

# CO-CREATION



# Introducing HoCare2.0 SME Co-creation Pilots

Drawing key learnings from co-creation process in homecare solution development

# Project HoCare2.0

The HoCare2.0 project aims to deliver highly innovative, digital-based, customercentered home care solutions for seniors. The project targets this area for innovation due to the **ageing of European society.** This process opens up a significant market — the Silver Economy — which still lacks solutions that are designed with seniors.

The success of newly delivered ICT based solutions and products depend largely on two main factors:

- 1. The solution must meet with the real needs of end-users;
- 2. End-users need to accept the solution.

It often happens that one might have a fitting solution, but it is not used by seniors as they are not comfortable with the technology.

Therefore, we suggest involving seniors already in the design process.



# Co-creation process and the SME Pilots

One of the most promising ways for the involvement of end-users into the development is co-creation. Co-creation is a process that utilizes the knowledge and experience of end-users in every stage of the development process. Participants share ideas and empower each other. This results in better-fitting solutions and involvement also promotes the usability of the technology. Therefore, increases its acceptance on the market.

To test the co-creation method and boost learning, pilots were launched in 6 countries: Hungary, Poland, Slovenia, Germany, Czech Republic and Italy with SMEs (Small and Medium Enterprises) who developed innovative homecare products.

Prior to the pilots, participants from all parts of the so-called quadruple-helix (QH), namely SMEs, academia or research sector, public service providers and seniors with their family members were connected in so-called Co-creation labs. Their tasks included among others selection of best innovative ideas to be tested in the pilots and also active participation in the co-creation process.



# **Process of Pilots**

In order to support the co-creation process with meaningful involvement of seniors, Tools have been developed during the HoCare2.0 project with guidelines on how to proceed in the various stages of solution development. All Pilots followed a common process procedure described in these Tools involving the following steps: **preparation, knowledge creation, prototyping the outcome and concluding the process.** 

#### **Preparation:**

the necessary physical conditions for the co-creation process are prepared, this phase includes tasks such as setting an **inspirational and creative environment**, making sure that the **facilitator** who will be leading the process has adequate skills and other activities connected with bringing together all **participants** and preparing the **outline of the process**.

#### Knowledge creation:

here the co-creation starts. The goal is to **identify end-users**' **requirements** - the needs, capabilities, attitudes and characteristics of seniors. The gathered knowledge is evaluated and analyzed by the team and/or facilitator. Helpful methods: shadowing, diary studies, interviews or focus group meetings, sticky notes, diagrams, mind maps, asset maps, mood boards.



#### **Prototyping:**

with the knowledge gained, the SME prepares production of the first **low-fidelity prototype** which is subsequently tested by users resulting in producing a **high-fidelity Minimal Viable Product (MVP)** - a working prototype. Eventually, all members of the Co-creation lab and external experts perform testing and evaluation to give final feedback to the SME. As a result, the **Minimal Marketable Product** is delivered which should be good enough to be presented to company leadership and approved for production. At this point the co-creation process is concluded. Examples of useful methods: using mock-ups, contextual interviews, citizen walkthroughs.

## Concluding the process: -

the team has to reflect on process/activities, to document the process and identify the lessons learnt. These follow-up activities include debriefing the team/individuals and wrapping up the whole process.

Details about each pilot including key learnings are presented on the next pages.



# SCN4ALL

# SME: E-Med4All Europe Ltd.

**Partner:** Central Transdanubian Regional Innovation Agency

Duration: 06/2021 - 03/2022

# Product description: -

The solution from SCN4ALL analyses the physiological functions of cardiovascular and autonomic nervous systems, and has a wide range of applications in medicine: monitoring patients with hypertension, heart failure or stroke, diabetes or lung disease, or monitoring the effectiveness of therapies. The company has developed a telemedicine system that independently monitors over 30 physiological parameters by a simple and easily disinfectable pulse oximeter, and sends the measured data to a processing unit in the cloud. Although most of the cardiovascular monitoring parameters offered by the SCN4ALL system were already known to science, their practical application, especially for the general population, was not yet solved.

# Participants:

End users: 11 elderly people over 60 and their relatives.

Co-creation Lab: a professional group of experts covering the QH.

**SME:** the owner of the innovative solution, who conducted the co-creation process and was responsible for the development of the product.

**Public service provider:** the Polgárdi Home for the Elderly, the institution where the pilot activity took place and which provided professional assistance in elderly care. **Project partner:** Central Transdanubian Regional Innovation Agency as the project lead partner, who managed and documented the co-creation process.

## Methods used: -

mapping, diary study, idea generation workshops, interview, focus group meetings, sticky notes, mind map, diagrams





The COVID19 pandemic made the implementation of the pilot activity very difficult, as strict legislation did not allow strangers to enter the nursing homes. The humble work and perseverance of the nurses during the implementation of the pilot was a great help.

