizens need not personally go to an authority to get a document (like driving license, EU Health Card etc.). The income tax declaration is became fully electronic in recent years.

[214] The law declares the procedures applied in the public administration. It lists those cases when citizens can use electronic communication means. It also defines the deadlines, conditions when somebody can turn to the court, can appeal etc.

• 1/2000. (I. 7.) SzCsM (ministerial) decree on the professional tasks of social institutions providing personal care and the conditions of their operation
• 9/1999. (XI. 24.) SzCsM (ministerial) decree on the use of social benefits providing personal care;
• 29/1993. (II. 17.) Government Decree on the reimbursement fee for social benefits providing personal care;
• 36/2007. (XII. 22.) SZMM (Ministerial) Decree on the detailed rules for the examination and certification of the need for care and social need based on health status;
• 9/2000. (VIII. 4.) SzCsM (ministerial) decree on the further training of persons providing personal care and the social professional examination;

1.4. Research and studies related to ageing: Is old age a process or disease?[215]; On the Wavelength of Fisher Kings: Experiences of older people Related to Religious Events[216]; SKYPE in Elderly Care: Experiences from an Intervention Research[217]; Learning in old age[218]; Analysis of the possibilities of increasing the activity rate of social groups with low economic activity[219]; Elderly-friendly cities, places, communities: 2016-2_3-1_Szeman_Idosbarat_varosok.pdf (esely.org); Healthy aging[220]; On the way to old age[221]

1.5. Conference volume: Silver Age: Ageing and Society[222] It helps the daily life of older people, increases their security, prevents the deterioration of social relations, contributes to the preservation of their physical mental capacity, activation, learning and intergenerational cooperation. Good and bad old age, either **Age Talks[223];** Retired workers in the labour market[224]

1.6. Examples of good practices in innovation for older people:

- Web nurse is the companion in home care[225]
- Elderly-friendly housing program in Győr
- Dementia-friendly urban development project in Mosonmagyarovar
- Helping Hands Infocommunication Model Program National Government Program (use of IT tool)
- Language learning of older people
- Third age university[226]
- University of retirement age[227]
- Telenor's innovations in telephones serving the safety of older people[228]
- Signalling home help for older people living in their own home, in need because of their health and social status, who are able to use the emergency call device properly nationwide (emergency call, application for relatives, the insured is always available through the emergency call)[229]

[215] http://www.beteghuone.hu/hirek/az_oregkor_flamat_vagy_betegseg/ (Accessed: 15 October, 2021)
[216] https://eco.u-szeged.hu/download.php?docID=39995 (Accessed: 15 October, 2021)
[217] http://www.esely.org/kiadvanyok/2012_2/szeman.pdf (Accessed: 15 October, 2021)
[218] https://ofi.oh.gov.hu/tudastar/bajusz-klara-idoskori (Accessed: 15 October, 2021)
[219] 20190109_agat Court of Audit.pdf (Accessed: 15 October, 2021)
[220] https://www.etk.pte.hu/protected/OktatasiAnyagok/%21Palyazati/sport2/EgeszsegesIdosodesJ.pdf
[221] https://www.lib.uni-corvinus.hu (Accessed: 15 October, 2021)
[222] http://www.ksh.hu/docs/eng/xftp/idoszaki/pdf/korosodas.pdf. (Accessed: 15 October, 2021)
[223] http://www.lib.uni-corvinus.hu/content/corvinuskioszk/age-talks (Accessed: 15 October, 2021)
[224] https://ppk.elte.hu/content/nyugdijas-munkavallalok-a-munkaeropiacon.t.40447 (Accessed: 15 October, 2021)
[225] https://webnover.hu/ (Accessed: 15 October, 2021)
[226] http://www.harmadikkoregyeeme.hu/alapitvany.html (Accessed: 15 October, 2021)
[227] https://nye.sze.hu/a-nyugdijas-egyemrol (Accessed: 15 October, 2021)
[228] https://www.telenor.hu/sajto/kozlemeny/az-idosek-biztonsagat-szolgaljak-a-telenor-ujitasai (Accessed: 15 October, 2021)
[229] https://www.soskozpont.hu/?gclid=cj0kcqjwp86ebhd7arisafkgakifoyhljhevxzltztkpwswwdw6i1j-1ixqzm1wl9h8zl897lbtruteaarpcealw_wcb

Relevant stakeholders and policy makers[230]

	Local	Regional	National
Health	Municipalities and GP Service	State Health Care Center, County Government Offices Red Cross County level Organisations	Ministry of Human Resources Secretary of State for Health
Social	Old people's homes, municipalities, non-governmental organisations	County Government Offices, Directorate General for providing Social Opportunity	Ministry of Human Resources Secretary of State for Social Affairs Maria Kopp Institute for Demography and Families (KINCS)
Built environment	Municipalities, companies, NGOs	County Government Offices, National Park directorates, Agriculture and Rural Development Office National Food Chain Safety Office Water Directorates Environmental and nature protection authorities National Institute of the Environment	Ministry of Innovation and Technology: State Secretary for the Construction Economy, Infrastructure Environment and Sustainability, Ministry of Agriculture: State Secretary for the Environment
Digitalisation	Youth and adult education institutions, companies	Nemzeti Infokommunikációs Szolgáltató Zrt . (National Infocommunication Service Zrt.)	Ministry of Innovation and Technology
Development	Municipalities, companies	Key national developments, companies, National Intellectual Property Office, Nemzeti Infrastruktúra Fejlesztő Zrt. (National Infrastructure Development Zrt.)	Prime Minister's Office Responsible State Secretaries to the Ministry of Innovation and Technology
Education	Schools, district education centers, vocational training centers	Office of Education, National Office for Vocational and Adult Education	Ministry of Human Resources: State Secretary for Public Education, Ministry of Innovation and Technology: State Secretary for Higher Education, Innovation and Vocational Training
Research	Universities, colleges, research organisations	Universities, colleges, research organisations Hungarian Academy of Sciences, National Research, Development and Innovation Office, National Expert and Research Center, Animal Husbandry and Feed Research Institute, Central Research Institute for Environmental and Food Sciences	Ministry of Human Resources, Ministry of Innovation and Technology

[230] There is an ongoing process of centralization of health and social services. State owned clinics, hospitals, polyclinics, GP praxes are united under the umbrella-organisation, which is called National Healthcare Service Center https://okfo.gov.hu/hu/web/national-healthcare-services-center/main-page (Accessed: 15 October, 2021)

(National, regional, local) ecosystem on SHAFE of the partner

"DIGITIZATION FOR ACTIVE OLDER PEOPLE" PROGRAM, INTRODUCED NATIONWIDE BY THE GOVERNMENT RESOLUTION NO. 1761/2017. (XI. 7.)

In Hungary, it is very important that the older generation should be able to perform the daily tasks with IT tools that help them to manage their private and professional tasks. affairs. e.g. identity card, driver's license, using the E-Government, bank transfers, etc. That is why, since 2017, preparations have started nationwide. In addition, they the Government aims to continuously improve the digital literacy of all citizens. The program is aiming the 65 plus age group, supporting the development of their basic digital knowledge.

People over the age of 65 can study in small groups sessions as part of free training. In the sessions, participants gain knowledge ranging from turning on the computer to using social networking sites. Under the guidance of mentors, education takes place in small groups. In parallel, a Digital Welfare Program Network was established, under which 6,500 seniors have been able to learn how to use a computer under the guidance of mentors.

The new publication is entitled *View of the World Wide Web*, published by Neumann János Nonprofit Kft. The publication provides a guide to digital technology in plain language with colourful illustrations.

- An action called *Digital Alliance* has been launched[231].
- Within the framework of the *Digital Alliance*, a website www.digitalisjoletprogram.hu, was created.[232]

Offers: Digital application, Digital service, Digital volunteering, IT tool. Other volunteer work.

What has been done in Hungary for 21st century digital education? An organisational unit was established to support the Digital Pedagogical Methodology Center.[233]

Partners of the Association for Women's Career Development in Hungary in Ageing issues[234].

Research on Women's Employment, the Family and Work Balance in V4 Countries 2020[235].

[231] The initiative aims to make the digital solutions, tools and services offered by the industry should reach all those who need them in this emergency. Reasonable steps to prevent the spread of the coronavirus epidemic have made it clear that without digitalization, the 21st century cannot be imagined. Digital solutions became basic needs for more people than ever before.

[232] All digital solutions, applications and services offered by the actors of the sector can be accessed in one place. On the website everybody interested can be informed at all times and receive information about the currently available digital provisions and the conditions of their use.

[233] The importance is indicated by the fact that the Government Resolution No. 1536/2016. (X. 13.) includes the purpose of digital transformation of the public education, vocational training, higher education and adult education system.

Results of Hungarian pilot projects are analysed (eg: Telenor, Vodafone, Samsung, Magyar Telekom, Microsoft, LEGO, etc.) for further development. They support the sharing of digital pedagogical experiences and good practices. A framework and measurement-assessment tool for measuring digital competencies has been developed. The implementation of Hungary's Digital Education Strategy is monitored annually with a monitoring system. Every year a digital education conference and exhibition is organized, where everyone can learn new procedures and methods. The

latest one was organized between 14-6October 2020.

[234] National Assembly Committee on Employment and Labour, National Council on Ageing, Ministry of Human Capacities, Local Governments, Hungarian Academy of Sciences, EBH - Equal Treatment Authority, Hungarian Central Statistical Office (HCSO) Demographic Research Institute, National Research, Development and Innovation Office, Gerontology Science Coordination Center, Faculty of Health, University of Debrecen, Széchenyi István University, Crime Prevention Department of the Hungarian National Police, Hungarian Red Cross, Chambers of Commerce and Industry, Embassies accredited to Budapest.

[235] Within the Project we have been working together with the members of our V4 Civil Partnership, the Business & Professional Women CR z.s., from the Czech Republic, the Slovak Business Agency and the Związek Dużych Rodzin "Trzy Plus" (Large Families Association) from Poland and with our Hungarian partner organisations, the National Association of Large Families – NOE, the Hungarian Red Cross, and the Women's Entrepreneurial Club

„Be the Change" 2016-2018[236].
„TRAME" 2013-2015[237].

(National, regional, local) funding opportunities on SHAFE

The government publicize the development program calls on a government webpage[238] . In the forthcoming 2021-2027 period the following development programs are planned. They are financed by the EU Cohesion Fund. There might be national development programs as well whose calls will appear also on this webpage.

- Digital Renewal Operative Program Plus (DIMOP Plus)
- Human Resources Development Program Plus (EFOP Plus)
- Hungarian Fishing Management Operative Program Plus (MAHOP Plus)
- Integrated Transportation Operative Program Plus (IKOP Plus)
- Economic Development and Innovation Operative Program Plus (GINOP Plus)
- Area and Settlement Development Operative Program Plus (TOP Plus)
- Program Implementation Operative Program Plus (VOP Plus)
- Environment and Energy Efficiency Operative Program Plus (KEHOP Plus)

The *Plus* in the name means that similar Operative Programs were implemented in the previous 2014-2020 period.

Primarily, from the point of view of SHAFE, the EFOP Plus program is the candidate. Human resources development includes social and medical care, (elderly) education programs, societal inclusion programs, electronically supported public services. Secondarily, the TOP Plus program can finance Settlement development programs, thirdly the healthy environment projects can be financed from the KEHOP Plus program. Eligible participants (public authority, public institution, or company), and eligible regions where the result realized may vary from call to call.

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE

- Subscription based or mixed (free and subscription based) services which can be self-finance for the continuous maintenance of the service. The project[239] plans to provide free services to the patients, while collect subscription fee from medical institutions. The Hungarian Health Insurance Fund in 2020 allowed e-Connections to be reimbursed, like personal check-ups.
- Inclusion the service into the existing financing structure, like in the GINOP 2.2.1-15-2017-0073 project. The goal is to define telemedicine services (sending sensory data from patients to a central repository) and allocate doctors who can treat these patients. In such a way that the Health Insurance Fund will reimburse their costs.

15. Iceland

Contributor: Roxana Elena Cziker

of Győr-Moson-Sopron County Chamber of Commerce. We and our V4 Partners with their own country specific knowledge and contacts contributed to achieve our goals together.

[236] This international report represents the deliverable 4 of the project "Boosting entrepreneurship through intergenerational exchange", hereafter "Be the Change", funded by the Erasmus+ Programme-Key Action 2-Cooperation for Innovation and the Exchange of Good Practices. The partnership is composed by six partners from five European countries, with different backgrounds and competences that, if integrated, may ensure a multifaceted and interdisciplinary approach, useful for an educational intervention in non-formal and informal settings. The project leader, the Italian National Institute of Health and Science on Aging (INRCA) is a public body with a longstanding experience in research on care, health prevention and social inclusion of older people.

[237] Under the TRAME programme, experienced craftsmen will be trained in the self-narration method in order to acquire it properly and effectively, with a view to preparing and uctating young craftsmen as 'educators' the transfer of their professional knowledge and life experience

[238] https://www.palyazat.gov.hu (Accessed: 15 October, 2021)

[239] www.dokivideo.hu (Accessed: 15 October, 2021)

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

1. **Legislation regarding older people[240]:**

This Act aims at older people people´s rights to health and social services according to the individual needs and health conditions. The law also provides the measures containing the rights of elderly people to continue, as much as possible their life at home. If this is not possible anymore, they have the right to benefit from the long-term care services.

2. **Legislation regarding the rights of disabled people to long-term services[241]:**

The purpose of this law creates the proper framework for the rights of disabled people to access the best services according to their individual specific needs. The service aims to enable disabled people to enjoy a decent life and benefit of human and equal rights at the same level as their peers and create conditions for independent living. The provision of services is made in such a way that ensures human dignity, autonomy, and independence.

3. **Law about the constructions´ regulations[242]:** The purpose of this law is as follows:
    a. To protect human life and health, property, and the environment by ensuring professional preparation for construction and active monitoring of compliance with the requirements necessary for ensuring human life and health safety conditions.
    b. To promote the durability and efficiency of structures/constructions, e.g., by ensuring the building standards in line with the Icelandic conditions.
    c. To promote environmental protection by guiding sustainable development in the design and construction of buildings.
    d. To promote technological progress and innovation in the construction industry.
    e. Ensuring accessibility for all.
    f. To promote good energy efficiency of buildings.
4. **Legislation about urban planning[243]**

[240] https://www.althingi.is/lagas/nuna/1999125.html (Accessed: 15 October, 2021)
[241] https://www.althingi.is/altext/stjt/2018.038.html (Accessed: 15 October, 2021)
[242] https://www.althingi.is/lagas/nuna/2010160.html (Accessed: 15 October, 2021)
[243] The purpose of this law is as following: to develop settlement/buildings and land in the whole country based on organisation/infrastructure plans where the people's economic, social, health, safety, and cultural needs, are taken into consideration; to promote the rational and efficient utilization of land, to ensure the protection of landscape, nature, and cultural values, and to prevent environmental damage and overexploitation, considering at all levels the principle of sustainability; to ensure legal certainty in the handling of organisational matters so that the rights of individuals and legal entities are not overridden, even if the interests of the whole are taken into account, to ensure that the public is consulted in the preparation of development plans so that they are allowed to influence the government's decision in the preparation of such plans; to ensure professional preparation for construction, zonal organisation, and building structures accessibility for all.
https://www.althingi.is/lagas/nuna/2010123.html (Accessed: 15 October, 2021)

5. **Building regulations nr. 112/2012[244] Planning regulation nr. 19/2013[245]**
6. **Law about the Municipal Social Services[246]:**

Municipal social services aim to ensure financial and social security and promote the population's well-being based on mutual assistance.

a. to improve the living conditions of people with disabilities,
b. to ensure the proper developmental conditions for children and young people,
c. to assist so that residents can live as long as possible to their home, to be employed and have the best possible quality of life,
d. to envisage all necessary measures in order to prevent social problems.

7. **Welfare Appeals Committee Act[247]:**

Role: The Welfare Appeals Committee shall rule on appeals lodged in connection with administrative decisions as provided for in laws which allow for appeals to be made to the committee. The appeals committee is independent and autonomous in its work.

8. **Social Assistance Act[248]**
9. **Information Act[249]:** The purpose of this Act is to ensure transparency in administration assuring the public interests, e.g., to strengthen:

1. right to information and freedom of expression,
2. ensuring the active participation of the public in a democratic society,
3. media and the public's restraint on [public bodies], 1)
4. the possibility for the media to disseminate information on public affairs;
5. public trust in the administration.

Reykjavík Public Health Policy until 2030[250]

- The main key priorities of the policy are the public health and quality of life of all citizens. This entails that Reykjavík will be a health city on different dimensions: spiritual, physically and socially.
- Vision: Reykjavík is health-promoting, sustainable and a diverse urban community that promotes security, balance, active participation and well-being of all.
- The main objectives of the policy are as following:
  - Improve the health and wellbeing
  - Equality to health and well-being – no one left behind
  - Health and well-being is a guide to all the activities of the City of Reykjavík

[244] The purpose of this law is as follows: To protect human life and health, property, and the environment by ensuring professional preparation of construction and active monitoring of building compliance with safeness and healthiness requirement; To promote the durability and efficiency of structures in line with the Icelandic conditions; To promote environmental protection by guiding the sustainable design and building development structures; To promote technological progress and innovation in the construction industry; Ensuring accessibility for all; To promote good energy efficiency in the operation of buildings.
https://www.hms.is/media/8043/byggingarreglugerd_med_breytingum.pdf (Accessed: 15 October, 2021)
[245] https://www.reglugerd.is/reglugerdir/eftir-raduneytum/umhverfis--og-audlindaraduneyti/nr/18558 (Accessed: 15 October, 2021)
[246] https://www.althingi.is/lagas/nuna/1991040.html (Accessed: 15 October, 2021)
[247] https://www.althingi.is/lagas/nuna/2015085.html (Accessed: 15 October, 2021)
[248] https://www.althingi.is/lagas/nuna/2007099.html (Accessed: 15 October, 2021)
[249] https://www.althingi.is/lagas/nuna/2012140.html (Accessed: 15 October, 2021)
[250] : https://reykjavik.is/sites/default/files/heilsuborgin_19-05-20211.pdf (Accessed: 15 October, 2021)

10. Health promotion of elderly people, an initiative of the Ministry of Health, released January 2021[251]:

Health promotion aims to enable people to live healthy lives in healthy conditions. Health and well-being are the product of the interaction of individuals and their immediate environment and circumstances, as a contribution of different specialists and stakeholders. Efforts are made to create social, cultural, and economic conditions and environments that foster people's mental, physical, and social health and well-being with different needs. The main focus is to ensure good health conditions, promotion, and prevention of health as much as possible.

Relevant stakeholders and policy makers

	Local	Regional	National
Health	Directorate of Health		Ministry of Health
Social	Municipalities Department of welfare of the City of Reykjavík: – Services at home – Long term care services – Occupational therapy – Physical training at home Council of elderly people of the City of Reykjavik responsible for counselling services for elderly people older than 67 Department of Sport and Leisure of the City of Reykjavik Organisation of people with hearing impairment Organisation for people suffering of Alzheimer[252] Organisation for Parkinson disease[253]		Ministry of Social Affaires
Built environment	Municipalities Department of Environment and Planning of the City of Reykjavík		Ministry of Environment and Natural Resources Ministry of Industry and Innovation
Digitalisation	Municipalities Department of Service and Innovation, City of Reykjavík MEMAXI – Telecare and communication solutions[254] MEMAXI enhances and facilitates care planning and communication, breaks isolation and provides a sense of security to people who need long-term care.		The Business Innovation Fund is an investment fund that takes an active part in the development and growth of the Icelandic economy by investing in promising innovation and start-up companies.
Development	Municipalities		Ministry of Industry and Innovation
Education (we considered the post compulsory education only)	Department of Education and Youth. Their role is to give the city's children and teenagers the best possible education at each given time, to be at the forefront of education and to		Ministry of Education and Culture

[251] https://www.stjornarradid.is/library/04-Raduneytin/Heilbrigdisraduneytid/ymsar-skrar/Heilsuefling%20aldra%C3%B0ra%2014012021.pdf (Accessed: 15 October, 2021)
[252] www.alzheimer.is (Accessed: 15 October, 2021)
[253] www.parkinson.is (Accessed: 15 October, 2021)
[254] https://www.memaxi.com/ (Accessed: 15 October, 2021)

	follow a progressive policy for the primary and junior schools. Department of Sport and Leisure of the City of Reykjavik		
Research	University of Iceland[255] Reykjavik University[256] University of Bifröst (https://www.bifrost.is/english)		University of Iceland[257] Reykjavik University[258] University of Bifröst (https://www.bifrost.is/english)
Non-governmental organisations	Association for elderly people in Reykjavík and neighbourhood[259]		National Organisation of Elderly people[260]
Other: please specify	Red Cross Iceland[261] Organisation of elderly people and buildings[262]		

(National, regional, local) ecosystem on SHAFE of the partner

1. Policy of digital solution of the Welfare Department of the City of Reykjavik – 2018-2022

The Welfare Department of the City of Reykjavik developed the strategy of implementing the new technology to facilitate the support of elderly people, improve their quality of life and enable them to live longer in safeness at their home. The objectives of the strategy are as follows:

a. Welfare technology should be efficient so that the service runs smoothly and that it is easy for users and staff to use it.
b. Welfare technology should contribute to breaking social isolation and improving access to social participation.
c. Welfare technology should facilitate communication between users, relatives/family, and employees.
d. Welfare technology should make it easier for people to live independently and change the organisation and work processes of employees so that the service becomes more flexible and tailors to the particular needs of each individual.
e. Welfare technology should increase the activity and participation of people when they are assisted.
f. Welfare technology solutions should always be evaluated according to their usefulness, the problems they are supposed to solve, and their cost.
g. The Department of Welfare shall, when the opportunity arises, support research and development of welfare technology, e.g., in collaboration with the innovation and science community.
h. The Welfare Department shall promote dialogue with individuals, entrepreneurs, and companies on new welfare technologies.
i. The choice of welfare technology solutions should always consider ethical values such as the user's right to self-determination, e.g., informed consent, transparency, and utility.

[255] https://english.hi.is/university_of_iceland (Accessed: 15 October, 2021)
[256] https://en.ru.is/ (Accessed: 15 October, 2021)
[257] https://english.hi.is/university_of_iceland (Accessed: 15 October, 2021)
[258] https://en.ru.is/ (Accessed: 15 October, 2021)
[259] https://feb.is/ (Accessed: 15 October, 2021)
[260] https://www.leb.is/ (Accessed: 15 October, 2021)
[261] www.redcross.is (Accessed: 15 October, 2021)
[262] www.aldradir.is (Accessed: 15 October, 2021)

j. Welfare technology shall improve the conditions of employees and promote occupational safety[263].

2. Reykjavík Age-friendly city

The policy regarding the support of elderly people released by the City of Reykjavík by 2017 has created a long-term vision to support the active participation of senior citizens in an age-friendly city. One of the strategies adopted by the policy is to become a partner of the age-friendly cities network in the World Health Organisation's (WHO), the Global Network of Age-Friendly Cities and Communities, or the World Network of Elderly Cities.

The City of Reykjavík's policy on senior citizens' issues until 2017, approved in May 2013, facilitates the application of a membership to the World Network of Elderly Cities under the auspices of the WHO. A steering group, composed of representatives from seven divisions and city offices, prepared the application, but the WHO-approved Reykjavík's membership in the co-operation in June 2015. From then on, the planning of position assessment according to WHO criteria began. Divided into eight categories Outdoor areas and buildings, transport, housing, social participation, respect and social recognition, active community participation and employment opportunities, telecommunications and information, and finally, community and health services.

(National, regional, local) funding opportunities on SHAFE

1. Welfare Technology Centre - Action plan for the Welfare Technology Center in 2019

The Welfare Department of the City of Reykjavík uses welfare technology to facilitate as long as possible the life in their own homes ensuring the quality of life, despite aging, disability, or illness, and at the same time enable them to be more active participants in society.

The action plan is based on the Reykjavík City Welfare Department's policy in welfare technology 2018 - 2022 and the City of Reykjavík's policy on senior citizens' issues 2018 - 2022. The plan is intended to guide the Welfare Technology Center in disseminating knowledge and encouraging the use and implementation of welfare technology.

The Welfare Technology Center aims to test and efficiently implement new welfare technology and provide the Welfare Department's staff and citizens with knowledge and advice. The introduction of welfare technology increases security and flexibility in services and gives senior citizens and their families a more active role in its implementation. The action plan is divided into three sections:

1. Development of the activities of the Welfare Technology Center.
2. Testing and implementation of welfare solutions in the services of the Welfare Department.
3. Educational and raising awareness programme among the senior citizens for the promotion of the welfare technology.

2. Welfare Technology Centre – Services via screen

The activities offered by the screen services are as following:

- Home care
- Assessment of the primary symptoms
- Advice regarding nutrition, mental well-being, sleep, etc.
- Monitoring and counselling activities

[263] https://www.facebook.com/velferdarsvid/videos/417816435330825 (Accessed: 15 October, 2021)

- Monitoring of daily administration of medicine in case of a patient with regular medication for different diseases
- Treatment of diabetes
- Empowerment - daily life and the use of technology
- Family support
- Social home services
- Support for C19
- General monitoring
- Assistance/motivation for independent living • Order food, housework, etc.

Iceland intends to use the new technology to inform, guide, provide advice and encourage increased and general use and support individuals in their daily life and activities. The aim is to increase the quality of life of older people and efficiency in providing the service. The center serves the citizens of municipalities in the north of Iceland and possibly extended to the whole country.

The main benefit of services

- Modernization of services and working environment in line with technological developments
- Offer a diverse category of services
- Increase the quality of services
- Increases user and staff security
- More accurate information and responses
- Increased efficiency and service optimization - better use of time
- More frequent visits and increased monitoring

3. Research 2018 – Department of Social Services of the University of Iceland

The research was conducted by the Social Sciences Institute of the University of Iceland as a request formulated by the Ministry of Welfare. The research aimed to map services provided to the senior citizens in Iceland, here not being included the residential and nursing homes.

4. Set up of the office of welfare digital solution in the North of Iceland - 2018

The project aimed to carry out a preliminary study and needs analysis of municipal co-operation for a service and knowledge center in welfare technology. The guiding principle of such co-operation is to use the new technology to inform, guide, provide advice and encourage increased and general use and support individuals in their daily life and activities. The aim is to increase the quality of life of older people and efficiency in providing the service. The center serves the citizens of municipalities in the north of Iceland and possibly extended to the whole country.

There are four categories of welfare technology that are falling into the interest of the Office of Digital solution in the North of Iceland:

- Communication and commitments (examples: mail, conversations, games, telephones, computers, websites, electronic information, and applications). Hi-security and safety (examples: safety systems, fall sensors, safety buttons, assistive devices).
- Health monitoring and quality of life (examples: telemedicine, visits/visits, medication dosing, physiotherapy, aids).
- Learning and social participation (examples: working at home, distance learning, communication with friends and family, self-employment, and earning a living from home).

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE N/A

16. Ireland

Contributors: Dr. Pauline Boland (UL), Dr John Dinsmore (TCD), Dr Helen Kelly (UCC), Dr John Deepu (UCD) and Damon Berry, TU Dublin

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

1. Healthy Ireland (HSE) Is a wide-ranging policy instrument that includes provisions on healthy ageing.
2. National Development Plan (the EU SHAFE project Irish partners have recently made a submission in relation to renewal of that plan.)
3. Slaintecare – the national plan for development of the healthcare system

Established in 2018 as a shared service function of the local government sector Age Friendly Ireland coordinates the national Age Friendly Cities and Counties Programme. The national Age Friendly Ireland Office is hosted by Meath County Council on behalf of the local government sector.

Age Friendly Cities and Counties Programme provides a means to operationalise the Declaration and with a national infrastructure to bring key actors – City and County Councils, the Health Service Executive, An Garda Síochána (police), NGO's, business and third level sector representatives – together at local authority level to plan collaboratively, to share resources and to streamline their work, with the interests and needs of older people and an ageing population at their core.

