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While the European population is ageing, life expectancy is increasing. European Union citizens can remain productive and active far beyond the standard age of retirement. Sustaining longer and healthy lives requires solutions that prevent or minimise risks of injury, frailty, and long-term chronic diseases.

SHAPES – Smart and Health Ageing through People Engaging in Supportive Systems is an Innovation Action funded by the European Union’s Horizon 2020 programme involving a total of 14 European countries. It aims at creating an integrated technological platform that will bring together a wide range of digital solutions, focused on improving the health, wellbeing, and independence of people as they get older. This interoperable platform will offer a network of large-scale interconnected digital products and
services, that will empower older adults, families and caregivers, to solve real and meaningful problems. These solutions are intended for older adults facing a temporary or permanent reduction of functionality and capabilities, whether physical or psychological, but also to help those who are healthy to maintain their health and well-being for as long as possible.

**SHAPES** will foster European industry and policymakers to find a means to successfully face the challenges of an aging population. In addition, it will push towards the development of value-based business models to open and scale-up the market for innovative digital health and care solutions and services, supporting and extending healthy and independent living. The programme will also impact on the long-term sustainability of health and care systems in Europe, in which current 25% of the population is represented by older people, according to the United Nations (UN).

The project is a collaboration between 36 organisations, led by the ALL (Assisting Living & Learning) Institute, University of Maynooth, Ireland. The project will span 48 months (from November 2019 to October 2023) and will involve a range of activities, from creating the digital platform itself, to the development and enhancement of 15 technological and social solutions aimed at supporting older people. These solutions will be tested by more than 2,000 older adults involved in SHAPES, to ensure that they are meaningful and suitable for users from different countries and cultures. SHAPES will examine and analyse consenting participants’ health, environmental and lifestyle experiences, in order to identify their needs and provide personalized solutions, whilst also upholding data protection requirements and ensuring the user's trust in the overall approach.

SHAPES will also involve hundreds of professionals from different areas of knowledge and practice, including health and social care, government, academia and industry. With an investment of almost 21 million Euro, SHAPES is a broad initiative to encompass the needs and expectations of older adults, a population group that, according to the United Nations, grows 3% on average per year.

**Overall project value:** EUR 20,944,318.75 of which EUR 18,732,468.25 is direct EU contribution
The SHAPES Project began in November 2019 with the aim of understanding the context of the lives of older individuals; building more accessible and age-friendly physical spaces and social pathways; supporting people to continue to live in their own homes and communities; and building, piloting and deploying a large-scale, EU-standardised open platform, capable of integrating a range of digital and technological solutions.

Partners in SHAPES have been incredibly busy over the first 6 months of the project. Following the Kick Off meeting held at Maynooth University in November 2019, and despite the challenge of working under the restrictions of COVID-19, the project has continued to achieve key milestones. The submission of Deliverable 2.5, SHAPES Personas and Use Cases; and of Deliverable 6.1, SHAPES Pan-European Pilot Campaign Plan, marks the Completion of the project’s Concept Development Cycle. This important achievement was also marked by the first SHAPES Dialogue Workshop organised by Olomouc University. Although, unfortunately, we could not meet in person, SHAPES created one of the first virtual consultative workshops of its kind, which was executed masterfully by all involved across large number of European countries.

In the first 6 months we have also established the SHAPES Ethical Advisory Board (D8.1), defined the Baseline for Project Ethics (D8.2), submitted the SHAPES Data Management Plan (D8.13), and established the SHAPES Quality Plan (D1.2).

Like all of our colleagues around the world, SHAPES has however been impacted by COVID-19. In response to this the coordinating team arranged a special Project Management Board Meeting, to develop a mitigation plan for work packages that might be affected, in order to support everyone in continuing their work under these new and challenging times. SHAPES partners have developed innovative new methodologies, in order to be able to continue working under the current restrictions, and still produce scientifically robust results.

