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1 Introduction

1.1 Background to the Case Study

Slovenia hosted the sixth ITHACA Exchange of Experience and Peer Evaluation (EEPE) event on 2-4 October 2018. EEPE event was hosted by Slovene partner, Centre for Social Informatics at the Faculty of Social Sciences, University of Ljubljana. The programme was comprised of series of presentations, practical demonstration of Slovene solutions for smart health and care, discussions between speakers and delegates and site visits to inform the visiting delegation of experts[1] what is the situation in Slovenia in relation to the ITHACA project objectives to accelerate the scaling up of smart health and care solutions for active and healthy ageing whilst aiming to achieve the triple win of economic growth, more sustainable health and care systems and improved well-being of all citizens. The EEPE concluded with an interactive and structured peer evaluation session with the presence of representatives of Slovenian policymakers.

The EEPE was structured around three pillars that are the key to achieving progress on the ITHACA project goals. These were Slovenian:

- strategic and policy framework;
- ecosystems for scaling up smart health and care solutions; and
- experience across the innovation cycle (invention, co-creation, market testing, validation and scaling-up).

1.2 Methodology

This case study is informed by and derives from:

- documentation provided by Slovene stakeholders before and during the EEPE event – including strategy documents, evaluation reports and promotional materials;
- the information and evidence presented and demonstrated during the event – including PowerPoint presentations;
- peer evaluation feedback from visiting delegates presented during the EEPE's concluding peer evaluation and follow-up, written reports.

Slovene stakeholders were briefed to provide information that would help 37 visiting delegates to understand the Slovenian policy, activity and infrastructure and make informed assessments of their strengths and weaknesses. On September 19, we organised national stakeholder meeting with event organizers, key Slovenian stakeholders, representatives of Long-term care directorate at the Ministry of Health, representatives from the Ministry of Labour, Family, Social Affairs and Equal Opportunities, and lead partner representative, Marielle Swinkels. See section 2.1 for a more detailed description.

Equally, the visiting delegates were briefed about the peer evaluation process (see section 6.1). This enabled them to act as an "evaluation and feedback team" and to provide structured feedback to the hosts about what they saw and learnt. In this context, visiting ITHACA delegates brought their own knowledge and experience and, with the benefit of a fresh eye, they provided Slovenian partners and stakeholders with an expert critique and recommendations about the country's approach. It provided

[1] 37 delegates from 8 ITHACA regions attended the Slovenian EEPE: 3 from Baden-Wuerttemberg (Germany), 5 from Basque Country (Spain), 4 from Friuli Venezia Giulia (Italy), 6 from Liverpool (United Kingdom), 3 from Malopolska (Poland), 10 from Noord-Brabant (Netherlands), 3 from Nouvelle-Aquitaine (France) and 3 from Zealand (Denmark).

a forum to engage in a mutual discussion about visiting delegate perceptions and flagged up implications for policy and practice going forward. The verbal and written insights of visiting delegates emerged through the peer evaluation process and have influenced and added considerable value to the content of this case study.

1.3 Structure of this Case Study

This report describes the Slovenian approach to active ageing and measures for scaling up smart solutions for health and care, innovative Slovene solutions for smart health and care, and experiences across innovation cycle, social innovations, and state-of-the-art of Slovenian networks and ecosystems on health and care, along with highlighting the expert feedback from the ITHACA delegation. Section 2 outlines the preparatory activities for the EEPE event and the course of the event. Section 3 highlights the regional strategies, policies and pilots that shape and drive the (smart) health agenda. Section 4 highlights the Slovenian networks and ecosystems. Section 5 focuses on the innovation cycle and the range of initiatives and innovations, including social innovations, which were presented during EEPE event. Section 6 summarizes the assessment provided by visiting experts and key findings and presents the case study's recommendations.

2 Slovenian EEPE

2.1 Preparatory stakeholder meeting

The preparatory stakeholder meeting for the Slovenian EEPE event was organised on September 19. Three main objectives and agenda points of the meeting were:

- Discussion on the agenda between project partner organisation members, external expert involved in the organisation (Drago Rudel, PhD), and the representative of lead partner, Marielle Swinkels.
- Discussion on the topics for the discussion with presenters and visitors after EEPE presentations.
- Discussion with key Slovenian stakeholders, representatives of Long-term care directorate at the Ministry of Health, representatives from the Ministry of Labour, Family, Social Affairs and Equal Opportunities, and Marielle Swinkels with an aim to set the outline of the policy section of the EEPE event and final discussion topics.

Mutual challenges, issues and questions, which are important for all ITHACA regions and were discussed with Slovene policy makers are:

- Lack of learning culture and how to connect stakeholders from the start in transformation and innovation processes? How to become more secure as a government in using a practice-based learning approach? In Slovenia we have two calls for national pilots. This approach is a good example of using a practice-based learning approach to find out how the new law and eCare solutions could be implemented and work in practice. Does everyone experience it in this way, or are we more experienced in organising successful pilots and preventing failures on beforehand?
- How to reach a more integrated policy approach that entails health, informal care, social care, health care and eCare? How to overcome the silo and start working together? What kind of practical struggles in terms of capacity, time and political commitment need to be overcome and how can this be achieved? What if the national pilots could be more organised in an integrated way? Should we present good practices of the health and social care field? What do these mean for the organisation and structuring of the national pilots in a more integrated way?
- How to realize an impact driven approach with proper monitoring to support the learning and under build the outcomes for the policy improvement process? How to show the real impact of our strategy of change and interventions that we do, e.g. national pilots?
- Should we emphasize the importance of informal care?

Given the fact that Slovenia is still in its infancy regarding the use and development of smart solutions for healthy and independent living, the three key identified challenges/questions to be discussed in the debate during the EEPE event were:

- ***How to connect stakeholders from the start in transformation and innovation processes?*** How to stimulate interaction among developers, scholars, social & health care providers, technology & housing providers, users and formal carers, etc. We are realising that we need to foster partnerships among different stakeholders so that they are involved in decision-making process.

  - How to create a strong coalition of the willing?
  - How to build fruitful learning culture?
  - How can we make sure that regional and local stakeholders are involved in decision-making process?
- ***How to create the sense of urgency and create collective awareness?*** It seems that a prerequisite for that are determined policy-makers at the right positions with mandates to make real changes and persistent, positive-thinking stakeholders.
  - How to get the attention from policy makers?
  - We would need a strong policy framework and comprehensive strategic planning, the aim of which would be to support planning and implementation of (also ICT-supported) healthcare and social care services. How to mobilise proactive stakeholders?
  - How can different types of proactive stakeholders, including the policy-makers, be heard?
- ***How to realise an impact driven approach with proper monitoring to show the real impact of the interventions (e.g., those that were presented)?*** We need to demonstrate the impact of the practice-based learning, we need to measure and monitor outcomes so that evidence-informed policy measures would be possible.
  - How to become more secure as a government in using a practice-based learning approach? For example, in Slovenia we have two calls for national pilots. This approach is a good example of using a practice-based learning approach to find out how the new law and eCare solutions could be implemented and work in practice. Does everyone experience it in this way (i.e. close to participatory action research), or is it more experienced as organising successful pilots and preventing failures on beforehand? How to share/communicate the results of the impact assessment?
  - Decisions about the development and implementation of eCare and eHealth solutions need to be made on the basis of a clear understanding of the costs and benefits – how to develop a sound framework for impact assessments?

2.2 EEPE event

The sixth EEPE event begun with the short introduction in the evening of October 2nd 2018 in the Chamber hall at the University of Ljubljana. After the welcome speech by the head of International Research Projects unit at the Faculty of Social Sciences, Mrs. Irena Brinar and head of the project at the University of Ljubljana, assoc. prof. Vesna Dolničar, PhD, participants listened to the presentations of Slovenian health and long-term care systems, current state-of-the-art in the fields of eHealth and eCare (presentation by Mrs. Živa Rant from National Institute of Public Health), and uptake of eHealth and eCare services in Slovenia. At the end, representative of the Liverpool partner, Jon Dawson, briefed the delegates about the peer evaluation process.

In the morning of the second day, October 3rd 2018, which took place in parallel with the Festival for the Third Age in Cankarjev dom, about 35 foreign delegates from project partner regions and around 30 Slovene guests, were welcomed by assoc. prof. Vesna Dolničar, PhD, Mrs. Ulla Hudina Kmetič (European Commission Representation in Slovenia), Mrs. Marija Pukl (Slovene Federation of Pensioners' Associations) and Mr. Davor Dominkuš (Ministry of Labour, Family, Social Affairs and Equal Opportunities). Afterwards, during the session hosted by representative of the lead partner (Noord-Brabant) Marielle Swinkels and Vesna Dolničar, PhD, delegates got acquainted with Active Ageing

Strategy (Aleš Kenda, Ministry of Labour, Family, Social Affairs and Equal Opportunities), current challenges in the field of long-term care (Andreja Rafaelič, PhD and Isabelle Querrioux, MD, Long-term Care Directorate at the Ministry of Health), call for the national ICT pilot project by Ministry of Labour, Family, Social Affairs and Equal Opportunities (Urška Stepanek), and evaluation plan/strategy of the pilot project in the field of long-term care (Anita Jacović, Long-term Care Directorate at the Ministry of Health). After the presentations, Marielle Swinkels moderated the discussion with delegates and presenters, during which some points of the presentations were further highlighted and discussed.

The second part of the morning of the second day of the EEPE was moderated by Drago Rudel, PhD. During his session, eight representatives of Slovenian enterprises (SRC Infonet, Mikropis, iHelp, Eurotronik, Gospodar zdravja, Feelif, Spominčica and Mediainteractive) presented their innovative health and care solutions. After the presentations, delegates had a chance to see the functioning of the presented solutions at the stands.

The afternoon part was hosted by the University Medical Centre. After the welcome speeches by Aleš Šabeder (CEO), prof. Jadranka Buturović Ponikvar, PhD (Medical Director) and Dominika Oroszy, MD (Assistant of Medical director for Quality), Mrs. Oroszy presented the development of a smart system of integrated health and social care in the EKOSMART project. Her presentation was followed by presentations on practical applications of innovative solutions: telemedicine services for patients with chronic heart failure (Gregor Poglajen, PhD, Department of Cardiology), robotic surgery in urology, at the Department of Urology at the Division of Surgery (Simon Hawlina, Urology Consultant), tele-stroke program (Matija Zupan, PhD, Department of vascular neurology and intensive care, Neurology Division), Medical Simulation Centre (Dušan Vlahovič, MD, Head of Medical Simulation Centre) and e-Care by Telekom Slovenije (Elena Nikolavčič, eCare and eHealth, Telekom Slovenije).

Third day begun with a trip to University Rehabilitation Institute, where prof. Zlatko Matjačić, PhD, presented their research and development in the field of rehabilitation after stroke and IRIS smart home. Afterwards, delegation moved to European Union House, where prior to feedback, two sessions took place. The first, the presentation of the ecosystems in the field of eCare and eHealth in Slovenia was hosted by Gregor Cuzak. The following ecosystems were presented: ECHAlliance/Healthday.si (Gregor Cuzak, ECHAlliance), Ljubljana Technology Park – Initiative Start:Up Slovenia (Mojca Cvirn, Technology Park Ljubljana), EkoSmart (Aleš Smokvina, Marand), Slovenian Coalition for public health, environment and tobacco control (Mihaela Lovše, "NGOs protect our health" project) and Network NVO 25×25 – a network of non-governmental organisations in the field of health (Franc Zalar, Slovenian association for Cardiovascular Health). In the second session, the innovative solutions providing social assistance to older adults were presented. Presenters in the session hosted by Simona Hvalič Touzery, PhD, were representatives of the following end-user origination: Slovene Federation of Pensioners' Associations: Elderly for the elderly project, Simbioza Genesis, social enterprise: Simbioza BTC City Lab - innovative hub of technology for older adults, Oreli Institute: Innovative model for supporting older people in the local community, Slovene Philanthropy, Association for promotion of voluntary work: The program of intergenerational community centers, Peter Uzar home for older people: Holistic approach to care for people with dementia in the home for older people, and Anton Trstenjak Institute for Gerontology and Intergenerational Relations: The Slovenian Network of Age-friendly Cities and Communities. The morning part of the second day of the event was concluded with the presentation of the telemedicine support to patients with chronic diseases for better self-management at home in the Slovenj Gradec General Hospital by Cirila Slemenik Pušnik, MD.

In the afternoon, delegates discussed their experiences and impressions, which were presented in the feedback session prior to the EEPE conclusion.

See Appendix 1 for the complete agenda of the event.

3 Strategic and policy context

3.1 Overview

The Republic of Slovenia lies at the heart of Europe where the Alps and the Mediterranean meet the Pannonian plains and the mysterious Karst region. To the north is Austria, to the east Hungary, to the south Croatia, and to the west Italy. Two million people live here on just over twenty thousand square kilometres.

Slovenia's population of just over two million is well educated and the country has a good labour market. Like other modern European societies, it is experiencing typical trends of aging and low birth. In addition, large families, once a core unit of society, are undergoing changes and becoming smaller.

Slovenia is one of the youngest democracies in Europe. It gained independence in 1991, when the westward oriented and human rights conscious republic left the Yugoslav federation. It won international recognition almost immediately and became a member of the European Union in 2004. Only four years later Slovenia became the first "newcomer" to hold the EU Presidency.

3.1.1 Slovenian health profile in brief

Table 1: Demographic factors (source: OECD, 2017)

	Slovenia	EU
Population size (thousands)	2064	509394
Share of population over age 65 (%)	17.9	18.9
Fertility rate	1.6	1.6

Table 2: Socioeconomic factors (source: OECD, 2017)

	Slovenia	EU
GDP per capita (EUR PPP)	23900	28900
Relative poverty rate (%)	8.4	10.8
Unemployment rate (%)	9.0	9.4

Life expectancy at birth was 80.9 years in 2015, almost 5 years longer than in 2000. However, the extra years of life are not always spent in good health and healthy life years are below the EU average. Life expectancy gains are mainly the result of a consistent reduction in premature deaths from cardiovascular diseases and cancer although these continue to be the leading causes of death. Nearly a quarter of people in Slovenia live with hypertension, 1 in 11 live with chronic depression, 1 in 20 with asthma, and 1 in 14 with diabetes (OECD, 2017).

In 2014, 19% of adults in Slovenia smoked tobacco every day, which is slightly below the EU average and down from 24% in 2001. Obesity rates, however, are above the EU average and for adults have increased from 16% in 2007 to 19% in 2014. Repeated drunkenness among 15-year-olds is higher than in most EU countries, but binge drinking among adults is close to EU average (OECD, 2017).

In 2015, Slovenia spent EUR 2.039 per head on health care, compared to the EU average of EUR 2.797. This equals 8.5% of GDP, which is also below the EU average of 9.9%. However, its health system is one of the most expensive among the newer Member States. Only 71.1% of health spending is publicly funded compared to 78.7% at EU level. While 13% of health expenditure is paid out of pocket the role of voluntary health insurance is significant, at 14% (OECD, 2017).