Reporting to a National Advisory Group comprising senior representatives from Government Departments and agencies, the local authority and business sectors Age Friendly Ireland has responsibility for:

Source: https://agefriendlyireland.ie/category/about-us/about-the-programme/

- HSE Ireland Positive Ageing Programme[264]:
- Irish Department of Reform and Expenditure - Prevention and Early Interventions Supporting Health and Wellbeing in Older Age[265]:

[264] https://www.hse.ie/eng/about/who/healthwellbeing/our-priority-programmes/positive-ageing/

[265] https://igees.gov.ie/wp-content/uploads/2019/10/PEIU_FPA_PEI-Supporting-Health-and-Well-being-in-older-age.pdf (Accessed: 15 October, 2021)

- Irish National Positive Ageing Strategy[266]:
- TILDA[267]

Relevant stakeholders and policy makers

	Local	Regional	National
Health	Health Services Executive (HSE) Hospital Groups General Practititioners Care Homes Care Provider organisations (public and private) Local Authorities Mens Sheds Irish Countrywomens Association	Health Services Executive Regional Assemblies (most activity is at national level – regions are not so significant in Ireland apart from in rugby!) There is county level activity in the GAA.	Department of Health Health Services Executive Health Information and Quality Authority eHealth Ireland Age Friendly Ireland Age Action Ireland
Social	Local Authority Gaelic Athletics Association (GAA) Mens Sheds Irish Countrywoman's Association Bingo clubs Retirement assoc. for large organisations Parish and church organisations Pubs – maybe the only functioning social outlet in some rural communities Residents associations	Local Authorities	HSE Age Action Ireland
Built environment	CEUD	Age Friendly Ireland	Sustainable Energy Association of Ireland Age Friendly Ireland Age Action Ireland
Digitalisation	Companies. Ireland has attracted most of the main ICT multinationals. General Practices Also some connected health companies.		HSE Government of Ireland Enterprise Ireland
Development	Companies such as Pacsana, Acorn, GrandPad.	County Enterprise Boards	Enterprise Ireland IDA
Education	Higher Education institutions (including colleges of further education Adult education - in secondary schools BA / MA in Adult education at NUIM	County Education Boards	HEA, NUI, THEA NALA FETAC QQI RCPI
Research	MISA (at St. James's Hospital, Dublin) CASALA (DKIT) tPOT TU Dublin School of Nursing TCD		SFI, HRB, Enterprise Ireland, HEA, TILDA (National project on research into ageing – run out of TCD)

[266] https://www.gov.ie/en/publication/737780-national-positive-ageing-strategy/ (Accessed: 15 October, 2021)
[267] https://tilda.tcd.ie (Accessed: 15 October, 2021)

Other: please specify			
Other: please specify			

(National, regional, local) ecosystem on SHAFE of the partner

AGE ACTION[268] -

Our mission: Age Action supports and advocates for equality and human rights for all older people. Everything we do is based on a recognition of the diversity of identity and situation among older people and a concern for equality for all older people. In addressing ageing, our work includes a concern to influence perspectives on and responses to ageing. This pursuit of equality and human rights is underpinned by our work to promote ageing in place, life-long learning, and health and wellbeing for older people, empowering them to live as active citizens. Our work is driven by an organisation that is professional in its operations and lives out its values of dignity, participation, diversity, social justice, and professionalism.

We will mobilise and empower older people to advocate on behalf of themselves, their families and their communities as a key element of our advocacy work. As part of this work, we will also challenge attitudes towards ageing and older people. We will continue to promote the adoption of a life course approach which recognises ageing as a lifelong process. We will particularly focus on highlighting the needs of the most disadvantaged of older people. This work will be informed by best international practice and will raise awareness of the needs of older people in developing countries, promoting global policies to protect and support older people.

Our services and programmes will support older people and their families to live full and independent lives and we will endeavour to ensure these services and supports are models of good practice. We will work with partners in the business and community sectors to support the development and expansion of these services.

The **4th Joint eHealth Ireland and Northern Ireland Connected Health Ecosystem Gathering,** organised by ECHAlliance and sponsored by InterTradeIreland, took place in Dundalk on the 22nd January. The Gathering, whose aim is to promote cross border initiatives and future opportunities in Digital Health, foresees a pitching panel, an exhibition, a workshop and several opportunities dedicated to networking. Several are the topics covered by the dense Gathering agenda, between others health care strategy development in Ireland, links between economy and healthcare, promotion of a local approach to primary care, international perspective in identifying opportunities for collaboration in health and social care and transfer of data across borders.

Represented by the Irish partner the Technological University Dublin, the EU_SHAFE project, committed to promote a comprehensive multilevel approach to Smart Healthy Age-Friendly Environments (SHAFE), will present at the Gathering its experience on identifying and scaling up SHAFE

[268] https://www.ageaction.ie (Accessed: 15 October, 2021)

good practices between different territories for the growth of community-based services and to respond to the "ageing at home" needs around Europe.[269]

We have participated in ehealth ecosystem events and presented SHAFE – the national organisation is currently in transition and the cross border one is an annual event. We also collaborate with Louth County Council, Fingal County Council and St. John of God community (intellectual disability support). HSE, local companies, local authorities

(National, regional, local) funding opportunities on SHAFE

Key funding bodies and grants in Ireland

The Irish country report for Hands on SHAFE is a good resource for this and actually for many of the other questions. www.hands-on-shafe.eu.

Health Research Board funds many health and social care-based research – calls throughout the year[270]

National Disability Authority – functions include research, developing and collaborating on the development of relevant statistics; assisting in the development of standards; developing codes of practice and monitoring the implementation of standards, codes and employment of persons with disabilities in the public service. We work through our Centre for Excellence in Universal Design to promote the universal design of the built environment, products, services and information and communication technologies so that they can be easily accessed and used by everyone, regardless of age, size, ability or disability[271].

Co-ordinated by NDA - dedicated to the principle of universal access, enabling people in Ireland to participate in a society that takes account of human difference and to interact with their environment to the best of their ability[272].

Science Foundation Ireland funding has been used to fund tech projects to support independent living. Health Research Board for more clinical research style projects. Enterprise Ireland funds commercial research. SFI also has links to other national science funding agencies

Science Foundation Ireland[273]

Our research promotes and assists the development and competitiveness of industry, enterprise and employment in Ireland. Oriented basic research is research that is carried out with the expectation that it will produce a broad base of knowledge that is likely to form the background to the solution of recognised, or expected, current or future problems or possibilities.

Applied research is an original investigation undertaken to acquire new knowledge and is directed primarily towards a specific practical aim or objective. The results of applied research are intended primarily to be valid for a single or limited number of products, operations, methods, or systems.

[269] https://echalliance.com/the-eu_shafe-project-at-the-4th-joint-ehealth-ireland-and-northern-ireland-connected-health-ecosystem-gathering-dundalk-22nd-january-2020/ (Accessed: 15 October, 2021)
[270] https://www.hrb.ie/ (Accessed: 15 October, 2021)
[271] http://universaldesign.ie/ (Accessed: 15 October, 2021)
[272] https://www.sfi.ie (Accessed: 15 October, 2021)
[273] *Ibidem*

SFI also promotes and supports the study of, education in, and engagement with STEM and promotes an awareness and understanding of the value of STEM to society and, in particular, to the growth of the economy. The definition of STEM employed by SFI does not extend to the Humanities and Social Sciences, except where it may pertain to the specific mission of the Foundation – for example, through the use of targeted instruments, SFI may support the development, assessment and publication of research to assess the impact of funded research activities, STEM teaching, etc.

Irish Research Council[274]

The IRC is an associate agency of the Department of Education and Skills, under the aegis of the Higher Education Authority (HEA), and has the following mandate:

- To fund excellent research within, and between, all disciplines, and in doing so to enhance Ireland's international reputation as a centre for research and learning
- To support the education and skills development of excellent individual early-stage researchers and to cultivate agile independent researchers and thinkers, while offering a range of opportunities which support diverse career paths
- To enrich the pool of knowledge and expertise available for addressing Ireland's current and future needs, whether societal, cultural or economic, and to deliver for citizens through collaboration and enabling knowledge exchange with Government departments and agencies, enterprise and civic society
- To provide policy advice on postgraduate education, and on more general research matters, to the HEA and other national and international bodies. In giving us this role, Government requested that particular attention be given to the Arts, Humanities and Social Sciences.

The mandate and unique role of the IRC generates a strong value-added dimension in the Irish research and innovation landscape.

Enterprise Ireland[275] **-**

Enterprise Ireland is the state agency responsible for supporting the development of manufacturing and internationally traded services companies. We provide funding and supports for companies - from entrepreneurs with business propositions for a high potential start-up through to large companies expanding their activities, improving efficiency and growing international sales.

The **Covid-19** pandemic has created severe challenges for Irish businesses with significant job losses, worldwide disruption and an uncertain road ahead. These essential funding supports are designed to help businesses stabilise and adapt to the evolving situation, in preparation for getting back on the road to recovery.

Health Service Executive

The public health service in Ireland which can run funding calls for discrete groups and/or projects – held a 250,000 euro call in 2019 - unsure if running in 2021[276].

[274] https://research.ie (Accessed: 15 October, 2021)
[275] https://www.enterprise-ireland.com/en/ (Accessed: 15 October, 2021)
[276] https://www.hse.ie/eng/services/list/4/olderpeople/support-grant-for-older-persons/ (Accessed: 15 October, 2021)

Wellcome Trust[277]

Though not an Irish specific grant body, researchers in Ireland have secured funding relevant to NET4Age through this body.

17. Italy

Contributor: Gian Matteo Apuzzo, PhD

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

Italy presents several policy-level initiatives on AHA and the mapping of AHA interventions highlight the importance of active and healthy aging for the country; however, Italy lacks a comprehensive regulation and implementation of policies promoting active and healthy ageing at national level.

Moreover, within the current normative framework, the Italian legislation does not provide any definition of elderly /older people, nor of active and healthy aging— leaving to national or regional policy makers the task to determine the definition and the criteria case by case.

Considering the absence of a comprehensive strategy for AHA on a national level, the legislation process is based on the article 117 of the Italian Constitution that delineates the legislative authority of the State and the Regions by illustrating the different areas for law-making that are prerogative of the State, of the Region, or of both.

That said, in the last decade— and especially during the Legislature XVII of Italy (2013-2018)— various national legislative proposals for AHA had been put forward; nevertheless, none of them were implemented. Thus, policy-making on AHA in Italy have been entrusted to the Regions and many of them have promoted policy initiatives.

As of 2021, 10 Regions have a specific regional law on AHA:

Piemonte, L.R. 9 aprile 2019, n. 17.
Liguria, L.R. 3 novembre 2009, n. 48.
Veneto, L.R. 08 agosto 2017, n. 23
Friuli Venezia Giulia, L.R. 14 novembre 2014, n. 22
Marche, L.R. 28 gennaio 2019, n. 1
Abruzzo, L.R. 9 giugno 2016, n. 16
Campania, L.R. 12 febbraio 2018, n. 2.
Puglia, L.R. 30 aprile 2019, n. 16
Basilicata L.R. 20 novembre 2017, n. 29
Calabria L.R. 16 maggio 2018, n. 12

Moreover, even if the Regions Umbria and Emilia-Romagna do not have a regional law on AHA, they developed regional policy initiatives with equivalent functions. Additionally, all Italian Regions and Autonomous Provinces have at least one sectoral policy promoting aspects of AHA within target settings, such as social protection and promotion, education, mobility, civic duties and volunteering— especially fostering inclusiveness and participation within the third sector, and often referring to WHO guidelines.

[277] https://wellcome.org/ (Accessed: 15 October, 2021)

Going back to the national level, in Italy the project "*Progetto di coordinamento nazionale partecipato multilivello delle politiche sull'invecchiamento attivo*"[278] started in 2019 with the aim of promoting and strengthening national coordination to improve awareness of AHA in Italy by involving multiple stakeholders— such as civil society, public policymakers, researchers— and disseminating information on AHA guidelines, good practices, and policies. The project has the specific objectives of building networks to exchange AHA-related experiences and competences among Regions and Autonomous Provinces and their stakeholders and of evaluating AHA policies.

It is also worth to mention that many Italian Regions has been awarded as Reference Site of the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA) and that a group to coordinate the activities of the Italian Reference Sites has been established by PROMIS - Programma Mattone Internazionale Salute[279] (an initiative of the Ministry for Health to promote the international dimension of the Italian regional health systems).

Relevant stakeholders and policy makers

	LOCAL	REGIONAL	NATIONAL
HEALTH		+	+
SOCIAL	+	+	
BUILT ENVIRONMENT	+	+	+
DIGITALISATION		+	+
DEVELOPMENT	+	+	+
EDUCATION	+	+	+
RESEARCH	+	+	+
OTHER: PLEASE SPECIFY			
OTHER: PLEASE SPECIFY			

(National, regional, local) ecosystem on SHAFE of the partner

Friuli Venezia Giulia Region Reference Site of EIP on AHA

(National, regional, local) funding opportunities on SHAFE

There is no specific funding opportunity on SHAFE at national level.
All regional laws above-mentioned foresee funding instruments on AHA.

[278]"Project of Multilevel Participative National Coordination for AHA policies" http://famiglia.governo.it/it/politiche-e-attivita/invecchiamento-attivo/progetto-di-coordinamento-nazionale/ (Accessed: 15 October, 2021)
A project coordinated by the Italian Government Department for Family and the Istituto Nazionale Riposo e Cura per Anziani IRCSS INRCA https://www.inrca.it/ (Accessed: 15 October, 2021)
[279] https://www.promisalute.it/servizi/notizie/notizie_homepage.aspx (Accessed: 15 October, 2021)

Moreover, concerning the innovation sector, usually the ERDF Regional Operational Plans and the S3 strategies include funding opportunities at regional level.

18. Japan

Contributor: Kazumasa Yamada

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

References

1. There are 2 presentations and pdfs available in English from Obu City.
2. National policies: New Orange Plan[280]:
3. Regional policies: Aichi Prefecture: "Aichi Orange Town Concept Phase 2 Action Plan"[281], (Aichi Prefectural Website is in Japanese but you can choose language by google service. From 2020, 2nd Phase Promotion Conference was started and I was a R&D Working Group member and contributed to make a part of "Aichi Orange Town Concept Phase 2 Action Plan" of Aichi Prefecture.)
4. Local activities: This activity was granted by Aichi Prefecture's financial supports. One of sample (Toyoake City)[282]
5. Local Citizen activities prized by Aichi Prefecture[283]: the presentations are all Japanese. However, if you push Caption button and try to use Camera function of "Google Translate" of your smart phone, you can read what they said on the screen of your smart phone. Please try. The MC & last presenter is Ms. Fuyume Maruyama, NPO Sawayaka-Aichi. She is one of Second Proposers of this COST Action.

Japan has two basic policies for older people. Japan has been one of the oldest countries in the recent quarter century and has been ravaged by a demographic change. Below follows a summary historical changes of Laws and Measures, that establish health and medical service for the aged (A) or that build Age-friendly Environments for older people and the Disabled (B), in Japan.

(A) Establishing health and medical service for the aged

・National policies

- **1963 Act on Social Welfare for older people**
- 1973-1983 Free of charge on geriatric medicine over 70 years of age
- 1982 Law Concerning Securing Medical Care for older people
- (1984 10% burden of charge on geriatric medicine over 70 years of age)
- 1987 Appearance of Certificated care workers and Certificated social workers
- 1991 Revision of Law Concerning Securing Medical Care for older people

[280] https://japanhpn.org/en/1-2/ (Accessed: 15 October, 2021)
[281] https://www.pref.aichi.jp/soshiki/chiikihoukatu/aichiorangetown-2.html, (Accessed: 15 October, 2021)
[282] https://www.city.toyoake.lg.jp/secure/7724/version2_en.pdf (Accessed: 15 October, 2021)
[283] https://m.youtube.com/watch?v=6G18tWJCdQw&feature=youtu.be (Accessed: 15 October, 2021)

2015 "Comprehensive strategy for promoting dementia measures toward community development that is friendly to elderly people with dementia" (New Orange Plan)
Promotion of enlightenment to deepen understanding of dementia
Timely and appropriate providing medical care and long-term care according to the condition of dementia
Strengthening measures for juvenile dementia
Support for caregivers of people with dementia
Promotion of age-friendly community development, including people with dementia
Promotion of research & development and dissemination of its results related to Dementia prevention, diagnosis, treatment, Rehabilitation model, long-term care model, and etc
Emphasizing the perspective of people with dementia and their families.

- (1993 Consumption tax 3% was started to contribute for social security)
- 1997 Public Nursing Care Insurance Law
- **2000 Long-term Care Insurance Law**
- (2004 International Conference of Alzheimer's Disease Association)
- (2004 Official Name of Dementia changed from "Chihou-shou" to "Ninchi-shou")
- **2005 Revision of Public Nursing Care Insurance Law** (Revision: 2008, 2011, 2014, and 2017)

- **2006 Law Concerning Securing Medical Care for older people**
- (2008 Report on "Urgent project to improve medical care and Quality of Dementia)
- **2008 Medical Care System Law for the Late Elderly**
- (2012 "Direction of future dementia measures" by Dementia measures Study Project Team")
- 2012"Five-year plan to promote dementia measures" (Orange plan)
- (2013 G8 Dementia Summit in Ise-Shima of Japan)

- **2015 "Comprehensive strategy for promoting dementia measures toward community development that is friendly to elderly people with dementia" (New Orange Plan)**
  - Promotion of enlightenment to deepen understanding of dementia
  - Timely and appropriate providing medical care and long-term care according to the condition of dementia
  - Strengthening measures for juvenile dementia
  - Support for caregivers of people with dementia
  - Promotion of age-friendly community development, including people with dementia
  - Promotion of research & development and dissemination of its results related to Dementia prevention, diagnosis, treatment, Rehabilitation model, long-term care model, and etc
  - Emphasizing the perspective of people with dementia and their families
- (2017 International Conference of Alzheimer's Disease Association)
- 2019 "Dementia Policy Promotion Charter"
  - (Decided by the Ministerial Meeting on Dementia Policy Promotion on June 18, 2019)

1. Dissemination and enlightenment / personal transmission support
2. Prevention
3. Support for medical care, social care, long-term care services, and caregivers
4. Promotion of barrier-free of dementia and Support for of juvenile dementia / social participation support

5. R & D / industrial promotion
   - These five pillars above 1. - 5. are planned and promoted based on the opinions of people with dementia and their families.

- **Regional policies (Example: Aichi Prefecture)**

- **Local policies (Example: Obu city or Toyoake City in Aichi Prefecture)**

After Revision of Public Nursing Care Insurance Law on Jun. 2005 (Revision: 2008, 2011, 2014, and 2017)

- Nov. 2007 Aichi Prefecture Late Elderly Medical Care Wide Area Union Ordinance on Late Elderly Medical Care (Revision: Jan. 2008, Oct. 2009, Jan. 2010, Mar. 2011, Dec. 2011, and Jul. 2012)
- Mar. 2008 Obu City Ordinance on Medical Care for the Late Elderly (Revision: Mar. 2018 and May 2020)
- Apr. 2008 Obu City Ordinance Enforcement Regulations on Medical Care for the Late Elderly Revision: Jun. 2012, Jun. 2013, Sep. 2013, Mar. 2015, Dec. 2015, Mar. 2017, Mar. 2018, Jun. 2019, and Oct. 2020）

After "New Orange Plan" on Jan. 2015

- Dec. 2017 Aichi Orange Town Concept
- Dec. 2017 Obu City Town development promotion ordinance without anxiety about dementia (First in City of Japan)
- Dec. 2018 Aichi Prefecture Dementia Policy Promotion Ordinance (First in Prefecture of Japan). Town development model activity with a deep understanding of dementia (Supporting to Cities and towns from 2018 to 2020), Nagoya, Toyohashi, Okazaki, Hannda, Kariya, Toyota, Anjo, Takahama, Toyoake※, and Nagakute cities[284] ※, Obu city : original activities （See attached PDF files.）
- After Law concerning securing medical care for older people on Jun. 2006 and Law concerning medical care system for the late elderly on Apr. 2008
- Mar. 2008 Obu City Ordinance on Medical Care for the Late Elderly (Revision: Mar. 2018 and May 2020)
- Apr. 2008 Obu City Ordinance Enforcement Regulations on Medical Care for the Late Elderly (Revision: Jun. 2012, Jun. 2013, Sep. 2013, Mar. 2015, Dec. 2015, Mar. 2017, Mar. 2018, Jun. 2019, and Oct. 2020)

B) Building Age-friendly Environments for older people and the Disabled

- National policies

- 1970 Fundamental law for Measures Concerning Mentally and Physically Handicapped Persons
- 1993 Fundamental law for Counter Measures for Mentally and Physically Handicapped Persons
- 1994 Heart-buil. (= Heartful Building) Act: "Law for Promotion of Construction of Specific Buildings that can be Smoothly Used by older people, Persons with Disabilities and etc."

[284] https://www.city.toyoake.lg.jp/secure/7724/version2_en.pdf (Accessed: 15 October, 2021)

- 2000 Barrier-Free Transportation Act: “Act on Promotion of Smooth Movement of Elderly People, Persons with Disabilities, etc. Using Public Transportation”
- 2004 Revised Fundamental law for Counter Measures for Mentally and Physically Handicapped Persons
- 2006 New Barrier-Free Act, which was integrated with Heart-buil. and Barrier-Free Transportation Acts:“Act on Promotion of Smooth Movement of Elderly People and Persons with Disabilities”

・Regional policies (Example: Aichi Prefecture)

・Local policies (Example: Obu city or Toyoake City)

After Heart-buil. Act on Jun. 1994

October 1994 Aichi Prefecture People-friendly town development promotion ordinance (Revision Mar. & Oct. 2000, Dec. 2004, and Mar. 2007)

1. Personnel Training and Publicity since 1995: Prize for People-friendly town development ⇒NPO Sawayaka Aichi
2. Support to Cities and towns since 1995: Promotion Activity for People-friendly town development ⇒ Obu City NPO Sawayaka Aichi and Obu City[285]

After Barrier-Free Transportation Act on May 2000 and New Barrier-Free Act on Jun. 2006

- Dec. 2012 Ordinance that establishes standards for road structure necessary for facilitating movement in Obu City

Note: Obu city (Area： 33.66 km², Total population： 92,479 Persons)

Aichi Prefecture (Area： 5,172.92 km², Total population： 7,521,192 Persons)

The total fertility rate: National Average of Japan 1.43 (2013-2017)

Aichi Prefecture Average 1.55

Obu City (No1. in Aichi Pref.) 1.93

(National, regional, local) ecosystem on SHAFE of the partner

Now in progress. Partner will build an ecosystem idea in detail since our Honorary President Dr. Shinn-ichi Ohshima (National Center for Geriatrics and Gerontology, Japan) asked to make a basic idea at the end of April 2021. This plan includes education and contributes to not only one area but also other area flexibly to suit for each area. The future of this plan is unknown and the Honorary President has the ball now.

On the other hand, an open call for participants regarding designation of super city type national strategic special zone is now calling from Japanese government in domestic public offering, that can be checked in the link below. In this public offering, cooperative structures or bonds consisting of public authorities, companies, non-governmental organisations, health and social care providers,

[285] https://m.youtube.com/watch?v=6G18tWJCdQw&feature=youtu.be (These presentations were granted by Aichi Prefecture (Accessed: 15 October, 2021)

research and academia for care provision and ICT implementation. However, all idea seems that its extensibility would be limited[286].

(National, regional, local) funding opportunities on SHAFE in your country
Collaboration among EU and Japan:

Examples: e-VITA Projects (EU-Japan VIRTUAL COACH FOR SMART AGEING) in Horizon 2020[287]

This project consists of Japan team (Tohoku Univ., National Center for Geriatrics and Gerontology, and etc.) and European Team (Germany: UNIVERSITAET SIEGEN (USI), DIOCESAN CARITAS ASSOCIATION COLOGNE E.V. (CARITAS), FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V. (FHG), INSTITUT FÜR ANGEWANDTE INFORMATIK e.V. (INFAI), INSTITUT FUR EXPERIMENTELLE PSYCHOPHYSIOLOGIE GMBH (IXP), France: DELTA DORE S.A. (DELTA), ASSISTANCE PUBLIQUE DES HÔPITAUX DE PARIS (HBP), Italy: INSTITUT MINES-TELECOM (IMT), ENGINEERING - INGEGNERIA INFORMATICA SPA (ENG), ISTITUTO NAZIONALE DI RIPOSO E CURA ANZIANI(INRCA), UNIVERSITA POLITECNICA DELLE MARCHE (UNIVPM), and Bergy: AGE PLATFORM EUROPE AISBL (AGE).

Private B to B promotion is supported by EEN-Japan[288] Partner got most information about EU-Japan collaboration, that was mentioned above, from EU-Japan Centre for Industrial Cooperation.

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE
Partner introduces the activity of NPO Sawayaka Aichi, see the paper in the footnote[289].

In the past, On barrier-free designing of Chubu Centrair International airport (IATA:NGO), discussions of all stakeholders including the disabled people for 4 years contributed to the design and practice of Chubu Centrair International Airport.[290]

19. Kosovo

Contributor: Avni Rexhepi

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

For example, LAW (NO. 03/L-019) ON VOCATIONAL ABILITY, REHABILITATION AND EMPLOYMENT OF PEOPLE WITH DISABILITIES. There is also a "Strategic Plan for granting inclusiveness (regarding elderly, individuals with disabilities, etc)".

Relevant stakeholders and policy makers

	Local	Regional	National
Health	Municipality, Health Directorate		Ministry of Health
Social	Municipality, Directorate labour and social welfare		Government, Ministry of labour and social welfare

[286] https://www.chisou.go.jp/tiiki/kokusentoc/supercity/supercity_sckoubo2.html (Accessed: 15 October, 2021)
[287] https://www.tohoku.ac.jp/japanese/newimg/pressimg/tohokuuniv-press20201020_03web_e-VITA.pdf (Accessed: 15 October, 2021)
[288] https://www.een-japan.eu/ja/eu-profile/it-ecg-smartphones (Accessed: 15 October, 2021)
[289] https://www.mdpi.com/2076-0760/8/4/110 (Accessed: 15 October, 2021)
[290] https://www.centrair.jp/en/index.html (Accessed: 15 October, 2021)

Built environment	Municipality, Directorate of Environment and Spatial Planning		Government, Ministry of Environment and Spatial Planning
Digitalisation			Ministry of Science and Education
Development	Municipality, Directorate of Development		Ministry of Economy
Education	Municipality, Directorate of Education		Ministry of Science and Education
Research			Ministry of Science and Education
Other: please specify -Labour and Social Welfare			Government, Ministry: https://mpms.rks-gov.net/en/
Other: please specify			

(National, regional, local) ecosystem on SHAFE of the partner: NA

(National, regional, local) funding opportunities on SHAFE

Monthly payments (Elderly Pensions) are paid to individuals aged 65 and over by the ministry of labour and social welfare. Municipal elderly centres (House of elderly) are financed by local and national government, and municipalities provide free urban transport for older people.

There are examples of private initiatives that have opened local "Elderly Houses", providing shelter and care, with monthly payment and there are also private "Elderly House/Centres" that offer free shelter and care, funded by donors.

Ministry of Education provides funding for small research projects (including the ones that have clear impact at local level on citizens).

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE

- Entrepreneurship Center and official incubator of the University of Pristina[291].
- Innovation Centre Kosovo (ICK) is a centre whose aim is to connect research and development component of scientific field with the business sector, focusing on creating new job opportunities oriented towards the future, based on knowledge and new technology[292].
- Caritas Kosovo[293]
- EC (eng. Walk) is engaged for a democratic governance and sustainable economy in the local level (as well as regional) through community mobilization, overseeing public decision-making and partnership in the implementation of development programs and policies. Inclusive Cities Project[294].

[291] https://venture-up.org/ (Accessed: 15 October, 2021)
[292] https://ickosovo.com/ (Accessed: 15 October, 2021)
[293] https://caritaskosova.org/repository/docs/policy_paper_and_recommendations_on_social_inclusion_of_people_with_disabilities_and_mental_disorders_in_kosovo.pdf (Accessed: 15 October, 2021)
[294] https://www.ecmandryshe.org (Accessed: 15 October, 2021)

20. Latvia

Contributor: **Associate prof. Signe Tomsone**

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

In Latvia, on 6 September 2016, the Cabinet of Ministers approved the conceptual report Active Ageing Strategy for Longer and Better Working Life in Latvia, developed by the Ministry of Welfare in cooperation with other institutions and social partners. The conceptual report contains the following lines of action:

- **employment** – an inclusive labour market for older people;
- **education** – educated and competent older workers in accordance with changing labour market conditions;
- **health and active lifestyle** – healthy and physically active older people who continue to live an active and independent life for as long as possible;
- **social security** – socially protected elderly people.

The informative report of the Ministry of on the progress of the implementation of the conceptual report Active Ageing Strategy for Longer and Better Working Life in Latvia was published in 2019 Welfare (MoW, June 2019). The report is available on the website of the Ministry of Welfare[295]:

Some findings from the report summary and conclusions:

- Current demographic trends in Latvia indicate an ageing population and a declining population, especially in people of working age, resulting in a declining share of the working age population. At the beginning of 2018, there were 1,934,379 inhabitants in Latvia, 40.9% (780,667) of which were older than 50 years. The age group of 50–64 years makes up 32.4% of the working age population (15–64 years).
- The working age population is declining even faster than the total population, driven mainly by the large decline in the 15–24 age group due to the low birth rate in the 1990s and the high emigration rates in recent years for the population under 35.
- Since the financial and economic crisis, the level of economic activity and employment has been gradually increasing in Latvia. An increase in the indicators is observed in all age groups. In 2017, the employment rate of persons aged 50–64 in Latvia was 67.5% (64.9% in the EU), while in 2011 the employment rate was only 59.3%.
- In the field of employment, older people population in Latvia is characterized by relatively high participation in the labour market, but the main challenge is unemployment and especially long-term unemployment, which is influenced by factors such as lower mobility, both in terms of changing jobs and returning to the labour market, stereotypes by employers, education and health aspects as well as care responsibilities.
- Improving knowledge and skills throughout life is particularly important for maintaining competitiveness in the labour market, and for older people in particular. However, the participation of older people in adult education is relatively low and less widespread than in other EU Member States. The low level of involvement in adult education activities is based

[295] http://www.lm.gov.lv/lv/nozares-politika/darba-tirgus?id=91063 (Accessed: 15 October, 2021)

on a lack of interest on the part of employees and companies, costs, lack of time, availability of information and programs, and the structure of the economy and companies.