The SHAPES Coordinators are incredibly grateful to all of our project partners for their commitment, tenacity and flexibility during these challenging first few months of the project. As a team, as a consortium, we have done well. COVID-19 has also taught us that solutions, such as SHAPES, are needed now more than ever and will have a very strong role in supporting older people to live good lives at home and in their communities, in the future. SHAPES also illustrates the opportunities to manage future global health challenges, through the carefully designed interplay of digital and human ecosystems supporting smart and healthy ageing.

Malcolm (Mac) MacLachlan
SHAPES Project Coordinator
SHAPES NEWS

• **SHAPES ACTIVITIES**

**SHAPES 1st Dialogue Workshop**

On the 12th of May, the 1st Dialogue Workshop took place online, gathering almost 150 participants, namely SHAPES partners, academics, students, and NGOs. This online one-day event aimed to unveil and discuss the project’s preliminary findings from 4 of the 36 SHAPES partners over the past 6 months.

The workshop was organized into two complimenting sessions;

1. **Morning session (8h30 – 11h25):**
   Presented via YouTube streaming, the morning session was dedicated to present the following topics:
   - The SHAPES projects and its key messages by Malcolm (Mac) MacLachlan;
   - Ethics requirements for digital solutions by LAUREA;
   - Use cases, personas and scenarios by Palacký University;
   - Foresight exercise: thinking about future technologies for the users of the future by Fraunhofer INT;
   - Co-creation of think tank for European Integrated Care by Carus Consilium Sachsen GmbH.

2. **Afternoon session (11:55 – 17:30):**
   Supported by Zoom platform, in the afternoon session the last 4 topics were discussed during interactive workshops in smaller groups.

The workshop was organised by Palacký University, with the support of AGE Platform Europe.

Find more about the outputs of each workshop in the **SHAPES Events** section.

**Additional information**

• **SHAPES PILOT THEMES**

**SHAPES Pilot Theme 6 preparation**

**Pilot Theme 6 - “Physical Rehabilitation at Home”**: this pilot theme aims to provide physical rehabilitation services in a supervised or semi-supervised home to older individuals who need exercise routines during recovery periods after accidents, surgeries strokes or facing musculoskeletal diseases. In addition, the pilot theme seeks to optimize the rehabilitation process and reduce costs, and to evaluate the rehabilitation tool in terms of health benefits, usability and user engagement.
The Universidad de Castilla-La Mancha (UCLM) is currently preparing Pilot Theme 6 of the SHAPES project. On the 31st of January a meeting was held with members of the UCLM and the El Salvador Nursing home. The purpose of the meeting was to present UCLMs assistive technology to EL Salvador’s specialists and to test and get feedback from the end-users’. This approach follows a co-design, involving the end-users from the very beginning of the project, validating early prototypes.

**SHAPES Pilot Theme 2 and 5 presentation**

**Pilot Theme 2 - “Improving In-Home and Community-based Care Services”**: this pilot theme is focused on providing a suitable home environment for those who need care through a specialized nursing service. It creates a safe and caring environment aiming to promote and maintain the autonomy of individuals at home, without neglecting the need for medical and nursing care. The pilot theme is also aimed at strengthening informal care and expanding outpatient care, increasing the involvement of the elderly and their families in the environment of care and therapies, and reducing the municipal rescue service and hospitalization rates, mainly at night and on weekends.

**Pilot Theme 5 - “Caring for Older Individuals with Neurodegenerative Diseases”**: this pilot theme addresses the provision of care to older individuals facing neurodegenerative diseases, with the aim of evaluating effective methods and solutions for monitoring and evaluating the health condition of individuals through the different stages of the disease. The pilot theme also seeks to demonstrate digital solutions to improve safety and increase the quality of care, and to demonstrate a systematic approach to ensure the highest level of quality control, automated monitoring and data governance in care for the older individuals who face neurodegenerative diseases.