#### Feedback from SME: -

The SME did not expect that the implementation of the co-creation process would contribute so much to the development of their product. It revealed many important end-user needs that the SME would not have thought of during the planning phase. Although the co-creation process was time and energy consuming, it was worthwhile because it saved the company time and money in the long run.

#### Feedback from participants/users: -

Participants were almost unanimously positive about the process. By the end of the pilot, the product had undergone a very useful development in many respects. The elderly people involved in the testing particularly enjoyed the work and the fact that finally someone was very seriously interested in their opinions.

#### Key learnings:

- The co-creation process has a real added value in product development.

- Taking end-user opinions into account helps to bring to the market a product that is based on real demand needs and perfectly matches the end-user's expectations in terms of functionality, comfort and design.
- After an initial reticence, it turned out that older people are great to work with and their age is not really a disadvantage in normal circumstances.



# ZWIPPEN

# SME: Zwippen Ltd.

Partner: Central Transdanubian Regional Innovation Agency

Duration: 06/2021 - 06/2022

# Product description: -

Zwippen's system provides an effective response to a serious problem: improving, maintaining and, if necessary, rehabilitating the fine motor skills and cognitive functions of elderly care home/institutionalised patients, thus improving their independence and quality of life, documenting training and improving communication between health professionals, carers and their families.

# Participants: -

End users: 11 elderly people over 60 and their relatives.

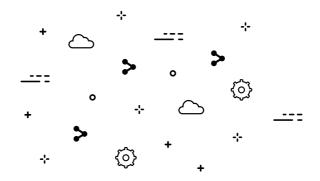
**Co-creation Lab:** a professional group of experts covering the QH.

**SME:** the owner of the innovative solution, who conducted the co-creation process and was responsible for the development of the product.

**Public service provider:** the Polgárdi Home for the Elderly, the institution where the pilot activity took place and which provided professional assistance in elderly care. **Project partner:** Central Transdanubian Regional Innovation Agency as the project lead partner, who managed and documented the co-creation process.

# Methods used: —

idea generation workshops, interview, focus group meetings, sticky notes, mind map, diagrams



During tests of the first prototype the SME found out that further product development was not possible due to time and cost reasons. Nevertheless, the co-creation process has taken place, although a marketable product will certainly not be ready before the project is completed. Thus, seemingly this pilot was a failure, but instead we considerit entirely viable. Not all product development can be immediately successful, but the co-creation methodology can give a timely indication of what further improvements are needed to develop a successful product.

# Feedback from SME: -

The SME was both disappointed and grateful. Disappointed because it hoped that its product development could be achieved within the given framework. Grateful because it realised in time what improvements were needed to move forward. However, the way forward and the final development of the product will not be part of this project.

# Feedback from participants/users: -

Participants were almost unanimously positive about the process. Despite the fact that it was unfortunately not marketable, the older people enjoyed the work and the fact that finally someone was seriously interested in their opinions.

# Key learnings:

A big lesson from pilot is that not all product development can be successful immediately, if success is defined as getting the product to market. However, the co-creation process itself can still be useful, provided that obstacles are pointed out in time.



# MobiSeni app

## SME: Bottom Line Tomasz Bober

Partner: Rzeszów Regional Development Agency

Duration: 11/2020 - 05/2022

## Product description: -

The idea of MobiSeni app relates to the development and implementation of a mobile application for seniors, running on smartphones. The application is legible (graphics friendly to the people with worse eyesight) and easy to use (minimum operations necessary to use the function). It works on Android, as it is the most popular operating system, and phones with this system are available at affordable prices. The app idea was guided by the factor of availability and low costs.

#### The basic functionalities of the MobiSeni app are:

- Activity timer;
- Group messages;
- Emergency button.

#### **Technical requirements:**

- Android smartphone;
- Internet access;
- Location sharing.

# Participants:

**End users of MobiSeni** – 11 active and mobile seniors with mobile phones with OS Android and 11 family members who went through the development process of the product.

**Co-creation lab members** - representatives of QH were present throughout the pilot implementation and provided valuable feedback.

**External experts** - 3 geriatric nurses participated in some activities where their opinion was important for the development process or testing.

## Methods used: —

shadowing technique, user interviews, sticky notes



The biggest risk was related to covid-19 pandemia and caused delays in pilot implementation. To mitigate that risk many meetings were rescheduled and moved to the online mode. Neverheless, seniors were more effective during physical meetings. Seniors were not that responsive in case of online meetings, sometimes due to connectivity issues, no cameras at their PCs, etc.