- The health status of the population in the context of an ageing population is one of the most important factors that has a major impact on employment opportunities and quality of life in general, so improving access to quality health care and long-term care and increasing its effectiveness is a key principle of health reforms.
- As part of the reform of the health care system, the Ministry of Health is implementing various measures to improve access to health care and reduce waiting times, as well as organisational aspects, which include significant improvements for patients in general, including older people, but funding for the health sector in general is still insufficient.
- In Latvia, compared to other EU Member States, the number of people at risk of poverty is increasing every year, and especially among older people. The population after the age of 60 is at a significantly higher risk of poverty than other age groups, moreover, in Latvia the increase in the risk of poverty in 2017 has been significant compared to other age groups.
- The MoW continues to work on improving the social security system. Social services are constantly being improved, as well as social protection policy measures are being implemented to improve the situation of population groups often at risk of poverty and social exclusion (pensioners, people with disabilities, families with children), positively influencing their future living standards, improving their social protection and reducing the risk of poverty and social exclusion.
- In general, it can be concluded that significant progress has been made in the implementation of several measures and it is necessary to continue the existing measures in the fields of employment, education, health, social security and other related areas, analysing their impact on changes in the situation. Significant challenges remain and respective improvements need to be made in the areas of access to health, skills development of employees, reduction of the risk of poverty, and quality of work to improve the situation of active ageing as a whole.

Additional information on older people in Latvia

Protection of older people is responsibility of Ministry of Welfare[296]:

Lifelong learning for older people[297]:

To improve digital competencies in society, the Programme of Digital Agents started in 2018. Older people is one of the target groups[298]:

My very brief conclusion on SHAFE (Smart Healthy Age-Friendly Environments) principles in legislation and policies in Latvia would be that there is no specific focus particularly on older people. Initiatives are fragmented (mainly separate projects), responsibility is shared with different organisations with quite week cooperation and synergies.

Relevant stakeholders and policy makers

LOCAL	REGIONAL	NATIONAL

[296] https://www.lm.gov.lv/lv/senioriem (Accessed: 15 October, 2021)
[297] https://epale.ec.europa.eu/lv/blog/senioru-ieklausana-muzizglitiba-latvija (Accessed: 15 October, 2021)
[298] https://mana.latvija.lv/digitala-agente-digitalo-prasmju-apgusana-senioriem-nav-tikai-jaunas-zinasanas-ta-ir-ari-komunikacija-starp-paaudzem-2/ (Accessed: 15 October, 2021)

HEALTH	+	+	+
SOCIAL	+	+	+
BUILT ENVIRONMENT	+	+	+
DIGITALISATION	+	+	+
DEVELOPMENT	+	+	+
EDUCATION	+	+	+
RESEARCH	+	+	+
OTHER: PLEASE SPECIFY			
OTHER: PLEASE SPECIFY			

(National, regional, local) ecosystem on SHAFE of the partner

Partner is not aware that we currently have any good ecosystem on SHAFE in Latvia. Will continue my exploration. Example of one interesting initiative I am taking part: Smart Silver Lab: https://www.connectlatvia.lv/osiris/. Project OSIRIS description[299]:

(National, regional, local) funding opportunities on SHAFE

Research funding by Latvian Council of Science
Funding schemes: State research programme and Fundamental and applied research projects.
Other funding opportunities should be explored.

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE: NA

21. Lithuania

Contributor: Aurelija Blaževičienė

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

National Science Program "Healthy Aging" The aim of the National Science Program "Healthy Aging" is to comprehensively analyse and solve the issues of biomedicine and social medicine of healthy aging in the Lithuanian society, using the development of science and technology, the results of fundamental and applied research.
Three research tasks are planned for the implementation of the program in 2015–2021. The research carried out according to them is financed from the state budget appropriations of the Republic of Lithuania.

Task 1. To develop new methods and technologies for the assessment and prevention of disease risk factors, to study their impact on healthy and quality life expectancy.

Task 2. Using biotechnology, nanotechnology, imaging, information and telecommunications technologies, to develop methods for early diagnosis and prognosis of diseases that shorten healthy and quality life expectancy.

Task 3. To develop, improve and research methods for the treatment of health conditions that affect healthy and quality life expectancy, rehabilitation and long-term monitoring of patients, and technologies to reduce the social exclusion of older people in Lithuania.[300]

Relevant stakeholders and policy makers:

[299] https://www.osiris-smartsilvereconomy.eu/ (Accessed: 15 October, 2021)

[300] https://www.lmt.lt/lt/mokslo-finansavimas/valstybes-uzsakomieji-tyrimai/sveikas-senejimas-nmp/292 (Accessed: 15 October, 2021)

	Local	Regional	National
Health	X	x	x
Social	X	x	x
Built environment	X	x	
Digitalisation			x
Development	X	x	x
Education			x
Research			x
Other: please specify			
Other: please specify			

(National, regional, local) ecosystem on SHAFE of the partner

Result from scientist or some communities' initiative fragmentally implemented in the difference municipalities.

(National, regional, local) funding opportunities on SHAFE

Municipal health community projects funded by municipalities

Research grants

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE

Partner can't provide any examples because in Lithuania it rather young concept healthy ageing and smart environmental for elderly. And we have individual initiatives in some regionals.

22. Moldova

Contributor: **Prof. Dumitru Todoroi**

1. **(National, regional, local) policies on Smart Healthy Age-Friendly Environments**

Civic Association „Union of Pensioners of Moldova" with the support of Civic Association "Parliament 90" and the Association "AESM Seniors" of the Academy of Economic Studies of Moldova aims to develop and carry out a program for the construction and management of the Ecosystem for Elderly of Moldova which constitutes the net of 24 Asylums for older people (Acronym: Net4MoldEld), with the capacity of 5232 beds consisting of 8.3% of the number needed for this category of citizens. The total value of the investment is estimated at 95 mln. Euro, which returns 800 euros per square meter, including housekeepers, machinery, furniture, infrastructure, and so on.
Advisers to the President of Moldova: - Mrs. Ala Nemerenco – medical problems (GSM a.nemirenco@prm.md); - Mr. Ana Revenco - Social Issues (GSM a.revenco@prm.md); -Mrs. Elena Drută – Problems with Diaspora (GSM e.druța@ prm.md); -Mr. Vlad Negruța – economic problems (GSM v.negruța@prm.md); -Mrs Cristina Gherasimov– external problems (GSM c.gherasimov@ prm.md). Prof. Victor Leancă, President Civic Association „Union of Pensioners of R.Moldova"; Boris Carandiuc, Member of the Civic Association "Parliament 90", GSM 0691-52-500; email: eneadzz@gmail.com, Dumitru Todoroi, Member of the Civic Association "Parliament 90" and

President of the Association "AESM Seniors" of the Academy of Economic Studies of Moldova, GSM 069367027, e-mail: todoroi@ase.md.

Relevant stakeholders and policy makers

	Local	Regional	National
Health			+
Social	+	+	+
Built environment	+	+	+
Digitalisation			+
Development	+	+	+
Education			+
Research	+	+	+
Other: please specify			
Other: please specify			

Mostly the organisations at the beginning are Association "Parliament 90", President of the Association "AESM Seniors" of the Academy of Economic Studies of Moldova, AO MicusaStil, NGO ECOInfoMold

6. Strategies to involve policy makers, stakeholders in NET4 and setting the political agendas for SHAFE Working Plan

6.1. Choosing the best and most relevant results of the research results obtained by seniors and their co-partners under COST CA19136 activities and presented at the International TELECONFERENCE of young researchers "Creation of the Society of Consciousness" 10th edition, Chisinau, 12-13 March 2021.

6.2. Proposition to the authors of the most relevant research results, obtained by seniors and their co-partners (participants in the collaborative initiative) in the framework of COST CA19136 activities, to exhibit the results in the format of extended and standardised texts (4, 6 or 8 pages)

6.3. Presentation of the results of the selected research in the format of extended and standardised texts for publication in accordance with the requirements of the Journal "ARA Journal of Sciences", Edited by ARA Publishing House, California Davis University, USA.

6.4. Formation of the Volume of the Journal "ARA Journal of Arts and Culture" with extended and standardised texts of the results of research obtained by seniors and their co-partners.

6.5. Presentation for Publication by ARA Publishing House of the Volume of the Journal "ARA Journal of Science" with extended and standardised texts of the results of research obtained by seniors and their co-partners.

6.6. Publication of the volume of the Journal "ARA Journal of Sciences" with extended and standardised texts of the results of research obtained by seniors and their co-partners and its presentation to the Core Group of COST CA19136 for dissemination, publicity, SHAFE impact, and sustainability**.**

7. (National, regional, local) ecosystem on SHAFE of the partner, Strategies to build, maintain, join an ecosystem

Developing the knowledge and experience acquired by older people (seniors) in their desire to continue working in green societies for society.

Most of the scientific results, communicated at TELE-2021, are obtained by research groups, led by members and associate members of the AESM Seniors Association personally and/or with the support and management of the research work carried out by the intergenerational staff of the AESM and the Partners. The list of participants in the collaborative initiative with key research contributions carried out in the framework of COST CA19136 activities is set out below.

Dumitru Micuşa, Associate Member of the Association "Seniors AESM", PhD Stdent, Free International University of Moldova, researcher in the issues of adult psychology. Dumitru presents some research results, achieved under COST CA19136, such as: Personality of young researchers in psychological collaboration between generations; Measuring, maintaining and improving the psychological well-being of retired seniors with COST support.

Valentina Capatina, Member of the Association "Seniors AESM", assoc. prof., PhD, Dr. in pedagogy, Academy of Economic Studies of Moldova (AESM), leader in the research carried out within the framework of intergenerational SMEs with the participation of older people people. Valentina together with her colleagues presents research products, such as: The gap of opinions between generations; The importance of communication in preventing conflicts between generations; Working conditions of an ageing workforce; For an active life at any Age.

Aureliu Zgureanu, Associate Member of the Association "Seniors AESM", assoc. prof., PhD, Dr. in information security, leader in ICT research with applications in information SMEs aimed at the application of intergenerational staff in adult associations with activities at home and at workplaces. Aureliu presents research products, such as: Deploying Enterprise Root Certificate Authority; Ensuring quality levels within frequent changed software product; Security features of information system that use micro-service architecture.

Maria Moraru, Member of the Association "AESM Seniors", Senior Specialist in The Computerization of the Society by investigating the possibilities of adult membership in household activities. Maria together with her colleagues' present research products, such as: Continuity of intellectual and emotional activities of older people; social media for all generations; Human influence on the transition of the current ecosystem in the Republic of Moldova; Features of the emotional sphere of people in old age.

Corina Bulgac, Associate Member of the Association "Seniors AESM", assoc. prof., PhD, Dr. in economy, Doctoral School of AESM, project coordinator, carried out by AESM students and masters in the fields of media for economic SMEs. Corina presents results: Activity of Economic Agencies having disabled employees; Effect of fiscal policy on the quality of life of older people; National and international employment tax policy aspects.

Marina Coban, Member of the Association "AESM Seniors", assoc. prof., PhD, Dr. in economy, research coordinator with a focus on the creation of Ecosystems with older people in its intergenerational cooperation. Marina presents some result: Bouquet of business plans initiated by the Association "AESM Seniors".

The Ecosystem for Elderly of Moldova which constitutes the net of 24 Asylums for older people (Acronym: Net4MoldEld)

- Civic Association „Union of Pensioners of Moldova"; Civic Association "Parliament 90"; Association "AESM Seniors" of the Academy of Economic Studies of Moldova.
- Prof. Victor Leancă, President Civic Association „Union of Pensioners of R.Moldova"; Boris Carandiuc, Member of the Civic Association "Parliament 90", GSM 0691-52-500; email: eneadzz@gmail.com,

Dumitru Todoroi, Member of the Civic Association "Parliament 90" and President of the Association "AESM Seniors" of the Academy of Economic Studies of Moldova, GSM 069367027, e-mail: todoroi@ase.md

8. (National, regional, local) funding opportunities on SHAFE Strategies for successful SHAFE business models

8.1. Developing the knowledge and experience acquired by older people (seniors) in their desire to continue working in green societies for society.
8.2. Selection of the most relevant research results obtained by seniors and their co-partners from Association" AESM Seniors" (green society) in the framework of COST CA19136 activities.
8.3. Developing the results of the selected research and its presentation for publication.
8.4. Completing the volume with the results of the selected research and preparing it for publication.
8.5. Publication of the volume and its presentation to the Core Group of COST CA19136 for dissemination, publicity, SHAFE impact, and sustainability.

Most of research results are obtained by the research groups, led by the members of the Association "Seniors AESM" personally and/or with the support and management of the research work carried out by the intergenerational staff of the AESM and the university partners in the evaluation of the projects:

- Integration ICT solutions into habitats will allow seniors to live at home longer;
- Recipes for a better psychological well-being towards the continuity of spiritual, intellectual and emotional activities in society of older people;
- Business plans, created and implemented by professors, which are employed, associated or affiliated with AESM;
- Ensuring active, healthy, and safe aging for the country's rural population;
- Intergenerational relationship in listening, understanding, and communication;
- Internet behaviour and individual psychological characteristics of youngsters and Generation X;
- Transition and pollution problems of current ecosystems in maintaining human health;
- Emotionality of older people;
- Benefits of studying music in older citizens;
- Chamber music on the transmission, maintenance and development of spiritual, intellectual and emotional well-being of older people;
- The motivational factors for the continuity of work and professional harassment of older people;
- Tourism services offered to older people through the implementation of technology;
- Implementation of fundamentals of music among the 30 million Romanians in the World;
- Mass media and communication models for active aging;
- Activities and their diversity for elderly in promotion healthy and dynamic lifestyle;
- The policies and measures to combat discrimination on the grounds of disability;
- Decent life and effects of fiscal policy to promote adequate standard of living of older people;
- The "full" TLS / SSL certificates and its automated issuance for companies and individuals;
- The quality assurance processes for delivering frequent changed software products;
- Security of information systems for software products;
- Services for fast feedback through mobile technologies in teaching process for elderly;
- Characteristics of the continuity of activities, IQ, EQ and psychological well-being of older people;
- Opinions of young researchers on the subjective state of well-being and their self-acceptance;
- Self-transcendence as a critical element of human consciousness, through which people can learn, preserve their health as well as evolve and transform future societies;
- Virtually systems as a material-informational nucleus for management of economy.

Main expected results have a direct contribution to the progress towards the COST Action 19136 objectives to ensure dissemination, evaluation and exploitation of the Action's results together with establishing a strong network with the relevant industrial stakeholders and deliverables intends to

achieve specific objectives on design and creation innovative ICT solutions that will be integrated into Smart habitat environments according to user's needs.
The total value of the investment is estimated at 95 mln. Euro, which returns 800 euros per square meter, including housekeepers, machinery, furniture, infrastructure, and so on.
For the financing of the project, we are betting on the European Union with the help of Romania, the Government of Moldova, donations from local, district and city logs, donations to the cities and the twin communes, support from businessmen from all over the world.

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE

9. Conclusions and further actions

Association "AESM Seniors" of the Academy of Economic Studies of Moldova (AESM), which is composed of about 150 adults (retired teachers and teachers of age around retirement), constitutes a type of human ecological community (Ecosystem), in which the members of the association are in **continuous activity** in the AESM with affiliate status (Volunteer) of the AESM.

Performed research by the research groups, led by the members of the Association "Seniors AESM" personally and/or with the support and management of the research work carried out by the intergenerational staff of the AESM and the university partners contribute to the COST Excellence and inclusiveness policy is developed around:

- geographical spread which includes less research-intensive such Inclusiveness Target Countries as the Republic of Moldova,
- career stage: involving early career investigators such as students, masters, PhD students, and young doctors in the sciences of the Republic of Moldova, and
- gender balance, which includes more than 50% of leaders and participants in research work, the results of which have already been communicated within TELE-2021 and the summaries of which have been published under the aegis of COST Action in the Journal "Society Consciousness Computers", No. 7, 2021.

Benefits from products created by the authors of the research carried out within the COST Activities are of two types: **social benefits** offered to the beneficiaries of products created by the authors and **benefits for the authors** – the creators of the products.

Social benefits:

- Obtaining information about the products: communication;
- Transmission of products information among possible beneficiaries: dissemination;
- Product publicity and implementation.

Benefits for the authors:

- Positive emotions regarding the possibility of announcing the products - the results of research - to be listened to, discussed and analysed by colleagues;
- Positive emotions from the implementation of the products, created by the authors of the products in favour of society; the benefits being announced at the end of the discussions on the results obtained;
- Positive emotions from the publication, communication, dissemination and publicity of the results, of the products created by the authors ;
- Positive emotions from the possibility of obtaining funding for the product created by the authors.

All these **benefits** directly refer to the results obtained within the **current Virtual Mobility Grant**.
Performed research have a direct contribution to the Action plans for stakeholder engagement towards the Action objectives to ensure dissemination, evaluation and exploitation of the Action's results together with establishing a strong network with the relevant industrial stakeholders and deliverables intends to achieve specific objectives on design and creation innovative ICT solutions that will be integrated into Smart habitat environments according to user's needs for an active ageing.
The Capacity Building, which concerns the present Virtual Mobility, includes:
- the promotion of the participation and innovation of European researchers, engineers and scholars from less research intensive countries, such as Moldova, regardless of their age and gender, in

networking activities aiming to develop ecosystems of well-being for older people,
- International cooperation between researchers from COST member countries (Romania , Greece) and International Partner countries (USA), bringing together different disciplines to enable breakthrough scientific developments in the field of Active Assisted Living,
- creation knowledge alliances between research group from universities in different countries to increase the impact of research in the economic, industrial, and social sectors and favour the production of new products and services for making new ecosystems of active ageing a reality, and
- ensuring the correct integration, dissemination and exploitation of all knowledge and results from Net4Age-Friendly among the research groups of interest, economic, industrial, and social sectors, and users.

23. Montenegro

Contributors: Andjela Jakšić Stojanović, Marko Gošović

5. (National, regional, local) policies on Smart Healthy Age-Friendly Environments

Regarding public health, national legislation on healthcare is partly aligned with the EU practices. Average life expectancy rose slightly from 76.1 to 76.8 between 2010 and 2018. The country's health budget is around 5 % of GDP for many years.
In recent period, some important laws regarding this issue have been adopted such as:

- The Law on Health Care (Official Gazette of the Republic of Montenegro, no. 3/16, 39/16 and 2/17),
- The Law on Health Insurance (Official Gazette of the Republic of Montenegro, no. 6/16, 2/17 and 22/17),
- The Law on Pension and Disabilities Insurance (Official Gazette of the Republic of Montenegro, no. 54/03, 39/04, 61/04, 79/04, 81/04, 29/05, 14/07, 47/07, 12/07 and 13/07 and Official Gazette of the Republic of Montenegro, no. 79/08, 14/10, 78/10, 34/11, 39/11, 40/11, 66/12, 36/13, 38/13, 61/13, 6/14, 60/14, 10/15, 44/15, 42/16 and 55/16),
- The Law on Social and Child Protection
- The Law on Social Council, adopted on 26 June 2018.
- The Law amending the Law on Protection and Health at Work, adopted on 26 August 2018,
- The Law on Mediation in Employment and Rights during Unemployment, adopted 30 April 2019
- The Law of Labour.

In recent years some important strategic acts have been adopted such as:

- Strategy of Healthcare Development in Montenegro 2003-2020[301].
- Master plan of the development of health system in Montenegro 2015-2020[302],
- Strategy for Development of Integrated Health Information System (IHIS) and eHealth for the period 2018 - 2022.
- Strategy for improving the quality of health care and patient safety for the period 2019-2023
- Strategy for the Development of the Social Welfare System for older people 2018-2022
- Mental Health Care and Improvement Strategy In Montenegro 2019-2023.
- National Strategy of Social Inclusion of Roma and Egyptians 2016-2020

[301]https://extranet.who.int/countryplanningcycles/sites/default/files/planning_cycle_repository/montenegro/montenegro.pdf (Accessed: 15 October, 2021)
[302]https://mzd.gov.me/ResourceManager/FileDownload.aspx?rid=271078&rType=2&file=MASTER%20PLAN%20OF%20THE%20DEVELOPMENT%20OF%20HEALTH%20SYSTEM%20IN%20MONTENEGRO%202015-2020.pdf (Accessed: 15 October, 2021)

- Smart specialisation strategy of Montenegro 2020-2024[303]

The related S3 guidelines (2018-2024) were adopted in December 2018.

Something that is significantly improved in previous period is eHealth. The Institute for Public Health is responsible for all eHealth issues. Some services such as: eAppointments, ePrescription, Test results, ePharmacy service were introduced. There was significant increase of demands for these services especially during pandemic time. services introduced in November 2018.

Relevant stakeholders and policy makers

	Local	Regional	National
Health	Hospitals Retirements homes …		Ministry of Health Institute for Public Health
Social	Centres for social work Retirements homes		Ministry of Justice, Human and Minority Rights Ministry of Economic Development Ministry of Finances Ministry of Education, Science, Culture and Sports Pension fund of Montenegro
Built environment	NGO Green Home		Ministry of Ecology, Spatial Planning and Urbanism
Digitalisation	Digitalizuj.me Amplitudo		Ministry of Public Administration, Digital Society and Media
Development	Tehnopolis		
Education			„University of Montenegro", "University Mediterranean" "University of Donja Gorica (UDG)"
Research			„University of Montenegro", "University Mediterranean" "University of Donja Gorica (UDG)" Montenegrin Academy of Sciences and Arts
Other: please specify			
Other: please specify			

(National, regional, local) ecosystem on SHAFE of the partner

During the realisation of Erasmus + PH-ELIM project we have established strong and successful cooperation with different stakeholders from the field of public health such as Ministry of health, Institute of Public Health, representatives of higher education institutions that deal with education in public health.[304]

(National, regional, local) funding opportunities on SHAFE

Funds provided by:

- Ministry of Education, Science, Culture and Sports
- Ministry of Economic Development

[303] https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjx4I7_l57wAhVto4sKHVQ7Dh0QFjABegQIAhAD&url=https%3A%2F%2Fmna.gov.me%2FResourceManager%2FFileDownload.aspx%3FrId%3D395955%26rType%3D2&usg=AOvVaw1Su7Q-vC3fSYtS6p6vmV5i (Accessed: 15 October, 2021)

[304] https://ph-elim.net (Accessed: 15 October, 2021)

These two ministries have certain funds and publish open calls every year regarding to realisation and implementation of different projects in fields that may be complementary with SHAFE. Here is the example of the call[305]:

24. Netherlands

Contributors: Willeke van Staalduinen (AFEdemy) and Professor Joost van Hoof (The Hague University of Applied Sciences)

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

- The national government of the Netherlands mainly prescribes the boundaries for the realisation of policies at local level. SHAFE policies as such do not exist in the Netherlands, however looking at several features it is compliant. Accessibility, social housing, independent living, combat isolation and dementia prevention programmes are launched by the national government and promoted to local governments by law or funding schemes.
- Legislation:
  - Dutch Building Code (Bouwbesluit)
  - Municipal Support Act (Wet maatschappelijke ondersteuning)
  - Housing Act (Woningwet)
  - District nursing via the Health Insurance Act (Zorgverzekeringswet)
  - Public health Act (Wet publieke gezondheid)
  - Long-term care Act (Wet langdurige zorg)
  - eHealth financing measures for care organisations
- National funding programmes for municipalities, healthcare organisations, housing organisations etc. regarding combat isolation, prevention programmes, eHealth implementation.

Relevant stakeholders and policy makers

	Local	**Regional**	**National**
Health	Health and social care providers Home care providers Public health administration	Regional insurance offices	Ministry of Health, Welfare and Sports (VWS)
Social	Municipality and its organisations		Ministry of the Interior and Kingdom Relations
Built environment	Social housing associations Private housing enterprises and developers City planning/urban planning	Provinces: environmental perspective	
Digitalisation	Municipalities		Digital Alliance Telecom and cable providers Ministry of Infrastructure
Development	NA		
Education	Schools and universities	Schools and universities	Ministry of Education
Research	Universities (fundamental and applied sciences)	Universities (fundamental and applied sciences)	Ministry of Education

[305] https://mna.gov.me/ministarstvo/Konkurs_naucnoistrazivacki_projekti/ (Accessed: 15 October, 2021)

			Ministry of Economic Affairs National agencies Climate
Citizens	Citizens at local level		National associations of citizens
Other: please specify			

(National, regional, local) ecosystem on SHAFE of the partner

Name: Knowledge Platform Age-friendly The Hague

Partners:

- Research: The Hague University of Applied Sciences, Urban Ageing, Leiden University of Applied Sciences, Social domain, Leiden University, Campus The Hague
- Citizens: Older People's Council The Hague
- Authorities: Municipality of The Hague and Public Health Administration
- Business/NGO: Welfare organisation Xtra, Consultancy agency Hulsebosch Advies, AFEdemy, Academy on age-friendly environments in Europe BV

The ecosystem is open to include additional research organisations and businesses/NGOs

(National, regional, local) funding opportunities on SHAFE

The Hague provides several funding[306] opportunities that are in line with SHAFE measures, such as for environment and sustainability, neighbourhood activities, housing, culture, care and community support and sports.

The municipality of Gouda provides funding[307] to Gouda citizens and organisations to work on the topics of 'safety', 'liveability' and 'social structure' in Gouda. Conditions are that the funding must benefit Gouda citizens, that without funding it cannot take place and that they are in line with Gouda policy.

At national level, the Dutch government provides several kinds of funding and information:

- The Ministry of Health provides a website showcasing many care and eHealth solutions: Zorg van nu[308] (Care at the present) and Zorg voor Innoveren[309] (Care for innovation).
- The Ministry of Health fosters acceleration programmes to exchange information between care professional, patient, professional networks and between the care domains long term care and acute care (VIPP – Versnellingsprogramma Informatie-uitwisseling Patiënt en Professional InZicht). More information on the Zorg van Nu website.

[306] denhaag.nl/nl/subsidies.html (Accessed: 15 October, 2021)
[307] gouda.nl/Inwoners/Subsidieloket (Accessed: 15 October, 2021)
[308] zorgvannu.nl (Accessed: 15 October, 2021)
[309] zorgvoorinnoveren.nl (Accessed: 15 October, 2021)

- The Ministry of Health and Netherlands Enterprise Agency offer the e-Health at home funding programme 'Stimuleringsregeling e-health Thuis [310] (SET). SET fosters scaling up and implementation of the use of existing e-health applications for older adults and people with a chronic disease or disability at home. The funding is available for care professionals who facilitate care and support at home and wants to cooperate with a purchaser.
- Ministry of Health: Innovation Impulse [311] Care providers people with disabilities. This funding is meant for healthcare providers to implement existing technologies.
- Ministry of Health: 15% of the budget for nursing homes is for innovations and working hours saving measures.
- Netherlands Enterprise Agency (Rijksdienst voor Ondernemend Nederland [312]): Investment funds Seed capital for e-health start-ups. Especially for upscaling.

Dutch universities, Erasmus University Rotterdam, Erasmus MC and TU Delft, are cooperating to develop a joint eco-system[1] to address the major social challenges in the SMART, HEALTH, BUILT and even BUSINESS fields.

Some Dutch City Councils also provide 360º services, like YES!Delft [313], a tech incubator, to turn innovative ideas based on disruptive technology into successful social entrepreneurship. These initiatives connect an ecosystem of experts, mentors, corporate partners and investors. In these incubators, providers can get in contact with initiatives to see the different possibilities and companies, they use the regional centres to get in contact with users.

More concretely in the SHAFE domain, also Dutch universities, Erasmus University Rotterdam, Erasmus MC and TU Delft, are cooperating to develop a joint eco-system[314] to address the major social challenges in the SMART, HEALTH, BUILT and even BUSINESS fields. It will provide a working space in which scientists in the fields of medicine and the health sciences, technical sciences and social sciences can collaborate with businesses and institutions in start-ups, scale-ups and wet labs. It will have co-creation sites all over the region. "This far-reaching collaboration gives a better opportunity for realising revolutionary solutions and for systematically advancing the social embedding and acceptance of new technologies and medical developments," says Hans Smits, interim President of the Erasmus University's Executive Board.