3.2 Slovenian healthcare system and long-term care

3.2.1 Healthcare system

Since 1992, Slovenia has had a Bismarck-type social insurance system based on a single insurer for health insurance, which is administered by the Health Insurance Institute of Slovenia (HIIS). HIIS is the main purchaser of services in the health system and it plays a primary role in the formulation of prices for such services. The key regulatory role rests with the Ministry of Health. Primary care is decentralized to municipal level.

Compulsory health insurance in Slovenia is mandatory for all citizens. It is paid by employers and employees. It covers the most general and urgent healthcare services. The Slovenian health system provides near universal coverage but there are extensive co-payments. To cover these, 87% of the population have voluntary health insurance and there is help for those who cannot afford it. Slovenia's health system is mainly funded through compulsory health insurance (71%), with the remainder coming from voluntary health insurance (16%) and direct out-of-pocket payments (13%). Out-of-pocket payments are low overall, but the share of private expenditure is high compared to the EU average. Our health system is one of the most expensive among the newer Member States.

Access to health services is good, with very low numbers reporting unmet needs for medical care and almost no variation between income groups. However, waiting lists for specialised care remain a challenge.

Hospital efficiency indicators are mostly on the EU15 levels while the number of physicians and nurses are similar to that of the UK and somewhat better than most CEE countries. Despite the strong primary care system, there is a lack of coordination and integration across levels and sectors, causing discontinuity of care. Greater focus on preventive measures is needed as well as better care coordination, particularly for those with chronic conditions.

3.2.2 Long-term care needs and financing

Key problems with long-term care (LTC) needs and financing are:

- Too much of the provision is in residential and hospital settings, with too little support to help people to remain in their own homes.
- Too many different government and non-government agencies are responsible for (overlapping) provision of LTC services.
- Lack of transparency, because of different entry points and different needs assessment procedures, resulting in access to care being uneven.
- Even on optimistic assumptions, the effects of demographic change will be to more than double expenditure on LTC by 2035.
- Private spending on LTC is almost all out of pocket spending by recipients and this has been growing significantly.
- Consideration should be given to reducing the complexity of funding of LTC. This might be achieved by shifting responsibility to a single government department or agency.
- Long-term care in Slovenia has not yet been consolidated into a comprehensive system, and the fragmentation of funding leads to a lack of transparency and inefficient use of resources.
- A new system is being introduced and tested which is based on unified way to access services and on individual plan of care (based on needs assessment). The new system will be a

combination of: residential care OR home care OR cash benefits OR personal assistant, including use of e-care services and solutions.

- New LTC system solutions are being piloted at the moment. It is plan to have fully functional integrated care system until 2025.

3.2.3 eCare uptake in Slovenia

One of the most widespread (and the most fundamental) services in Slovenia was Lifeline network or red button. The first centre was established in Ljubljana in 1992. The service involved a special telephone or portable alarm device that can be used to call an alarm centre in the event of a need arising. Number of red button users was still very low in 2010 for example - there were reported to be approximately 300–350 older and disabled people using the service (Dolničar and Nagode, 2010; Nagode and Dolničar, 2010).

The main factors for the low uptake of assistive services in Slovenia on structural level are:

- Lack of comprehensive strategic planning (which would be conceived and realized by a central governmental body or agency, the aim of which would be to support local health, housing and social care services in order to promote telecare and telehealth);
- Lack of interdisciplinary and inter-departmental cooperation and integration (there should be a better mechanism for coordinating activities in eCare and eHealth within and between government directorates, research organizations and the (health)care services);
- Lack of business models, funding;
- Lack of understanding of the system wide distribution of costs and benefits.

Some other factor for low uptake:

- Inadequate information on availability and on potential benefits of eCare and eHealth services for potential users;
- Lack of integration of services and technical solutions;
- Insufficient exploitation of existing knowledge (studies, projects…);
- Lack of operational plans for service implementation;
- Lack of understanding older people's needs, fears, desires, abilities, skills, aspirations and circumstances.

3.2.4 eHealth services in Slovenia

eHealth solutions were established in the eHealth project, run by the Ministry of Health Slovenia, co-financed by the EU. eHealth project was one of the largest projects of public services informatisation. In December 2015, management of 20 solutions was taken over by National Institute for Public Health. All eHealth solutions are implemented on national level.

Some highlights of the Slovenian eHealth services:

- All people in Slovenia have a unique health identificator.
- It is not needed to come to the doctor to get the prescription.
- Patient can get the medications in any pharmacy in Slovenia.
- Patient can make the order to the medical specialist through the internet and see national waiting lists.
- General practitioner can see the specialist‘s report on-line.

- All vaccination data for all patients will be on the same place.
- Patient can in one place see his/her (and also for his/her children):
  - prescribed and dispensed medicines,
  - discharge letters and specialist's results,
  - vaccination data,
  - health data in patient summary.

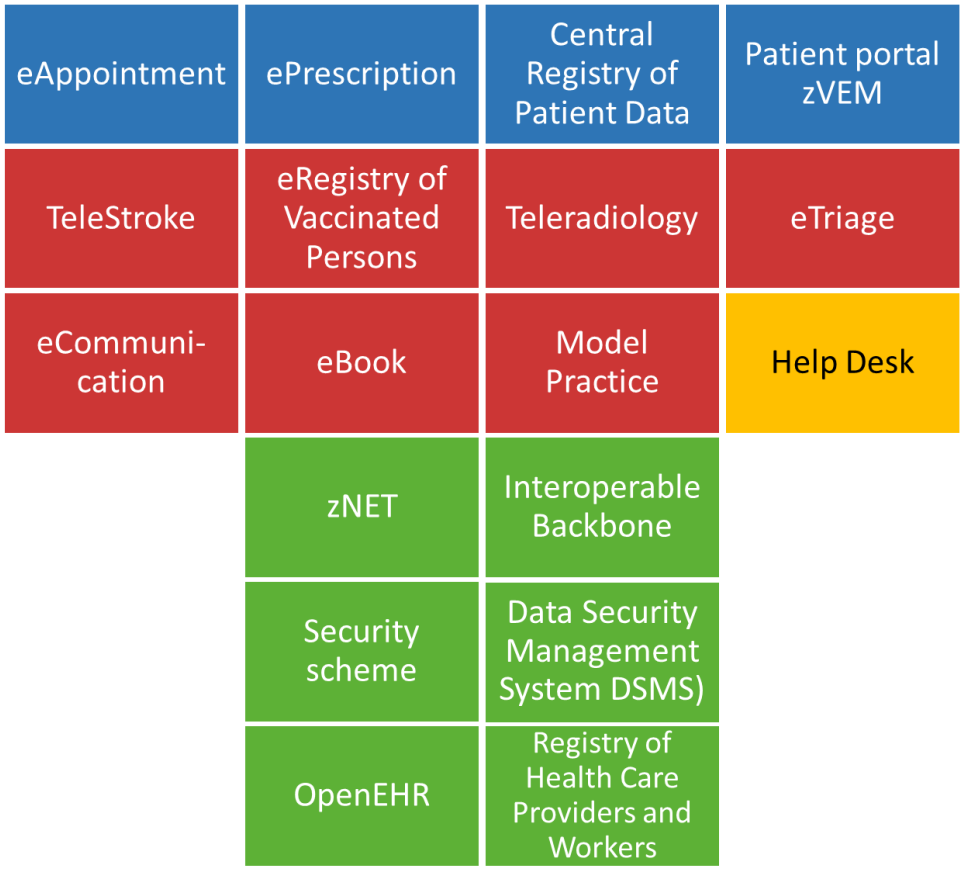

Figure 1: Slovene eHealth solutions (source: Rant, EEPE presentation)

3.3 Active Ageing Strategy

The age structure of the Slovenian population has been changing – life expectancy has been increasing and the share of over 65-years-olds has been growing. Demographic change requires existing systems and arrangement to be adapted to leverage the capabilities of the altered structures. Areas requiring adjustments are: the labour market, education and training systems of social protection, the living and working environment, and civil and political participation. To address the challenges, the Government of the Republic of Slovenia has adopted Active Ageing Strategy, which represents the substantive framework for the implementation of the necessary change. Underpinning in the strategy is the concept of active ageing, which emphasises activity and creativity in all periods of life, concern for health, and intergenerational cooperation and solidarity.

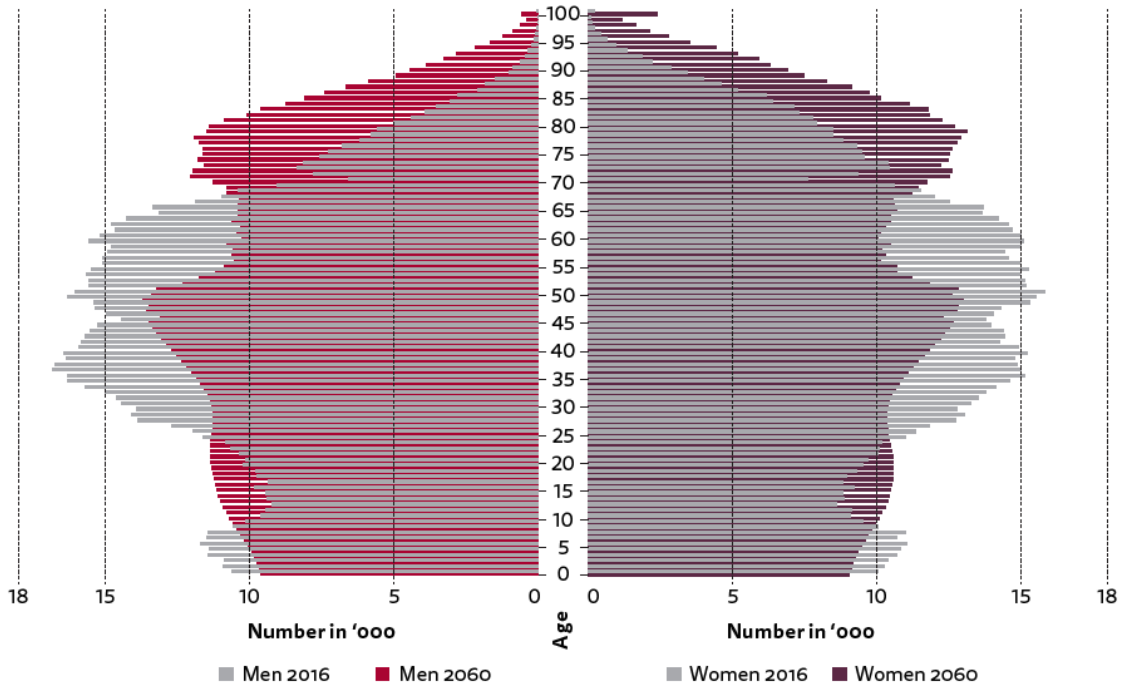

Figure 2: Changes in the age structure of the population from 2016 to 2060. (Source: SURS for 2016, EUROPOP2013 for 2060 in IMAD, 2018)

The guidelines in the Active Ageing Strategy are divided into four segments (pillars):

- Employment (adjustments on the labour market, including education and training, and provision of sufficient labour through net immigration);
- Independent, healthy and safe living for all generations (systems of social protection, accessibility of healthcare and long-term care services, concern for health, reducing inequalities in healthcare);
- Participation in society (intergenerational cooperation, volunteering, use of ICT in communication, prevention of discrimination and violence in society, political activity);
- Environment enabling an active life throughout the life course (adjustments to the economy, dwelling conditions and transport systems with the support of ICT and technological solutions).

Action plans and specific solutions to implement those guidelines will be drawn up by individual ministries. Implementation of action programmes and the achievement of objectives will be regularly monitored through indicators, with emphasis on an internationally comparable system of indicators of Active Ageing Index.

Activities concerning the implementation and monitoring of the strategy:

- Based on the guidelines, ministries to prepare two-year action plans (or four-year or longer depending on the duration of the processes in question) complete with implementing measures;
- Implementation to be monitored through Active Ageing Index indicators;
- A body in charge and a method of monitoring to be designated (roadmap and use of indicators, checking compliance with strategy guidelines);
- A procedure to be put in place to verify and supplement the strategy based on changes in the economic and social environment.

3.3.1 Why an Active Ageing Strategy?

The current systems on the labour market, in education and in systems of social protection were predominantly produced in different demographic circumstances. In the absence of changes on the labour market, the working age population would contract and the systems of social protection would grapple with dwindling financing sources and growing expenditure.

The well-being of all generations will depend crucially on a social policy that is adopted by consensus, on the basis of intergenerational cooperation and solidarity among all generations. Slovenia's current welfare state model is underpinned by a system of mandatory social insurance in which by paying contributions, the working age population supplies the bulk of the relatively stable financing of key social insurance funds and the coverage of social risk. However, the present system no longer satisfies all needs, as the financing of pension insurance requires transfers from the national budget. Given the changing age structure of the population and the growing expenditure on pensions, healthcare and long-term care, coupled with the expanding scope of non-standard forms of employment, the demand for funds will rise further, and it will not be possible to finance pensions sustainably without reform of the system.

The changed age structure of the population will also affect alignment of the interests of the different generations; the active participation of all generations in economic and social life and in political decision-making processes will be of the utmost importance.

Adjustment to demographic change will be taking place in a dynamic environment which, driven by technological development, is fast changing and transforming. The accelerating and intensifying introduction of digital and technological solutions in all fields is upending the environment that we live and work in. New technological products and services create new solutions which, in the context of a long-lived society, provide better opportunities in healthcare, long-term care, transportation and housing. In framing responses to the challenges of a long-lived society, effective use of these achievements will be considered along with achievements in the life sciences (neuroscience, genetics, precision medicine, biotechnology, pharmaceuticals) and other complementary sciences.

The key challenges of a long-lived society which require systemic solutions and adjustments are:

- Provision of conditions for active and healthy living across the entire life course;
- Extension of the years of employment (with earlier entry into and later exit from the workforce), which indirectly improves income security in old age;
- Creation of conditions for financial security throughout the life course;
- Creation of opportunities and promotion of education and creativity throughout the life course;
- Adjustment of the working and living environment to the needs of all age groups;
- Effective use of the potential of state-of-the-art technologies;
- Social participation and active citizenship of all generations.

The answer to the question "Why the Active Ageing Strategy?" may be condensed into a few key highlights:

- In order to secure income and material security for the younger and middle generation once they transition to being old themselves, and equip them with the knowledge and skills for this transition;

- To ensure high-quality ageing for older people, who should be independent for as long as possible;
- To apply intergenerational cooperation in order to leverage the huge potential of the knowledge and experience of all generations.