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Within the Pan-European Pilot Campaign of the SHAPES project, the Integrated Healthcare and Social Health System Long Lasting Memories Care (LLM Care) as well as the Virtual Patient Scenarios (VPS) – Mobile Virtual Patients (MVP) will be deployed by varied pilot sites across the EU. Both digital solutions are currently provided and evaluated by the Laboratory of Medical Physics of the School of Medicine of the Aristotle University of Thessaloniki with interventions addressed to older adults and caregivers respectively.

**LLM Care** is a certified ICT platform that combines state-of-the art mental exercise with physical activity in an advanced ambient assisted living providing effective protection against cognitive decline and, thereby, actively improving the quality of life. It provides a comprehensive solution that has a direct impact on improving the quality of life of older adults.

**Virtual Patient Scenarios (VPS) and Mobile Virtual Patients (MVP)** are problem-based learning activities aiming at supporting caregivers’ skills with regard to the delivery of care to older adults. They are considered effective learning tools that facilitate the transfer of real-life challenges in engaging scenarios which mimic the tensions, distractions and uneven issues that make real-life decisions more difficult.
KOMPAÏ robotics

KOMPAÏ robots which will be utilised in the SHAPES project, are currently being evaluated in some Nursing homes in Basque Country. What is he doing? KOMPAÏ Makes rounds in the living room, to calm residents, with music for example or to make announcements (menu of the day, weather, ...) helping people to walk with the mobility assistance function, or proposing individual or collective entertainment.

Games for the Blind

SciFY’s project ‘Games for the Blind’, which has been awarded by Zero Project as one of the best practices in the world for innovation, impact and contribution to disability support, is one of the digital solutions that will be used in SHAPES. “Our games for blind and sighted people will be adapted for the elderly community ”said Vassilis Giannakopoulos during an award in Vienna, making special reference to how the games will be used in SHAPES.

Regional Forum for Europe on “Accessible Europe: ICT 4 ALL”

Mark Wheatley, Executive Director of European Union of the Deaf (EUD),
SHAPES NEWS

gave a presentation about SHAPES Project during the “Accessible Europe: ICT for ALL - ICT Accessibility: The Key to Inclusive Communications” conference at St Julian’s, Malta during December 2019. The conference was organised jointly by ITU and European Commission within the Framework of the ITU Regional Initiative for Europe on Accessibility, Affordability, and Skills Development for All to Ensure Digital Inclusion and Sustainable Development.

SHAPES official launch at the Northern Health and Social Care Trust

The team at the Northern Health and Social Care Trust (NHSCT) officially launched the SHAPES project in Northern Ireland in January 2020. All have been actively engaged in participating and promoting the recent 1st Dialogue Workshop. We look forward to continued engagement and progressing towards the pan-EU pilot scheme.

Photograph: L-R Professor Michael Scott, Dr Claire Scullin, Dr Glenda Fleming

SHAPES presentation during the webinar “WeCareMore”

SHAPES project was presented during the webinar “WeCareMore: Ideas and Projects for Health and Social Care services 2.0”, organized by the AIAS WeCareMore Team in May 2020. Representatives of Local Health care and Social Care services, Educational services and local administrators attended the webinar and were made aware of the aims and future activities foreseen by the project.

SHAPES and social media

SHAPES promotion and communication plan is a cross-cutting task within work package 10, that works on increasing awareness and promoting the project.
within the general public. Since November 2019, SHAPES has shared multiple posts related to project results, events and partners’ activities on the projects Facebook, Twitter, Linkedin and Instagram profiles.

During phase one of the communication plan (from November 2019 to October 2020), the consortium established that the minimum successful metrics of SHAPES would be reflected in 30 posts and 30 followers on Facebook, 100 interactions and 30 followers on Twitter, 30 posts and 50 LinkedIn connections, and 30 posts and 30 followers on Instagram.

It is with great pleasure and a sense of fulfilment that, after six months, from the beginning of the project, we can confirm we already have 43 posts and 203 followers on Facebook, 75 interactions and 288 followers on Twitter, 18 posts and 65 LinkedIn connections, and 12 posts and 45 followers on Instagram.