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE

Learning and training offers on SHAFE:

- Hands-on SHAFE[315]:

[310] rvo.nl/subsidies-regelingen/stimuleringsregeling-ehealth-thuis-set (Accessed: 15 October, 2021)
[311] volwaardig-leven.nl/projecten/innovatie-impuls (Accessed: 15 October, 2021)
[312] rvo.nl (Accessed: 15 October, 2021)
[313] yesdelft.com (Accessed: 15 October, 2021)
[314] https://www.eur.nl/en/news/erasmus-university-tu-delft-and-erasmus-mc-intensify-collaboration (Accessed: 15 October, 2021)
[315] www.hands-on-shafe.eu (Accessed: 15 October, 2021)

- Building inclusive environments[316]:

25. North Macedonia

Contributor: Daniel Pavlovski (University Mother Teresa – Skopje)

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

- In the Republic of North Macedonia responsible for social protection off all citizens is The Ministry for Labor and Social Policy, Department for Social Protection (www.mtsp.gov.mk)
- Responsible for health protection is the Ministry for Health[317]
- Mojtermin: electronic system for health services[318]

Relevant stakeholders and policy makers

	Local	Regional	National
Health	Municipalities Institute of Public Health		Ministry of Health[319] Health Insurance Fund of Republic of North Macedonia www.fzo.gov.mk
Social	Municipalities Cetres for Social Work		Ministry for labour and social policy www.mtsp.gov.mk
Built environment	Municipalities Private housing enterprises		Ministry of Transport and Communications[320] Spatial Planning Agency[321]
Digitalisation	Municipalities Private ITC enterprises		Ministry of Information Society and Administration[322]
Development	Municipalities		
Education			Universities and Universities of Applied Science and Arts
Research			Universities and Universities of Applied Science and Arts
Other: please specify			
Other: please specify			

(National, regional, local) ecosystem on SHAFE of the partner:NA

(National, regional, local) funding opportunities on SHAFE

- Fund for Innovations and Technology Development[323]

[316] www.big-game.eu (Accessed: 15 October, 2021)
[317] www.zdravstvo.gov.mk (Accessed: 15 October, 2021)
[318] www.mojtermin.mk (Accessed: 15 October, 2021)
[319] www.zdravstvo.gov.mk (Accessed: 15 October, 2021)
[320] www.mcs.gov.mk (Accessed: 15 October, 2021)
[321] www.app.gov.mk (Accessed: 15 October, 2021)
[322] www.mioa.gov.mk (Accessed: 15 October, 2021)
[323] www.fitr.mk (Accessed: 15 October, 2021)

26. Norway

Contributors: Anne Moen, Kristin S. Fulgerud, Mara Diaconu, Bettina Huesbø, Nina Jøransson

Synopsis – SHAFE in Norway, survey in COST "NET4 Age Friendly"

This synopsis is prepared in response to several "NET4Age" WGs surveying the state of play in the participating countries. In general, we as participants from Norway can bring extensive, real-world experiences on use of a plethora of tools and strategies to reach goals in line with the ambition pointed out by SHAFE - «Smart Health Ageing Friendly environments".

Polices – local, regional – national

With the seminal white paper, NOU 2011:11 "Innovasjon i Omsorg" [Innovation in Care] the Norwegian Government set the stage for development of policies and solutions to enable aging in place. Following this, widespread trials and adoption of different solutions has taken place. Furthermore, regionally and locally there are several initiatives for Health aging in Place (WHO and KS), emphasizing prevention, early intervention, safety, inclusive and responsible development. A national innovation program "Nasjonalt velferdsteknologi program» has been a flagship Initiative to stimulate implementation and wide adoption of digital tools. This national strategy is a collaboration between the Norwegian Association of Local and Regional Authorities (KS), the Directorate of eHealth and the Norwegian Directorate of Health. The purpose is to contribute to more municipalities will apply welfare technologies to improve public services for older people living at home or in institutions. About 75% of the around 360 municipalities have participated in several projects testing various technologies, gaining experience and systematic knowledge. From 2020 the responsibility for development and management of national eHealth were transferred to the Norwegian Health Network, which is the provider of a national infrastructure for electric communication in the health sector.

At the national level, the program "Leve Hele Livet"[324] (A full life - all your life — A Quality Reform for Older Persons) was launched to share Best Practices, and a campaign to reform and improve in areas of early intervention, prevention and cooperation. KS launched this April a national center to promote Age friendly communities has been launched[325]. Embedded in this effort is commitment to accessible and universally designed physical and digital environment. These policies are also incorporating The European accessibility act aims to improve the accessibility of digital products and services. This will benefit older people and people with disabilities, as well as citizens in general by making web-based products and services more user-friendly.

Norway has been selected by European Commission to be partner in the New European Bauhaus[326] Initiative which aims at mobilizing all sectors of research, innovation and economy to take a leading role in shaping our climate-neutral, sustainable and inclusive futures, and to build a strong dialogue with science and technology. This partnership that has been signed with NTNU, the Faculty of Architecture and Design will have a great impact at national level as new policies and "tangible"

[324] https://www.regjeringen.no/en/dokumenter/meld.-st.-15-20172018/id2599850/ (Accessed: 15 October, 2021)
[325] https://www.ks.no/fagomrader/velferd/universell-utforming/good-examples-of-universal-design/ (Accessed: 15 October, 2021)
[326] New European Bauhaus (Accessed: 15 October, 2021)

experiences with human centred design will be put in place to bring people together in developing a future where all the actors of the society are implicated.

Types of tools and services In the publicly funded primary care sector we see a several types of services and digital tools to ensure age-friendly and safe environments. We choose to categories this as

1) Physical environment optimization; in house (e.g., good contrast, overview, light) and outdoor (e.g., rails, good surface, access, accessibility) to ensure control and safety
2) Sensor based surveillance, which can be seen as "passive monitoring", including use of GPS, sensor enabled safe environment in the home ("stove watch", light), personal safety (fall)
3) Engagements tools, including video-based health consultations, user-generated data on purpose and priority specific areas, to stimulate active contributions for prevention, early intervention or rehabilitation, empowerment of citizen to take care of Its own health
4) Environmental resources for older people in nursing homes, in particular for PwD, and technologies for entertainment or therapeutic purposes have been developed. The tools can recall memories combined with physical activity, residents can ride a fixed, adapted bike with hand or foot pedal while watching the screen displaying a chosen, well-known bike ride. Special sensorial rooms[327] have been created in care homes in Norway, e.g., Odda and Ullensvang municipality through the Sense-Garden[328] project, financed by AAL 2016. Others prefer interaction with a social robotic pet, such as the seal robot Paro, for mental, physical or social stimulation. Paro could be used individually or in group activity, and the activity is based on human-animal-interaction. In other locations, the Pepper robot has been used in care homes to stimulate people. Other technology used both in care homes and at home to keep elderly engaged with the families in easy to use and visual way is "Komp"[329].

> Types of tools and services are focusing on Physical environment optimization, Sensor based surveillance, Engagements tools, including video-based health consultations, user-generated data on purpose and priority specific areas, Environmental resources for older people in nursing homes, in particular for PwD, and technologies for entertainment or therapeutic purposes

5) Support for informal caregivers, tools for targeted information, sharing and preparing for altered roles, e.g., demonstration of tools and service – Almas Hus[330], AAL projects like CarerSupport[331], SUCCESS[332]

Stakeholders

[327] https://www.nrk.no/vestland/gamle-minne-gir_thor_betre-humor_-rolegare-netter_og-mindre-behov-for-medisinar-1.14781403 (Accessed: 15 October, 2021)
[328] https://sense-garden.eu/ (Accessed: 15 October, 2021)
[329] https://www.noisolation.com/global/komp/ (Accessed: 15 October, 2021)
[330] https://www.oslo.kommune.no/etater-foretak-og-ombud/helseetaten/senter-for-fagutvikling-og-forskning/almas-hus/#gref (Accessed: 15 October, 2021)
[331] http://www.aal-europe.eu/projects/carersupport/ (Accessed: 15 October, 2021)
[332] http://www.aal-europe.eu/projects/success/ (Accessed: 15 October, 2021)

Across the country, the full range of stakeholders are involved. This is ranging from the Citizens themselves, Health care professionals and Health care Providers, especially in the Municipalities, to regional and national authorities and regulators, and industry represented by start-up, SMEs and other organisations that are seeking to develop solution and innovations. National and regional government bodies, e.g., Research Council of Norway, Innovation Norway are financially supporting health technology industry and organisations for Research and Innovation in efforts to create better environments for the population.

Ecosystems involved

Across the country, several types of ecosystems are involved. There are several regional / county-based "Centre for Development of Institutional and Home Care Services"[333] with priority areas, dedicated to service development and quality improvements, to follow up on the "A full life - all your life" initiative and engage in the effort for age-friendly communities, as mentioned above. There are also significant technology development and transfer clusters, e.g., Norway health tech[334], Norwegian Smart Care Cluster[335], HelseInn[336] dedicated to share and disseminate funding- and collaboration opportunities. Another important type of ecosystems starts from universities and educational institutions" Science centers for health and technology ("Viten senter") that collaborate with regional partners to create awareness, novel projects and educational opportunities.

Funding opportunities

At national and regional level there are programs for R&D projects, and special programs to stimulate implementation. There are municipal programs (Age-friendly Communities), focused national program for AAL and welfare technology adoption (Nasjonalt velferdsteknologiprogram). There is also broad participation in EU-programs, including AAL, Horizon2020, Horizon Europe and Joint Programs incl. COST. For the individual citizen there are needs-based offerings from the municipality, like GPS, sensors for a variety of environmental and personal safety surveillance, in the interest of supporting and enabling safe independent living. Citizens can procure tools themselves.

Sustainability strategies

Sustainability of solutions and opportunities to ensure that promising project results are realized as well-diffused products and services remains a challenge with many unresolved issues. Sustainability strategies that have been most efficient so far are supported and funded by national and regional programs. This is the case for physical environments, sensor-based passive monitoring and in creating use of video-based consultations. To stimulate future uptake, tools and started programs to improve digital (health) literacy and initiatives to increase knowledge and awareness about universal design and accessibility, contributes to cross fertilization between developers of assistive technology and mainstream technology in the interest of age-friendly communities and empowered citizens in all ages.

Going forward, it is important to address, acknowledge and overcome potential limitations and barriers, that despite progress and development, have to be included by future projects:

[333] https://www.utviklingssenter.no/topmeny/english (Accessed: 15 October, 2021)
[334] https://www.norwayhealthtech.com/ (Accessed: 15 October, 2021)
[335] https://www.smartcarecluster.no/english/about-us (Accessed: 15 October, 2021)
[336] https://helseinn.net/english/ (Accessed: 15 October, 2021)

- as reported in a recent systematic literature review, considerable number of wearable and sensing technology for digital phenotyping in people with dementia (PwD) are available, but most devices are not yet Implemented and tested in this group of people or patients with chronic complex conditions (CCC)[337].
- The PAN.DEM study, nested in the stepped-wedge randomized controlled multicomponent intervention LIVE@Home.Path trial (financed by RCN) for home-dwelling PwD shows, found that more than 70% of PwD in the study have access to technology at home[338],[339]. However, this is mainly traditional equipment such as stove guard and safety button. Solutions such as GPS, automatic light, fall detectors are not yet available for all PwD living at home or in nursing home, as municipalities can be hesitant and home care services lack motivation. The interest in technology at home by informal caregivers has increased with only 17% during the COVID-19 pandemic, signalizing hesitation and reluctance in older people generation. This highlights the needs for early, individual education for the patients and their Informal and formal caregivers. Digital health literacy could be an priority, also for SHAFE.
- There is a potential to collect data from various instruments; but interoperability standards and required API functionality is often not established and tested. There are needs for platforms to collect data/data link for artificial intelligence. The European guidelines for GDPR and future MDR must be taken into account, especially with the growing group of people with CCC and dementia.

The collaboration between municipalities, developers and research environments have to be strengthened, because there are no standardized, innovative and validated "packages" at hand for wider deployment, and their effect on cost-benefit and relative burden must be investigated.

27. Poland

Contributors: Andrzej KLIMCZUK, Agnieszka CIEŚLA

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

The Polish government creates framework for implementing SHAFE measures, although SHAFE as a concept does not exist in Poland yet. Several different policies are being implemented to face the country with the challenges of demographic change and digitalisation:

- Polityka społeczna wobec osób starszych 2030. Bezpieczeństwo – Uczestnictwo – Solidarność (Social policy towards older people 2030. Security - Participation - Solidarity)[340]:

[337] Husebo BS, Heintz HL, Berge LI, Owoyemi P, Rahman AT, Vahia IV. Sensing Technology to Monitor Behavioral and Psychological Symptoms and to Assess Treatment Response in People With Dementia. A Systematic Review. Front Pharmacol. 2019;10:1699 (Accessed: 15 October, 2021)
[338] Husebo BS, Allore H, Achterberg W, Angeles RC, Ballard C, Bruvik FK, et al. LIVE@Home.Path-innovating the clinical pathway for home-dwelling people with dementia and their caregivers: study protocol for a mixed-method, stepped-wedge, randomized controlled trial. Trials. 2020;21(1):510. (Accessed: 15 October, 2021)
[339] Gedde MH, Husebo BS, Erdal A, Puaschitz NG, Vislapuu M, Angeles RC, et al. Access to and interest in assistive technology for home-dwelling people with dementia during the COVID-19 pandemic (PAN.DEM). Int Rev Psychiatry. 2021:1-8. (Accessed: 15 October, 2021)
[340] http://prawo.sejm.gov.pl/isap.nsf/download.xsp/WMP20180001169/O/M20181169.pdf (Accessed: 15 October, 2021)

- Polityka dla rozwoju sztucznej inteligencji w Polsce od roku 2020 (Policy for the development of artificial intelligence in Poland from 2020)[341]:

In Poland municipalities are responsible for housing, social care, health care provision, education, and citizens participation. They are important actor in implementing SHAFE measures and might very interested in learning good practices. Additionally, in the last years the municipal tasks were subsequently being extended but sufficient funding was not added. For these reasons cost-saving solutions are being searched for and many municipalities are opened to innovative solutions in the fields they are responsible for.

Relevant stakeholders and policy makers

	Local	**Regional**	**National**
Health	Local government units, local NGOs	Voivod's offices	Ministry of Health (Ministerstwo Zdrowia), National Health Fund (Narodowy Fundusz Zdrowia)
Social	Local government units, social welfare centres, local NGOs	Marshal's offices, Regional Centers of Social Policy	Ministry of Family and Social Policy (Ministerstwo Rodziny i Polityki Społecznej)
Built environment	Local government units, local developers and construction companies Social housing associations	Marshal's offices Voivod's offices	Ministry of Economic Development, Labour and Technology (Ministerstwo Rozwoju, Pracy i Technologii)
Digitalisation	Local government units, IT companies and start-ups	Marshal's offices	Ministry of Economic Development, Labour and Technology (Ministerstwo Rozwoju, Pracy i Technologii)
Development	Local government units, local NGOs	Marshal's offices	Ministry of Economic Development, Labour and Technology (Ministerstwo Rozwoju, Pracy i Technologii)
Education	Local government units, local NGOs, schools	Marshal's offices Voivod's offices	Ministerstwo Edukacji i Nauki (Ministry of Education and Science)
Research	universities, local technology transfer centres	Industrial and economic zones, Universities	Ministerstwo Edukacji i Nauki (Ministry of Education and Science)
Other: please specify			
Other: please specify			

(National, regional, local) ecosystem on SHAFE of the partner

1. Krajowy Instytut Gospodarki Senioralnej (NGO: National Institute of Silver Economy) [342] partners[343]:
2. Polskie Towarzystwo Gerontologiczne (NGO: Polish Society of Gerontology)[344] partners: mainly scientific organisations, universities, medical companies

[341] https://monitorpolski.gov.pl/MP/2021/23 (Accessed: 15 October, 2021)
[342] https://kigs.org.pl (Accessed: 15 October, 2021)
[343] https://kigs.org.pl/partnerzy/ (Accessed: 15 October, 2021)
[344] https://gerontologia.org.pl/en/ (Accessed: 15 October, 2021)

3. Instytu Polityki Senioralnej (NGO Institut of Ageing Policy)[345]

Senior Hub - Institute of Ageing Policy is the first research and advisory unit in Poland dealing with topics in the area of ageing policy conducted at the national, regional and local level. The institute is an innovative think-tank cooperating with dozens of researchers from various fields. It is the only research institution in Poland not associated with a public research unit, capable of co-creating research partnerships in most areas. We work constructively with the innovative sector, business sector, central public administration units, local government units, non-governmental organisations and mass media. We also run the only in Europe Central expert journal of popular science devoted to the aging of the society in the systemic dimension "Polityka Senioralna".

(National, regional, local) funding opportunities on SHAFE

At the national level, the Polish government introduced following programmes:

- *Program wieloletni "Senior+" na lata 2021-2025 (Multiannual program "Senior +" for the years 2021-2025)*[346]
- *Program wieloletni na rzecz Osób Starszych „Aktywni+" na lata 2021–2025 (Multiannual program for older people "Active +" for the years 2021–2025)*[347] . This program supports bottom-up activities aiming at keeping older adults healthy, independent and active. Funds (up to 50 000 Euro) are given to NGOs, Third Age Universities, companies which apply in the competition.
- *Program Dostępność Plus 2018-2025 (Program Accessibility Plus 2018-2025)*[348]. This program supports retrofitting measures in public buildings and housing. However, also other areas are supported by the program such as: transport, education, healthcare, digitalisation, services, competitiveness, coordination.
- *Program Polska Cyfrowa (Program Digital Poland)*[349]. The program finances projects which can be ascribed to three groups. The first are those aimed at developing broadband infrastructure enabling access to high-speed Internet. The direct recipients of these projects are residents of areas where, to date, access to the network has been limited or non-existent. The second group are projects that increase the pool of public services available by electronic means. The whole society benefits from these projects. The third group are projects encouraging people to use the Internet and increasing their digital competences. Mainly NGOs in partnership with local governments apply for funding for this type of activities.
- *Start in Poland*. Start in Poland is the largest start-up program in Central and Eastern Europe. It supports young, innovative companies locating their business in Poland at every stage of their development, starting from the incubation and acceleration phase, through development and international expansion. This program brings together the most important start-up support instruments in Poland.

Many municipalities see the growing need to support start-up companies by providing them workspace or trainings. In many of them dedicated services to help develop innovative business ideas

[345] www.seniorhub.pl (Accessed: 15 October, 2021)
[346] http://senior.gov.pl/program_senior_plus (Accessed: 15 October, 2021)
[347] http://senior.gov.pl/program_asos (Accessed: 15 October, 2021)
[348] https://www.funduszeeuropejskie.gov.pl/strony/o-funduszach/fundusze-europejskie-bez-barier/dostepnosc-plus/ (Accessed: 15 October, 2021)
[349] https://www.polskacyfrowa.gov.pl/ (Accessed: 15 October, 2021)

were created (e.g., Centrum Obsługi Przedsiębiorczości in Skarżysko Kamienna or Centrum Przedsiębiorczości Warszawa Twój Start up).

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE

Learning and training offers on SHAFE:

- Hands-on SHAFE[350]
- Building inclusive environments[351]

28. Portugal

Contributors: Silvina Santana and Pedro Roseiro; Diana Guardado, Rosa Silva and João Apóstolo[352]

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

NATIONAL PUBLIC POLICIES

The Portuguese government mainly defines the boundaries for policy implementation at national, regional and local level and a number of high-level initiatives have been designed, approved and launched in the last few years.

The Sustainable Cities Strategy 2020 (Estratégia Cidades Sustentáveis) was published by the Ministry of Environment, Territorial Planning and Energy (Ministério do Ambiente, Ordenamento do Território e Energia) in 2015[353] (Cidades Sustentáveis 2020 (dgterritorio.gov.pt). Also in 2015, The National Housing Strategy (Estratégia Nacional para a Habitação) was approved by resolution of the Council of Ministers.

The National Strategy for Active and Healthy Ageing (Estratégia Nacional para o Envelhecimento Ativo e Saudável) 2017-2025 was published in 2016 (Despacho n.º12427/2016) after an inter-ministerial proposal. It addresses the promotion of healthy lifestyles, health prevention, management of comorbidity processes, lifelong education and training, creating participative and integrative environments, safety in the built environment, fighting exclusion, isolation and violence towards older people. This Strategy, however, was never implemented. The previous related policy initiative was the National Program for the Health of Older People (Programa Nacional para a Saúde das Pessoas Idosas), that had been launched by the General Directorate of Health (Direcção Geral da Saúde) in 2004.

The National Strategy for Active Mobility 2020 – 2030 (Estratégia Nacional para a Mobilidade Ativa 2020 -2030) was approved by the Council of Ministers in 2019[2].

The Action Plan for the Digital Transition (Plano de Ação para a Transição Digital) was approved by the Resolution of the Council of Ministers in 2020[3]. The pillars of the plan are the digital training and

[350] www.hands-on-shafe.eu (Accessed: 15 October, 2021)
[351] www.big-game.eu (Accessed: 15 October, 2021)
[352] Many of the current policy and funding strategies mentioned in this document were previous to the release of the new Portugal 2030 programme and will thus be updated accordingly in following versions of the deliverable
[353] Cidades Sustentáveis 2020 (dgterritorio.gov.pt) (Accessed: 15 October, 2021).
[2] https://www.portugal.gov.pt/pt/gc21/governo/comunicado-de-conselho-de-ministros?i=286 (Accessed: 15 October, 2021).
[3] https://dre.pt/application/conteudo/132133788 (Accessed: 15 October, 2021).

inclusion of citizens, the digital transformation of companies and the digitalization of the State, addressed in twelve measures: Digitalization Program for Schools Intensive and specialized training program in the digital area of 3,000 professionals – UpSkill; Digital Inclusion Program for 1 million adults; Social tariff for access to Internet services; e-Residency Program; Promotion of Technological Free Zones through the creation of special regulatory regimes; Digital Training Program for SMEs in the interior of Portugal; Digital Innovation Hubs for Entrepreneurship; Digitization of the 25 public services most used by citizens and companies; Increase in the offer and translation of digital services of interest to internationalization in ePortugal; Cloud Strategy for Public Administration; Simplification of the contracting of information technology and communication services by the Public Administration.

The responsibility for health care is with the Ministry of Health, which coordinates and finances public health care provision, developing health policy and overseeing and evaluating its implementation and managing and regulating the National Health System (NHS). It is also responsible for the regulation, auditing and inspection of private health services providers. Technical expertise and support are provided by the High Commissariat for Health, the General Inspectorate of Health-related Activities, the General Directorate of Health, the Institute for Health Quality and the Central Administration of the Health System (Santana et al., 2014).

Municipalities and local and regional organisations have limited intervention to define policy and funding within the health care model. Regional health administrations are responsible for the regional implementation of national health policy objectives and coordinating all levels of health care, working in accordance with principles and directives issued in regional plans and by the Ministry of Health. Their main responsibilities are the development of strategic guidelines, coordination of all aspects of health care provision, supervision of management of primary health care and hospitals, establishment of agreements and protocols with private bodies, and liaison with government bodies, charity institutions (Misericórdias), other private non-profit-making bodies and municipal councils. Regional Health Administrations have been appointed responsible for the development of the National Network of Long-Term Integrated Care (Santana et al., 2014).

On the other hand, one of the main differences between Portugal and other Southern and Southwest European countries is the high degree of organisation and power of the non-profit sector through strong and powerful peak organisations that participate actively in policymaking defining the formal provision of social care, personal care and domestic aid. Local government involvement has been marginal and confined to the participation in a few specific projects (Santana et al., 2014).

The responsibility for residential care is under the Ministry of Employment, Solidarity and Social Security, as well as personal and home care). For several years, there were official documents defining, discussing and regulating SAD (Serviço de Apoio Domiciliário – Home Care Service of social nature) and defining the roles and criteria for users/users' family co-payments of the services provided.

The National Network of Long-Term Integrated Care (Rede Nacional de Cuidados Continuados Integrados RNCCI)) is the one Portuguese example of an integrated care initiative, with shared responsibility of the Ministry of Health and the Ministry of Employment, Solidarity and Social Security. Besides residential long-term care, this initiative, in a recent update, brings forward home health care as part of a set of health and/or social sequential interventions and defines "equipas domiciliárias" (home care teams). This new legislation is however still not fully implemented in this last concept and

home care, of a social nature, is mainly ensured by third sector organisations funded and supervised by the Ministry of Employment, Solidarity and Social Security.

Besides that, several initiatives and programs are worthy of mention, such as those related to social housing, independent living, dementia prevention, accessibility, fighting isolation, urbanism and rehabilitation, sports and physical activity promotion, accessible tourism, mobility in cities. Relevant to highlight are the following:

- **Estratégia Nacional para a Inclusão e Literacia Digitais** [National Strategy for Digital Inclusion and Literacy] With this document for a National Strategy for Digital Inclusion and Literacy (ENILD) (2015 - 2020), Fundação para a Ciência e Tecnologia (FCT), as responsible for public policies in the area of the Information Society in Portugal, invests in digital inclusion and literacy in a conscious and demanding effort. ENILD highlights an exhaustive diagnosis of a Portugal that, on the one hand, is advanced in terms of the infrastructure to support a digital society and the availability of digital public services, but, on the other hand, presents low levels of use of these same services and infrastructure[354].
- **Gerações mais saúdaveis – Politicas públicas de promoção da saúde das crianças e jovens** [Healthier generations - Public policies to promote the health of children and young people] - "The report HEALTHY GENERATIONS focuses on public policies for the protection and promotion of the health of children and young people from 0 to 18 years old. It aims to identify the policies that already exist in this area and verify which health determinants still need development and that may constitute risks accumulated over the life of this age group. "[355]

REGIONAL PUBLIC POLICIES

In terms of regional policies, it is worth to mention **RIS 3 – Estratégia de Investigação e Inovação para uma Especialização Inteligente** [Research and Innovation Strategies for Smart Specialization (RIS3)]. The definition of Research and Innovation Strategies for Smart Specialization (RIS3) is a collective and continuous construction process that was made mandatory by the European Commission, within the scope of the Cohesion Policy for 2014-2020, aiming at the identification of the priority areas for allocating community funds to Research and Innovation, in each region.

Relevant links per Region:

- North Region[356]
- Centro Region[357]
- Lisbon Region[358]:
- Alentejo Region[359]
- Algarve Region[360]

[354] https://www.fct.pt/dsi/inclusaoacessibilidadeliteraciadigitais/enild.phtml.pt

[355] http://www.cns.min-saude.pt/wp-content/uploads/2018/12/GERACOES-MAIS-SAUDAVEIS.pdf (Accessed: 15 October, 2021)

[356] https://norte2020.pt/sites/default/files/public/uploads/documentos/norte2020_ris3.pdf (Accessed: 15 October, 2021)

[357] http://ris3.ccdrc.pt/ (Accessed: 15 October, 2021)

[358] https://lisboa.portugal2020.pt/np4/19.html (Accessed: 15 October, 2021)

[359] http://www.alentejo.portugal2020.pt/index.php/documentacao/category/10-estrategia-regional-de-especializacao-inteligente (Accessed: 15 October, 2021)

[360] https://algarve2020.pt/info/ris3 (Accessed: 15 October, 2021)

LEGISLATION

- Lei de Bases da Saúde, Law nº 48/90.
- The National Housing Strategy (Estratégia Nacional para a Habitação, approved by resolution n.º 48/2015.
- Nacional Network of Long-Term Integrated Care, created by Law n° 101/2006
- Regulamento Geral das Edificações Urbanas
- The Digital Transition Action Plan (Plano de Ação para a Transição Digital), approved by resolution no. 30/2020 of the Council of Ministers.

FUNDING

Many national funding programmes for municipalities, healthcare organisations, security forces, housing organisations, informal caregivers and general citizens have been designed and implemented over the years, regarding fighting isolation and safety promotion, prevention in health, homecare implementation, eHealth implementation, rehabilitation and urban revitalization, ICT literacy, including those linked with Cohesion and Structural Funds implementation (like QREN and Portugal 2020).

In each region, older and dependent persons may receive benefits in kind (personal care and home help) and cash from Social Security (Segurança Social), at the Council (concelho) level. However, service implementation is mostly made via NGOs and Charities (Misericórdias), most of which have the status of IPSS - private institutions of social solidarity. As family support has been decreasing, the State considers home care provided by non-profit social solidarity institutions a strategic part of the care system.

Within the legal framework of Decree-Law 329-C/2000 of 22 December, the RECRIA Programme aims to finance the execution of conservation and improvement works that allow for the recovery of dwellings and degraded properties, through the granting of incentives by the State and the municipalities.

The Support Regime for Housing Recovery in Ancient Urban Areas (REHABITA), established by Decree-Law no. 105/96, of 31 July, consists of an extension of the RECRIA Programme and aims to financially support municipal councils in the recovery of old urban areas, being granted through the signing of collaboration agreements between the IHRU, the Municipal Councils and other authorized credit institutions.