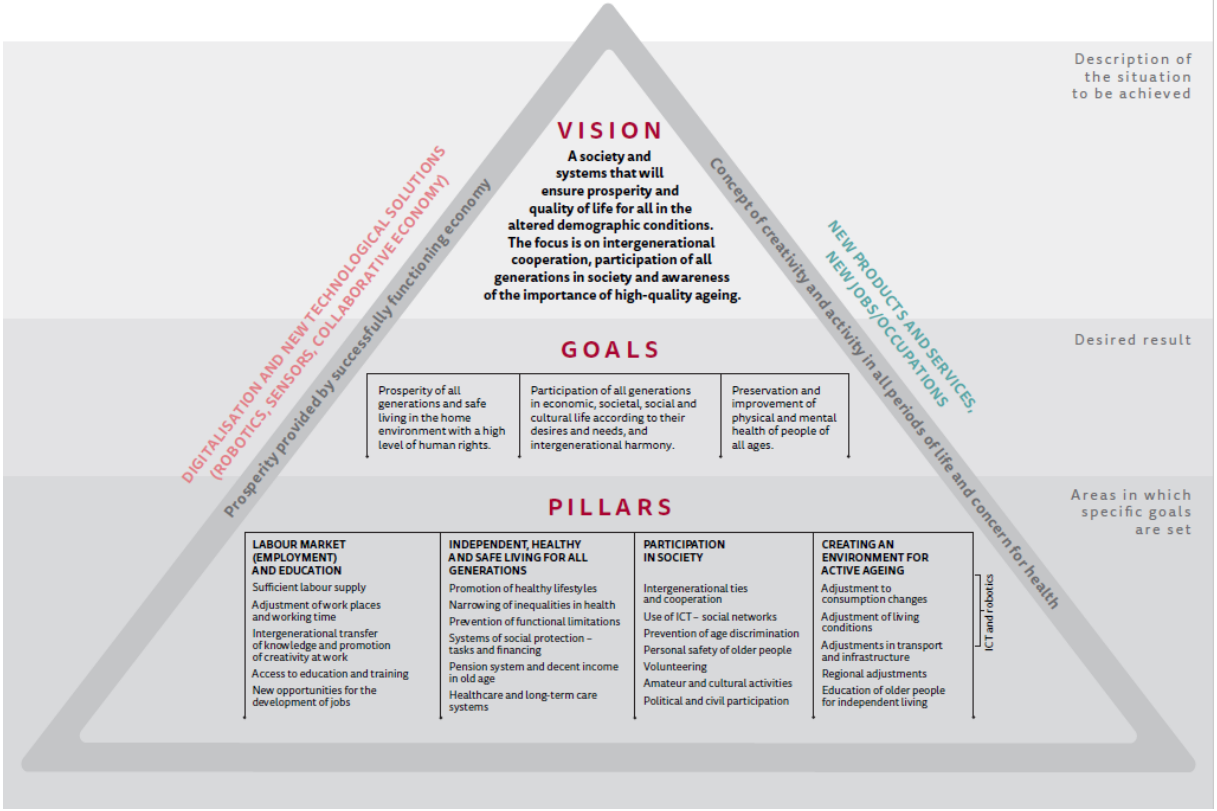

Figure 3: Vision, goals and pillars of the Active Ageing Strategy (Source: IMAD, 2018).

3.3.2 Active Ageing Strategy guidelines

The strategy draws on a new conceptual framework for development guidelines in a long-lived society. It is based on the concept of active ageing, which involved activity across the life course, concern for health, and intergenerational cooperation.

Vision of the strategy is:

> ***A society and systems that will provide well-being and quality of life for all in the altered demographic circumstances. The emphasis is on intergenerational cooperation, the involvement of all generations in society, and awareness of the importance of high-quality ageing.***

Strategic goals for the implementation of this vision are:

1. Well-being for all generations, dignified and safe living in the home environment with a high level of human rights.
2. Participation of all generations in economic, societal, social and cultural life in accordance with their wishes and needs, intergenerational symbiosis.
3. Preservation and improvement of the physical and mental health of people of all ages.

The Active Ageing Strategy guidelines form the foundation of measures to be adopted in individual pillars and will be tailored to individual age groups, taking into account the impact of demographic change. The detailed description of the guidelines can be found in the text of the Strategy, which is available here:

http://www.umar.gov.si/fileadmin/user_upload/publikacije/kratke_analize/Strategija_dolgozive_druzbe/UMAR_SDD_ang.pdf.

Briefly, the guidelines refer to the following topics and subtopics:

- Labour market (employment) and education:
    - ensuring sufficient labour supply (promoting extension of working life; providing opportunities for greater participation of older people and youths in the labour market…),
    - adjustment of jobs and working time (flexible working forms, suitable working conditions, flexible work hours for those taking care of relatives or neighbours…),
    - intergenerational transfer of knowledge and promotion of creativity and work (promoting and supporting positive attitude towards ageing; preventing age discrimination at work; strengthen age management…),
    - access to education and training (adaptation of the educational system to the need for continuing education and training; strengthen lifelong learning culture; improved participation of older people in lifelong learning…),
    - new opportunities for the development of jobs (support for public-private partnerships and private enterprises; increased support for non-governmental organisations; strengthen social entrepreneurship).
- Independent, healthy and safe living for all generations:
    - Improving health, reducing inequality in health and preventing functional limitations
        - promotion of healthy lifestyles (adoption of structural measures for the provision and promotion of health-friendly environment; strengthen disease prevention programmes; promoting the strengthening of physical and mental health),
        - reducing inequalities in health (creation of measure to improve health across entire life course; creation of interdepartmental policy to reduce inequalities in health; reducing material deprivation),
        - preventing functional limitations (creation of programmes to prevent the functional limitations of older people; tackling the most common age-related diseases…).
    - Social protection systems
        - mission of social protection systems (creation of social protection system that facilitates and eases individual's transition between periods in life, and supports independence in the decision to start a family; creation of social protection systems that contribute to the provision of adequate income for the socially disadvantaged yet supports their employment),
        - financing of social protection systems (adjustment of social protections systems to demographic change; determining new proportion among sources

of financing; securing the stability and long-term sustainability of all social protection systems…),
        - pension system and decent income in old age (structural reform of the pension system; pension system that promotes extended working life; promoting savings for old age),
        - healthcare and long-term care systems (preserving and improving access to healthcare and long-term care services; multimedia platform for medicine and tele-therapeutics; optimisation of healthcare; improved support for informal caregivers…).
    - Providing for quality of life in families (improved quality of life in all circumstances; improved opportunities for better work-life balance; protection of families and family members…)
- Participation in society
        - forging of ties and cooperation between generations (encouraging young and older people to engage in intergenerational transfer of knowledge; fostering mutual assistance within and outside the family circle; and raising awareness on importance of intergenerational cooperation),
        - use of information and communication technologies to improve participation of older people in society (expanded geographic availability of ICT and broadband coverage; improved digital literacy; improved affordability and usefulness of devices and services),
        - prevention of age discrimination (active awareness-raising about age discrimination and the promotion of positive image of older people; better provision of information to the older population…),
        - personal safety of older people (raising awareness about violence; strengthened inter-institutional cooperation in tackling abuse, violence and other illicit acts against older people…),
        - safeguarding and exercise of the rights of older people (raising awareness of the importance of human rights; preventing age-related discrimination…)
        - volunteering (promoting volunteering of older persons; promoting volunteering programmes for the provision of care…),
        - amateur, cultural and sports activities (opportunities for older people to participate in cultural activities; improved accessibility of cultural services; expanded programmes of lifelong cultural education…),
        - political and civil participation (creating conditions for the development of dialogue, and political and civil participation of the population at all levels of political decision-making).
- Creating an environment for active ageing
        - care and support in everyday activities [informal caregivers] (promoting the integration of different types of support for informal caregivers; education and informal training for informal caregivers; secured rights for informal caregivers),
        - adjustment to altered consumption patterns (creation of business environment and incentives for the development of new products in particular services that reflect demands of long-live society),

- adaptation of dwelling conditions (adaptations of the living environment for (extended) independent living of older people in the home environment, which needs to be integrated into multiple policies),
- adjustments of transport and transport infrastructure (improved accessibility of public transport for older people; provision of safe access to structures…),
- regional adjustments (strengthened regional economies based on their developmental strengths),
- education and training of older persons for independent living (accessible educational programmes for older people).

3.4 Current challenges in the field of long-term care in Slovenia

At the moment, in Slovenia there is no uniform system of long-term care, long-term care benefits in kind and cash-benefits provided and financed within healthcare system, social and parental protection system, and pension and disability system. There is also no unified entry point and unified needs assessment.

Prevailing form of care in Slovenia is institutional care. There is a lack of community-based services, whereas home based health and social services are not integrated. Benefits in cash are not related to comparable needs. Different levels of benefits are related to specific legislation. Implemented means are not being tested.

Main challenges in the field of long-term care in Slovenia are:

- Provision of adequate care to those in need of care.
- Promotion of integrated home care and independent living.
- Improvement of financing arrangements.
- Improvement of Quality and value for money.
- Promotion of prevention and the use of ICT.

Overall goal is to ***establish new pillar of social security that will in line with changes in other pillars (health, social and pension systems) enable implementation of LTC as an integrated service supporting people in independent, safe and quality living*** (Buzeti and Dominkuš, 2017).

Key changes that will be introduced with the new long-term care system are:

- Unification of mandatory insurance rights.
- Standardized assessment of needs (eligibility), single entry point (one stop shop), active involvement of user in planning.
- Integrated (coordinated) provision of LTC services, emphasis on community-based services.
- Greater support for informal caregivers.
- Prevention, rehabilitation and use of ICT.
- Integrated quality control.
- Integrated financing.

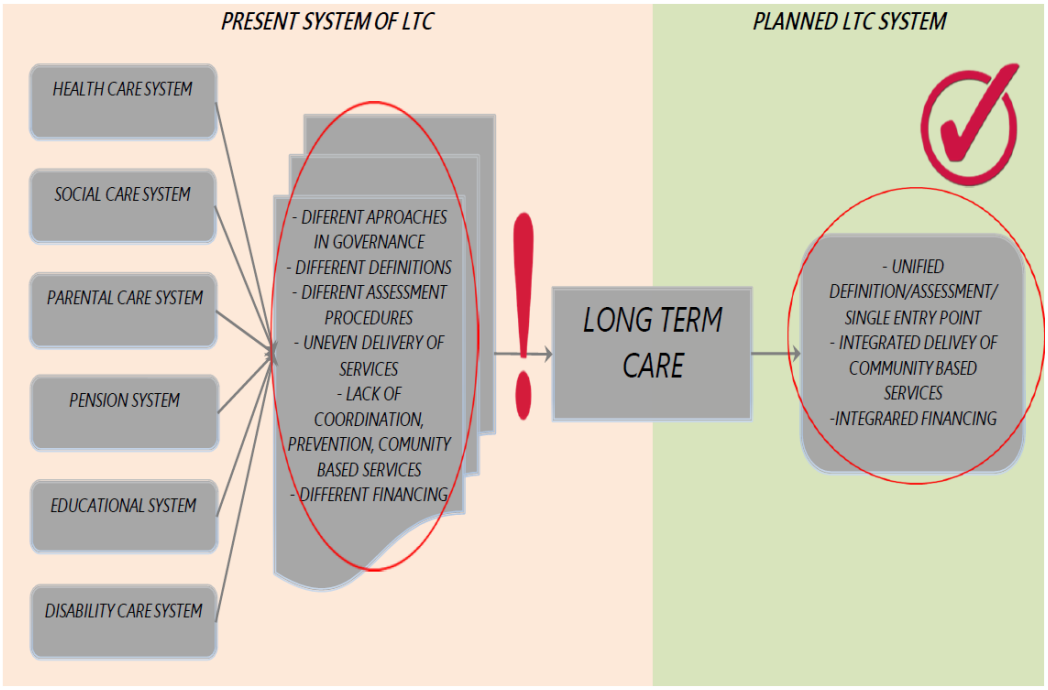

Figure 4: Present vs. planned long-term care system in Slovenia (Rafaelič and Querrioux, 2018)

3.4.1 Long-term care Pilot Project

Leverage for the pilot project is the fact that in Slovenia we need to establish long-term care system that will be integrated, fair, accessible and efficient. In the scope of the pilot, solutions proposed in the draft for the new Act on long-term care will be tested in three pilot environments – urban, semi-rural and rural. Pilot project is the opportunity to identify strengths and weaknesses of proposed integrated long-term care solutions.

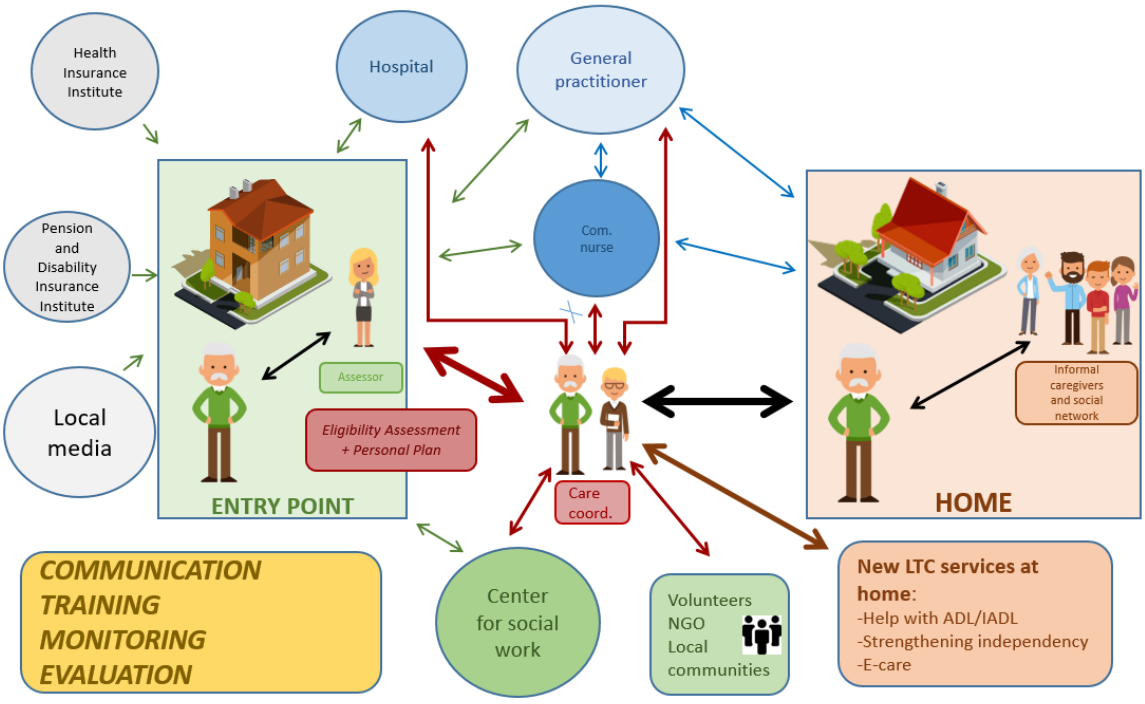

Figure 5: Scheme of the proposal of integrated long-term care (Rafaelič and Querrioux, 2018)

Key pilot project activities, which will be horizontally supported by communication and dissemination activities; training, supervision and support; monitoring and evaluation; and ICT support are:

1. Eligibility assessment
2. New services and integrated care
3. Coordination

Communication and dissemination activities will be held around the pilot activities at local, national and international level. The public will be informed about purpose and content of the pilot project, first findings during the implementation, and conclusions after the pilot future perspectives.

The training will be provided to assessors at the entry points, formal care providers and informal caregivers. Moreover, assessors and formal care providers will be supervised, whereas support will be available to informal caregivers.

Monitoring and evaluation will be carried out through regular monitoring of all foreseen activities, including quality indicators, evaluation study conducted already during pilot, and final evaluation. The findings of the pilot project will provide a starting point for the completion of system solutions in long-term care.