Keep up with SHAPES by spreading our Newsletter and following us on social media.
On the 11th, 12th and 13th of November 2019, the SHAPES kick-off meeting was held at the University of Maynooth (Ireland). During the meeting, each partner had the opportunity to present themselves and their contributions to the SHAPES project.

The 1st Dialogue Workshop was a one-day event. The aim was to gather SHAPES partners, academics, students, NGOs, and many others to evaluate the work of 4 of the SHAPES partners over the initial six months of the project.

The Workshop unveiled the project’s preliminary findings and in particular:

- The SHAPES projects and its key messages
- Ethics requirements for digital solutions
- Co-creation of a think tank for European Integrated Care
- Foresight exercise: thinking about future technologies for the users of the future
- Use cases, personas and scenarios

The morning session was streamed via YouTube and included presentations from the above-mentioned topics. In the afternoon, the 4 selected topics were discussed during interactive workshops. Participants were divided into 4 groups, so as to give everyone an opportunity to discuss each topic.

The morning session was attended by almost 150 participants. The afternoon workshops were attended by approximately 80 participants.
Ethical requirements Workshop by LAUREA

The workshop was presented by Sari Sarlio-Siintola and Nina Alapuranen and was focused on SHAPES legal, ethics, privacy and fundamental rights protection, namely ethical requirements concerning people’s fundamental rights and human capabilities, privacy and data protection, as well as ethics of the artificial intelligence in the SHAPES context. These requirements have explicit impact on both SHAPES technology, user processes, SHAPES businesses, and governance models and the entire SHAPES ecosystem.

During the workshop, LAUREA collected feedback on ethical challenges and opportunities of the SHAPES ecosystem of digital services. Participants were asked about the importance of ethical requirements and informed about the need to ensure those requirements alongside end-users’ requirements. Participants also expressed the need to ensure ethical requirements to avoid risk management issues and to promote innovation for end users, different organizations and society. The participants feedback will help LAUREA to define ethical requirements for the SHAPES solutions and to assess its conformance.
The workshop was presented by Eva Dubovská and was focused on the presentation of the personas that were created by UP team together with other SHAPES partners. In total over 60 participants attended the workshops throughout the afternoon.

After introductions were made to the personas and the personas methodology the participants worked in groups to brainstorm on individual persona’s needs and possible solutions. Ideas were than presented to others and discussed:

- Selected solutions for personas that were discussed;
- Support peer groups and networks for older adults with multiple chronic conditions;
- Create networks for matching volunteers with isolated older adults based on interests, favourite;
- Activities and places;
- Help older adults with musculoskeletal disorders to get easily accessible online physiotherapy and training;
- Support peer groups for informal caregivers and create a new persona solely describing informal caregivers;
- Think of more technical solutions that could to some extent substitute interpreter-guides for deafblind older adults.
Foresight Workshop by Fraunhofer INT

The workshop was presented by Diana Freudendahl and Simone Schmitz that carried out the Foresight Exercises “Thinking about future technologies for the users of the future “with around 70 participants. Information was provided on how future influencing factors and technologies for SHAPES could be identified and the following key questions were discussed with the participants:

- **Gaps**: What are the current needs of older persons, that are not yet properly addressed?

- **Influences**: What are critical current and possible future influences concerning older persons?

- **Possible direct solutions**: Are there any future technologies which could help older persons in smart and healthy aging and in the satisfaction of needs or the mitigation of negative influences?

- **Possible transferred solutions**: Are there any technologies in other areas (e.g. from industries such as automotive, space, production) which could be adapted to be used in the future for older persons?

The identification of gaps and influences can provide hints for the relevant trends and innovations as well as of changing environments for current and future SHAPES solutions. The following picture shows some results of the Foresight Workshop.