IFRRU 2020 (Financial Instrument for Rehabilitation and Urban Revitalization) mobilizes the appropriations approved by the Regional Operational Programmes (ROPs) of the Mainland and the Autonomous Regions, and the thematic programme Sustainability and Resource Efficiency Operational Programme (PO SEUR) of PORTUGAL 2020, with the objectives of revitalizing the cities, supporting the physical renewal of spaces dedicated to disadvantaged communities and supporting energy efficiency in housing.

Relevant stakeholders and policy makers

	Local	Regional	National
Health	. Health and social care providers	. Hospitals . Public primary care	. Ministry of Health (Ministério da Saúde)

	. Public primary care, health centers, unidades de saúde familiar, extensões de saúde . Hospitals . IPSS (Instituições Particulares de Solidariedade Social) and Misericórdias . Home care providers, public and private, formal and informal . Public health administration . RNCCI (Rede Nacional de Cuidados Integrados Continuados)	. IPSS (Instituições Particulares de Solidariedade Social) and Misericórdias . RNCCI (regional management of the network)	. General Directorate of Health (Direcção Geral da Saúde) . National Council for Volunteering Promotion . Portuguese Volunteer Confederation (CPV) . Insurance companies . Rede Portuguesa de Municípios Saudáveis . Mutualidades (e.g. Montepio Geral) . Serviços Partilhados do Ministério da Saúde (SPMS) . Autoridade Nacional do Medicamento e Produtos de Saúde, I.P. (INFARMED) . Cruz Vermelha Portuguesa . RNCCI (local providers)
Social	. Municipality and its organisations . IPSS (Instituto Particular de Solidariedade Social) and Misericórdias . Home care providers, public and private, formal and informal . RNCCI (Rede Nacional de Cuidados Integrados Continuados)	. RNCCI (regional management of the network)	. Ministro do Trabalho, Solidariedade e Segurança Social . National Council for Volunteering Promotion . Portuguese Volunteer Confederation (CPV) . União das IPSS . União das Misericórdias - União das Mutualidades Portuguesas - Confederação Nacional das Institucionais Sociais - Cáritas Portuguesa - Fundação Altice - Fundação Vodafone - RNCCI (Rede Nacional de Cuidados Integrados Continuados)
Built environment and mobility	. Municipalities . Social housing associations and cooperatives . Private housing enterprises and developers . Providers of mobility solutions . City planning/urban planning	. Regional Authorities/Coordination and Regional Development Commissions (Comissões de Coordenação e Desenvolvimento Regional - CCDR) . Intermunicipal Communities (Comunidades Intermunicipais – CIM) . Metropolitan Areas (Áreas Metropolitanas - AM)	. Ministro do Planeamento . Ministro das Infraestruturas e da Habitação . Ministério do Ambiente e Ordenamento do Território . Secretaria de Estado para a Cidadania e a Igualdade

			. Instituto da Habitação e da Reabilitação Urbana
Digitalisation	. Municipalities	. Regional Authorities/Coordination and Regional Development Commissions (Comissões de Coordenação e Desenvolvimento Regional - CCDR) . Intermunicipal Communities (Comunidades Intermunicipais – CIM) . Metropolitan Areas (Áreas Metropolitanas - AM)	. Ministério da Economia e Transição Digital . Secretaria de Estado da Transição Digital . Estrutura de Missão Portugal Digital . Ministério da Modernização do Estado e da Administração Pública . Secretário de Estado da Inovação e da Modernização Administrativa . FCCN (Unidade de Computação Científica Nacional) . TICE.PT . Health Cluster Portugal . Telecom and cable providers
Development	. Parish Councils . Municipalities . Universities . Polytechnic institutes . Local associations of citizens, companies and volunteers	. Regional Authorities/ Coordination and Regional Development Commissions (Comissões de Coordenação e Desenvolvimento Regional - CCDR) .Intermunicipal Communities (Comunidades Intermunicipais– CIM) Metropolitan Areas (Áreas Metropolitanas - AM) . Universities	. Rede de Cidades e Vilas de Excelência . Ministério do Ambiente e Ordenamento do Território . Ministério da Coesão Territorial . Ministério do Planeamento
Education	. Schools . Universities . Polytechnique institutes	. Schools . Universities . Polytechnique institutes	. Ministry of Education (Ministério da Educação) . Ministry of Science, Technology and Higher Education (Ministério da Ciência, Tecnologia e Ensino Superior) . Universities . Polytechnique institutes . (Ministério do Trabalho, Solidariedade e Segurança Social) . Instituto do Emprego e Formação Profissional (IEFP)
Research	Universities (fundamental and applied sciences)	Universities (fundamental and applied sciences)	. Ministry of Science, Technology and Higher Education (Ministério da Ciência, Tecnologia e Ensino Superior)

			. FCT (Fundação para a Ciência e a Tecnologia) . FCCN (Unidade de Computação Científica Nacional) . Fundação Calouste Gulbenkian . Fundação Champalimaud . Universities (fundamental and applied sciences)
Citizens	. Citizens at local level	. Regional associations of citizens . Volunteers' associations at regional level	. National associations of citizens . Volunteers' associations

(National, regional, local) ecosystem on SHAFE

NATIONAL AUTHORITIES

Fundação Para a Ciência e Tecnologia (FCT) - FCT supports the scientific community in Portugal through different financing instruments, aimed at scientists, research teams and R&D centres. These instruments allow FCT to support advanced training, research and development, the creation of research infrastructures and access to them, to promote international networks and collaborations, conferences, science communication and to interact with companies. FCT has a comprehensive incentive program that can be consulted on its website[361].

Agência Nacional de Inovação (ANI) - ANI develops actions aimed at supporting technological and business innovation in Portugal, contributing to the consolidation of the National Innovation System (SNI) and to strengthening the competitiveness of the overall national economy. ANI has a comprehensive and dynamic incentive program that can be consulted on its website[362].

OTHER NATIONAL INITIATIVES

Rede Portuguesa Ambientes Saudáveis, inteligentes e Amigáveis (SHAFE) – "The Portuguese Network for Healthy, Smart and Friendly Environments brings together a wide range of Portuguese organisations committed to promoting a joint agenda for the implementation of Inclusive Environments for All Ages, with a particular focus on the areas of Health, Social Support, Information Technologies, Communication and Electronics and Infrastructure. The Network favours participation in a quadruple helix, actively promoting collaboration between research/academia, public authorities, companies and civil society/citizens, with the aim of addressing and finding common solutions to national challenges in this theme."[363]

Rede Portuguesa de Municípios Saudáveis (Portuguese Network of Healthy Municipalities) - The Portuguese Network was created based on an association of municipalities that aim to support the dissemination, implementation and development of the Healthy Cities Project in the municipalities that intend to make health promotion a priority on the agenda of policy makers. It currently integrates

[361] https://www.fct.pt/apoios/ (Accessed: 15 October, 2021)
[362] https://www.ani.pt/ (Accessed: 15 October, 2021)
[363] https://caritascoimbra.pt/project/rede-portuguesa-ambientes-saudaveis/ (Accessed: 15 October, 2021)

61 healthy municipalities and aims to facilitate the exchange of knowledge and experiences with other cities, the strategic planning of integrated actions, the definition and construction of tools to support assessment and monitoring and institutional, national and international cooperation, on improving health and promoting quality of life[364]. The Portuguese Network integrated the WHO European Healthy Cities Network in 2001[365].

RUTIS (Associação Rede de Universidades da Terceira Idade) – RUTIS is a Private Institution of Social Solidarity (IPSS) and Public Utility that supports the community and senior citizens, with a national register of Senior Academies and Universities, in partnership with the Ministry of Solidarity, Labour and Social Security and CASES (Cooperativa António Sérgio for the Social Economy). RUTIS supports the creation of active aging projects, helps the emergence of new senior universities, promotes activities for seniors and holds national and international meetings[366].

REGIONAL AUTHORITIES

CIM – Comunidade intermunicipal (Inter-municipal community), which have in their work agenda areas of activity such as the environment, sustainability, civil protection, culture, education, entrepreneurship and modernity (e.g. CIM Coimbra[367]).

Comissão de Coordenação e Desenvolvimento Regional (CCDRC) - [Regional Coordination and Development Commission] – "The Regional Coordination and Development Commission (CCDR) are decentralisedbodies of the Ministry of Territorial Cohesion, endowed with financial and administrative autonomy. Their mission includes the execution of environmental, spatial and city planning and regional development policies at the level of NUT II; the promotion of coordinated performance of the decentralized services at the regional level; and the provision of technical support to local authorities and their associations. (e.g. CCDR Centro Region[368]).

OTHER REGIONAL STAKEHOLDERS

EIP on AHA National Reference Sites for active and Healthy

- Ageing@Coimbra
- Porto4Ageing Reference Site, University of Porto
- Region of Algarve Reference Site[369]
- Ageing Thinking Amadora - A.T.
- Ageing@Minho -University of Minho
- ALICE – Ageing Longer Integrated Care Environment
- Lisbon Ageing Well
- Lisbon_AHA

LIST OF OTHER STAKEHOLDERS

[364] http://redemunicipiossaudaveis.com/index.php/pt (Accessed: 15 October, 2021)
[365] https://www.euro.who.int/en/health-topics/environment-and-health/urban-health/who-european-healthy-cities-network (Accessed: 15 October, 2021)
[366] http://www.rutis.pt/paginas/3/atividades/ (Accessed: 15 October, 2021)
[367] https://www.cim-regiaodecoimbra.pt/ (Accessed: 15 October, 2021)
[368] https://eportugal.gov.pt/entidades/comissao-de-coordenacao-e-desenvolvimento-regional-do-centro (Accessed: 15 October, 2021)
[369] https://ec.europa.eu/digital-single-market/en/reference-sites-european-innovation-partnership-active-and-healthy-ageing (Accessed: 15 October, 2021)

Rede Portuguesa de Municípios Saudáveis (Associação Nacional de Municípios Portugueses/RENER Living Lab, Associação Nacional de Municípios Portugueses – ANMP, Associação Portuguesa de Promoção do Envelhecimento Ativo e Saudável, Associação para o Desenvolvimento das Comunidades Locais, Associação de Unidades de Cuidados na Comunidade, Conselho Nacional de Ética para as Ciências da Vida, ReaViva - Rede Portuguesa Ambientes Saudáveis, Inteligentes e Amigáveis, TICE.PT, Health Cluster Portugal, Cluster Smart Cities Portugal, Cluster Habitat Sustentável, Health Data Fórum, Rede de Cidades e Vilas de Excelência, Associação Amigos da Grande Idade, Associação Rede de Universidades da Terceira Idade (RUTIS), ANAI - Associação Nacional de Apoio ao Idoso, Digital Health Portugal, Healthy Ageing@LAB, CoLABOR, 4LifeLab, Built CoLab, , CEIIA/S2UL, ProChild CoLab, Value for Health CoLab, PORTO4AGEING, GRACE - Grupo de Reflexão e Apoio à Cidadania Empresarial, ZERO - Associação Sistema Terrestre Sustentável, Confederação Portuguesa das Coletividades de Cultura, Recreio e Desporto, Cruz Vermelha Portuguesa, Cáritas Diocesana de Coimbra, Associação de Defesa do Consumidor – DECO, Sociedade Portuguesa de Geriatria e Gerontologia, Associação Portuguesa de Nutrição, Associação Portuguesa de Psicogerontologia, ANGES – Associação Nacional de Gerontologia Social, Associação Portuguesa dos Terapeutas Ocupacionais, Associação Nacional de Unidades de Saúde Familiar, Associação Portuguesa de Fisioterapeutas, Sociedade Portuguesa de Terapia Familiar, Associação dos Profissionais de Serviço Social, Ordem dos Psicólogos Portugueses, Ordem dos Enfermeiros, Sociedade Portuguesa de Enfermagem de Saúde Mental, Federação Portuguesa das Associações das Famílias de Pessoas com Experiência de Doença Mental, Ordem dos Nutricionistas, Ordem dos Farmacêuticos, Associação Portuguesa de Enfermeiros de Reabilitação, Instituto Pedro Nunes, Associação Fraunhofer Portugal.

(National, regional, local) funding opportunities on SHAFE

The NHS is mainly funded by general taxation. Health subsystems covers certain professions that are funded on a voluntary basis by employees' contributions and/or state budget. A great part of total health expenditure funding comes from government sources, via direct and indirect taxation. The remaining part corresponds to private expenditure, including private voluntary health insurance and out-of-pocket payments.

The public component of the Social Security System covers solidarity, family and social assistance. The latter provides social support to the most vulnerable groups, as disabled citizens and older adults, and is mostly funded by taxation.

The Portugal Social Innovation, a public initiative aimed at promoting social innovation and boosting the social investment market in Portugal, mobilizes around EUR 150 million from the European Social Fund under the Portugal 2020 Partnership Agreement. Portugal is the only Member State that has earmarked part of their EU funds until 2020 to experiment with new financing instruments aimed at fostering innovation and social investment.

Financing options for ICT research and development and smart cities have been based on incentive systems or structural funds with a European or national basis and private financing. National opportunities are available from Portugal 2020, the partnership agreement adopted between Portugal and the European Commission, and the Environmental Fund, even if many times with a focus on decarbonization or adaptation to climate change, and the Urban Innovative Actions (UIA), which have supported very distinct projects.

The Foundation for Science and Technology (Fundação para a Ciência e Tecnologia - FCT) is a major funder of science and research in some of the areas encompassed by the SHAFE concept. Portuguese universities, research centres and laboratories, companies and national and regional government are also using Horizon 2020, which has support lines specific to many SHAFE related areas including smart cities, such as the "Lighthouse Projects" program, AAL Programme, Interreg Atlantic Area Programme, Interreg Europe, Interreg SUDOE, Erasmus+, Espon, URBACT.

Private initiatives from a few related institutions are available, such as Fidelidade Social Award; FMAM Award; Fundação Montepio – FACES; Mission Continente (Sonae); Prémio Seniores, BPI e Fundação "la Caixa".

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE[370]

BM Cooperation platforms between agents participating in the development of SHAFE related areas

- BM Learning and training offers on SHAFE. Hands-on SHAFE[371]
- BM Dissemination and promotion of urban projects and solutions toward sustainable, citizen-centered cities
- Smart Cities[372] Smart Cities is an online magazine. Areas: Architecture and Urbanism, Civic participation and Communities, Education, Energy, Entrepreneurship, Environment, Health, ICT, Innovation, Mobility, Social care, Social inclusion, Social innovation, Tourism, Urban rehabilitation and regeneration, Waste, Water.

Services provided through organisations

- Tele consultation - doctor, nurses, physiotherapy;
- Monitoring medical consultations with health services;
- Transport adapted to the needs of citizens;
- Intelligent technologies such as examples of intelligent public lamps - which feature low energy consumption, reducing costs and, at the same time, monitoring the environment) (for example, private company provide this service to the local municipally);
- Implementation of signage adjusted to the needs of citizens and institutions, such as health centres; projects focused on the needs of the most vulnerable, such as Braille signage, for the blind.

Services provided mainly directly to users

- 3rd sector organisations/companies: domestic basic needs;
- Home delivery (pharmacy, grocery, meals);
- Tourism adapted to the needs of citizens (e.g. thermal tourism)
- Senior universities (which foster lifelong learning;
- Elevator platforms that foster independent living at home (e.g. Stannah[373]).

[370] The reporting for this specific section is based mostly on the authors' interpretation of public information available on websites, reports (…) and that this aspect will be further structured and elaborated during the Action
[371] www.hands-on-shafe.eu (Accessed: 15 October, 2021)
[372] https://smart-cities.pt/ (Accessed: 15 October, 2021)
[373] https://www.stannah.pt/ (Accessed: 15 October, 2021)

29. Romania

Contributor: Luiza Spiru, Flaviana Rotaru

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

- **National Health Strategy 2014-2020** (Government Decision no 1028/2014); The Ministry of Health currently prepares the National Health Strategy 2021-2027, together with the general framework of the first Action Plan in the Field of Health Prevention and Promotion;
- **National Strategy for Intelligent Research, Innovation and Specialization** (SNSI);
- **National Research, Development and Innovation Strategy** (SNCDI)
- **Romania's Sustainable Development Strategy 2030**
- **National Strategy for the Protection of older people and the Promotion of Active Ageing** for the period 2015-2020 and the Operational Plan for the period 2016-2020 (Government Decision no 566/2015) – main objectives: extending and improving the quality of life; Promoting the active and dignified social participation; Achieving greater independence and safety for people in need of long-term care; Cross-cutting objectives for a longer life in good health
- **National Strategy on Social Inclusion and Poverty Reduction** 2015-2020 and the Strategic Plan for the period 2015-2020[374];
- Emergency Ordinance no. 196/2020, for amending and supplementing Law no. 95/2006 on health care reform - The normative act regulates the possibility of providing remote medical services, through telemedicine, by all health professionals
- The legal framework in the area of social services, preventing social exclusion was revised by adopting Law 292/2011 on social assistance (introducing reforms for the social assistance of people with disabilities, and for the social assistance of older people)
- PAL-PLAN 2020-2023 "Increasing the institutional capacity for the coordinated national development of palliative care and home care"[375]
- Regional SMART Specialization Strategies RIS 2021 2027 (8 regions) – See Annex 4. Governmental experts: Professor Luiza Spiru, MD, PhD, Ana Aslan International Foundation

Relevant stakeholders and policy makers

	Local	Regional	National

[374] The National Strategy and Action Plan on Social Inclusion 2021-2027 (SNIC) is under preparation and include several objectives related to SHAFE, such as: Development of social services intended mainly for single or dependent older adults to ensure active aging and equal opportunities (services aimed at encouraging the participation of the older adults in social life, preventing isolation and institutionalization; developing the network of home and community care services, including through mobile care units and subsidizing the costs of care and related services for the older adults who live alone; development of home care services (long-term care) for single and / or dependent elderly people; development of sheltered housing for older people; emergency call centers, but also for counseling; development of social telecare through the use of electronic devices, online communication, assistive devices such as bracelets and other assistive technologies, electronic applications; training of specialists working with older people; Adaptation, arrangement and minimum endowment of the homes of elderly people at risk of social exclusion, depending on their needs to prevent the risk of falling and losing functional autonomy, the purchase of assistive equipment; increase healthy life expectancy among the population by providing social services that promote active aging through measures to encourage a healthy lifestyle, while improving measures to access care for those in need, encouraging social participation, and measures to ensure financial security).

[375] https://anmcs.gov.ro/web/lansare-proiect-pal-plan-cresterea-capacitatii-institutionale-pentru-dezvoltarea-nationala-coordonata-a-ingrijirilor-paliative-si-ingrijirilor-la-domiciliu/ (Accessed: 15 October, 2021)

Health	County public health directorates Hospitals, Clinics, Healthcare Foundations, Academia (Universities of Medicine)	8 Regional Development Agencies (ADR)	Ministry of Health National Authority for Quality Management in Health Authority for Digitalization of Romania
Social	General Directories of Social Assistance	8 Regional Development Agencies (ADR)	Ministry of Labour and Social Protection National Council of Older Adults[376]
Built environment	Municipalities	8 Regional Development Agencies (ADR)	Ministry of Development, Public Works and Administration
Digitalisation	Municipalities	8 Regional Development Agencies (ADR)	Ministry of Research, Innovation and Digitalization Authority for Digitalization of Romania
Development	Municipalities	8 Regional Development Agencies (ADR)	Ministry of Development, Public Works and Administration Ministry of Economy, Entrepreneurship and Tourism National Council of Small and Medium Private Enterprises in Romania
Education	Municipalities	8 Regional Development Agencies (ADR)	Ministry of Education Ministry of Health
Research	Municipalities	8 Regional Development Agencies (ADR)	Ministry of Research, Innovation and Digitalization Ministry of Investments and European Projects Ministry of Health

(National, regional, local) ecosystem on SHAFE of the partner

Ana Aslan international Foundation (ANA) is the coordinator of the Romanian pilot of **H2020 Project SMART BEAR** „Smart Big Data Platform to Offer Evidence-based Personalised Support for Healthy and Independent Living at Home"[377] .

The duration of the project is 4 years (Sept 2019 - Aug 2023) and involves 27 partners from 10 participating countries: Italy (Project Coordinator - CNR Naples), Switzerland, France, Greece, Israel, the Netherlands, Portugal, Romania (WP11 LEADER – ANA), Spain and the UK.

Project validation will be done through **five large-scale pilots,** involving 5,100 older adults living at home in France, Greece, Italy, Romania and Spain. **Each of the 5 pilots will involve 1100 independent users at home.**

The Romanian pilot SMART BEAR is conceived as an ecosystem, with two strategic partners: The Family Physicians Association Bucharest-Ilfov (AMFB) and the Center for Seniors of the Municipality of Bucharest (CS-MB). See Annex 5 for more details.

In Romania, in general, SHAFE ecosystems are at their inception. Large cities have initiatives of public organisations that support active aging and social inclusion of the older adults, while for the small cities and rural areas the concept is still related to the traditional family culture. Some examples of public local initiatives that support active ageing would be:

[376] http://cnpv.ro/ (Accessed: 15 October, 2021)
[377] https://www.smart-bear.eu/ (Accessed: 15 October, 2021)

- Equipping parks with outdoor fitness equipment
- Third Age University (U3A) Galati - courses and other activities for seniors[378]
- General Directories of Social Assistance - initiatives that support active ageing - Day[379] Centers and clubs for seniors, volunteer activities, dances, cafe, events, etc
- Bucharest City Hall - Bucharest Center for Seniors[380] - - activities for older adults
- There are also entities that cooperates towards the objectives of SHAFE:

- **Ana Aslan Intl Foundation** and **The Excellence Clinic in Memory Disease and Longevity Medicine** (President Prof. Luiza Spiru, MD, PhD): The AAIF's mission is to integrate scientific progress into preventive and personalized medicine, by offering the tools that transform the medicine of brain aging into the medicine of longevity. AAIF is the network initiator and national leader of the COST Actions Net4Age-Friendly, CA19136 and GoodBrother, CA19121[381]:

- **Ana Aslan Intl Foundation's Seniors Community**[382],

Romania is also present in the following networks and professional associations, such as EADC (European Alzheimer's Disease Consortium) is a network of over 50 European centres of clinical and biomedical research excellence working in the field of Alzheimer's disease and related dementias (Romania: Prof. Luiza Spiru, MD, PhD)[383], **EPMA** promotes the paradigm change from delayed reactive medical services to evidence-based Predictive, Preventive & Personalised Medicine (PPPM) as an integrated science and healthcare practice (Romania: Prof. Luiza Spiru, MD, PhD)[384], **Alzheimer Europe[385], Alzheimer's Disease International[386], AGE Platform Europe**, The voice of older persons at EU level[387], **WONCA Europe**, the academic and scientific society for general practice/family medicine in Europe[388], **EBC** (European Brain Council), promotes brain research with the ultimate goal of improving the lives of the estimated 179 million Europeans living with brain conditions[389], **AAL Europe[390],**

EC (European Commission)[391], Prof. Luiza Spiru, MD, PhD, expert in: Ageing, Biotechnology, generic tools and medical technology, Clinical Pharmacology, Clinical trials, Gender in clinical medicine, Geriatrics and gerontology, Health, Hypnosis, Information and Communication Technologies, Neuroanatomy and neurophysiology, Neurochemistry and neuropharmacology, Neurosciences, Optimizing the delivery of health care, Phytotherapy, Psychiatric disorders (e.g. schizophrenia, autism, Psychophysiology of ageing, Psychosomatics, Research on the brain and related diseases)[392]; **ROHEALTH** (Silver Cluster) has currently 77 members, including: 42 innovative SMEs from Health and Bioeconomy for Health, 10 Universities (5 of Medicine), 6 Hospitals, 6 National Research Institutes, NGOs and physical persons, covering expertise in R&D, training, couching entrepreneurs, consulting services, internationalization and technological transfer and is under evaluation by ESCA for Gold

[378] http://www.u3a.ugal.ro/index.php/cursuri (Accessed: 15 October, 2021)
[379] General Directories of Social Assistance (Accessed: 15 October, 2021)
[380] https://www.cs-mb.ro/despre-csmb (Accessed: 15 October, 2021)
[381] www.anaaslanacademy.ro; www.stresscongress.org (Accessed: 15 October, 2021)
[382] https://www.facebook.com/groups (Accessed: 15 October, 2021)
[383] http://www.eadc.info/sito/pagine/b_08.php?nav=b (Accessed: 15 October, 2021)
[384] https://www.epmanet.eu/about-us/national-representatives/romania (Accessed: 15 October, 2021)
[385] https://www.alzheimer-europe.org/ (Accessed: 15 October, 2021)
[386] https://www.alzint.org/about/ (Accessed: 15 October, 2021)
[387] https://www.age-platform.eu/ (Accessed: 15 October, 2021)
[388] https://www.woncaeurope.org/ (Accessed: 15 October, 2021)
[389] https://www.braincouncil.eu/ (Accessed: 15 October, 2021)
[390] http://www.aal-europe.eu/ (Accessed: 15 October, 2021)
[391] https://ec.europa.eu/info/index_en (Accessed: 15 October, 2021)
[392] https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/reference-documents;programCode=H2020 (Accessed: 15 October, 2021)

Label Award[393] ; **MEDRo network** - Romanian Network of Clusters in the medical field[394] a network that includes all health clusters in Romania having as first objective the awareness at national level of the importance of financing the health field from the perspective of research and innovation;

- Other **Health clusters**: see Annex 3 - List of clusters
- Bucharest City Hall, CSM-B (**Bucharest Center for Seniors**), initiatives and projects for the benefit of the older adults[395]
- Bucharest City Council, DGAS (**General Directorate of Social Assistance of Bucharest**)[396]
- **Care centres for older adults** offering services for persons with neurodegenerative diseases: **Geronto Life Med** (geriatric-gerontology clinic) and more than 140 elderly care centres all over the country (see Annex 1, list of care centres)
- **University of Medicine and Pharmacy "Carol Davila"** Bucharest[397]
- **Romanian College of Physicians**[398], and Bucharest College of Physicians[399]
- **AMF-B** (Bucharest-Ilfov Family Physicians Association)[400] (ecosystem SMART BEAR, H2020 project) and the National Society of Family Physicians
- **Ministries**: Ministry of Health, Ministry of Investments and European Projects, Ministry of Education (AAL funding – UEFISCDI), Ministry of Research, Innovation and Digitalization, Ministry of Labour and Social Protection
- **Companies and NGOs** that offer funds and support for older adults and healthy ageing in general: Romanian Alzheimer's Society, White-Yellow Cross Foundation, "Sfanta Vineri" Center - Haller Association, Home Care Association (Romania), Citizenship Education and Action Group, Romanian Smart City Society, INES Foundation, Ever Pharma, GNC, UNICREDIT Bank, Orhideea Development, Exigent Development, AAA Evolution Optimus, Aquacity, SYNLAB labs network, Smart EpiGenetX, The Care HubOther relevant organisations: Public research infrastructures dedicated to mental health research[401]; Hospitals hosting mental care units; Cooperation between Academia and Research; Order of Architects of Romania (OAR); Medical and social hubs.

(National, regional, local) funding opportunities on SHAFE

Romania has 8 Euroregions: București-Ilfov, Center, North-East, North-West, South-East, South-Muntenia, South-West Oltenia and West. The Regional Development Agencies (ADR) fulfil the role of Managing Authority for the regional operational programs 2021-2027 (non-reimbursable external funds for the regional development of Romania), according to the Emergency Ordinance of the Government no. 122 of July 29, 2020.

National and regional funding opportunities

1. REGIONAL OPERATIONAL PROGRAMS

There are 9 regional draft operational programs under public consultation for the period 2021-2027: Intelligent Growth, Digitization and Financial Instruments; Sustainable Development; Transport;

[393] https://rohealth.ro/en/about-us (Accessed: 15 October, 2021)
[394] www.rohealth.ro/medro (Accessed: 15 October, 2021)
[395] https://www.cs-mb.ro/despre-csmb (Accessed: 15 October, 2021)
[396] https://www.dgas.ro/despre-noi/ (Accessed: 15 October, 2021)
[397] https://umfcd.ro/en/ (Accessed: 15 October, 2021)
[398] https://www.cmr.ro/ (Accessed: 15 October, 2021)
[399] https://www.cmb.ro/ (Accessed: 15 October, 2021)
[400] https://amf-b.ro/ (Accessed: 15 October, 2021)
[401] https://eeris.eu (Accessed: 15 October, 2021)

Education and Employment; Inclusion and Social Dignity; Health; Regional; Technical Assistance; Fair Transition.

2. **Health Operational Program** (POS)

The draft of the program for the period 2021-2027 is currently under public consultation.

Funding sources: FEDR (European Regional Development Fund) and FSE (European Social Fund)

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In the period 2021-2027 there will be several sources of funding in the field of health in addition to SOP, namely: Resc EU, Eu4Health, PNRR, React EU, Horizon Europe.