In the scope of ICT support, different e-packs delivery packages are going to be tested. A real-time record of services and all data related to the implementation of pilot activities will be gathered. Results of the implemented ICT services will be regularly monitored and evaluated.

Needs of the persons aged over 18 with long-term degree of dependency will be assessed based on NBA assessment instrument[2]. To determine care level, eight modules of day-to-day life will be considered and weighted differently:

- Movement
- Cognitive and communication skills
- Behaviour and mental health
- Self-care
- Skills for coping with diseases and complex situation related to health
- Every-day life and connections
- Activities outside the home environment
- Household tasks

Certain number of points will be assigned to each of the above area according to how much support person needs in day-to-day life. When assessment will be completed, one of five categories of limitation of independency will be determined. Categories are presented in the table below.

Table 3: Categories of care NBA-SLO (Rafaelič and Querrioux, 2018)

1. category	Low degree of limitation of independency	12,5 - 27 points
2. category	Moderate degree of limitation of independency	27 - 47,5 points
3. category	Heavier degree of limitation of independency	47,5 - 70 points
4. category	High degree of limitation of independency	70 - 90 points

[2] German assessment instrument - das Neues Begutachtungsinstrument – available at: https://www.mdk.de/versicherte/pflegebegutachtung/

5. category	The highest degree of limitation of independency with special needs of care	90 - 100 points

3.4.2 Evaluation plan of the Pilot Project

Evaluation plan of pilot project encompasses:

- Defined objectives (key evaluation questions) – evaluation objectives are divided into four research directions: the effectiveness of new methods; the efficiency of procedures in the pilot project; the effects of the pilot projects on people; and preparation of the content and financial projections for the future long-term care system. Key evaluation questions are:
    - What are the positive effects of individual activity both by users and providers?
    - How do different stakeholders see the contribution of all proposed solutions?
    - Tackling stakeholders in a project with potential risks?
    - Do the proposed activities achieve the overall objective?
- Approaches and evaluation model/flowchart – the participative approach in line with before-after model will be used, which will enable the combination of process evaluation and evaluation of results by triangulating data from several sources. The participative approach will enable the representative of all key pilot project stakeholders in all phases of the pilot project to get the opportunity to reflect the quality of the implementation.
- Method of obtaining data and data analysis – data will be collected at the following levels: user level, provider level, professional staff (accessor) level, coordinator level, and at the level of appropriate professional service. Methods used to gather the data will be (semi)structured conversations/questionnaires with users and providers and with potential other stakeholders in the pilot project. Existing valid questionnaires will be used regarding quality of life, protocols, logs, evaluation lists etc.
- Already defined indicators – indicators were defined at the level of the structure, process and results.
- The evaluation report(s) in accordance with the evaluation plan

3.4.2.1 Indicators defined in the evaluation plan

Structure indicators:

- Establishment of entry points in pilot sites and employment of an appropriate number of qualified assessors (February 1, 2019).
- Each pilot site employs at least one qualified care coordinator with strictly prescribed skills (February 1, 2019).
- Each site will set up an integrated care team, which will consist of precisely defined qualified occupational profiles (February 1, 2019).
- In each pilot site, the local project council and the local project team will be established (October 1, 2019).
- Established protocols on the participation of all stakeholders in the pilot project in a particular pilot site (February 1, 2019).
- All relevant stakeholders of the pilot project in each pilot site are informed of all planned activities in the framework of the pilot project (introductory meeting until September 15 2018, then ongoing communication with the sites throughout the duration of the pilot project).
- Number of trained long-term care coordinators (at least 3) (January 31, 2019).

Process indicators:

- 70% of existing adult rights users in the field of long-term care in pilot sites are assessed with an assessment tool in the first 9 months (until the end of pilot activities).
- The share of persons, who do not currently claim long-term care rights, assessed by the new assessment tool (continuous monitoring).
- The share of persons who were assessed within 3 working days after submission of the application (continuous monitoring).
- The share of persons who will be eligible for long-term care and will meet with the coordinator within 3 working days after the eligibility assessment (continuous monitoring).
- The share of persons who will not reach the threshold of eligibility but will be informed of the currently existing rights or possibilities of care in the field of social and health care and on participation in the evaluation process (continuous monitoring).
- At least 80% of all long-term care beneficiaries will be reassessed in 6 months if they are still involved in the pilot activities (every 6 months, continuous monitoring).
- At least 50% of registered informal care providers attend training courses that are organized during the duration of the pilot activities (continuous monitoring).
- Regular meetings between the assessors at the entry points and the expert team of assessors of the Ministry of Health, where they exchange information on potential challenges at work, open issues, etc. (at least 6x per year).
- Regular supervision for providers of formal care and employees at the entry point.
- Regular meetings between the long-term care coordinators, care teams and evaluators, where they exchange information on potential challenges at work, open issues, etc. (at least 5x per year).
- Electronic keeping of logs and documentation in real time on work tasks, the time needed to carry them out and possible loads.

Result indicators:

- The share of users of formal care, depending on the place of implementation: at home or in institutions (at the beginning and at the end of the pilot activities; the goal is to increase the number of home care users by at least 10%).
- The share of users whose satisfaction with the quality of life remains unchanged or increased due to the proposed solutions (at the beginning and at the end of the pilot activities).
- The share of unplanned hospital admissions or hospitalizations (at the beginning and at the end of the pilot activities).
- The share of users with care plans being implemented (continuous monitoring).
- The share of users who have switched to institutional care (continuous monitoring).
- The share of users who have fallen into other category of care in the re-evaluation and to another category of care (continuous monitoring).
- The percentage of users who opt for e-care services, the number of interventions (continuous monitoring).
- Regular meetings between the long-term care coordinators, care teams and evaluators, where they exchange information on potential challenges at work, open issues, etc. (at least 5x per year).
- Electronic keeping of logs and documentation in real time on work tasks, the time needed to carry them out and possible loads.

3.5 Call for national ICT Pilot Projects (Ministry of Labour, Family, Social Affairs and Equal Opportunities)

Changes in the demographic structure of Slovenian society point to the need of introducing systemic measures with the aim to ensure long-term sustainability in a number of areas including social and long-term care. The aim of the ICT pilot project, which is defined within the priority axis 9 of the Slovenian operational programme 2014-2020 (9.2.1 "Pilot-tested approaches for better integration of long-term care services"), is to ***provide care to the aging population, aligned with the desire of the elderly to live as long as possible as independently as possible in their own homes, in the same living and social environment.***

With the development of the information society, this can be achieved through the use of information and communication technologies (ICT), which can be used to provide remote care at home. These are systems where the remote residential environment of elderly people is connected with the control centre and through it to health and care centres. There are several reasons for implementing ICT solutions:

- Accelerated aging of the population.
- Desire of the elderly to live as long as possible and as independently as possible in their own homes – maintaining the quality of life of individuals.
- The independent living of the elderly at home with adequate assistance.
- Adjusting the living environment of the elderly.
- Introducing a supportive information environment to detect aid needs.
- Establishing the fastest possible response in the event of a need for immediate or emergency help at home.
- Reducing the cost of care for the elderly in institutional care.
- Reducing the spatial distress and waiting times in the institutional care of the elderly.
- Reduced financial capacity of the elderly.
- Overload of informal care providers.
- Development of pilot ICT projects serving as a support in the transition of the implementation of long-term care system and potential support to areas where community-based services are less available.

The objective of the pilot project is to ensure at least 2.000 active users aged over 65 are included in the ICT pilot. Piloted service and equipment will include:

- The service will include: rental and installation of the equipment; SIM-card for incoming and outgoing calls; assistance service available 24 hours a day and link to the contact persons and emergency services; service providers provide 24-hour control over the operation of technology at a distance; monitoring app for the relatives; maintenance of the equipment; technical support; triggering a call for help by pressing one button on pendant, bracelet or watch.
- The equipment will consist of: waterproof fall detector with various emergency call options; emergency call trigger (pendant, bracelet, watch or other similar device); motion detector; sensory equipment (smoke detector), sensor which detects need for help when user is unable to trigger the emergency call on his/her own; protection unit with microphone and speaker.

4 Ecosystem

One of the ITHACA's goals is to build capacity for mutual learning and good practices in strengthening the innovation eco-system. The ecosystem is needed since it drives the scaling up of smart health and care solutions which can support active and healthy ageing and living. The ecosystem which combines all four most important types of stakeholders – policy makers, researchers, enterprises and end-user organisations – is called quadruple helix. Quadruple helix enables all stakeholders to be aware of health and care priorities, challenges, needs and opportunities in the field of smart health and care. In this manner, it enables enterprises and researchers faster development of solutions to be tested and scaled up.

Slovenia does not have "a real" quadruple helix ecosystem, which would bring together all four types of stakeholders in the long-term cooperation. Therefore, one of the aims of Slovenian ITHACA partner, University of Ljubljana, is to bring together all most relevant stakeholders in the field of smart health and care. The core group of stakeholders was built in Semester 1 (June 2017) when we invited them to participate at the first national stakeholder meeting. The meeting and the formation of the core stakeholders group was very successful, as it was attended by 37 participants from all four parts of quadruple helix: 3 governmental organisations, 7 research institutions, 8 end-user organisations, and 8 enterprises and service providers. This meeting was also an important milestone for Slovenian smart health and care system, as we also managed to bring together representatives of two crucial Slovenian policy makers - Ministry of Health and Ministry of Labour, Family, Social Affairs and Equal Opportunities. Representatives of those organisations were also invited to (actively) participate at the Slovenian EEPE event.

Despite the absence of the "real" quadruple helix ecosystem which would bring together all types of stakeholders, there are five networks/ecosystems that operate in the field of smart health and care in Slovenia which were also presented during Slovenian EEPE event:

- ECHAlliance/Healthday.si
- Ljubljana Technology Park – Initiative Start:Up Slovenia
- EkoSmart
- Slovenian Coalition for public health, environment and tobacco control
- Network NGO 25×25 – a network of non-governmental organisations in the field of health

4.1 Healthday.si

HealthDay.si is a community of health-tech companies and organisations from their supportive environment, based in Slovenia, and is open to all regional and international partners. They are a Slovenia chapter partner of Health 2.0 and also the Slovenian partner of ECHAlliance, which is the Global Connector, facilitating multi-stakeholder connections around ecosystems, driving sustainable change and disruption in the delivery of health and social care (see Figure 6).

The main goal of the Slovenian Healthday.si community is to help each other in entering international markets. Healthday.si also stimulates the local health and social care community towards embracing change through cooperation and introduction of digital solutions. This is done via exchange of experiences, organising information about who they are and what they do, holding events, educating the companies about certification, international business development, introducing people to each other, helping members reach their goals and similar.

Healthday.si has been formed as an initiative of five independent companies and organisations, including Mesi, Xlab, Marand and Technology Park Ljubljana.

Since 2014, when Healtday.si was formed, they have organised more than 10 events and spread their activity by connecting to international partners, such as Health 2.0, Grants4Apps and ECHAlliance. The community also manages the directory of all Slovenian health-tech start-ups and interested experts, called the Green Book. The events of HealthDay.si host start-ups, physicians, information technology experts, investors, students, researchers, academics, mentors and others.

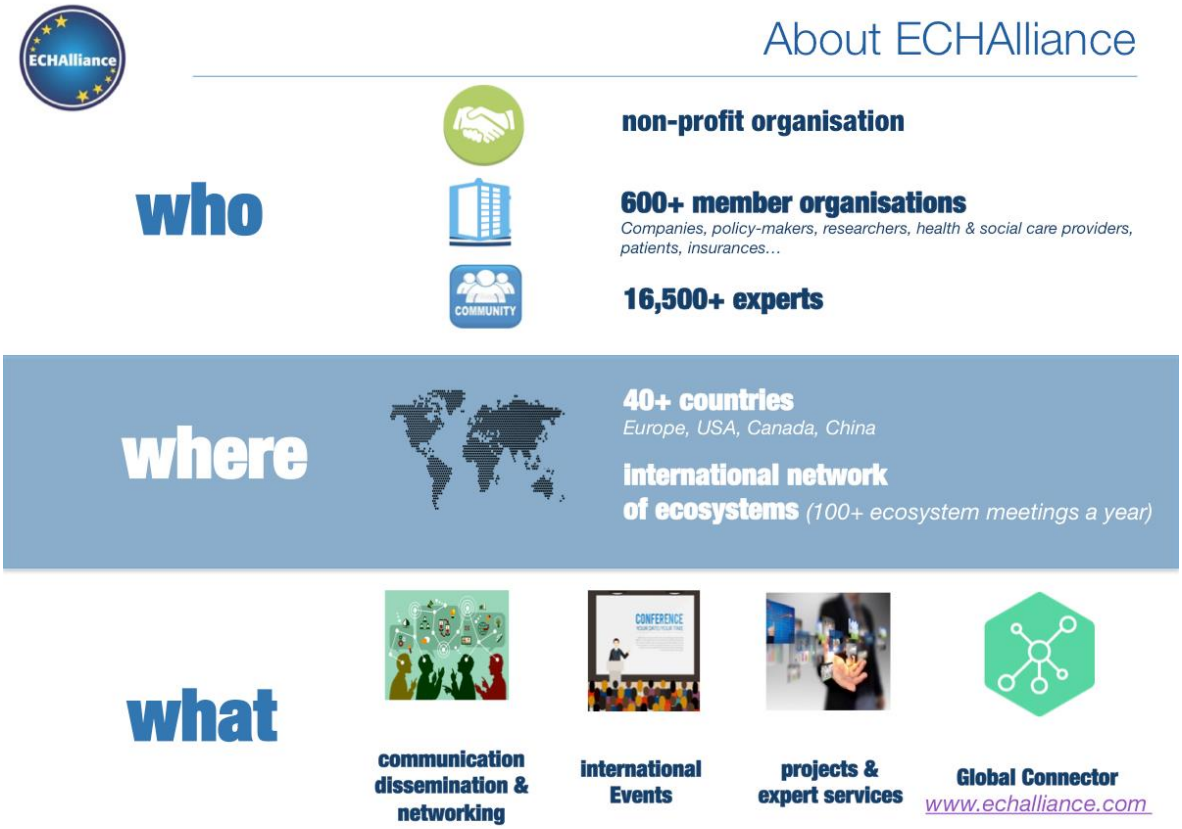

Figure 6: Brief presentation of the ECHAlliance (Source: ECHAlliance website).

4.2 Ljubljana Technology Park - Initiative Start:Up Slovenia

Ljubljana Technology Park is the largest innovation ecosystem for commercialization of knowledge and technology in SE Europe. It hosts more than 300 member companies with more than 1500 employees and provides the following internationally awarded services: Collaborative innovation ecosystems, Development Collaboration & Global Commercialization, Lean innovation and start-up acceleration, and Innovation infrastructure.

Ljubljana Technology park is also leading partner of the Initiative Start:Up Slovenia, which is an active facilitator and promoter of public and private stakeholders of the Slovenian start-up ecosystem. In collaboration with them, the initiative also carries out and promotes national programmes for supporting innovative entrepreneurship. With all activities and partners, they are trying to place Slovenia on the map of established European start-up hubs.