Some results of the Foresight Workshop

We ask workshop participants about: What are current needs of elderly, that are not yet properly addressed and what are critical influences? Additionally we wanted to know of the participants what could be useful future technologies filling the gaps and considering the influences.

**Gaps:**
- Deaf blind people are excluded (6%), solutions should be accessible to all
- Most existing technologies, unless specifically targeted at elderly people, are NOT designed to be accessible.
- Most technologies fail in helping the people and trust in technology is missing
- Co-design and collaboration methods in order to find problems and needs
- Social isolation – how can elderly be integrated
- Accumulated conditions give extra complexity

**Influences**
- Digital divide
- Economic viability
- Investments in technology vs. gain for the people
- Technology needs to be developed with elderly/stakeholders
- It is important to support digital education for doctors, nurses, carers at the same time
- Technologies are there but not known and misinformation on new technologies
- User-centered vs. technology centered design
- Data protection issues

**Technologies**
- Virtual reality (VR)
- Tactile gloves
- Smart insulin pens
- Sensors: EEG Devices (2-4 electrode measurements)
- Therapies: Light therapy, NIR stimulation
- Storing and Transfer of Information (data protection issues) – calculation on the device itself – e.g. with Blockchain
- Navigation systems to monitor movements of patients (interior/exterior) (with AI)
- Gamification (Rehabilitation for kids – adaptable to older people)
The gathered information will be used to identify additional possible technological solutions concerning the identified gaps by the participants. Some of the mentioned influences and technologies will be put together as Influencing Factor and Technology cards during the course of the project. Such Technology and Influencing Factor Cards could look like this:

These cards should then provide information and inspiration to other work packages in SHAPES. Additionally, these cards could be used as information source for people who are not directly involved in SHAPES, but are interested in future technologies concerning smart and healthy ageing.

**Think Tank Workshop by CCS**

The workshop was presented by CCS managing director Dr. Olaf Mueller and focused on the co-creation of SHAPES pilot 1 - smart living environment for healthy ageing at home. Together with experts from the digital healthcare ecosystem, CCS looked for insights into the needs of older adults with the aim of identifying solutions that support older adults in living a sustainable and independent life.
The Agile Ageing Alliance (AAA) is supporting the International Organization for Standardization’s efforts to define the next international standard (ISO) within the field of Ageing Societies. To deepen the understanding of what the framework should focus on, AAA organized the ISO Ageing societies workshop, bringing together 40 cross-sector experts and thought leaders, in a united effort to flesh out a new ISO standards framework.

The new ISO standards framework aims to accelerate construction of a new breed of age-friendly housing in ‘smart’ socially supportive multigenerational neighbourhoods, employing innovative technologies, business and service models, to improve health and wellbeing and reduce the financial burden on Citizens and States.

ISO Ageing societies workshop
27th May 2020

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SHAPES EVENTS

ISO Standards embody the principles of global openness and transparency, consensus and technical coherence, essential ingredients for building sustainable markets. AAA aims to qualify need, and evolve the proposition through consultation across seven broad categories: industry and commerce; government; labour; academic and research bodies; non-governmental organisations, together with end-users, older adults in particular.

More information
Read our article

SHAPES RESEARCH

Published

In press

UPCOMING EVENTS

SHAPES 2ND DIALOGUE WORKSHOP

October 2020

The 2nd Dialogue Workshop will be held in October 2020 and will be dedicated to the “Integrated care” topic. Learn more about this event and follow our promotional activities in SHAPES social media.
PROJECT DATA

PROGRAMME: H2020-EU.3.1.4.1. – Active ageing, independent and assisted living and H2020-EU.2.1.1.3. – Future Internet: Software, hardware, infrastructures, Technologies and services.

TYPE OF ACTION: Innovation Action

DURATION: 48 months (1 nov 2019 – 31 oct 2023)

PROJECT BUDGET: € 20944318,75

CONSORTIUM: 36 partners from 14 European countries

COORDINATOR: Maynooth University

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