Ana Aslan International Foundation was Selected as Partner of the European Funds Ministry for the 2021-2027 Health Operational Program and contributed to the list of SMART health specialisations: **eHealth**, **Personalised Medicine**, **Longevity Medicine**, Fighting addictions, **Technologies for autonomous living**, Early diagnosis, One health (see Annex 4)[402]

3. **NATIONAL RECOVERY AND RESILIENCE PLAN** (PNRR)[403]
4. **Programs of the National Authorites:** Computer System for Health Records - RegIntermed [404]
5. **GRANT CONTESTS** organized by private companies: Orange, Vodafone, Kaufland "Stare de bine", Banca Transilvania, Unicredit, Business Angels

At local level, the funds are granted by the municipalities – grant contest approved by the local Council.

4. Examples of relevant business models, sustainability means and strategies to address and implement SHAFE N/A

30. Serbia

Contributors: Dr Tatjana Lončar-Turukalo and Dr Gorana Mijatović[405], Dr Milica Solarević and Dr Marija Cimbaljević[406]

The Republic of Serbia is not a member of the European Union. In March 2012 Serbia was granted EU candidate status. The Stabilization and Association Agreement (SAA) is an international treaty, which entered into force on 1 September 2013, thus granting the Republic of Serbia the status of an associated country to the European Union. The two most significant commitments that our country

[402] http://mfe.gov.ro/wp-content/uploads/2020/07/ca2f8e59262b186de3097839156a3a98-1.pdf (Accessed: 15 October, 2021)

[403] https://mfe.gov.ro/pnrr/ (Accessed: 15 October, 2021)

[404] Computer System for Health Records - RegIntermed (Accessed: 15 October, 2021)

[405] **Tatjana Loncar-Turukalo and Gorana Mijatovic** are members of the research centers involved in the analysis of the data and massive information processing including applications in medicine and biology.**Tatjana Loncar-Turukalo** is a also a member of IEEE Engineering in Medicine and Biology Society and she has been involved in the development of an action plan for the implementation of the Strategy for the Development of Artificial Intelligence in the Republic of Serbia for the period 2020-2025, and takes part in development and work of the recently founded first AI Institute in the Republic of Serbia. These developments may be relevant for the efficient implementation of applications such as those needed in a SHAFE ecosystem.

[406] **Milica Solarević** is a member of The Association of Demographers of Serbia which was formed in 1990 a member of The Demographic research team of the Department of Geography, Tourism and Hotel management, Faculty of Sciences, which is dealing with research on diverse aspects of population and social topics (population dynamics, population ageing, migration, human mortality, fertility, population policies). **She** is also a member of the team of the Faculty of Sciences University of Novi Sad that initiated the signing of the cooperation agreement with The Protector of Citizens – Ombudsman of the Autonomous Province of Vojvodina, which is an independent institution protecting and promoting human rights and freedoms.

has taken over with the signing of this Agreement are to establish a free trade zone and align domestic legislation with the EU. SAA is a legal basis for the improvement of cooperation between Serbia and the EU in a number of areas, including (among others): tourism, social cooperation, education and training, cultural cooperation, collaboration in the audiovisual field, information society, electronic communications networks and services, information and communications, environment, research and technological development, public administration[407] . Today, the Republic of Serbia has three levels of public administration - national (republic), regional and local (city/municipal), so strategies and action plans are defined in this way. At the local level are defined local action plans for the implementation of national strategies, harmonized with the local unit characteristics. However, at the regional level, additional strategies and plans are often adopted, which are certainly in line with the national one.

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

The number of older people is increasing faster than the number of people of any other age group and therefore, their participation in the total population is also at an increase. According to United Nations estimates, the number of people over the age of 65 will, by mid-21st century, for the first time in human history, exceed the number of children younger than 5, even children younger than 14, and every fourth inhabitant of the planet will be over the age of 65 (World Population Ageing: Report, 2015). The share of people older than 65 in Serbia is around 20% (Statistical Office of the Republic of Serbia, 2017), and the projections based on vital statistics show its further increase.

Active aging index in Serbia was 29.4, based on the pilot report of 2016, which is lower than the average in the European Union in the same year (33.9). In 2005, the Government of Serbia adopted the **National Strategy on Ageing 2006-2015** (only in Serbian language) and founded the **Council for Improving Intergenerational Cooperation and Solidarity** in 2018. The main goal of the National Strategy is to create an integrated and coordinated policy, based on modern scientific knowledge and obligations which will society and economy of the Republic of Serbia, primarily health and social protection, labour market and education, harmonize with demographic changes - in order to create a society for all ages, which especially strives to meet the needs and unleash the untapped potential of older people. The strategy is based on the following basic principles: lifelong development of the individual, promotion and protection of all human rights and fundamental freedoms, ensuring economic and social security and quality of life in old age, enabling full integration and participation of older people in the community, elimination of all forms of social neglect due to declining functional abilities in old age and disability, engagement in achieving gender equality, respect for diversity and consequently different needs among older people population, promoting intergenerational and intragenerational transfer; solidarity and dialogue.

In accordance with the Madrid International Plan on Action of Ageing (MIPAA) (UN, 2002), and Regional Implementation Strategy (RIS) (ECE/AC.23/2002/2/6, 2002), Serbia is actively working on improving solidarity and inciting participation, non-discrimination and social inclusion of older people. **The National Report on the Application of Madrid International Plan on Action of Ageing and evaluation results of National Strategy on Ageing** (UN, 2016; Kozarčanin, Milojević, 2016) have indicated that implementation of the set goals of the strategy should be continued as they are in accordance with the goals defined by the European Union to 2022 (only in Serbian).

[407] https://www.mei.gov.rs/eng/serbia-and-eu/stabilisation-and-association-agreement/ (Accessed: 15 October, 2021)

National **Strategy of Public Health in the Republic of Serbia 2018–2026** supports the improvement of health, prevention of diseases and prolongation of the quality of life of the population.[408]

Older people makes up 15% of social protection beneficiaries in Serbia, and gender differences in risks and availability of social protection services are observed. They are most endangered in singles, and especially in rural households. Social protection services are available for 1% of older people population, and the need for services is expressed by 4% of older people. The consequences of policies and measures for the protection of older people are significant and far-reaching for all areas of society. It is essential that issues related to population aging be included in all policies, in order to align the development of society and the economy with demographic change. In 2018, the Ministry of Labor, Employment, Veterans' Affairs and Social Affairs started the process of drafting the **Social Protection Strategy for the period 2019-2025**[409]. In 2006, the Government adopted the **Strategy for the Development of the Information Society in the Republic of Serbia until 2020,** which is the first act of state bodies which completely regulates the field of the information society. Other related strategies are: **The strategy for the development of electronic communications in the Republic of Serbia from 2010 to 2020**[410] **and the e-government development program in the Republic of Serbia for the period from 2020 to 2022**[411]**.**

The Strategy for the Development of Digital Skills in the Republic of Serbia for the Period from 2020 to 2024 is a national strategic program of the Government which comprehensively regulates the development of digital skills of the population with the aim of using the potential of modern information and communication technologies. quality of life of all citizens, higher employment, work efficiency and economic growth of society. The Strategy reflects the continuity and relies on the **Digital Agenda for Serbia**, which consists of the Strategy for the Development of the Information Society in

[408] The strategy supports the fulfilment of social care for human health and encourages the responsibility of the state and society in ensuring well-being for all citizens by improving health, extending the expected duration of quality of life, preserving a healthy living and working environment. The goals are achieved through all forms of partnership for health and emphasizing the importance of a comprehensive approach through interdisciplinarity and multisectoral cooperation (only in Serbian).

[409] Social protection strategy 2019-2025 represents a social agreement on the development of social protection policies in the next medium term. The social protection strategy responds to the needs of society and defines directions for further development of social protection policies, as well as more effective and efficient integration of social protection policies with national development. priorities and other sectors. The new Social Protection Strategy represents continuity in the previous reforms and enables consistency in the work in the field of social protection (only in Serbian).

[410] is based on the comprehensive progress of electronic communications, which, among other things; includes efficient spectrum management, development of broadband access and introduction of new multimedia services, implementation of the transition from analogue to digital television broadcasting. programs and encouraging research and development, as well as domestic production of telecommunications equipment. Digitization will provide citizens with access to a variety of content, convergence of services, new services for people with special needs, older people and members of national minorities (only in Serbian).

[411] That is a public policy document which plans to reform public administration in a way that uses innovative technological solutions that will enable economic development, bring savings in the budget, as well as improve the level of service provision to citizens and the economy. The goal is to create and develop new public administration services, while recognizing the possibilities provided by new technologies such as artificial intelligence, the Machine Learning, Deep Learning, development of the Internet of Things, EDGE, quantum computing, etc (only in Serbian).

the Republic of Serbia until 2020 and the Strategy for the Development of Electronic Communications in the Republic of Serbia from 2010 to 2020 (only in Serbian).

Smart specialization strategy in the Republic of Serbia for the period from 2020 to 2027[412]

Picture of older people population in Serbia, various aspects of their position and living conditions, on the basis of which insights into social inclusion and overall quality of life, show that their position is relatively unfavorable, that they face numerous problems in achieving satisfactory living conditions, and that compared to older people population living in the EU28 they live shorter and of poorer quality. The key areas in which priority is given to improving the situation to which attention is sought here are:

- Improving institutional mechanisms for monitoring the living conditions of older people, monitoring the implementation of policies and measures and assessing their effects
- Improving social and health care services
- Improving the digital inclusion of older people
- Reducing the gender gap among older people, through improving the protection of older women (Research on social inclusion of older people (65+) in Serbia, 2018; in Serbian).

Although a lot of work has been done lately to improve the strategic and legal framework that would enable the development of the age-friendly environment in Serbia, most things are only on paper. First of all, it is necessary to adopt as soon as possible the draft and plan of a new strategy on aging, which would be harmonized with other strategies in the field of smart, healthy and age-friendly environment. Given that other strategies in the mentioned areas and above presented, it is expected that the reports on this topic will be significantly better in the future.

The work published under the support of the Commissioner for Protection of Equality in the Republic of Serbia, describes **the challenges of elderly people living in cities across Serbia**. (report available only in Serbian[413]).

Relevant stakeholders and policy makers

	Local	Regional	National
Health	City directorate for healthcare for Novi Sad	Provincial secretariat for Health Institute of Public Health of Vojvodina	Ministry of Health
Social	City directorate for social and child protection for Novi Sad Center for social work, Novi Sad (Service for adults and elderly people) Society of retired people in Novi Sad	Provincial secretariat for Social politics, Demography and Gender Equality Provincial Institute for Social Protection	Minister for Demography and population politics Ministry of Labour, Employment, Veteran and Social Affairs Institute for Social Insurance Commissioner for Protection of Equality Caritas Serbia

[412] That is part of a new innovation policy paradigm that brings together decision makers, academia and civil society and civil society to raise the competitiveness of the economy, economic growth and progress through connecting research, industrial and innovation forces and resources with a limited number of priority economic areas (only in Serbian).

[413] http://ravnopravnost.gov.rs/wp-content/uploads/2019/12/starenje-u-gradovima-izazovi-savremenog-drustva-ebook.pdf

			The Pension and Disability Insurance Fund of Serbia
Built environment	City directorate for urbanism and construction	Provincial secretariat for urbanism and environmental protection	Ministry of Construction, Transport and Infrastructure
Digitalisation	none	Vojvodina ICT Cluster	Digital Serbia Initiative
Development	City directorate for economy	Provincial secretariat for Economy and Tourism	Ministry of Economy Ministry for European Integration
Education	City directorate for education	Provincial Secretariat for Higher Education and Research	Ministry of Education, Science and Technological Development
Research	None	Provincial Secretariat for Higher Education and Research	Ministry of Education, Science and Technological Development
Other: please specify			
Other: please specify[414]			

(National, regional, local) ecosystem on SHAFE of the partner

Despite thorough search, we did not manage to find an ecosystem on SHAFE, apart from governmental care on the basic needs of elderly people, such as institutionalized help including health, retirement funds and social help. In the digitalization strategy of the Republic of Serbia, currently the initiative on digital literacy of elderly people is not in focus, as there are so many other strategic aims where digitalization did not take place so far. Our professional involvement includes engagement in societies which could potentially be relevant to an SHAFE ecosystem. The team from the Department of Geography, Tourism and Hotel Management is involved in many demographic associations and initiatives, while the team from the Faculty of Technical Sciences is more involved in societies and initiatives related to the development of the ICT enabling technology that is supportive of implementation of the SHAFE (as well as others similar pervasive monitoring and remote assistance applications).[415]

(National, regional, local) funding opportunities on SHAFE

We are currently not aware of, nor did we manage to find any open call of a local, regional or national to support the development on SHAFE. However, researchers in Serbia are invited to collaborate on EU funded projects, where topics span as well societal and health related challenges such as aging and well-being.

[414] *Please note that most of the sites, if available in English, have very high-level information. Much more detailed websites are in Serbian language. However, activities at local and regional level aimed at elderly population are mainly focused on refurbishments and opening of gerontological centers in the city and region. Additionally, there are clubs (and societies) of elderly and retired people, which offer social, legal and health related advice and help to their members, those are places to socialize and make some contribution.

[415] https://www.ombudsmanapv.org/eng/index.php. (Accessed: 15 October, 2021)

The signing of the SAA is a necessary step towards acquiring the status of candidate for membership, thus creating conditions for opening the remaining components of the IPA pre-accession fund, as well as opportunities for the use of significantly larger EU funds.

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE

- One of the examples of sustainability and smart management is the "smart city" project, which the city of Belgrade (Serbia) is implementing with the Siemens company[416].
- Another example of a business model that contributes to the SHAFE concept relates to the digitization and presentation of cultural heritage.[417]

31. Slovenia

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(National, regional, local) policies on Smart Healthy Age-Friendly Environments

[416] It is a "smart solution" for traffic jams that works by applying a traffic management system by zones, which allows vehicles to be directed depending on the traffic jams, as well as to have more green waves. Traffic management means managing the entire network or zone, and not just one corridor, which citizens recognize as a green wave. The data obtained is then processed in software that is part of the package supplied by Siemens. The processed data is then returned to the devices and preference is given to those routes that are most busy. Part of this project is the establishment of a system that will give priority to public transport vehicles, primarily trams. The control units are installed in trams, as well as on the street, so the software recognizes the arrival of trams, stops dynamic traffic, leaks a rail vehicle and it does not stay at intersections. Within the mentioned project, special emphasis was put on improving the knowledge of employees, as well as for the members of the Traffic Safety Council.

[417] The Museum of Vojvodina (Novi Sad, Serbia) has a leading role in coordinating the entire process of digitization of movable cultural heritage on the territory of Serbia. The museum has implemented a number of digital solutions, important for the sustainability of cultural heritage, as well as for presentation to tourists and citizens, such as applications based on augmented reality, QR codes, audio guides. The Museum of Vojvodina, together with the History Museum of Serbia and the Institute for the Protection of Cultural Monuments of the City of Novi Sad, is working on creating and modifying Imus and Zimus software solutions that serve to catalog and digitize documentation on movable and immovable cultural heritage. Through the Timus application, one of the leading goals of digitalization has been achieved - visibility and accessibility of cultural heritage. As part of the permanent exhibition of the Museum of Vojvodina and on the websites of the Museum of Vojvodina (https://www.muzejvojvodine.org.rs/index.php/lat/) and the Institute for the Protection of Cultural Monuments of the City of Novi Sad (http: //www.zzskgns.rs/kulturna-dobra-online/) for the first time, a visitor can discover the long-kept secret of the depot. Education and dissemination of knowledge raise awareness of the importance of cultural heritage for the identity of a city, state and people.
One of the current projects is the construction of the E-museums platform, which enabled the adaptation of the content to the millennial way of thinking. The E-Museums platform is a synergy of knowledge, entertainment and culture. It connects schools and museums, contributes to the modernization of the presentation of content and enables curators to acquire new knowledge in the field of interpretation of cultural heritage and audience development, with the application of modern information and communication technologies. Another important project is the application of digital photogrammetry in the field of cultural heritage. The project is aimed at standardizing the photography of cultural heritage in order to create photogrammetric models. 3D digitization is inevitable in future approaches to treating cultural heritage documentation.

- *Slovenian Active Ageing Strategy (2017)* defines the vision and main goals in designing responses to the challenges posed by changed age structures of the population in Slovenia and aims towards greater integration of long-term care services. Stresses the importance of support of ICT and technological solutions.
- *Resolution on the National Health Care Plan 2016-2025* states that the key challenge in Slovenia is the establishment of a comprehensive and integrated long - term care system, with emphasis on the de-institutionalization and development of community-based housing and care. Resolution gives importance to ICT in healthcare and long-term care (digitalization, e-care, e-health etc.)[418].
- *Resolution on the National Social Assistance Programme 2013-2020* is aiming at equal access to quality and safe long-term care services, integrated and comprehensive treatment. ICT and assistive technology is recognized in the document. New strategy is to be adopted in 2021[419].
- *Slovenian Development Strategy 2030* with the primary objective of a high quality of life for all. Gives attention also to IKT and digitalisation[420].
- *Operational Programme for the Implementation of the EU Cohesion Policy in the period 2014 – 2020 Slovenia.* One of the priority axis (2.9) of the Programme emphasises ICT-related pilot projects, with planned calls for projects in the field of long-term care and care as well as development of ICT-supported services and ICT support structures[421].
- *The bill on Long-term Care (June 2021) was adopted by the government of Slovenia and is currently in discussion before being considered in the National Assembly.* The bill introduces ICT supported services to the list of long-term care services. *University Medical Centre (UMC) Ljubljana Development Strategy 2018 - 2023.* The strategy of the biggest UMC in Slovenia recognises the importance of the digitisation of healthcare and the development of telemedicine approaches in managing non-communicable diseases.[422]
- *Strategic Development Programme of Health Insurance Institute of Slovenia 2020 - 2025*. Strategic Activity 3 assumes several steps, including developing and updating existing payment models to promote rapid integration of new technologies into treatment methods (e.g., telemedicine)[423].

Relevant stakeholders and policy makers

	Local	Regional*	National
Health	Municipalities and its organisations (health centre etc.), care (nursing) homes	National Institute of Public Health (regional units), hospitals, University Medical Centre Ljubljana,	Ministry of Health, National Institute of Public Health, Health Insurance Institute of Slovenia, Slovenian Medical Informatics Association, Slovenian Coalition for Public Health, Environment and Tobacco Control, University Rehabilitation Institute Republic of Slovenia Soča.

[418] http://pisrs.si/Pis.web/pregledPredpisa?id=RESO102 (Accessed: 15 October, 2021)
[419] http://www.pisrs.si/Pis.web/pregledPredpisa?id=NACP68 (Only available in Slovenian.) (Accessed: 15 October, 2021)
[420] https://www.gov.si/assets/vladne-sluzbe/SVRK/Strategija-razvoja-Slovenije-2030/Slovenian-Development-Strategy-2030.pdf (Accessed: 15 October, 2021)
[421] https://www.eu-skladi.si/sl/dokumenti/kljucni-dokumenti/op_ang_final_web.pdf (p. 183-186) (Accessed: 15 October, 2021)
[422] https://www.kclj.si/dokumenti/tocka_2_STRATEGIJA_17_04_2018_Koncno.pdf (Only available in Slovenian.) (Accessed: 15 October, 2021)
[423] https://api.zzzs.si/ZZZS/info/egradiva.nsf/0/49222d7a58687039c12584c700312620/$FILE/SRP%20ZZZS%202020-2025_december%202019.pdf (Only available in Slovenian.) (Accessed: 15 October, 2021)

		University Medical Centre Maribor	
Social	Municipalities and its organisations (Centres for social work, units etc.), care (nursing) homes; Age-Friendly Cities and Communities	Centres for social work, regional, Simbioza Genesis, social enterprise	Ministry of Labour, Family, Social Affairs and Equal Opportunities; Social Protection Institute of the Republic of Slovenia, Institute of Economic Research, Slovene Federation of Pensioners' Associations, Association of Social Institutions of Slovenia; Slovenian Network of Age-Friendly Cities and Communities
Built environment	Municipalities		Ministry of the Environment and Spatial Planning, Urban Planning Institute of the Republic of Slovenia
Digitalisation			Strategic Council for Digitization (SSD), HealthDay.si, Institute for Electronic Participation
Development			Ministry of Economic Development and Technology, HealthDay.si
Education	Municipalities and its organisations (schools, kindergarten etc.)	faculties, universities	Ministry of Education, Science and Sport, faculties, universities (e.g. University of Ljubljana Faculty of Social Sciences; University of Ljubljana Faculty of Health Sciences; University of Ljubljana Faculty of Economics; University of Ljubljana, Faculty of Electrical Engineering, Laboratory for Telecommunications, Social Protection Institute of the Republic of Slovenia; Angela Boškin Faculty of Health Care; Institute Jožef Stefan; University of Maribor Faculty of Electrical Engineering and Computer Science), Anton Trstenjak Institute
Research		faculties, universities	Ministry of Education, Science and Sport, faculties, universities (e.g. University of Ljubljana Faculty of Social Sciences; University of Ljubljana Faculty of Health Sciences; University of Ljubljana Faculty of Economics; University of Ljubljana, Faculty of Electrical Engineering, Laboratory for Telecommunications, Social Protection Institute of the Republic of Slovenia; Angela Boškin Faculty of Health Care; Institute Jožef Stefan; University of Maribor Faculty of Electrical Engineering and Computer Science), Anton Trstenjak Institute
Other: Service provider			Telekom Slovenije
Other: please specify			

*Regional is not always the same unit (we differentiate statistical regions, regions in health, social care).

(National, regional, local) ecosystem on SHAFE of the partner

- Research Platform 2020-2030. Consists of researches from Institute of Economic Research, National Institute of Public Health, Social Protection Institute of the Republic of Slovenia with the aim to collaborate in activities to reduce health inequalities and increase wellbeing in Slovenia.
- Scirocco Exchange hub[424]. Partners in the project aiming to strengthen bonds in exchanging knowledge in the field of integrated care and scaling up the integrated care.
- International LTC Policy Network (ILPN)[425]. ILPN is a network of researchers, policy-makers and other stakeholders with the aim to promote the global exchange of evidence and knowledge on LTC policy.

(National, regional, local) funding opportunities on SHAFE

- Slovenian Research agency[426]
- Funds od Ministry of Labour, Family, Social Affairs and Equal Opportunities
- Funds od Ministry of Health
- Funds of municipalities

32. Spain

Contributors: Pablo Abascal-Gonzalez, Antonia Caro-Gonzalez, Marta Fernandez, María Esther Lázaro-Pérez, Francisco Melero, Begonya Garcia-Zapirain, Lucía González-López, Roberto Nuño-Solinís; Ana Perandrés-Gómez.

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

Spain presents a specific political idiosyncrasy and administrative landscape based on a strong regional focus with most policies areas, decision making processes, and execution levels delegated to the Autonomous Communities, the Provincial Councils and the municipalities. This highly capilarised decision making, and multiplicity of actors and initiatives, challenges the presentation of a comprehensive country-based panorama related to the Smart Healthy Age-Friendly Environments. Hence, among the 17 autonomous communities, there are two main positions when supporting aged territories: that of the most populated territories that demand a distribution that prioritizes the number of inhabitants, and that of the areas with older and more dispersed demography that demand to be compensated for the higher cost of the services they need to cover due to these circumstances. This report offers predominantly a preliminary selection of relevant national, regional and local policies and legislation; strategies and action plans.

For more complete understandings of the myriad of long-lasting and/or incipient innovative plans and initiatives, specific searches should be made crossing policy levels, combined domains and multi-stakeholders' collaborations depending on different given focuses.

National[427]

[424] https://www.sciroccoexchange.com/ (Accessed: 15 October, 2021)
[425] https://www.ilpnetwork.org/ (Accessed: 15 October, 2021)
[426] http://www.arrs.si/en/index.asp (Accessed: 15 October, 2021)
[427] Relevant Legislation:

Royal Decree 2171/1994, 4 November, partially amended by Royal Decree 428/1999 of 12 March, on the creation of the State Council of older people: The purpose of this Decree is to create and regulate the State Council of older people, in order to institutionalize the collaboration and participation of the association

Strategy of the Spanish Network for Age-friendly Cities and Communities (2012- onwards)[428]: Created in 2012, the network is the result of the Collaboration Agreement between the Institute for Older Persons and Social Services (Imserso) and the Global Network of Age Friendly Cities and Communities (GNAFCC) led by the World Health Organisation (WHO). The members of the network include 197 Spanish cities, which are facilitating the exchange of knowledge and experiences in the creation of age-friendly environments. The most engaged regions are the Basque Country (with 47 cities), Catalonia (with 22 cities), Asturias (with 22 cities) and Cantabria (with 18 cities). The Strategy has 4 phases and follows the GNFCC's methodology, which identifies eight areas of the urban and social environment impacting the life and wellbeing of people.

Age-friendly, accessible and intelligent cities (2014)[429]: Proposes a reflection on how to respond to the needs of older people and people with functional diversity in this new city model. It describes some initiatives included in State, European and international networks, technical standardisation activities, forums and workshops. The final annexes provide checklists and indicator systems that help design and evaluate the management of plans, projects and actions in this area.

Strategic Plan of Lifelong Learning (2015)[430]: The goal is to create a society that promotes the lifelong learning of all its citizens, regardless of their starting level, social conditions or age. The plan was designed through the collaboration of education administrations and is open to other administrations and organisations with competencies on lifelong education.

Regional[431]

All Autonomous Communities in Spain have developed with different levels of intensity and resources SHAFE related policies. Three examples, Andalusia, Basque Country and Catalonia are presented given their active contribution to the Spanish Network of Age Friendly Cities and Communities, the EIP on

movement of older people in the definition, implementation and monitoring of policies of care, social insertion and quality of life for this sector of the population.

ACT 3/2006, 14 December, on the Promotion of Personal Autonomy and Care of Dependent Persons: The purpose of this Act is to regulate the basic conditions that shall guarantee equality in the exercise of the subjective citizen right to the promotion of personal autonomy and care for dependent persons, according to the terms laid down in legislation, with the collaboration and participation of all of the Public Administrations and the guarantee by the General State Administration of a minimum common content of rights for all citizens in any part of Spanish State territory.

ACT 27/2011, 1 August, on Updating, Adequacy and Modernization of the Social Security System. The Preamble plans the adoption of a comprehensive employment strategy for older workers..

Royal Legislative Decree 1/2013, of November 29, on approving the Consolidated Text of the General Law on the rights of people with disabilities and their social inclusion.

Royal Decree 504/2007, of April 20, which approves the scale of assessment of the dependency situation established by Law 39/2006, of December 14, on the promotion of personal autonomy and care for people in situation of dependency.

Royal Decree 614/2007, of May 11, on the minimum level of protection of the System for Autonomy and Attention to Dependency guaranteed by the General State Administration.

[428] Strategy of the Spanish Network for Age-friendly Cities and Communities (Accessed: 15 October, 2021)

[429] (Accessed: 15 October, 2021)

[430] Strategic Plan of Lifelong Learning (2015). (Accessed: 15 October, 2021)

[431] More legislation at regional level can be found here: https://www.imserso.es/InterPresent1/groups/imserso/documents/binario/guiapresta2013.pdf (Accessed: 15 October, 2021)

AHA and other regional, national and European initiatives. Further information on the rest Spanish regions can be found in their dedicated websites.

Andalusia Region[432]

The coordination, development and promotion of active policies for older people in Andalusia is carried out by the Directorate General for Older People and Non-contributory Pensions. Specifically, they focus on the management and coordination of Centres and Services, on the management of financial aid, on the performance and evaluation of specific services and programmes related to dependency and the promotion of active ageing, and on the functions related to the authorisations and accreditations of the centres.

The Basque Country[433]

Agenda Nagusi of the Basque Country, Governance Strategy with older people (2019-2022)[434]: A model of public-social participation with and for older people living in the Basque Country. Through this model, the community of older people in the Basque Country form part of and share the definition of the problems that affect them, working with public administrations.

Catalonia[435]

Strategy for Demographic Change and Ageing (2018-2030)[436]: The strategy includes a study and analysis of the ageing process and demographic change in Catalonia, as well as commitment to actions and strategic approaches. The strategy presents a study on the dynamics of demographic change and the ageing process in Barcelona, as well as 77 actions divided into four strategic approaches and the catalogue of services for senior citizens and the budget, integrating the various programmes and projects that are already operational, mostly under Barcelona City Council's Area for Social Rights.

[432] Relevant legislation: Through the Order of 27 October 2020, the Strategic Grants Plan of the Regional Ministry of Health and Families for the period 2020-2022 was approved. In addition, this region has developed a project (2014-2020) for the creation of the "En Buena Edad" platform, through which a communication portal has been set up between health sector professionals and citizens to promote healthy and active ageing.

[433] *Relevant Legislation:* Act 1/2013, 10 October, Lifelong Learning Law: The decree promotes universal and equitable access to lifelong learning in order to foster social inclusion, create a strong culture of lifelong learning and improve skills, knowledge and competencies that enhance employability.
This strategy is aligned with the Basque strategy of active and healthy ageing from 2015-2020 leaded by "Matia Technological Institute", which is closely related with the "Health Plan 2013-2020 (page 25).