The key activities, which are defined in the Start:up Manifesto, are: systematic motivation and activation of business talents, commercialization of knowledge and technologies, encouraging company growth on the global market using their own connections across the world, capital access, and activating various stakeholders as well as their coordinated and effective work. The goal of the initiative is, that until 2020 in Slovenia they will annually:

- create 1000 new jobs in start-up companies,
- create or attract at least 150 start-up companies with global potential,
- connect at least 50 start-up companies with most important global ecosystems.

4.3 EkoSmart

EkoSmart is a three-year programme (August 2016 – July 2019), funded by Ministry of Education, Science and Sport, and European Regional Development Fund. The purpose of the EkoSmart program is to develop a smart city ecosystem with all the support mechanisms necessary for efficient, optimized, and gradual integration of individual areas into a unified and coherent system of value chains. The program focuses on three key domains of smart cities: health, active living and mobility; and forms strategic relationships with municipalities and other areas of smart cities, such as energy, smart buildings, involvement of citizens, smart communities, etc. EkoSmart introduces the universal architecture of a smart city, based on the combination of self-learning and self-optimizing agents able to find a common Nash equilibrium even between inhomogeneous sources; this architecture enables the realization of all the concepts of smart cities, such as interoperability, self-adaptivity and self-configurability, open data, semantic interoperability, and integration of social capital. In terms of economy, the vision of the EkoSmart program is to launch Slovenian solutions in the field of smart cities on the world market. The realization of this vision is based on several major approaches: concentration of knowledge and experience, focus on the user, evolutionary development, and flexible architecture.

EkoSmart program consists of six projects contributing in their respective ways to the realization of the program vision:

- Research and development project No. 1 (RDP1) – Design of a smart city ecosystem.
- Research and development project No. 2 (RDP2) – Smart mobility.
- Research and development project No. 3 (RDP3) – Active living and wellbeing.
- Research and development project No. 4 (RDP4) – E-health and mobile health.
- Research and development project No. 5 (RDP5) – Integrated health services.
- Research and development project No. 6 (RDP6) – Solution prototypes.

See Chapter 5.3.1 for more comprehensive description of research and development project no. 5 - Smart System of Integrated Health and Care.

4.4 Slovenian Coalition for public health, environment and tobacco control

Slovenian Coalition for public health, environment and tobacco control (SZOTK) is a federation of associations and an umbrella organisation that combines non-governmental organisations with the aim of general prevention of public health, smoking, environmental protection and the impact of transport on health and environment, and reducing mortality and morbidity due to inhalation of harmful particles from the air or environment.

SZOTK is a non-profit humanitarian organization and has the status of and organisation acting in the public interest. More than 100 Slovenian associations and non-governmental organisations are currently involved in the Alliance. Priority of the SZOTK are activities that address children, youth and vulnerable groups.

4.5 Network NGO 25×25

Network NGO 25×25 was established in 2012 by the Slovenian Heart Foundation. The part of the name 25×25 indicates the aim of non-governmental organisations in the field of health to reduce the mortality rate as a result of chronic non-communicable diseases by 25 % until 2025, which is also the goal of World Health Organisation.

Aims of the network are:

- Promoting the active role of NGOs in designing and implementing public health policies.
- Strengthening the capacity of NGOs in the field of health.
- Provision of services for NGOs in the field of health and promotion of the non-governmental sector.

NGO's 25×25 fields of work are: creating a representative network of non-governmental organisation in the field of health; providing support for all Slovenian non-governmental organisations, strengthening the role and importance of NGOs in the health field in Slovenia; education of health NGOs' staff; networking at local, national and international level; strengthening the common identity of network members; finding system solutions for non-governmental health organisations and many others.

5 Interventions and implementation across the innovation cycle

As it turned out in the self-assessment online survey and during stakeholder meetings, innovation support services (e.g., infrastructure enabling innovation and knowledge transfer; networks and platforms to support improvement; established partnerships; innovation cooperation partnership programmes…) available in Slovenia are very modest compared to other ITHACA regions. Assessment of development of new ideas and development and use of innovative products and services in Slovenia was also lower than in other ITHACA regions. Last but not least, Slovenian stakeholders rate regional policy framework related to development and use of technology-enabled services for smart health and care (e.g., policy lead for initiatives; integration of services into publicly-funded systems; guidelines and legal framework for services implementation…) lower as stakeholders from other ITHACA regions.

Despite low policy support for innovations and weak support services for innovations, Slovenian EEPE introduced visiting delegates to a range of innovative initiatives and solutions in smart health and care. In Slovenian health and care system, we do not have jointly designed care and/or healthcare innovation cycle which would enable us to place solutions or initiatives into certain stages of the cycle. Therefore, we present solutions, projects and initiative in line with the field/area in which they are situated, regardless of the phases in the innovation cycle.

5.1 eHealth services

Slovenian eHealth services, which are implemented in the healthcare system by National Institute of Public Health are presented in the section 3.2.4

5.2 Innovative smart health & care solutions

Hereafter follow short presentations of some Slovenian smart health and care solutions, which were presented during the EEPE event. Some of those solutions are implemented on the regional or national level, whereas some of them are also in use abroad.

5.2.1 Nationwide Medic API

SRC Infonet company is a Slovenian market leader in providing health information systems. Their systems are used in more than 80 % of hospitals and more than 50 % of primary healthcare centres and private clinics.

They provide software platform of APIs (application programming interfaces) that allows third-parties to build new health-care IT solutions based on and connected to existing medical data. Their platform is either a software product that can be provided as a custom platform for safe centralized medical data access or a real-life deployment environment where vendors can test their solutions almost in the whole country.

Figure 7: An example of emergency centre HIS (Source: SRC Infonet, 2018)

5.2.2 24alife

24alife with its efficient preventive health programs helps to prevent diseases related to unhealthy lifestyle and to decrease healthcare costs. 24alife understands the current health challenges and is backed up with clinical studies on efficiency of the offered programs.

24alife is a smart platform which guides individuals toward their well-being goals, regardless of their current lifestyle or circumstances. Each customized well-being program provides education, activities, and motivation to achieve a healthier and happier life. It combines the knowledge of exercise science, nutrition, psychology and medicine.

Figure 8: 24alife app features (Source: 24alife, 2018)

5.2.3 iHelp

The iHELP SOS mobile app allows users to send quickly and easily an SOS alarm to members of the iHELP community (ICE contacts, first responders, rescuers and iHELP users) in the nearby area. iHELP collects real time data including user location, personal information's, medical data and rescuer responses to incidents.

iHelp application is free to download and is used to send SOS notification in cases of medical emergencies. It is suitable for all users of smartphones. iHELP mobile application increases safety and provides effective help in any type of emergency for all iHELP users. The application:

- Provides information on first responders network (doctors, nurses, firefighters…).
- Enables SOS alarming to family, friends, first responders, …

- Reduces the rescue time (first responders may arrive already in 2 minutes).
- Provides information on providing first aid (reviving, bleeding, amputation…).
- Enables input of the data on user's medical condition (diseases, medications, allergies, blood type, medical history).
- Provides various reminders (medication, water intake, food intake, physical activity).

Application increases personal safety locally and globally. It uses global SMS alarm system. In case of emergency, iHELP connects family, friends, first responders, professional help and iHELP users in radius 500 meters. Based on big data, it includes network of defibrillators (AED) and first responders.

Figure 9: iHELP app (Source: iHelp, 2018)

5.2.4 MiTeam Emergency Collaboration

MiTeam is used for digital collaboration and communication of medical teams in Mass Incident and Daily Interventions in Slovenia.

Solution is an advanced collaboration and communication tool, which is dramatically changing the way how medical teams and operations centres coordinate their activities in the Mass Incident occasions and execute their training activities. It also includes First Responder communication and support.

5.2.5 NurseCare system

By using NurseCare system, healthcare institutions reduce administrative work and related burden of nurses in nursing homes and hospitals, thus improve quality of health-care services and optimise work processes in health-care institutions.

NurseCare system is an intelligent, IP-based nurse call solution for hospitals, clinics, nursing homes, assisted living apartments, and other health-care organisations. It combines nursecall and care documentation management in the same device. The solution enables users to automate work processes, to efficiently organise care documentation and to receive information on current events in the organisation. NurseCare was developed in cooperation with its end-users and incorporates a continuously optimized artificial intelligence to offer only the best in user experience. All this, together with its modular flexibility marks NurseCare is the perfect solution for institutional needs.

Figure 10: NurseCare platform (Source: https://www.medica-tradefair.com/vis/v1/en/exhibitors/medcom2018.2567215)

5.2.6 Healthlord Pharmacy

Healthlord Pharmacy operates as a mediator in the triangle of the pharmacy-patient-doctor. The primary users of the solution are pharmacists in pharmacies. The platform includes about 100 pharmacies and 300 pharmacists. The main purpose of the solution is to support the pharmacist in solving the patient's problem of correct simultaneous intake of a large number of medicines – it saves the problem of correct medication intake. If a patient of pharmacist needs more precise doctor's advice, they can get in touch with him/her via the platform.

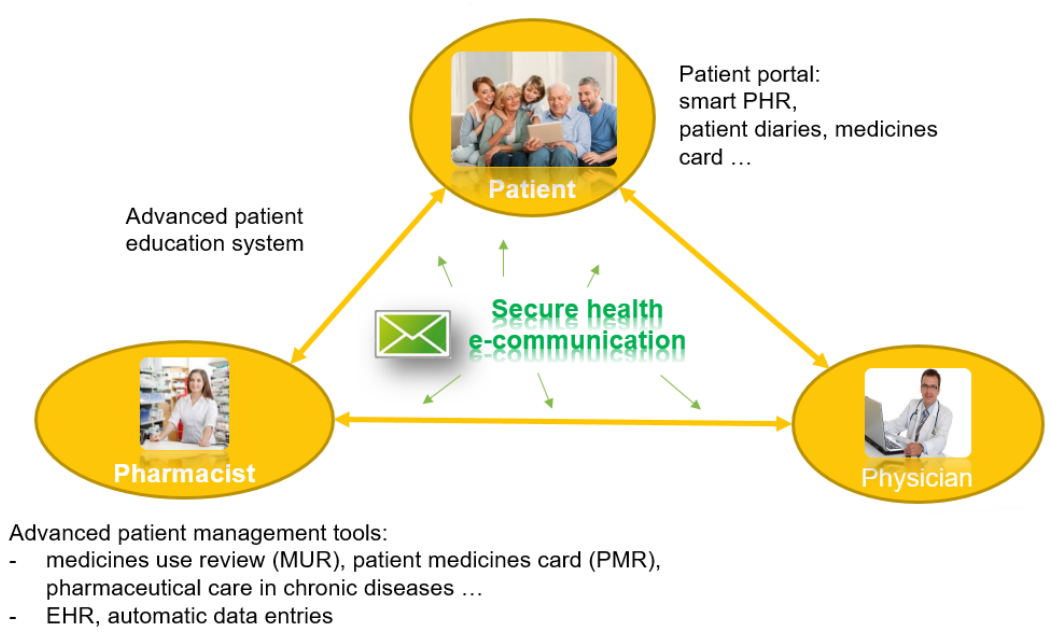

Figure 11: Healthlord Pharmacy platform triangle (Souce: Gec, 2018)

5.2.7 Feelif

Feelif is the multimedia device, an adapted tablet or smartphone, designed for blind and visually impaired people, as well as teachers and parents. Feelif uses unique technology, that makes feeling shapes, pictures and images possible on a standard smartphone and tablet touchscreen. This enables blind and visually impaired people better access to digital content and serves as way for them to better connect with society.

With Feelif you can:

- feel shapes, pictures, diagrams, graphs and photos;
- you can read multi-sensory content - tactile books;
- with FeelBook Maker (our specialized software), sighted people, such as teachers and parents, can create new content – tactile books for blind and visually impaired children;
- you can be creative and share your masterpiece with others via e-mail;
- you can play digital games: alone, with friends or even online;
- you can learn Braille, graphs, math, improve fine motor skills, boost cognitive skills, improve spatial orientation, concepts and much more.

Figure 12: Feelif memory game (Source: Feelif, 2018)

5.2.8 IONIS

The IONIS is a technological solution for improving the quality of life of persons with dementia. It can compensate in an adaptive way for mild to moderate dementia associated deficiencies such as memory problems and cognitive decline. The integrated AAL technologies and services inside (schedule and reminders, home automatization, alarms, fall detection, health management, sleep monitoring…) and outside (geolocation, notification, movement patterns, fall detection, instant communication with caregivers…) home will offer support to both caretakers and caregivers. By providing new technologies and services it will support autonomy of people with dementia and significantly improve the quality of life of people with dementia and their care partners.

5.3 Use of innovations in University Medical Centre Ljubljana

The largest Slovenian hospital, University Medical Centre Ljubljana (UMCL), is facing similar challenges as other healthcare institutions worldwide. Nowadays, patients are getting better connected with health professionals and provides, patients are getting empowered and want to get personalised treatment, hospitals are getting digital and are striving to become paperless, technological progress and development enables new manners of treatment, new ways of performing surgeries and facilitate the flow of information…

Crucial transformations, University Medical Centre strives to achieve, are shifts from:

- face-to-face contact with health care staff to teleconsultation and remote disease management,

- reactive treatment to proactive treatment and continuous remote monitoring,
- passive patient/citizen to active and informed citizen/patient,
- focus on treatment to focus on prevention and home care,
- fragmented health care to integrated and coordinated health care,
- generation of health data to integrated smart health care system,
- patient dependence on institutional health care and home care to self-care and independent living at home.

eHealth services and practices already established in UMCL are:

- Emergency respond and management
- eAppointment and eReferral
- Appointment reminders
- ePrescription
- Teleconsultation
- Teleradiology
- Telestroke programme
- Robotic surgery in urology, using da Vinci Xi (IS-4000) robot
- Medical simulation centre
- Electronic health record
- Central registry of patient data
- Genomics

Telemedicine (chronic disease) programme, 3D printing in reconstruction surgery and eLearning are currently undergoing pilot testing.

5.3.1 EkoSmart project – Smart System of Integrated Health Care and Home Care

The purpose of the Smart System of Integrated Health and Care project is to develop approaches and prototypes providing basic conditions for effective transformation of Slovenian health care system. The development of prototype applications of modern ICT technologies and telemedicine treatment in the management of chronic diseases will provide full integration of the individual levels of health care, efficient and secure exchange of information between the various stakeholders at the national level (national registries, billing system, analyses of large volumes of data), and basic conditions for the development and sustainability of health and social systems.

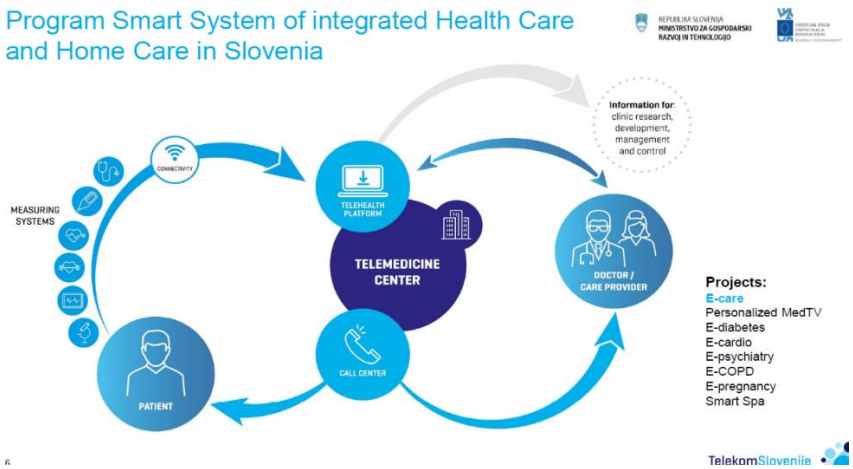

Figure 13: Programme scheme

EkoSmart will develop five modules for chronic diseases management with telemedicine:

- Patient empowerment, self-care and healthy living,
- Integrated care for stable chronic disease,
- Prevention of hospitalisation for patients at risk,
- Remote diagnostics (arrhythmia, respiratory insufficiency),
- Home care (E-care).

First phase of the development of chronic disease management with telemedicine was composed of:

- Formation of integrated clinical pathways for chronic diseases: diabetes type 2, COPB, asthma, arterial hypertension and chronic heart failure,
- Implementation of tele-care (E-Care),
- Development and implementation of ICT infrastructure for telemedicine,
- Review of legal issues and finance models for telemedicine,
- Approval of National Medical Ethics Committee for research project.

Second phase will be the clinical study with 200 patients and control group. Participating public healthcare institutions are: University Medical Centre Ljubljana (chronic heart failure patients), University Clinic of Respiratory and Allergic Diseases Golnik (COPD and asthma patients), Community Health Centre Trebnje (diabetes type 2 and arterial hypertension patients) and Anton Trstenjak Institute of Gerontology and Intergenerational Relations. Partner in charge of ICT services, medical devices and logistic and eCare is telecommunication services provider Telekom Slovenije.

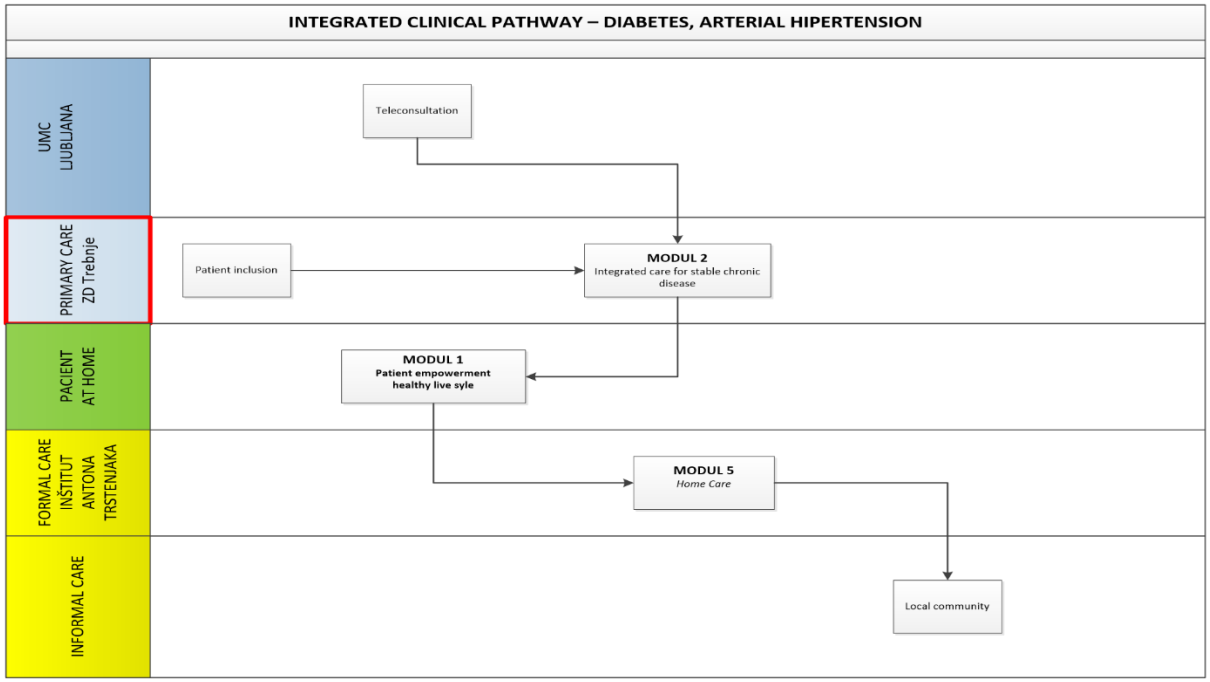

Figure 14: An example of clinical pathway for diabetes and arterial hypertension patients – patients from primary care institution (Community Health Centre Trebnje) will receive consultations from UMC Ljubljana. Moreover, they will be educated on healthy life style at home. The pathway also includes provision of formal home care and informal care. (Source: Oroszy, 2018)

Telemedicine services package consists of:

- First telemedicine consultation during which the patient's condition will be assessed and individual telemedicine annual care plan will be prepared.
- E-learning for patients and "front line" staff.
- Telemonitoring of vital signs and activities using medical devices, such as glucometer, blood pressure monitor, scale, arterial blood saturation monitor, spirometer, EGC.
- Phone consultations in case of urgency and for control.
- Reminders, questionnaires, diaries.
- Annual telemedicine report.

5.4 Innovation in rehabilitation research

Research and Development Unit at the University Rehabilitation Institute of the Republic of Slovenia, whose head is prof. Zlatko Matjačić, PhD, prepares, conducts and implements research projects in the following areas: rehabilitation engineering; provides support in the preparation, management and implementation of the research projects in the field of physical medicine and rehabilitation; and carries out laboratory tests in the field of kinesiology and biomechanical needs for outpatient rehabilitation services.

In the context of implementation of the research program of the University Rehabilitation Institute the Research and Development Unit continually develops novelties in measurement, diagnostics and therapeutic techniques, and develops methods and devices and their evaluation in the rehabilitation of physically handicapped persons. The unit is also actively involved in training young researchers in engineering and medicine (Matjačić, Zadravec, and Olenšek, 2018).

5.4.1 Balance Assessment Robot – BAR

One of the latest developments of the Research and Development Unit is a balance-assessment robot (BAR), that enables assessment of balancing abilities during walking. BAR is an admittance-controlled haptic robot that interfaces with the pelvis of a walking subject. In combination with an instrumented treadmill, this enables: application of perturbing pushes to the pelvis, and assessment of the resulting balancing responses. The utility of BAR may not be limited to assessment. It could also be used for training balancing responses to perturbation delivered as centre of mass displacements in fall-safe conditions and thus, possibly, facilitate development of efficient balancing responses across the post-stroke population.

5.5 Innovative solutions providing social assistance to older adults

5.5.1 Elderly for the elderly

Social program elderly for the elderly, ran by Slovene Federation of Pensioners' Associations (ZDUS) is one of the biggest social programs run by an NGO in Slovenia. The origins of the program date back to 2004 when first research about the needs of the people older than 69 was conducted. It was found that 15 % of people, older than 69, who live in their own households, need some kind of assistance to be able to live in their own homes as long as possible.

Aims of the program which was awarded with European Citizen 2017 prize, are:

- to improve quality of life of people, older than 69 years,
- to find and include all 69+ in local community that need assistance for independent life,
- to join stakeholders in local community in assistance to those who need help.

Goals of the program which were set back in 2006 are:

- to use the knowledge and experience of the elderly for mutual assistance,
- increase the flow of information on the assistance needed between the governmental and non-governmental sectors,
- to extend the concern for the quality of life of the elderly in the local community,
- increase the quality of assistance for the elderly at home,
- improve cooperation between non-governmental organizations,
- to improve cooperation between non-governmental organizations and public services,
- to increase the influence of civil society in decision making on the elderly,
- to include the non-governmental sector as an equal partner to public institutions in the field of care for the elderly.

Social workers, experts, regional coordinators, local coordinators and volunteers who are a part of the programme have learnt that volunteering is a good complement to the social and health care of the population in the local environment. Moreover, long-term care and volunteer help enable people to stay at home longer. Beside this, volunteers are learning and getting new knowledge all the time. They also share their experiences between themselves and with younger generations. Nevertheless, many local authorities recognize the value of this kind of volunteering.

Experience from the program also makes a major contribution to the region and the country. Based on the gathered data, ZDUS started the collaboration with policy makers in the areas important for older adults. They also started raising awareness on the growing poverty among older adults and violence to the elderly in public. In scope of the Elderly for the elderly programme, ZDUS cooperates with academy, industry and local authorities.

5.5.2 Simbioza BTC City Lab

Simbioza is a program based on intergenerational cooperation, solidarity and promotion of lifelong learning. The main purpose of the project is to help the older generation gain a positive experience with a computer, inspire and strengthen their confidence, and motivate them for further learning, computer and internet use.

In seven years, more than 35.000 participants took part in their workshops, at more than 470 locations nationwide.

Simbioza BTC City Lab is one of the first attempts of setting up a living lab in Slovenia and can therefore be considered as the first living lab in Slovenia. It is an open space for education and entrepreneurship with ICT and provides the following activities:

- My third career: enables older adults to get in touch with technologies. Central part of the program is acquisition of the information on the use of certain products and services and the room where tailored workshops on this topic for people aged over 55 are conducted. My third career operates from Monday to Friday and relies on 5 thematically designed modules: computer technology, telecommunications, e-services and e-products, digital photography, and audio-video technology + kitchen appliances.
- Senior Intern (65+): a program in which seniors can be admitted to internship programs of companies and get paid for it. Senior trainee firstly goes through one-month training course,

where they are trained to become trainee in different companies. Depending on their needs, the companies hire those trainees and incorporate them into the work of the company.

- Accelerator 55+: program for people aged over 55 who are looking for new job opportunities. The program gives them insight into the world of start-ups. The program incorporates: entrepreneurial workshops tailored for the elderly; intergenerational learning at the workplace – mentoring in the company; computer skills, digital competences, basics of working with computer at the office; participation at intergenerational hackathons to find solutions for older adults; campaign to raise awareness and inform employers of the positive aspects of employing generation 55+.

5.5.3 Slovene Network of Age-Friendly Cities and Communities

Slovene network of age-friendly cities and communities is a programme that addresses issues and challenges arising from demographic changes in Slovene society, and aims to achieve higher level of "age-friendliness" in Slovene local communities. The main added value of the programme is that the local community is engaged at all levels of the preparation of 5-year local strategy for age-friendly community that is tailored according to the specifics of the local environment.

The programme is led and coordinated by Anton Trstenjak Institute, national scientific and expert institution that works in the fields of gerontology, intergenerational relations, logotherapy and anthropohygiene with combination of sociology, psychology, medical science, law, ... The basis for the programme was a research, following the Vancouver Protocol in Ljubljana (2009-2010), and the implementation of two handbooks (Age-Friendly Cities, 2008 and Province-Wide Age-Friendly Initiative, Canada).

Overall approach for achieving the programme's goals are the dissemination of good practice and experiences together with the implementation of guidelines for quality ageing and intergenerational relations. Additionally, the programme provides help for cities and communities with evaluation and professional support, especially for the development of new soft approaches.

When a new community enters the programme of Slovene network of age-friendly cities and communities, it goes through two phases. In first phase, members of a local "honorary" committee are selected (around 20 citizens, members of different generations that are willing to help and actively participate in the programme). Members of the committee can provide a first-hand information on the current local situation in terms of age-friendliness, pinpoint the potential areas of improvement, and express their ideas on how to achieve a higher level of age-friendliness in their local community.

Based on the information gathered in first phase, a 5-year strategy for active ageing and strengthening of inter-generational solidarity is prepared. The strategy, which is accepted by community, is a concrete plan for connection of existing programs and for the implementation of new necessary programs in the following areas:

1. Long-term care of sick, disabled elderly and other persons with disabilities (relevant for 5 % of the population); the course for informal and home carers (10 % of the population),
2. Active and healthy ageing of entire senior generation (relevant for 20 % of total population) – training and organizing volunteers (the program for prevention of falls in the old age, Living with High Blood Pressure program),

3. Strengthening the solidarity between generations and education of all residents about better coexistence (relevant for 100 % of the population): the participation of kindergartens, primary and secondary schools.

5.5.4 Integrated care approach for residents with dementia

Peter Uzar home for elderly in municipality of Tržič, Slovenia, started to implement a bundle of new innovative and social oriented projects specially designed to address home's residents with dementia.

General approach to work at Peter Uzar home for elderly is to apply the so called "social" model where residents are treated individually, the teams of caregivers are permanent to ensure that caregivers are familiar with each resident's life story, habits and needs. This kind of resident-centred model enables caregivers to encourage residents with their favourite activities, and equips the caregivers with knowledge on how to intervene in a way that best suits each particular resident.

Regarding the bundle of new innovative and social oriented projects aimed to improve care and life-quality of residents with dementia, Peter Uzar home for elderly implemented three projects:

1. Specially designed room called "Going to a better place" that simulates a train ride. The interior of the room is designed as a compartment on the train where the window is substituted with the monitor that shows images (i.e. video) of the landscape that reflects the typical landscape of Slovenian environment. When residents go to a simulated train ride, they usually believe that they are travelling home. The aim of the "Going to a better place" room is to calm down the residents with dementia at the time of restlessness.
2. "Box of memories" is a box of photographs and other personal items that residents can relate to, and which helps residents to preserve their memories, and gives them the sense of domesticity at times when no family member or other person they recognize is present at Peter Uzar home's facilities.
3. Peter Uzar home has also changed the movement policy of residents with dementia and has introduced measures to extend the area of safe movement for residents with dementia. Before, the residents could freely move on the limited area, whereas now the residents can wander around freely, safely, and without restraints within the dementia ward and within home's facilities and accompanied areas.

5.5.5 ProVolunteer web application for providing support to the elderly on local level

ProVolunteer is a web application that efficiently connects elderly who need assistance with their everyday tasks, ProVolunteer administrators, and the local volunteers. The ProVolunteer project is ran by Oreli Institute which is located in the municipality of Kamnik, and is an example of local response to demographic changes and challenges related to aging society. ProVolunteer was developed on the basis of a 20 years long experiences of members of Oreli Institute in the field of volunteering and working with end-users and volunteers. In its essence, ProVolunteer is an application that simplifies and optimizes communication and processes related to providing end-users (elderly) with suitable assistance (volunteers) in simple and efficient manner. It connects end-users, ProVolunteer administrators and volunteers. The algorithms for the ProVolunteer web application were developed and optimized with the cooperation of the Faculty of Economics. It runs on a strong engine that connects the needs of end-users with volunteer support, and enables monitoring for management of the processes on all levels. The basic characteristics of ProVolunteer application are the following:

- it is the result of years of experiences in the field of volunteering on a local level and advances in modern technologies,
- administrators can easily access and manage the centralized database of end-users, local volunteers and reports,
- it enables easy management of running tasks and monitoring of their status,
- it offers reviewing and correcting reports,
- it computes aggregated statistics that can support periodical evaluations, and better overview over end-user's demand and available volunteer force,
- it offers mobile/tablet access.

Another important characteristic of ProVolunteer web application is that is transferable, meaning that it is suitable for use by other NGO's and can be used in other municipalities.