[434] https://www.euskadi.eus/web01-a2aznscp/es/k75aWebPublicacionesWar/k75aObtenerPublicacionDigitalServlet?R01HNoPortal=true&N_LIBR=052451&N_EDIC=0001&C_IDIOM=es&FORMATO=.pdf (Accessed: 15 October, 2021)

[435] *Relevant legislation*: Decree 31/2014, 11 of March, on the creation of the Council of older people of Catalonia: The purpose of this Decree is to create and regulate the Council of older people of Catalonia which is a collegiate body for the participation and consultation of older people, which will be consulted by various public administrations.

[436] https://ajuntament.barcelona.cat/dretssocials/sites/default/files/arxius-documents/2018_estrategiaenvelliment_en_acc.pdf (Accessed: 15 October, 2021)

Plan of Mobility mHealth.cat (2015)[437]: The plan will enable people to access health and welfare services using mobile technologies such as smartphones, tablets and laptops and will contribute to the modernisation of care and social services. This is the first such mHealth strategy in Europe.

Local

The Spanish local policies on SHAFE cover issues as varied as financial aid for building rehabilitation[438]; accommodation service for older people; aid to improve accessibility; social care; ay care service (day centres) for older people; aid to support entrepreneurs; aid for companies that hire unemployed people with over 55 years of age; Dependency Care Program in the family environment; etc. A sample of some relevant strategies and plans is shown below:

Catalogue of services for senior citizens and the budget, an effort to integrate the various programmes and projects that are already operational, and a plan which will enable people to access health and welfare services using mobile technologies such as smart phones, tablets and laptops and will contribute to the modernisation of care and social services.

Madrid Strategy for Older People (2017 to 2021)[439]: The plan includes 5 strategic implementation areas: active ageing and prevention of dependency; older people in vulnerable situations; services and resources for dependent people; socio-sanitary coordination, and a modern, integrated and innovative organisation of public services.

Barcelona Age Friendly City Project Plan (2017-2020)[440]*:* The plan identifies and collects the municipal actions needed to improve the age-friendliness of the city of Barcelona. It includes 339 actions: 31 are action plans or strategic measures, 158 are at local level, 130 at territorial level and 20 are led by other stakeholders.

Valencia, Age Friendly City Report (2016)[441]: shows the implementation of the Global Age Friendly Cities and Communities project in the Spanish region of Valencia. The plan concludes with a list of practical recommendations to fill the gap in age-friendliness in Valencia.

[437] http://smartcatalonia.gencat.cat/web/en/projectes/govern/detalls/article/Pla-de-mobilitat-mHealth.cat#bloc2 (Accessed: 15 October, 2021)

[438] As an example, the Territorial College of Property Administrators of Biscay is recognised as a proactive social actor to support the Basque Public Institutions in active ageing matters taking place daily in the residential buildings managed by Collegiate Administrators. They value the new paradigm proposed by the Euskadi Lagunkoia Sustraietatik project promoted by the Basque Government for active ageing aligned with the values of social participation, experience and intergenerational solidarity.

[439]https://www.comunidad.madrid/transparencia/sites/default/files/plan/document/372_767_estrategia_atencion_al_mayor_version_digital_0.pdf (Accessed: 15 October, 2021)

[440]http://estatic.bcn.cat/ConsellAssessorGentGran/Continguts/Documents/Pla_Barcelona_Amigable_amb_les_Persones_Grans_2017-2021_v2.pdf (Accessed: 15 October, 2021)

[441] https://extranet.who.int/agefriendlyworld/wp-content/uploads/2016/12/Informe-diagn%C3%B3stico-Val%C3%A8ncia_compressed.pdf (Accessed: 15 October, 2021)

(National, regional, local) ecosystem on SHAFE of the partner - Relevant stakeholders and policy makers

The following table shows a comprehensive, although non-exhaustive, list of entities and institutions that respond to the SHAFE objectives under the different domains in Spain. Most of them do so from an overlapping interdisciplinary and intersectoral perspective (social-health-research).

Local	Regional[442]	National
	HEALTH	
Municipalities (public health services and administration); Hospitals and health centres; Care providers; NGOs; Private companies	Regional Ministries of Health Fundació TICSALUT[443]; Provincial Councils of Health; Catalan Smart Health Ecosystem[444]	Ministry of Health; Ministry of Culture and Sport; Spanish Red Cross; Spanish Society of Geriatrics and Gerontology
	SOCIAL	
Municipalities (libraries, community centres, etc.); Home care and assistance centres (ex. Fundació Roure, etc.); Associations and NGOs (ex. SIENA, *Servicios Integrales para el Envejecimiento Activo, etc.*); Adult day-care centres; Networks of volunteers (ex. AVOL, *Associació de gent gran voluntària en ciència I cultura I àmbit social, etc.*); Social enterprises (ex. Dignetik, Saluus, etc.); Care workers; Human Rights centres (ex. *Oficina per la No Discriminació*);	Regional Ministries of Social Affairs (*those CCAA recognized as Reference Sites on EIP AHA are Basque Country, Extremadura, and Asturias); Provincial Councils of Social affairs; Federation of associations of older people (e.g. FATEC, etc.); NGOs (e.g. *Grandes Amigos*, etc.); Regional Ombudsman	Ministry of Social Rights and 2030 Agenda; Ministry of Equality; Ministry of Inclusion, Social Security and Migration; Ministry of Culture and Sport; Ministry of Justice; The Ombudsman; Institute for Older Persons and Social Services (Imserso); State Reference Centre for Personal; Autonomy and Technical Aid (Ceapat); Confederación Española de Organizaciones de Mayores (CEOMA); ONCE Foundation for Cooperation and the Social Inclusion of the Disabled; Lares Federation; Spanish Episcopal Conference (Caritas); Rights and Elders State Board; Spanish Network for Age friendly Cities and Communities; State Council for older people; Spanish Committee of Representatives of Persons with Disabilities (CERMI); Labour Unions
	BUILT ENVIRONMENT	
Municipalities; Basque Digital Innovation Hub in Health; Private housing enterprises; Construction companies; Social housing organisations; Senior Cohousing associations (e.g. *Asociación Jubilares*)	Regional Ministries of Environment; Provincial Councils of Environment; Spanish Federation of Municipalities and Provinces	Ministry of Transports, Mobility and Urban Agenda; Ministry of Territorial Policy and Civil Service; Ministry of Ecological Transitional and Demographic Challenge
	DIGITALISATION	
Municipalities; IT Companies and startups; Associations (e.g. EmancipaTIC); Mobile World Capital Barcelona	Provincial Councils;	Ministry of Economic Affairs and Digital Transformation; Ministry of Culture and Sport; National Centre for Accessibility Technologies (CENTAC)
	DEVELOPMENT	
Municipalities; NGOs	Regional Ministries of Development; Provincial Councils of Development	Ministry of Labour and Social Economy; *Confederación Estatal de Mayores Activos*
	EDUCATION AND RESEARCH	
Municipalities; Adult education centres; Schools and vocational training centres; Universities; NGOs	Regional Ministries of Education; and of Science and Innovation; Provincial Councils of Education; and Vocational Training; Universities [445]; Research and Innovation	Ministry of Education and Vocational Training; Ministry of Science and Innovation; Ministry of Culture and Sport; State Confederation of Associations and Federations of Students and

[442] The Spanish Autonomous Communities recognized as Reference Sites on the European Innovation Partnership on Active and Healthy Ageing are Andalucía, Aragón, the Basque Country, Extremadura, Galicia, Madrid, and Valencia. See more: https://ec.europa.eu/eip/ageing/file/3480/download_en%3Ftoken=1LMgQDvY (Accessed: 15 October, 2021)

[443] Reference Site on EIP on AHA with special recognition of excellence

[444] Member of the ECHAlliance

[445] Ex. Barcelona Institute for Global Health (ISGlobal); CARTIF Foundation; Foundation University Institute for Primary Health Care Research Jordi Gol i Gurina (IDIAPJGol); Polytechnic University of Madrid (UPM), Research Group of Life Supporting Technologies (LifeSTech); University of Deusto, Interdisciplinary Platform on Ageing and Wellbeing.

	Centres[446]; Federation of Associations (ex. *Agrupació d'Aules de Formació Permanent per a la Gent Gran de Catalunya (AFOPA)*	Alumni of University Programs for older people (CAUMAS); Spanish Seniors for Technical Cooperation (SECOT)

(National, regional, local) funding opportunities on SHAFE

The following funding opportunities have been identified at national, regional and local level:

National

Apart from the existing national funding schemes[447], Spain will use part of the EU Next Generation funds to carry out sustainability, digitization or cohesion and equality projects to promote, among other issues, the silver economy; and with specific emphasis on research and innovation projects, some of them focused on SHAFE matters due to the high levels of elderly population.

Besides, the Spanish Agency for International Development Cooperation (AECID), in its purpose of contributing to the development of friendly cities with older people in Latin America and the Caribbean, grants partial scholarships for qualified technicians, middle managers, experts and equivalents, in charge of planning, management and financing of social services for older people in public and private institutions at local level; political leaders and technical staff of city councils interested in adhering to the Global Network of Age Friendly Cities and Communities, as well as representatives of older people.

Adult education grants

- General grants and financial support in post-compulsory education and non-university higher education[448]: Adults who are enrolled in non-university post-compulsory education programmes are eligible for these grants and general financial support when they are studying: BBA, intermediate or advanced vocational training, professional artistic education or sports education, whether in a mainstream provision or in a specific adult education provision (including part-time provision).
- Grants for post-compulsory university education[449]: Adults can apply for general grants and financial support to pursue university studies in the Spanish university system at Spanish institutions.
- Subsidies for private providers[450]: Private adult education and training, both in-class and distance provisions, is organised by a variety of institutions.
- Publicly-funded private institutions[451]: For compulsory and post-compulsory non-university education, the educational authorities can establish an agreement to allocate public funds to privately owned education institutions.
- Online free course of the Spanish Network of Age Friendly Cities and Communities[452], which is organized by Imserso and is focused on how to be a city and community friendly to older people.

Regional

[446] Ex. TECNALIA Research and Innovation; Telefonica's Department of eHealth and Digital Business Operations

[447] Public financing of residences for older people;

[448] https://eacea.ec.europa.eu/national-policies/eurydice/content/adult-education-and-training-funding-79_es

[449] https://eacea.ec.europa.eu/national-policies/eurydice/content/higher-education-funding-79_en

[450] https://eacea.ec.europa.eu/national-policies/eurydice/content/adult-education-and-training-funding-79_en

[451] https://eacea.ec.europa.eu/national-policies/eurydice/content/early-childhood-and-school-education-funding-79_en

[452] https://ciudadesamigables.imserso.es/ccaa_02/ciu_amig/form_online/index.htm

Below this shows a succinct breakdown of some financing opportunities offered by public services in various autonomous communities. Due to the high number of actions, this is just a sample (neither all Autonomous Communities, nor all funding bodies, entities and programmes are enlisted and described).

Andalusia: The Ageing Lab Foundation[453] promotes platforms which help individuals and companies develop entrepreneurial, innovation and digital skills to create new products and services demanded by the silver economy.

The Basque Country: The Basque Government Social services, dependency / risk of dependency[454], covers a full range of services from public adapted transport to economic benefits for care in the family environment and support for non-professional caregivers. Besides, the three provincial councils have innovative action lines with high implication of stakeholders at community level.

Catalonia: Social Services of the Generalitat[455], public grants for rent payments for older people[456]; Barcelona City Council (BCC) includes a program on active ageing and wellbeing, which is responsible for a wide range of services addressing the promotion and social participation of older people as well as the special care of older people in vulnerable situations.

Extremadura Network of Cities and Communities Age-Friendly[457]: Los Santos de Maimona holds the Age-Friendly City classification granted on February 14, 2012 by the World Health Organisation and has promoted the creation of an Extremadura Network of Elder-Friendly Cities and Communities, adhering to the global program of the WHO for all the work carried out by the City Council in this regard and the effort of private institutions to improve the quality of life of older people in rural areas.

Gandia Ciudad Amigable:[458] The Network of Cities and Communities Friendly with Older People (Age-Friendly Cities –AFC) is a project promoted by the World Health Organisation (WHO) and aimed at cities and communities in order to respond to demographic aging in a scenario of urban growth. The main objective of the project is to contribute to the creation of environments that facilitate an active and healthy life for older people.

Madrid: Care Strategy for older people 2017-2021[459], the Strategy has a total of 5 strategic lines. To carry them out, 27 objectives have been established, which are specified in a total of 129 measures aimed at improving the living conditions of older people, promoting active aging and addressing dependency situations.

Valencia: Programa Bono Respiro 2020: The purpose of this program is to offer 3 different types of financial aids for different modalities of temporary or non-permanent stays in nursing homes for elderly people when due to needs that affect older people or their family caregivers.

[453] https://ageinglab.org/pricing/ (Accessed: 15 October, 2021)
[454] https://www.euskadi.eus/servicios-sociales-dependencia-riesgo-de-dependencia/web01-a2gizar/es/ (Accessed: 15 October, 2021)
[455] https://web.gencat.cat/es/temes/serveis/ (Accessed: 15 October, 2021)
[456] Resolution TES/1097/2020, 19 may (Accessed: 15 October, 2021)
[457] https://extranet.who.int/agefriendlyworld/network/los-santos-de-maimona/ (Accessed: 15 October, 2021)
[458] https://www.gandia.es/aytg/web_php/index.php?contenido=subapartados_woden&id_boto=787 (Accessed: 15 October, 2021)
[459] https://www.comunidad.madrid/transparencia/informacion-institucional/planes-programas/estrategia-atencion-personas-mayores-2017-2021 (Accessed: 15 October, 2021)

Examples of relevant business models, sustainability means and strategies to address and implement SHAFE

Initiatives from TICSalut, (as Reference Site on the EIP on AHA with special recognition of excellence).

- mHealth[460]: refers to the practice of healthcare and welfare activities centred on the individual, with the help of mobile devices, patient monitoring sensors and other wireless solutions that serve as remote digital assistants which, in turn, can interact with other technologies such as Virtual Reality and Artificial Intelligence.
- mConnecta platform[461]: A mobility marketplace to foster welfare through the use of the mobile tech: mobile apps, wearables and medical devices.
- Diacare[462]: The project will provide support and monitoring tools for the optimum follow-up and management of diabetes.
- Strack[463]: To improve the management of a post-stroke a mobile technology-based solution is proposed to create a support digital ecosystem for patients and healthcare professionals.
- Empoc[464]: Technologic solutions to facilitate the management of the Chronic Obstructive Pulmonary Disease (COPD) based on the unsatisfied needs of the patients and health professionals

33. Sweden

Contributors: Arianna Poli (Linköping University), Liane Colonna (Stockholm University)

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

Public Procurement Act. The national procurement strategy emphasises universal design and accessibility (see for example Chapter 9, Section 2 of the Act). The Act specifically refers to accessibility to people with disability but does not mention age or older people.[465]

Relevant stakeholders and policy makers

	Local	Regional	National
Health	Municipalities	Swedish Association of Local Authorities and Regions (Sveriges Kommuner och Regioner) (SKR)	National Board of Health and Welfare (Socialstyrelsen) The Public Health Agency (Folkhälsomyndigheten)
Social	Municipalities	Swedish Association of Local Authorities and Regions (Sveriges Kommuner och Regioner) (SKR)	National Board of Health and Welfare (Socialstyrelsen) The Public Health Agency (Folkhälsomyndigheten) Swedish Agency for Health Technology Assessment and Assessment of Social Services Statens

[460] https://ticsalutsocial.cat/en/area/mhealth-en/ (Accessed: 15 October, 2021)
[461] https://ticsalutsocial.cat/en/projectes/mhealth-en/appsalut-marketplace/ (Accessed: 15 October, 2021)
[462] https://ticsalutsocial.cat/en/projectes/digital-transformation/diacare/ (Accessed: 15 October, 2021)
[463] https://ticsalutsocial.cat/en/projectes/digital-transformation/strack/ (Accessed: 15 October, 2021)
[464] https://ticsalutsocial.cat/en/projectes/digital-transformation/empoc/ (Accessed: 15 October, 2021)
[465] https://www.konkurrensverket.se/globalassets/english/publications-and-decisions/swedish-public-procurement-act.pdf (Accessed: 15 October, 2021)

			beredning för medicinsk och social utvärdering (SBU) The Swedish Agency for Participation (Myndigheten för delaktighet)
Built environment		Swedish Association of Local Authorities and Regions (Sveriges Kommuner och Regioner) (SKR)	
Digitalisation	Various municipalities	Various regions	• Myndigheten för digital förvaltning (Agency for Digital Government) - DIGG[466] • E-hälsomyndigheten (Swedish eHealth Agency)[467] • The Research Institute of Sweden (RISE)[468] • AI Sweden[469],

(National, regional, local) funding opportunities on SHAFE

- FORTE – Swedish Research Council for Health, Working Life and Welfare[470]. It funds research projects in the field of health, working life and welfare. It is often possible to include international partners in the proposals, although projects are mostly national. FORTE has both annual open calls and more focused calls on specific themes.
- VR – Swedish Research Council[471]. Call is listed at[472].
- Vinnova – Sweden's innovation authority[473]
- Familjen Kamprads stiftelse[474]. Among the areas, it finances projects which deal with increasing quality of life in old age.
- Municipalities finance small research projects that have clear impact at local level on citizens, for example[475].

34. Switzerland

Contributors: Leonardo Angelini, Alexander Seifert

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

[466] https://www.digg.se/ (Accessed: 15 October, 2021)
[467] https://www.ehalsomyndigheten.se/other-languages/english/ (Accessed: 15 October, 2021)
[468] https://www.ri.se/en (Accessed: 15 October, 2021)
[469] https://www.ai.se/en (Accessed: 15 October, 2021)
[470] https://forte.se/en/ (Accessed: 15 October, 2021)
[471] https://www.vr.se/english (Accessed: 15 October, 2021)
[472]https://www.vr.se/english?sv.target=12.12596ec416eba1fc84514a8&sv.12.12596ec416eba1fc84514a8.route=/&articleType=calls&targetParent=vr_cards-flex%20vr_cards-flex-1%20vr_cards-row&start=6&end=14&calls=Open%20calls&decisions=&subjectArea=all&year=all (Accessed: 15 October, 2021)
[473] https://www.vinnova.se/ (Accessed: 15 October, 2021)
[474] https://familjenkampradsstiftelse.se/ (Accessed: 15 October, 2021)
[475] https://www.norrkoping.se/organisation/ekonomi/norrkopings-fond-for-forskning-och-utveckling (Accessed: 15 October, 2021)

There are some policies measures to Protect aged people in Switzerland[476]

There are regional (cantonal) political **age strategies** (e.g., in Fribourg Canton). However, there are no specific national policies to achieve smart healthy age-friendly environments.

Relevant stakeholders and policy makers

	Local	Regional	National
Health	+Local Health and Care Networks	+	Health Insurances[477] Spitex (Association of all home assistance networks)[478] Association of all retirement homes[479] Alzheimer association[480]
Social	Local subsidiaries of Pro Senectute	Local subsidiaries of Pro Senectute	https://www.prosenectute.ch/de.html Swiss council of older adults[481] Federation of retirees' associations[482]
Built environment	Local subsidiaries of Pro Senectute	Local subsidiaries of Pro Senectute	https://www.prosenectute.ch/de.html
Digitalisation	+	+	https://www.bakom.admin.ch/bakom/en/homepage.html
Development	Local subsidiaries of Pro Senectute	Local subsidiaries of Pro Senectute	https://www.prosenectute.ch/de.html
Education	Local universities of third age	+	https://www.uni-3.ch/de/kontakt
Research	SilverHome Senior Lab iHomeLab CCA SUPSI And many other competences centers of age in the different Swiss universities	+	https://www.age-netzwerk.ch/en/ https://www.gerontologie.ch/
Other: please specify			Access for all[483]
Other: please specify			

[476] https://www.bsv.admin.ch/bsv/de/home/sozialpolitische-themen/alters-und-generationenpolitik/altersfragen.html (Accessed: 15 October, 2021)
[477] https://www.bag.admin.ch/bag/en/home.html (Accessed: 15 October, 2021)
[478] https://www.spitex.ch/ (Accessed: 15 October, 2021)
[479] https://www.curaviva.ch/ (Accessed: 15 October, 2021)
[480] https://www.alzheimer-schweiz.ch/ (Accessed: 15 October, 2021)
[481] https://ssr-csa.ch/ (Accessed: 15 October, 2021)
[482] https://fsr-srv.ch/ (Accessed: 15 October, 2021)
[483] https://www.access-for-all.ch/en/ (Accessed: 15 October, 2021)

(National, regional, local) ecosystem on SHAFE of the partner

Working Group of Gerontechnology in Gerontologie.ch network. Professionals and researchers[484]

(National, regional, local) funding opportunities on SHAFE

Funding schemes at national level (general scope):

- Swiss National Science Foundation[485] (promoting national and bilateral international projects on all research subjects)[486]. (Applied innovation projects, with and without companies, on all subjects)
- AAL projects[487]
- Local funding schemes for older adults:
- Leenaards foundation[488]
- Age-Stiftung[489]

35. Tunisia

Contributor: **Prof. Amine HAJ TAIEB**

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

There some policies measures to Protect aged people in Tunisia

- Loi n°94-114 du 31 octobre 1994, relative à la protection des personnes âgées.
- Décret n°96-1016 du 27 mai 1996, fixant les conditions et les modalités de prise en charge par les familles des personnes âgées sans soutien.
- Décret n°96- 1017 du 27 mai 1996, fixant les conditions d'hébergement dans les établissements de protection des personnes âgées.
- Décret n°96-1766 du 30 septembre 1996, fixant les conditions de création des établissements privésde protection des personnes âgées et les modalités de leur fonctionnement.
- Décret n° 96-1767 du 30 septembre 1996, fixant les conditions et le montant de la contribution de la personne âgée ou de sa famille aux frais des services sociaux et sanitaires fournis à domicile.

Some research studies (master degree) for an interactive space using smart textiles for elder people are in progress under supervision of Prof. Amine HAJ TAIEB. The ultimate goal is to develop interactive as materials for architecture, and to do so through the research of design based on a collaborative practice between the designer of the space, the designer textile and material engineer. Our objective in this research topic is to study the means by which the design could be integrated into an interdisciplinary approach, which makes it possible to open up to new disciplines such as thecollaboration between space design and textile design. how does the design of retirement homes based on interactive textiles create an adaptiveenvironment for the services of elderly people with dementia? To create a new notion of architecture that of the "adaptive

[484] https://www.gerontologie.ch/fr/les-g%C3%A9rontechnologies-pour-une-meilleure-qualit%C3%A9-de-vie-des-personnes-%C3%A2g%C3%A9es (Accessed: 15 October, 2021)
[485] http://www.snf.ch/en (Accessed: 15 October, 2021)
[486] https://www.innosuisse.ch/ (Accessed: 15 October, 2021)
[487] https://www.innosuisse.ch/aal (Accessed: 15 October, 2021)
[488] (Only in French part) https://www.leenaards.ch/ (Accessed: 15 October, 2021)
[489] (Only in German part) https://www.age-stiftung.ch/ (Accessed: 15 October, 2021)

architecture" which responds and reactsto the different requirements of these occupants, especially people with specific needs, such as elderly people with Alzheimer's disease. The means sought by space designers who aim to help olderpeople with dementia, should be built on understanding the needs, expectations and fears while putting the technology in question. Thus, the daily life of this rather specific group of users and their entourage vis-à-vis their daily life in specific places such as retirement homes. How does the interaction between interior design and textiles interactive allow the creation of aspace adapted to the service of people with specific needs for adaptive architecture? By studying the sensory effects of textile designs on users, we think we are committing in a new ideabased on combining interactive textiles with the layout of the interior spaces, in order to achieve a new concept of architecture interior called "Snoezelen" this concept, has the power to match perfectly with monitoring the health and therapy of these people while promoting stimulation sensory in space.

36. Turkey

Contributors: Nimet Ovayolu and Ozlem Ovayolu and Berrin Benli

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

Under the Ministry of Family and Social Policies, there is the Department of Elderly Care Services within the General Directorate of Services for the Disabled and older people.

Relevant stakeholders and policy makers

	Local	Regional	National
Health	Provincial Health Directorate	-	Ministry of Health
Social	Municipality	-	Ministry of Family and Social Policies
Built environment	Municipality	-	Ministry of Environment and Urbanization Policies
Digitalisation	Ministry of Industry and Technology	-	TUBITAK (The Scientific and Technological Research Council of Turkey)
Development	Municipality	-	General Directorate of Disabled and Elderly Services
Education	Provincial Health Directorate	-	Ministry of Health
Research	Provincial Health Directorate	-	Ministry of Health
Other: please specify	-	-	-
Other: please specify			

(National, regional, local) ecosystem on SHAFE of the partner

(National, regional, local) funding opportunities on SHAFE

Monthly payments are made to individuals aged 65 and over by the ministry of family and social policies. Monthly payments are made by the same institution to those who care for elderly people. In addition, municipalities provide free urban transportation for older people.

37. United Kingdom

Contributor: Hannah Marston

(National, regional, local) policies on Smart Healthy Age-Friendly Environments

From a UK standpoint at a national level there really is only the Centre for Ageing Better with the 'Communities' section on their website.

There could be other smaller groups doing other research/policy but this is not easily identifiable.

Relevant stakeholders and policy makers

	Local	Regional	National
Health			
Social			
Built environment			
Digitalisation	What We Do - WaveLength	What We Do - WaveLength	What We Do - WaveLength
Development			
Education			
Research			
Other: please specify			
Other: please specify			

From a UK perspective this is not so easy to complete. Across England you have Age UK, but then in towns and cities there are different franchises such as Age Milton Keynes, Age Teesside, Age Gateshead, Age Leeds. For Wales there is Age Cymru, for Scotland there is Age Scotland, and Age NI (Northern Ireland). Each franchise has its own website. There is the Centre for Ageing Better (CoB) but this organisation focus on specific areas. There is the Manchester Institute for Collaborative Research on Ageing, local to Manchester. The Togetherness hub There are additional organisations that could be reached but it has to be directed.

(National, regional, local) ecosystem on SHAFE of the partner

As far as I am aware there is no direct ecosystem on SHAFE in the UK. Although there are the following:

- Age UK – Age Friendly Communities Guide[490]
- UK Network of Age-Friendly Communities c/o Centre for Ageing Better – with 'eight domains of age-friendly'. Some 40 plus communities listed. Also case studies[491]
- The Older People's Commissioner for Wales supports the development of age-friendly initiatives and the Ageing Well in Wales network. Get in touch with David McKinney for more information.
- Scottish Older People's Assembly (SOPA) exists to give a strong voice to older people about their concerns and experience of life in Scotland, including inequalities of age. Through local meetings and a National Assembly with older people and others, SOPA identifies issues that worry the older population and conveys messages from them direct to Scottish and Westminster Governments via meetings with Ministers, civil servants, politicians, academics, the media and the UK Network of Age-friendly Communities. Get in touch with Chair Diana Findley for more information.
- Age Friendly Barnsley - and more![492] other localised local authority and city initiatives come up. The most prominent for me is Manchester[493]
- Royal Institute of British Architects – Alternative Age-Friendly Handbook[494]. This followed a 2018 design guide written by Sophie Handler (a key person with regard to the UK age-friendly agenda).

[490] https://www.ageuk.org.uk/our-impact/politics-and-government/age-friendly-communities/ (Accessed: 15 October, 2021)

[491] https://www.ageing-better.org.uk/uk-network-age-friendly-communities (Accessed: 15 October, 2021)

[492] https://www.barnsley.gov.uk/services/community-and-volunteering/age-friendly-barnsley/#:~:text=Age%20Friendly%20is%20a%20concept%20that%20was%20developed,to%20their%20communities%2C%20for%20as%20long%20as%20possible (Accessed: 15 October, 2021)

[493] https://www.manchester.gov.uk/agefriendly (Accessed: 15 October, 2021)

[494] https://www.architecture.com/knowledge-and-resources/resources-landing-page/age-friendly-handbook

(National, regional, local) funding opportunities on SHAFE in your country

Funding opportunities at the moment are all via UKRI and the rules for international partners varies depending on the call. I have provided links to 3 specific councils which sit under UKRI which might be most relevant[495].

2021

[495] https://www.ukri.org/ (Accessed: 15 October, 2021

4.3 ANNEX 3 - Points of focus and positions

	Sub-topic	*Country*	*Point of focus and position*
HEALTH	e-Health	Austria	eHealth initiative: information and communication strategy for a modern Austrian healthcare system (recommendation), 2007 IHE Initiative: Association for promoting the integration of IT and medical technologies in the Austrian health care system HEALIX: communication infrastructure for IT applications in the healthcare system ELGA: electronic health records eHealth strategy board: control group for coordinating and accompanying actors in health and social system. AAL Austria
		Belarus	CONCEPT of e-Health Development of the Republic of Belarus for the period up to 20221. E-health is the use of electronic communication technologies for health needs: patient care, training of health workers, detection of diseases and monitoring of public health trends. Approved by the Order of the Ministry of Health of the Republic of Belarus of 20.03.2018. No. 244
		Cyprus	the electronic medical record system was tested at the Nicosia and Famagusta General Hospitals and there is a plan for an organised digital system to monitor hospital internal processes and regional eHealth networks: including aspects of telemedicine, smart homes, and ambient assisted living services. eHealth Lab – University of Cyprus (Constantinos Patichis pattichi@cs.ucy.ac.cy, Christos Schizas, schizas@ucy.ac.cy
HEALTH	e-Health	Denmark	Integrated National eHealth Ecosystem Long Lasting Memories (Dr Marios Neofytou mneoph@cs.ucy.ac.cy) Electronically Care and Social System – messages and documents can be sent between the region/hospitals and the municipalities/elder care system eHealth Platform Columna – joint Clinical Information System across the Region Central Denmark's 17 hospitals1
		Netherlands	The Ministry of Health provides a website showcasing many care and eHealth solutions: Zorg van nu2 (Care at the present) and Zorg voor Innoveren3 (Care for innovation). Ministry of Health: Innovation Impulse4 Care providers people with disabilities. This funding is meant for healthcare providers to implement existing technologies. Netherlands Enterprise Agency (Rijksdienst voor Ondernemend Nederland5): Investment funds Seed capital for e-health start-ups. Especially for upscaling

Strategy	Legislation	Croatia Finland Hungary Iceland Japan Montenegro Spain	(Including Basque strategy of active and healthy ageing)
	Working documents	Bosnia and Herzegovina	World Bank1: Finances the "Health Sector Enhancement Project (HSEP)" in order to repair, reconstruct and furnish the primary healthcare facilities with the aim to improve the family medicine model. Finances the "Reducing Health Risk Factors in B&H" project, which aims to reduce the risk factors of non-communicable diseases. United Nations Population Fund (UNFPA)2: Support the opening of Centres of Healthy Aging in cooperation with Federal Ministry of Health in order ensure healthy ageing and protect mental health and physical activity. (It also supports the "Sexual and Reproductive Health" programme in order to strength the capacities of governments to provide integrated sexual and reproductive health services with a focus on vulnerable populations.) Swiss Agency for Development and Cooperation (SDC)3: Finances the project of "Strengthening of Nursing in B&H", where one of the activities is establishment of the polyvalent patronage nurse (PNN) service that is important for providing the services for the seniors and long-term care. Finances the project "Mental Health Project in B&H", which focuses on improvement of capacities of the competent institutions in order to improve the mental health of the entire population. World Health Organisation/ Europe Office: Implements the project of "Strengthening and Advancing Modern and Sustainable Public Health Strategies, capacities and services to improve population health in B&H" in order to reduce burdens with non-communicable diseases and ensure better health outcome for the B&H population.
		Croatia	In October 2020 in Zagreb the 2020-2024 Strategy for Improving the Quality of Life for Older Persons was presented: "The 30-measure strategy, which was presented on the occasion of the International Day of Older Persons, observed on 1 October, will be implemented in six fields

Strategy

Legislation	Croatia Finland Hungary Iceland Japan Montenegro Spain	(Including Basque strategy of active and healthy ageing)
Working documents	Bosnia and Herzegovina	World Bank496: Finances the "Health Sector Enhancement Project (HSEP)" in order to repair, reconstruct and furnish the primary healthcare facilities with the aim to improve the family medicine model. Finances the "Reducing Health Risk Factors in B&H" project, which aims to reduce the risk factors of non-communicable diseases. United Nations Population Fund (UNFPA)497: Support the opening of Centres of Healthy Aging in cooperation with Federal Ministry of Health in order ensure healthy ageing and protect mental health and physical activity. (It also supports the "Sexual and Reproductive Health" programme in order to strength the capacities of governments to provide integrated sexual and reproductive health services with a focus on vulnerable populations.) Swiss Agency for Development and Cooperation (SDC)498: Finances the project of "Strengthening of Nursing in B&H", where one of the activities is establishment of the polyvalent patronage nurse (PNN) service that is important for providing the services for the seniors and long-term care. Finances the project "Mental Health Project in B&H", which focuses on improvement of capacities of the competent institutions in order to improve the mental health of the entire population. World Health Organisation/ Europe Office:

[496] https://www.worldbank.org/en/country/bosniaandherzegovina (Accessed: 15 October, 2021)

[497] https://www.unfpa.org/ (Accessed: 15 October, 2021)

[498] https://www.eda.admin.ch/deza/en/home/countries/bosnia-herzegovina.html (Accessed: 15 October, 2021)

Croatia	Implements the project of "Strengthening and Advancing Modern and Sustainable Public Health Strategies, capacities and services to improve population health in B&H" in order to reduce burdens with non-communicable diseases and ensure better health outcome for the B&H population. In October 2020 in Zagreb the 2020-2024 Strategy for Improving the Quality of Life for Older Persons was presented: "The 30-measure strategy, which was presented on the occasion of the International Day of Older Persons, observed on 1 October, will be implemented in six fields
Czech Republic	Working document summarizing the area of assistive technologies and the possibilities of their use in social, health and informal care systems (Pracovní dokument shrnující oblast asistivních technologií a možností jejich využití v systémech sociálních, zdravotních a v systému neformální péče)499.
Norway	"Innovasjon i Omsorg" [Innovation in Care] the Norwegian Government set the stage for development of policies and solutions to enable aging in place. Leve Hele Livet"500 (A full life - all your life — A Quality Reform for Older Persons) was launched to share Best Practices, and a campaign to reform and improve in areas of early intervention, prevention and cooperation The PAN.DEM study, nested in the stepped-wedge randomized controlled multicomponent intervention LIVE@Home.Path trial (financed by RCN) for home-dwelling PwD shows, found that more than 70% of PwD in the study have access to technology at home501,502. However, this is mainly traditional equipment such as stove guard and safety button. Solutions such as GPS, automatic light, fall detectors are not yet available for all PwD living at home or in nursing home, as municipalities can be hesitant and home care services lack motivation. The interest in technology at home by informal caregivers has increased with only 17% during the COVID-19 pandemic, signalizing hesitation and reluctance in older people generation. This highlights the needs for early, individual education for the patients and their Informal and formal caregivers. Digital health literacy could be an priority
Portugal	Estratégia Nacional Para o Envelhecimento Ativo e Saudável 2017-2025 [National Strategy for Active And Healthy Aging 2017-2025]

499 http://www.podporaprocesu.cz/pracovni-dokument-shrnujici-oblast-asistivnich-technologii-a-moznosti-jejich-vyuziti-v-systemech-socialnich-zdravotnich-a-v-systemu-neformalni-pece/ (Accessed: 15 October, 2021)

500 https://www.regjeringen.no/en/dokumenter/meld.-st.-15-20172018/id2599850/ (Accessed: 15 October, 2021)

501 Husebo BS, Allore H, Achterberg W, Angeles RC, Ballard C, Bruvik FK, et al. LIVE@Home.Path-innovating the clinical pathway for home-dwelling people with dementia and their caregivers: study protocol for a mixed-method, stepped-wedge, randomized controlled trial. Trials. 2020;21(1):510. (Accessed: 15 October, 2021)

502 Gedde MH, Husebo BS, Erdal A, Puaschitz NG, Vislapuu M, Angeles RC, et al. Access to and interest in assistive technology for home-dwelling people with dementia during the COVID-19 pandemic (PAN.DEM). Int Rev Psychiatry. 2021:1-8. (Accessed: 15 October, 2021)

	UK	Royal Institute of British Architects – Alternative Age-Friendly Handbook503. This followed a 2018 design guide written by Sophie Handler (a key person with regard to the UK age-friendly agenda).
Platforms	Austria	Austrian Interdisciplinary Platform on Ageing (ÖPIA)504
	Denmark	Digital Health Strategy in Denmark. Cooperation in an integrated network focused around citizens.
	Romania	The SMART BEAR platform will be connected to hospitals and other healthcare services in order to obtain all the information necessary to make the right personalized decisions
	EU	AGE Platform Europe, The voice of older persons at EU level505 EBC (European Brain Council), promotes brain research with the ultimate goal of improving the lives of the estimated 179 million Europeans living with brain conditions506 AAL Europe507
Programs	Croatia	The National Program on Palliative Care Development in Croatia 2017-2020 (hereinafter: National Program),
	Hungary	Charter of the Seniors - Establishment of the Council of older people No. 1712/2014 (XII.5.) government decision. Includes the Hungarian Program of the European Year for Active Aging and Intergenerational Solidarity including: Active Ageing Conference, Generations at School, Let's Rest Together, Get a move, Mama, Day of Older Persons, Methodology Conference on Ageing, Cross-Border Cultural and Art Competition for the Seniors 2013, “Ki MIT TUD” – Who knows What -2013, 2015.) “Kor-Társ” Cohorts – Community Ageing Programs.
	Iceland	EFOP Plus program is the candidate. Human resources development includes social and medical care, (elderly) education programs, societal inclusion programs, electronically supported public services. Secondarily, the TOP Plus program can finance Settlement development programs, thirdly the healthy environment projects can be financed from the KEHOP Plus program The Welfare Technology Center aims to test and efficiently implement new welfare technology and provide the Welfare Department's staff and citizens with knowledge and advice. The introduction of welfare

[503] https://www.architecture.com/knowledge-and-resources/resources-landing-page/age-friendly-handbook
[504] http://www.oepia.at/en (Accessed: 15 October, 2021)
[505] https://www.age-platform.eu/ (Accessed: 15 October, 2021)
[506] https://www.braincouncil.eu/ (Accessed: 15 October, 2021)
[507] http://www.aal-europe.eu/ (Accessed: 15 October, 2021)

		technology increases security and flexibility in services and gives senior citizens and their families a more active role in its implementation.
	Ireland	Age Friendly Ireland HSE Ireland Positive Ageing Programme508: Irish Department of Reform and Expenditure - Prevention and Early Interventions Supporting Health and Wellbeing in Older Age509: Irish National Positive Ageing Strategy510: TILDA
	Japan	2015 “Comprehensive strategy for promoting dementia measures toward community development that is friendly to elderly people with dementia” (New Orange Plan)
		2015 “Comprehensive strategy for promoting dementia measures toward community development that is friendly to elderly people with dementia” (New Orange Plan)
	Portugal	The Municipality of Covilhã in the TOGETHER project has developed procedures for implementation of indicators of wellbeing and to enhance citizen’s participation in it.511
Digitalisation	Germany	Eighth Ageing Report of the Federal Government is focusing on digitalisation as a strategy to improve the life quality of senior citizens in Germany, while it also includes measures to increase independence of the older adults, such as smart homes
	Iceland	Policy of digital solution of the Welfare Department of the City of Reykjavik – 2018-2022 The Welfare Department of the City of Reykjavik developed the strategy of implementing the new technology to facilitate the support of elderly people, improve their quality of life and enable them to live longer in safeness at their home.
	Norway	Nasjonalt velferdsteknologi program» has been a flagship Initiative to stimulate implementation and wide adoption of digital tools. This national strategy is a collaboration between the Norwegian Association of Local and Regional Authorities (KS), the Directorate of eHealth and the Norwegian Directorate of Health Strategic Plan of Lifelong Learning (2015)512: The goal is to create a society that promotes the lifelong learning of all its citizens, regardless of their starting level, social conditions or age.

[508] https://www.hse.ie/eng/about/who/healthwellbeing/our-priority-programmes/positive-ageing/

[509] https://igees.gov.ie/wp-content/uploads/2019/10/PEIU_FPA_PEI-Supporting-Health-and-Well-being-in-older-age.pdf (Accessed: 15 October, 2021)

[510] https://www.gov.ie/en/publication/737780-national-positive-ageing-strategy/ (Accessed: 15 October, 2021)

[511]https://urbact.eu/sites/default/files/import/Projects/Together/outputs_media/TOGETHER_LAP_Covilh%C3%83%C2%A3.pdf (Accessed: 15 October, 2021)

[512] Strategic Plan of Lifelong Learning (2015). (Accessed: 15 October, 2021)

	Spain	Cloudy: a digital ecosystem made up of different engines to promote the health and security of the house of older people and dependent people, though a voice interface, Machine Learning and Artificial Intelligence.
Support services	Croatia	Ministry dealing with Family and Social Policy provides various support services, such as: -providing community-based housing (more than 1,000 service users included), -assistance at home, personal assistant (over 1,700 users of service, including people over the age of 65), -a sign language interpreter (employing 80 interpreters of the sign language who provide service to older people with hearing impairment), -assistant with healthy vision (35.5 assistants employed who provide service to older people over 65 years, as well).
	Czech	Life90 / Gerontological Institute (Život 90) a regional and local community centre, providing various types of services, educational and cultural activities and respite care. They are pioneers in the provision of emergency red button for older adults supported by the 24/7 telephone support and supervision. Via their Gerontological Institute they are involved in various types of senior advocacy and policy lobbing. In cooperation with the Masaryk University and Czech Technical University in Prague CIIRC they are testing the humanoid robot Pepper for the community usage and active ageing support
	Denmark	APP's Café – older people and other's meet for helping each other with all kind of APP'sAppsCafé513 Vito – App for older people to find solutions/technologies for having a good life/wellbeing in their homes and on own conditions
	Hungary	Web nurse is the companion in home care: https://webnover.hu/ Elderly-friendly housing program in Győr Dementia-friendly urban development project in Mosonmagyarovar Helping Hands Infocommunication Model Program National Government Program (use of IT tool) Language learning of older people Third age university: http://www.harmadikkoregyeeme.hu/alapitvany.html University of retirement age: https://nye.sze.hu/a-nyugdijas-egyemrol Telenor's innovations in telephones serving the safety of older people: https://www.telenor.hu/sajto/kozlemeny/az-idosek-biztonsagat-szolgaljak-a-telenor-ujitasai

[513] aarhus.dk (Accessed: 15 October, 2021)

	Subscription based or mixed (free and subscription based) services which can be self-finance for the continuous maintenance of the service. The project514 plans to provide free services to the patients, while collect subscription fee from medical institutions. The Hungarian Health Insurance Fund in 2020 allowed e-Connections to be reimbursed, like personal check-ups.
Netherlands	The Ministry of Health fosters acceleration programmes to exchange information between care professional, patient, professional networks and between the care domains long term care and acute care (VIPP – Versnellingsprogramma Informatie-uitwisseling Patiënt en Professional InZicht). More information on the Zorg van Nu website.
Norway	The Ministry of Health and Netherlands Enterprise Agency offer the e-Health at home funding programme 'Stimuleringsregeling e-health Thuis515 (SET). SET fosters scaling up and implementation of the use of existing e-health applications for older adults and people with a chronic disease or disability at home. The funding is available for care professionals who facilitate care and support at home and wants to cooperate with a purchaser.
Spain	Support for informal caregivers, tools for targeted information, sharing and preparing for altered roles, e.g., demonstration of tools and service – Almas Hus516, AAL projects like CarerSupport517, SUCCESS518 catalogue of services for senior citizens and the budget, an effort to integrate the various programmes and projects that are already operational, mostly under Barcelona City Council's Area for Social Rights VinclesBCN: A service offered by Barcelona City Council's Area of Social Rights that uses new technologies to reinforce the social relationships of senior citizens who feel lonely by improving their wellbeing. SeniorLab: Project led by Citilab, Fundació i2cat, University of Barcelona and University of Older People in Cornella to incorporate the innovation capabilities of older people for the design and construction of new technologies. Remote monitoring of patients: A service provided by Telefonica to allow the control and monitoring of patients with chronic diseases, such as diabetes, heart failure and hypertension, to contribute to a more efficient model of health assistance with fewer costs.

[514] www.dokivideo.hu (Accessed: 15 October, 2021)
[515] rvo.nl/subsidies-regelingen/stimuleringsregeling-ehealth-thuis-set (Accessed: 15 October, 2021)
[516] https://www.oslo.kommune.no/etater-foretak-og-ombud/helseetaten/senter-for-fagutvikling-og-forskning/almas-hus/#gref (Accessed: 15 October, 2021)
[517] http://www.aal-europe.eu/projects/carersupport/ (Accessed: 15 October, 2021)
[518] http://www.aal-europe.eu/projects/success/ (Accessed: 15 October, 2021)

R&D	Centres of expertise	Belgium	Fall and fracture prevention519 Dementia520 Healthy Living521 Informal care522
		Hungary	Gerontology Science Coordination Center
		Iceland	Organisation for people suffering of Alzheimer523 Organisation for Parkinson disease
		Lithuania	The aim of the National Science Program "Healthy Aging" is to comprehensively analyse and solve the issues of biomedicine and social medicine of healthy aging
	Research	Cyprus	TILEPROMITHEAS – Transforming care for those in intensive care units (Dr Theodoros Kyprianou, kyprianou.t@unic.ac.cy SHAPES_Smart and Healthy Ageing through People Engaging in Supportive Systems (University of Nicosia-research foundation (Andreas Andreou (UNRF), Constandinos X. Mavromoustakis (UNRF)
		Finland	Finnish Society for Growth and Ageing Research524 the Social Policy Association in Finland525 , University of the Arctic two working group (Social work and Ageing and Gender in the Arctic526,). She is also involved in CareSam etc.
		Hungary	Is old age a process or disease?527; On the Wavelength of Fisher Kings: Experiences of older people Related to Religious Events528; SKYPE in Elderly Care: Experiences from an Intervention Research529; Learning in old age530; Analysis of the possibilities of increasing the activity rate of social groups with low

[519] https://www.valpreventie.be (Accessed: 15 October, 2021)
[520] https://www.dementie.be (Accessed: 15 October, 2021)
[521] https://www.gezondleven.be (Accessed: 15 October, 2021)
[522] https://www.mantelzorger.be (Accessed: 15 October, 2021)
[523] www.alzheimer.is (Accessed: 15 October, 2021)
[524] https://www.gerontologia.fi/finnish-society-growth-and-ageing-research (Accessed: 15 October, 2021)
[525] https://sosiaalipoliittinenyhdistys.fi/in-english/ (Accessed: 15 October, 2021)
[526] https://www.uarctic.org (Accessed: 15 October, 2021)
[527] http://www.beteghuone.hu/hirek/az_oregkor_flamat_vagy_betegseg/ (Accessed: 15 October, 2021)
[528] https://eco.u-szeged.hu/download.php?docID=39995 (Accessed: 15 October, 2021)
[529] http://www.esely.org/kiadvanyok/2012_2/szeman.pdf (Accessed: 15 October, 2021)
[530] https://ofi.oh.gov.hu/tudastar/bajusz-klara-idoskori (Accessed: 15 October, 2021)

	Moldova	economic activity531; Elderly-friendly cities, places, communities: 2016-2_3-1_Szeman_Idosbarat_varosok.pdf (esely.org); Healthy aging532; On the way to old age
	Poland	AESM Seniors Association personally and/or with the support and management of the research work carried out by the intergenerational staff of the AESM and the Partners Senior Hub - Institute of Ageing Policy is the first research and advisory unit in Poland dealing with topics in the area of ageing policy conducted at the national, regional and local level
	Portugal	Ageing Thinking Amadora -A.T. Ageing@Minho -University of Minho ALICE –Ageing Longer Integrated Care Environment Lisbon Ageing Well Lisbon_AHA Porto4Ageing Reference Site, University of Porto
	Spain	Region of Algarve Reference Site533 Diacare: The project will provide support and monitoring tools for the optimum follow-up and management of diabetes. Strack: To improve the management of a post-stroke a mobile technology-based solution is proposed to create a support digital ecosystem for patients and healthcare professionals
	Sweden	Empoc: Technologic solutions to facilitate the management of the Chronic Obstructive Pulmonary Disease (COPD) based on the unsatisfied needs of the patients and health professionals AEQUALIS, for improvement in health for elderly people in disadvantages areas through self-care, health literacy and social capital: The AEQUALIS study aims to reduce health inequalities through an intervention that promotes self-care, health literacy and social capital in elderly people living in socio-economically disadvantaged areas. FORTE – Swedish Research Council for Health, Working Life and Welfare534. It funds research projects in the field of health, working life and welfare.
Housing	Austria	https://www.aal.at/pilotregionen-3/ (Accessed: 15 October, 2021)

[531] 20190109_agat Court of Audit.pdf (Accessed: 15 October, 2021)

[532] https://www.etk.pte.hu/protected/OktatasiAnyagok/%21Palyazati/sport2/EgeszsegesIdosodesJ.pdf

[533]https://ec.europa.eu/digital-single-market/en/reference-sites-european-innovation-partnership-active-and-healthy-ageing (Accessed: 15 October, 2021)

[534] https://forte.se/en/ (Accessed: 15 October, 2021)

Housing		Belgium	The Austrian Research Promotion Agency FFG funds test regions with the aim of developing system solutions that enable smart home applications in terms of comfort and lifestyle elements as well as support and care Adaptable housing[535]
		Denmark	Age-friendly housing[536] House for Generations – Big building with flats with many digital solutions and facilities for both older people and families, students and a kindergarten live together Generationernes Hus (aarhus.dk)
		Finland	Hoivatilat Plc specialises in producing, developing, owning and leasing out day-care centres and nursing homes, as well as service blocks. We solve the spatial needs of growing municipalities and service companies looking for growth without them needing to make their own investments[537] . This is a problematic actor since it moves transnational funds, invests locally and takes the profits out of the country. These profits stem predominantly from municipalities that need the space for service provision. Municipalities use tax funds and Hoivatilat is a means to steer tax funds out of the country. Hypo is the only credit institution in Finland that specialises in housing[538] Loppukiri (Final sprint) is a housing community in Helsinki for those aged 48 and over[539]
		Hungary	ARA The Housing Finance and Development Centre of Finland grants subsidies for improving the housing conditions of groups with special needs
		Spain	Signaling home help for older people living in their own home, in need because of their health and social status, who are able to use the emergency call device properly nationwide (emergency call, application for relatives, the insured is always available through the emergency call): https://www.soskozpont.hu/?gclid=cj0kcqjwp86ebhd7arisafkgakifoyhljhevxzltztkpwswwdw6i1j-1ixqzm1wl9h8zl897lbtruteaarpcealw_wcb Jubilares[540]: model of senior co-housing implemented in Spain.
Older Adults	Networking	Bosnia and Herzegovina	Informal Network of NGOs for the Protection of the Rights of older people - "FOR DIGNIFIED AGING"[541].

[535] http://www.meegroeiwonen.info (Accessed: 15 October, 2021)
[536] http://www.dezilverensleutel.be (Accessed: 15 October, 2021)
[537] https://hoivatilat.com/ (Accessed: 15 October, 2021)
[538] https://www.hypo.fi/en/in-english/ (Accessed: 15 October, 2021)
[539] https://www.loppukiri.com/ (Accessed: 15 October, 2021)
[540] http://www.jubilares.es/ (Accessed: 15 October, 2021)
[541] http://dostojanstvenostarenje.org/ (Accessed: 15 October, 2021)

participation	Czech Republic	ECHAlliance 542 : ECHAlliance Ecosystems are geographically focused, permanent, multi-stakeholder partnerships committed to break down silos, transform health and social care and create economic growth. For the last ten years with the support of the European Commission, we've developed a methodology and approach on how to set up and manage and connect ecosystems in 55+ global locations.
	Finland	Fund Sitra defines itself as follows: Sitra is an accountable and independent future-oriented fund that is influential nationally and internationally and acts as a think tank, promoter of experiments and operating models and a catalyst for co-operation.
	General networkings	the World Health Organisation's (WHO), the Global Network of Age-Friendly Cities and Communities, or the World Network of Elderly Cities.
	Ireland	4th Joint eHealth Ireland and Northern Ireland Connected Health Ecosystem Gathering
	Italy	"Progetto di coordinamento nazionale partecipato multilivello delle politiche sull'invecchiamento attivo"543 Italian Regions has been awarded as Reference Site of the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA)
	Moldova	Civic Association „Union of Pensioners of Moldova" with the support of Civic Association "Parliament 90" and the Association "AESM Seniors" of the Academy of Economic Studies of Moldova aims to develop and carry out a program for the construction and management of the Ecosystem for Elderly of Moldova
	Netherlands	The Ministry of Health fosters acceleration programmes to exchange information between care professional, patient, professional networks and between the care domains long term care and acute care (VIPP – Versnellingsprogramma Informatie-uitwisseling Patiënt en Professional InZicht). More information on the Zorg van Nu website. Dutch universities, Erasmus University Rotterdam, Erasmus MC and TU Delft, are cooperating to develop a joint eco-system1 to address the major social challenges in the SMART, HEALTH, BUILT and even BUSINESS fields "Nasjonalt velferdsteknologi program» has been a flagship Initiative to stimulate implementation and wide adoption of digital tools. This national strategy is a collaboration between the Norwegian Association of

[542] https://echalliance.com/ (Accessed: 15 October, 2021)

[543]"Project of Multilevel Participative National Coordination for AHA policies" http://famiglia.governo.it/it/politiche-e-attivita/invecchiamento-attivo/progetto-di-coordinamento-nazionale/ (Accessed: 15 October, 2021)

A project coordinated by the Italian Government Department for Family and the Istituto Nazionale Riposo e Cura per Anziani IRCSS INRCA https://www.inrca.it/ (Accessed: 15 October, 2021)

Norway	Local and Regional Authorities (KS), the Directorate of eHealth and the Norwegian Directorate of Health. The purpose is to contribute to more municipalities will apply welfare technologies to improve public services for older people living at home or in institutions. About 75% of the around 360 municipalities have participated in several projects testing various technologies, gaining experience and systematic knowledge. Ageing@Coimbra is a consortium which aims to enhance the role of older people in society and the application of best practices that benefit their general well-being and active and healthy aging
Portugal	ROHEALTH (Silver Cluster) has currently 77 members, including: 42 innovative SMEs from Health and Bioeconomy for Health, 10 Universities (5 of Medicine), 6 Hospitals, 6 National Research Institutes, NGOs and physical persons, covering expertise in R&D, training, couching entrepreneurs, consulting services, internationalization and technological transfer and is under evaluation by ESCA for Gold Label Award544
Romania	MEDRo network - Romanian Network of Clusters in the medical field545 a network that includes all health clusters in Romania having as first objective the awareness at national level of the importance of financing the health field from the perspective of research and innovation Age-friendly, accessible and intelligent cities (2014)546: Proposes a reflection on how to respond to the needs of older people and people with functional diversity in this new city model
Spain	Alella, caring community (Alella poble cuidador): This project wants to create a compassionate community network People Centered Care Model (PCCM), SUMAR Project: The goal is to improve the quality of life of older people in residential and day care centres, Accessible City (La Ciudad Accesible): online search engine specifically related to accessibility that includes four interactive portals and sixteen interactive websites in which users, administration experts and social entities can connect among each other to promote solutions and good practice around universal accessibility and inclusive design.
UK	UK Network of Age-Friendly Communities c/o Centre for Ageing Better Age UK – Age Friendly Communities Guide547

[544] https://rohealth.ro/en/about-us (Accessed: 15 October, 2021)
[545] www.rohealth.ro/medro (Accessed: 15 October, 2021)
[546] (Accessed: 15 October, 2021)
[547] https://www.ageuk.org.uk/our-impact/politics-and-government/age-friendly-communities/ (Accessed: 15 October, 2021)

Small scale initiatives	Belgium	The decree 'local social policy' (Art. 4 and 7) 548 supports municipalities in the realisation of a local social policy and stimulates municipalities to adopt a leading role. Municipalities are encouraged to develop a well-supported, integral and inclusive (local) social policy, in cooperation with local actors and the local population. In order to realise a good local social policy, the municipalities need to formulate policy objectives in relation to the local needs and involve and stimulate participation of their citizens in policy preparation and implementation. Therefore, the majority of Flemish municipalities have a local advisory council for older adults.
	Norway	There are several regional / county-based "Centre for Development of Institutional and Home Care Services"549 with priority areas, dedicated to service development and quality improvements, to follow up on the "A full life - all your life" initiative and engage in the effort for age-friendly communities
Senior Citizens Council	Austria	Austrian Senior Citizens Council
	Belgium	The majority of Flemish municipalities have a local advisory council for older adults. The advisory council can signal local difficulties and challenges to the local government
	Finland	Participatory budgeting
	Germany	BAGSO – Bundesarbeitsgemeinschaft der Seniorenorganisationen (Federal Working Group of Senior Citizens' Organisations).
	Iceland	Council of elderly people of the City of Reykjavik responsible for counselling services for elderly people older than 67
	Ireland	
	Spain	National Advisory Group comprising senior representatives from Government Departments and agencies
	UK	Decree 31/2014, 11 of March, on the creation of the Council of older people of Catalonia, which will be consulted by various public administrations. Scottish Older People's Assembly (SOPA)

[548] https://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1029068&param=inhoud&ref=search&AVIDS=
[549] https://www.utviklingssenter.no/topmeny/english (Accessed: 15 October, 2021)