5.5.6 The program of Intergenerational community centres

Intergenerational community centres address the issues of aging population through promotion of intergenerational integration and intergenerational solidarity. The overall aim of the project is to improve the quality of life of the elderly and to promote intergenerational integration. The creation of the intergenerational community centres is part of the Slovene Philanthropy's programme "Intergenerational Cooperation" that aims to foster closer integration and cooperation between members of different generations.

Within the centres various activities are conducted to pursue the project's goals. These activities, some of them performed on a daily basis, are frequently conducted in the form of workshops, courses, classes, exercises, etc. They cover a wide range of different topics, such as physical exercises (e.g. yoga classes), mental exercises, cooking, herbalism, computer skills, language learning and conversation, and social interactive games. These activities enable elderly to remain physically and mentally active.

The innovative aspect of the intergenerational community centres lies in the active participation of younger generations which by spending time with the older generations acquire skills and social skills and spend quality leisure time. In addition, they develop empathy and a way of communicating beyond prejudices and stereotypes. Intergenerational community centres offer a unique space for two-way learning and knowledge transfer. Many traditional knowledge and skills would be forgotten if the elderly did not have the opportunity to transfer it to younger generations. Young people have knowledge in the field of modern technologies, which enable the elderly to become more independent in the modern world. A practical example of intergenerational knowledge transfer are workshops where youngsters teach elderly how to use computer and internet.

Intergenerational community centres also help overcoming loneliness. In fact, the most frequent reason that elderly and other users state for participating in the activities of intergenerational community centres, is making new friends and socializing.

Additionally, community centres are a perfect field for gathering valuable information and gaining insight into the needs and problems of end-users, which helps Slovene Philanthropy design new services to address issues of modern and aging society.

5.6 Good practice in telehealth resulting from EU project

5.6.1 CEZAR centre for telehealth (telemedicine) services

CEZAR centre for telehealth (telemedicine) services is located in General Hospital Slovenj Gradec (Slovenia). Its implementation is a fruit of the European project United4Health (2013-2015), and it is a good example of a project that has successfully been transformed from a piloting project to an on-going project. The project is operational since April 2014. It had over 550 users so far, over 440.000 measurements were sent by the patients, what resulted in over 1.200 therapy changes. Slovenian partners that collaborate in CEZAR's implementation in Slovenj Gradec are: General Hospital Slovenj Gradec (public healthcare provider), Healthcare Centre Ravne (public healthcare provider), and MKS Elektronski sistemi d.o.o. (private SME).

CEZAR telemedicine service model is depicted in the Figure 15 below. Patients are equipped with adequate devices for vital functions measurements and a gateway device (e.g. smartphone). CEZAR telehealth centre is a connecting and mediating point between the patients and a healthcare system. The centre is equipped with information and communication technology devices, such as computer and server for data processing and storage, and counts with personnel that manages the processes. The third element in the CEZAR telemedicine service model is the healthcare system: general practitioner, specialized doctor, other healthcare professionals, and family or informal caregivers.

CEZAR Centre service characteristics are the following:

- The solution is mobile and does not require any patient's intervention when taking measurements using devices at home.
- Each patient cares only that his or her smart phone is on and operational.
- All patients and their carers receive an adequate training prior to inclusion.
- The patient's equipment is personalised prior being provided to the patient.
- Patients are called by the CEZAR staff if something goes wrong.
- Patients are informed by phone and by mail when they have to change their therapy.
- Decision on "What to do?" when something goes wrong is on the medical staff.

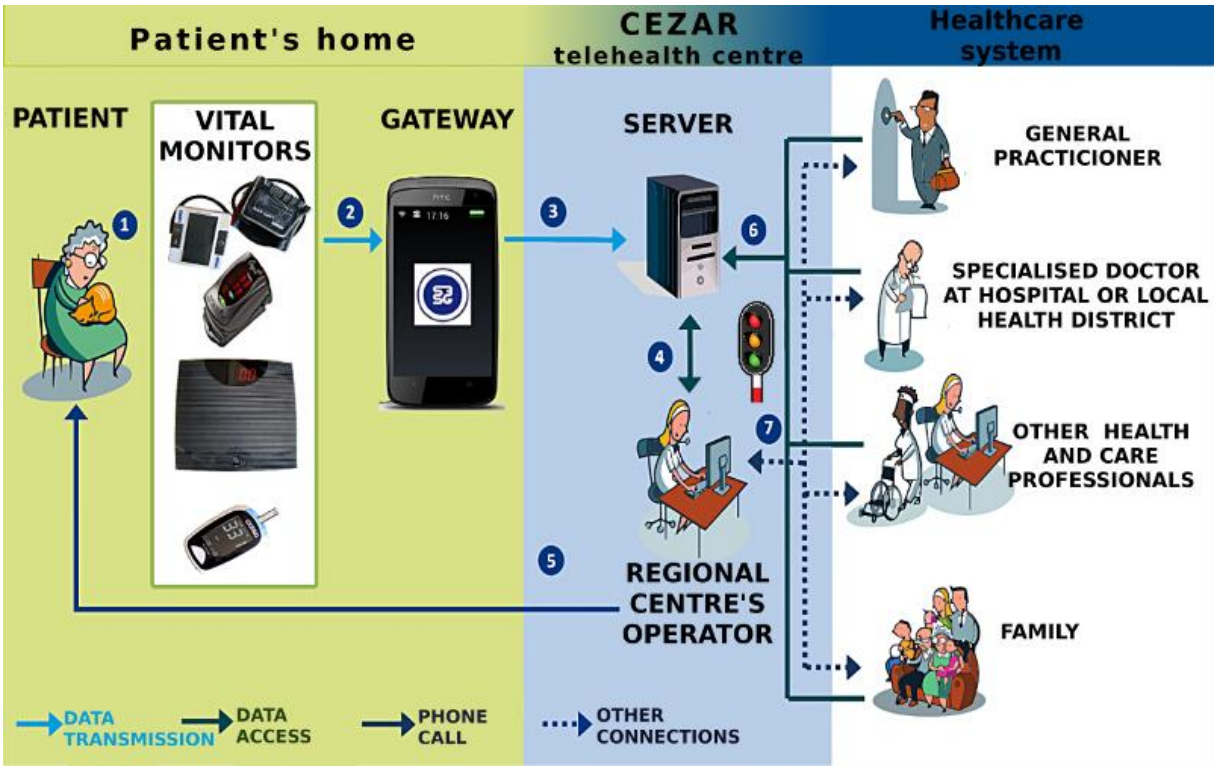

Figure 15: CEZAR telemedicine service model (Source: Telemedicine support to patients with chronic diseases for better self-management at home, 2018)

CEZAR telemedicine centre for telehealth in Slovenj Gradec (Slovenia) supports DM2 (Diabetes Mellitus type 2) and HF (Heart Failure) patients at home. The CEZAR's success in Slovenia can be substantiated by data and analyses that were collected and performed along with CEZAR's implementation.

Firstly, a retrospective analysis was performed on the cohort of 134 patients with Congestive Heart Failure as the primary diagnose. The aim of the analysis was to compare the average duration of hospitalization and the number of admissions (readmissions) before and after the inclusion in CEZAR program. Results showed a substantial reduction in duration of hospitalization, from 2.36 days per year per patient in the year prior to inclusion in CEZAR program to 0.55 days in the year after the inclusion in the program. Similarly, the number of admissions (readmissions) to the hospital decreased, from an average of 0.34 times per year per patient to 0.10 times per year per patient. To conclude, for the cohort of 134 Congestive Heart Failure patients, the participation in CEZAR project resulted in 77% decrease in number of hospitalization days, and 70% decrease in the number of admissions (readmissions) to the hospital.

Secondly, telemedicine acceptance and perception were also assessed by a survey performed among patients - TM (telemedicine) service users - in the phase when CEZAR project was running within the UNITED4HEALTH European project. Amongst 400 patients that were the service users for at least 12 months, 363 users answered the questionnaire with 18 questions. Survey results indicated high overall satisfaction of patients with TM service, the average score was 4.6, on a scale of 1 to 5. The average score on experience with the use of TM equipment was also high (4.4). Another important indicator of acceptance of TM service was the likelihood of recommendation of TM services to other patients with the same type of disease, the average score on indicator was high, reaching 4.5 scores on average (on scale of 1 to 5).

Overall, stakeholders that were involved into implementation of CEZAR centre for telehealth services in Slovenj Gradec, as well as measurable CEZAR project's results presented in the above paragraphs, indicate that CEZAR project carries high potential, not only for becoming a permanent part of the public healthcare services for patients with diabetes and heart failure issues in the area of Slovenj Gradec, but also to extend its scope to patients with other (chronic) diseases. Moreover, the project has a potential to be transferred to other Slovenian regions.

6 Peer evaluation process, feedback and recommendations

6.1 Peer evaluation process

The Slovenia EEPE event involved diverse stakeholders from across the Slovenian eco-system. It showcased the strategic and policy context, the shape of the eco-system and the range of interventions and innovations across, and how to strengthen the regional innovation cycle for health, care and well-being. This final section of the case study discusses the findings from the exchange of experience and peer evaluation process and sets out recommendations, for Slovenia (and particularly the national ITHACA Stakeholder Group) and for the wider ITHACA partnership, that derive from them.

Visiting delegates to the Slovenia EEPE acted as an "evaluation and feedback team" who observed and provided structured feedback to the hosts about what they saw and learnt at the EEPE. This was delivered at two stages. Firstly, during a verbal peer evaluation feedback session in the final afternoon of the EEPE.

Visiting delegates were asked to provide feedback on one of five themes. All themes were covered by the overall delegation. The key themes were:

- Policies, priorities, objectives and aims.
- Eco-systems and clusters.
- Implementation across the innovation cycle.
- Innovation in policy and practice, dissemination and transferability.
- Evaluation and impact.

For each theme, delegates peer evaluation reviews focused on:

- What the host region has done;
- Strengths, areas for improvement and gaps;
- Good practices - and potential for transferability;
- Lessons learnt and their implications;
- Recommendations for the host region;
- Recommendations for other ITHACA regions.

The final sections of this case study summarise the key comments provided by the delegation. It is structured according to evaluation theme. Recommendations flowing from the peer evaluation – and the EEPE event overall – are flagged up.

6.2 Peer evaluation feedback and recommendations

6.2.1 Theme A: Policies, priorities, objectives and aims

Delegates found it inspiring that Slovenia has an Active Ageing Strategy. It could also be translated to some sort of action plans. Moreover, they agreed, pilot projects which are currently being implemented in the field of long-term care are a very good starting point to have some real evidence on long-term care that could inform the Long-term care act subsequently. Pilots can also serve as a basis for the future policies.

First gap recognised by delegates is the lack of integration between the two most important policymakers in the field of smart health and care, Ministry of Health and Ministry of Labour, Family, Social Affairs and Equal Opportunities. In delegates' opinion, both organisations seem to be short-term focused, which is not possible in the health care sector. Delegates also agreed, Slovenia needs a future

planning on financial aspect of healthcare, since at the moment, there are no clearly defined pathways for the future actions, what makes the health sector very fragile. There also seems to be little involvement of the government sector, hospitals, primary care institutions, … in the ecosystems.

Practices, recognised as good by visiting delegates are: research activities at University Rehabilitation Institute, where clinicians, engineers and others work together to develop all kinds of technologies; eHealth solutions, such as Health Insurance Card, ePrescription, eAppointment, Central Registry of Patients, Patient Portal…; and social innovations Simbioza and integrative care for residents with dementia in Dom Petra Uzarja home for older people.

Overall, there is a lot of good will and energy out there in the ecosystems, but there seems to be disconnection between them and the partners in the government system. According to delegates, responsibilities could be better divided between the ecosystem and the government.

The peers mentioned the following areas for improvement:

- Despite the fact that Active Ageing Strategy is strong, it seems to be isolated in addressing all the demographic and financial challenges Slovenia is facing.
- There is no health sector policy or strategy as such. Health is mentioned in the Smart Specialization Strategy, but in a very general manner.

Recommendations for Slovenia

- Strong base of the civil society could be better integrated in the future partnerships.
- There is a need for the bridge between all stakeholders and those who are going to execute the strategies and plans. And “trust” is the keyword for this connection which can serve as a basis for the future development and implementation of strategies.

Recommendations for ITHACA regions

- Using the results of the evaluation of the pilots is something all ITHACA partners could do. Those results can serve as a basis for fine-tuning, refining or adjusting future policies and strategies.
- All ITHACA regions could have Active Ageing Strategy, because when you got a framework for your agenda, which is about active healthy aging, and you don’t have a strategy for it, it’s a bit of the gap.

6.2.2 Theme B: Ecosystems and clusters

According to the peers, intergenerational solidarity seems to be the common thread of connections between stakeholders. Presented projects seemed very community-driven, and in the heart of many projects are the people, not the technology. Collaboration between members of different networks and ecosystems was recognised as good practice of Slovenian ecosystems and clusters.

Strengths of the Slovenian ecosystems and clusters, recognised by delegates, are: active ageing strategy, presence of quadruple helix, involvement of all the relevant actors in addressing ageing issues, strong NGOs, much easier cooperation and collaboration between the stakeholders due to the smallness of the country, people in focus of the projects, and openness of stakeholders for the innovations. On the other side, gaps and open questions identified by the peers are:

- How do all the networks and ecosystems fit into the Active Ageing Strategy?
- Where in the mix of new service models are the GPs? How does social care fit in?
- The market is too small for making a sustainable business.
- Presented ecosystems are not “real” ecosystems involving all four types of stakeholders.

Important lessons, learned during the EEPE were that national body coordinating and stimulating formation of new ecosystems is needed, and that Slovenia needs collaborative ecosystems enabling industrial partners to reach their goals.

The peers mentioned the following areas for improvement:

- Networks and ecosystems could be more structured.
- Networks could make action plans to see how to strategically target all stakeholders.

Recommendations for Slovenia

- Due to the small size of the country, sustainable business models are needed.
- Networks, ecosystems and clusters could be better formalized and more structured.

Recommendation for ITHACA regions

- It is a great benefit that members of networks and ecosystems cooperate among each other and that everyone knows each other.

6.2.3 Theme C: Implementation across the innovation cycle

Peers agreed that there are a lot of smart health and care innovations in Slovenia. Potential for innovations, and cooperation between social enterprises and local partners were identified as strengths. On the other side, it is not clear, what are the present innovations really achieving in lives of the people, what was recognised at the main gap of the Slovenian innovation cycle.

As good practices, peers recognised concepts of some pilots that could be taken to another context, intergenerational hackathon, and living lab IRIS Home, where people can stay to use the gadgets and be observed by the professionals. Visiting delegates agreed, that in Slovenia, balance is needed between the innovations and the culture of caring. Innovative solutions need to really help people who take care of the family members. Implementation and not just innovation phase has to be emphasized. Regarding the start-ups, it is not just about counting the number of successful start-ups, but to count the results of their solutions.

The peers mentioned the following area for the improvement:

- Much attention and money is going to the innovation part and less to the implementation.

Recommendations for Slovenia

- It has to be clear what is the contribution of the innovations for the people.
- We should be looking ahead to adoption and full implementation, and looking at the sustainability right from the beginning.
- More partnerships need to be developed.
- Support is needed to bring the pilots to the next step, which is not necessarily financial, but can also be coaching… And if you bring enterprises together and ask them what do they need to be able to move to the next step, you can make it together.

6.2.4 Theme D: Innovation in policy and practices, dissemination and transferability

As the most important Slovenian achievements related to innovations, delegates identified process of looking for solutions, which already started 10-15 years ago (which is earlier than i.e. in Poland); University as an important player in the dialogue; lots of e-solutions; holistic approach to innovations; and many "striking" innovations. It is also very important that policies and solutions are implemented on national level, given the fact that in Slovenia there are no regions.

Good practices identified by peers are: Feelif (multimedia device, an adapted tablet or smartphone, designed for blind and visually impaired people), CEZAR Centre for telehealth, eHealth solutions (ePrescription, eAppointment, Central Registry of Patients, Patient Portal), holistic approach to patients with dementia in Dom Petra Uzarja home for elderly people, IRIS smart home/living lab at the University Rehabilitation Institute and iHelp (SOS mobile app allows users to send quickly and easily an SOS alarm to members of the iHELP community (ICE contacts, first responders, rescuers and iHELP users) in the nearby area).

The peers mentioned the following areas for the improvement:

- Presented volunteer platform (ProVolunteer web application for providing support to the elderly on local level) could be extended to informal carers.
- Healthlord platform (pharmacist supervised chronic disease self-management platform) can be extended to checking if patient is actually taking drugs.

Recommendation for Slovenia

- Key direction to boost the innovation process are foreign investments and partners.

Recommendation for ITHACA regions

- Many e-solutions can serve as an inspiration for the development of e-solutions in other ITHACA regions.

6.2.5 Theme E: Evaluation and impact

In terms of evaluation and impact, as the strengths, peers recognised lots of robust evidence and papers, presented in the University Medical Centre; presented local ecosystem where they looked up at what people want, what they need and changed their projects according to their needs; and lots of innovations implemented. Gap is related to the fact, that there are lots of pilots, which are conducted

in the "opposite direction" – in order to contribute to the decisions how to do things nationally. This should be changed.

As a good practice, delegates recognised IRIS Smart Home, where evaluation led to the investment of the insurance company.

The peers mentioned the following area for the improvement:

- Ecosystem should start functioning in the manner of putting the patient to the centre, making sure their needs are clear for everyone who develops the solutions.

Recommendations for Slovenia

- Pilots should be done to test the implemented solutions and not to decide on how to implement them.
- A formal evaluation of the impact of "volunteers' programmes" should be done to formally evaluate their impact.
- The need to be more formal in the evaluation in order to influence, in particular, the insurance institute, so that they would agree to fund it.
- When starting the evaluation or the project, we should make sure that we already know what are the aims for the patients, for the volunteers, the government and insurance.

Recommendation for ITHACA regions

- We are measuring the same things over and over again in all ITHACA regions. It might be really interesting to see how we can put these evaluations together, to see if there are some similarities between them, and how can we learn from things we are measuring so that we don't have to invent everything over and over again.

7 References

Buzeti, T., & Dominkuš, D. 2017. *Slovenia's present situation on policy and outlook in long-term care and plans for the future.* Presentation, Ljubljana, Slovenia.

Dolničar, V., & Nagode, M. 2010. Overcoming key constraints on assistive technology uptake in Slovenia. *Teorija in praksa 47*(6), 1295–1315.

Institute of Macroeconomic analysis and Development of the Republic of Slovenia (IMAD) and Ministry of Labour, Family, Social Affairs and Equal Opportunities. 2018. *Active ageing strategy.* Ljubljana, Slovenia.

Matjačić, Z., Zadravec, M., & Olenšek, A. (2018). Feasibility of robot-based perturbed-balance training during treadmill walking in a high-functioning chronic stroke subject: a case-control study. *Journal of Neuro Engineering and Rehabilitation, 2018*, 15-32.

Nagode, M., & Dolničar, V. 2010. Assistive technology for elder people and its potential for intergenerational cooperation. *Teorija in praksa 47*(6), 1278–1294

OECD/European Observatory on Health Systems and Policies (2017), Slovenia: Country Health Profile 2017, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels, https://doi.org/10.1787/9789264283558-en.

Oroszy, D. 2018. *EkoSmart project – Smart System of Integrated Healthcare and Homecare.* Presentation at the 6th EEPE event of the ITHACA project, Ljubljana, Slovenia.

Rant, Z. 2018. *Current state-of-the-art in eHealth in Slovenia – National Institute of Public Health*. Presentation at the 6th EEPE event of the ITHACA project, Ljubljana, Slovenia.

Rafaelič, A., & Querrioux, I. 2018. *Current challenges in the field of long-term care in Slovenia – Ministry of Health.* Presentation at the 6th EEPE event of the ITHACA project, Ljubljana, Slovenia.

8 Appendix

8.1 Appendix 1: Agenda

DAY 1: Tuesday, 2. October 2018

Venue: University of Ljubljana, Kongresni trg 12, Ljubljana	
18:30-18:45	• Delegates join the Steering group members at the University, Registration
18:45-19:45	• Welcome messages **(Irena Brinar, University of Ljubljana, Faculty of Social Sciences, Head of Organizational Unit, International Research Projects and Vesna Dolničar, Assoc. Professor, University of Ljubljana, Faculty of Social Sciences, Centre for Social Informatics)** • Presentation of the Slovenian health care and long-term care systems **(Vesna Dolničar, Assoc. Professor and Mojca Šetinc, Researcher & Head of unit, University of Ljubljana, Faculty of Social Sciences, Centre for Social Informatics)** • Current state-of-the-art in the fields of eHealth and eCare, uptake of eHealth and eCare services in Slovenia **(Živa Rant, Professional Assistant, National Institute of Public Health and Vesna Dolničar, Assoc. Professor, University of Ljubljana, Faculty of Social Sciences, Centre for Social Informatics)** • Introduction to Peer Evaluation **(Jon Dawson, JDA Ltd, ITHACA Expert Task Force)**
20:00	*Dinner in very special little gostilna-style restaurant employing several people with disabilities* (Druga violina, Stari trg 21, 1000 Ljubljana)

DAY 2: Wednesday, 3. October 2018

Venue: Cankarjev dom, Prešernova cesta 10, Ljubljana (M1 Conference Hall)	
8:15-8:30	*Delegates meet at the Prešeren Square in the Ljubljana city centre and walk to Cankarjev dom together (app. 10 min walk)*
8:30-9:00	Registration and coffee
Slovenian eHealth and eCare in the mirror of the European Union **Moderators: Marielle Swinkels, Vesna Dolničar**	
9:00-9:20	***Welcome addresses*** • Welcome address by the Slovenian ITHACA partner **(Vesna Dolničar, Assoc. Professor, University of Ljubljana, Faculty of Social Sciences, Centre for Social Informatics)** • Welcome address by the European Commission in Slovenia **(Ulla Hudina-Kmetič, Deputy Head, European Commission Representation in Slovenia)** • Welcome address by the representative of the Festival of the Third Age **(Marija Pukl, Vice-President, Slovene Federation of Pensioners' Associations)** • Welcome address by the Slovenian policymakers' representative **(Davor Dominkuš, Secretary, Ministry of Labour, Family, Social Affairs and Equal Opportunities)**
9:20-9:30	Presentation of the Active Ageing Strategy **(Aleš Kenda, Secretary, Ministry of Labour, Family, Social Affairs and Equal Opportunities)**
9:30-9:50	Current challenges in the field of long-term care in Slovenia **(Andreja Rafaelič, PhD, Secretary and Isabelle Querrioux, MD, Secretary, Long-term Care Directorate at the Ministry of Health)**
9:50-10:00	Call for national ICT pilot project by Ministry of Labour, Family, Social Affairs and Equal Opportunities **(Urška Stepanek, Project Expert, Ministry of Labour, Family, Social Affairs and Equal Opportunities)**

10:00-10:10	Evaluation Plan/Strategy of the Pilot Projects in the field of long-term care **(Anita Jacović, Secretary, Long-term Care Directorate at the Ministry of Health)**
10:10-10:35	**DISCUSSION AND QUESTIONS FROM THE AUDIENCE**
10:35-10:55	*COFFEE BREAK & first look at the stands with presented innovative Slovenian smart health and care solutions and coffee with the owners of those solutions*
10:55-11:30	**Presentation and demonstration of Slovenian smart health and care solutions** **Moderator: Drago Rudel**
	Presenting companies: 1) SRC Infonet – »Nationwide Medic API« 2) Mikropis – »24alife preventive health programs« 3) iHelp – »iHELP care network and solutions to increase survival rates at a sudden cardiac arrest« 4) Mediainteractive – »MITEAM multimedia platform for healthcare« 5) Eurotronik – »NurseCare system« 6) Gospodar zdravja – »Healthlord Pharmacy« 7) Feelif – »Feelif solution for visually impaired people« 8) Spominčica – »Alzheimer Slovenia"
11:30-12:00	*Discussion and networking with owners of presented solutions at stands over coffee or optional tour at the Festival of the Third Age fair*
12:00-13:45	*Joint walk to the city centre and lunch on the boat on Ljubljanica river*
13:45-14:00	*Joint walk to the next venue*
Venue: University Medical Centre Ljubljana, Zaloška cesta 2, Ljubljana	
Site Visit 1: University Medical Centre	
14:00-14:20	*COFFEE BREAK*
14:20-14:35	• Welcome speech by the representatives of University Medical Centre Ljubljana (Aleš Šabeder, CEO and/or prof. Jadranka Buturović Ponikvar, PhD, Medical Director, Zdenka Mrak, MSc, Chief Nursing Officer) Best practices in eHealth at the University Medical Centre Ljubljana **(Dominika Oroszy, MD, Assistant of Medical director for Quality)**
14:35-15:00	Development of a smart system of integrated health and social care – EKOSMART project **(Dominika Oroszy, MD, Assistant of Medical director for Quality)**
15:00-16:00	Practical applications of innovative solutions I: • Telemedicine services for patients with chronic heart failure **(Gregor Poglajen, PhD, Department of Cardiology)** • Robotic surgery in urology, Department of Urology at the Division of Surgery **(prof. Matjaž Veselko, PhD, Medical Director of Surgical Division, Simon Hawlina, Urology Consultant)** • Tele-stroke Program **(Matija Zupan, PhD, Department of vascular neurology and intensive care, Neurology Division)**
16:00-16:20	*COFFEE BREAK*

16:20-17:00	Practical applications of innovative solutions II: • Medical Simulation Centre **(Dušan Vlahovič, MD, Head of Medical Simulation Centre)**
17:00-17:30	Practical applications of innovative solutions III: • e-Care by Telekom Slovenije **(Elena Nikolavčič, eCare and eHealth, Telekom Slovenije)**
19:45	*DINNER – after the end of Day 2, delegates will walk together to the gathering point and meet again at that point at 19:45 to walk to the restaurant together* (Altrokè, Stari trg 19, 1000 Ljubljana)

DAY 3: Thursday, 4. October 2018

Venue: University Rehabilitation Institute SOČA, Linhartova 51, Ljubljana	
Site Visit 2: SOČA	
8:00-8:30	*Delegates meet at the Prešeren Square in the Ljubljana city centre, transfer to the Rehabilitation Institute*
8:30-8:45	*COFFEE*
Research activities at the University Rehabilitation Institute SOČA	
8:45-9:30	Presentation of the Institute and their work **(Zlatko Matjačić, PhD, Head, Research and development unit, University Rehabilitation Institute)**
Venue: European Union House, Dunajska cesta 20, Ljubljana	
9:30-9:50	*Joint walk to the European Union House (app. 15 min)*
10:00-10:10	Welcome speech by European Commission in Slovenia **(Ulla Hudina-Kmetič, Deputy Head, European Commission Representation in Slovenia)**
10:10-10:15	Brief presentation of the examples of R&D activities in the field of eHealth and eCare **(Vesna Dolničar, Assoc. Professor and Tomaž Burnik, University of Ljubljana, Faculty of Social Sciences, Centre for Social Informatics)**
Ecosystems in the field of eCare and eHealth in Slovenia **Moderator: Gregor Cuzak**	
10:15-11:00	Invited ecosystems: • ECHAlliance/Healthday.si **(Gregor Cuzak, International Ecosystem Coordinator, ECHAlliance)** • Ljubljana Technology Park – Initiative Start:Up Slovenia **(Mojca Cvirn, Senior Project Manager, Technology Park Ljubljana)** • EkoSmart **(Aleš Smokvina, Startup & Educational program manager @ ehrscape.com, Marand)** • Slovenian Coalition for public health, environment and tobacco control **(Mihaela Lovše, Project Manager, "NGOs protect our health" project)** • Network NVO 25×25 – a network of non-governmental organisations in the field of health **(Franc Zalar, Vice-President, Slovenian association for Cardiovascular Health)**
11:00-11:20	*COFFEE BREAK*
Innovative solutions providing social assistance to older adults **Moderator: Simona Hvalič Touzery, PhD**	
11:20-12:40	Presentations of representatives of the end-user organisations and end-users: • Slovene Federation of Pensioners' Associations: Elderly for the elderly **(Amalija Šiftar, Volunteer, Member of the program council of the project)**

	• Simbioza Genesis, social enterprise: Simbioza BTC City Lab - innovative hub of technology for older adults **(Tjaša Sobočan, Project Manager and International Lead, Simbioza Genesis, social enterprise)** • Oreli Institute: Innovative model for supporting older people in the local community **(Roman Rener, Volunteer and Simon Rener, Volunteer, Oreli Institute)** • Slovene Philanthropy, Association for promotion of voluntary work: The program of intergenerational community centers **(Tamara Raftović Loštrek, Activities Coordinator and Alenka Fink, Volunteer, Intergenerational centre Hiša Sadeži Družbe Logatec)** • Peter Uzar home for older people: Holistic approach to care for people with dementia in the home for older people **(Anamarija Kejžar, PhD, Director, Peter Uzar home for older people)** • Anton Trstenjak Institute for Gerontology and Intergenerational Relations: The Slovenian Network of Age-friendly Cities and Communities **(Ana Gorenc Vujović, Project coordinator, Anton Trstenjak Institute for Gerontology and Intergenerational Relations)**
Transferability – Good practice resulting from European project	
12:40-12:55	Telemedicine support to patients with chronic diseases for better self-management at home **(Cirila Slemenik Pušnik, MD, General Hospital Slovenj Gradec, and a user of the telemedicine service)**
12:55-14:00	*LUNCH and networking with representatives of end-user organisations (PLAC, Dunajska cesta 20, 1000 Ljubljana)*
14:00-14:15	Getting ready for Peer Evaluation and groups' gathering
14:15-15:45	Preparing feedback
15:45-16:00	*COFFEE BREAK*
16:00-17:15	Feedback (Peer Evaluation) Session
17:15-17:30	Hosts response and final discussion, closure
19:45	*DINNER – after the end of the EEPE event, delegates will walk together to the gathering point and meet again at that point at 19:45 to walk to the restaurant together* (Hiša pod gradom, Streliška ulica 10, 1000 Ljubljana)