#### Feedback from SME: -

"It was a great opportunity to benefit directly from the help of seniors and experts and to receive on-going feedback for comments on product improvements. Working on the application with the target audience allowed us for better customisation and meeting specific needs identified in the co-creation process" - says Tomasz Bober, the owner of Bottom Line.

#### Feedback from participants/users: -

End-users insisted on next co-creation meetings. Seniors like talking about themselves and moderators of co-creation process showed interest in discussing the seniors' habits, family-related issues, hobbies. Some seniors expressed their frustration and were happy that someone listened. The end-users liked the Life Lines app much and were happy to test the app in small groups.

# Key learnings: -

- Good contacts with various insitutions in the region is a must
- Good business connections are an inevitable element, especially with the personell of day care centers for the elderly
- Having some technicians present during the meetings with seniors is an advantage
- Prepare spare devices with Android, some elderly may not have any sufficient ones



# Life Lines app

#### SME: Simple Wool

Partner: Rzeszów Regional Development Agency

Duration: 11/2020 - 05/2022

# **Product description:** -

LifeLines app - a mobile family photo album/book:

- an app to keep in touch with family whenever we can't be together physically
- a response to the emotional needs of the elderly
- a tool to combat loneliness among seniors
- maintaining family ties
- keeping in touch on a regular basis
- keeping an eye on seniors in a non-intrusive way
- reminding them of the most important moments in their lives
- ensuring privacy and allowing you to remember most intimate events and memories
- the app may motivate seniors to take care of themselves: they see the family they started
- memory training

# Participants:

End users of Life Lines app - 11 seniors and 11 family members who like being in touch with their relatives via mobile phone apps and social media but want to keep their privacy when posting pictures.

Quadruple Helix members (co-creation lab members) - representatives of QH were involved into the development process and provided valuable feedback.

External experts - 3 geriatric nurses participated in some activities where their opinion was important for the development process or testing.

## Methods used: -

user journey technique, user interviews, sticky notes

The biggest risk was related to covid-19 pandemia and caused delays in pilot implementation. To mitigate that risk many meetings were rescheduled and moved to the online mode. Neverheless, seniors were more effective during physical meetings. Seniors were not that responsive in case of online meetings, sometimes due to connectivity issues, no cameras at their PCs, etc.

#### Feedback from SME: -

"The feedback from the end-users was very useful and also at some point surprising for the SME. It was the seniors who suggested some important app functionalities. Such adjustments are only possible with the engagement of end-users of a given product as the feedback is provided from their perspective." says Ms. Mudryk, owner of Simple Wool. "The development of any product makes only sense when the end-users are involved from the very beginning into the process. Also, before starting working on the 1st prototype of any product, the needs of the end-users need to be examined whether a development of such a product makes sense at all."

#### Feedback from participants/users: -

End-users insisted on next co-creation meetings. Seniors like talking about themselves and moderators of co-creation process showed interest in discussing the seniors' habits, family-related issues, hobbies. Some seniors expressed their frustration and were happy that someone listened. The end-users liked the Life Lines app much and were happy to test the app in small groups.

#### Key learnings: -

- Good contacts with various insitutions in the region is a must.
- Good business connections are an inevitable element, especially with the personell of day care centers for the elderly.
- Having some technicians present during the meetings with seniors is an advantage.
- Prepare spare devices with Android, some elderly may not have any sufficient ones.





# The Android Aplication

# SME: Institute of Josef Stefan

Partner: BSC, Business support centre L.t.d., Kranj

Duration: 02/2021 - 06/2023

# Product description: -

The Android app for the elderly will combine the most effective solutions for care for elderly people. It will be a modern hybrid of all apps currently on the market, where we will redesign the architecture, user interface, user experience, layout of the elements, and size of fonts. The innovative solutions for example pedometer, medication alarms, fall detection service, pill calendar, history activity report, SOS function and geo-location of the elderly as information for the caregiver will all be packed in one single Android app. If the smartphone will be able to measure oxygen levels in the blood, this will also be available as a function of the app. The level is somehow correlated with the overall health of the senior. The main focus is to connect caregivers (or relatives) and elderly people.

# Participants:

**End users:** 11 seniors and family members, 61 - 93 years old, most of them living at home, only one residing at the retirement home. During the project some regularly perticipated in activities, some decided to leave and some joined few meetings.

**External Expert:** Prof. Ddr. Ovsenik - a top Slovene gerontologist, professor, author, researcher and practionist

Tjaša Čebašek – head geriatric nurse for institutionalised caretakers

Jelka Humar – head geriatric nurse for caretakers living at home and 2 geriatric nurses **Public service provider:** Retirement home Kranj

# Methods used:

open dialogs, interviews, citizen walkthrough, diary studies, sticky notes, mind maps, online questionnaires



The biggest drawback was the covid-19 pandemic situation. It was a challenge to adapt the project activities, e.g. as motivation of the end-users to participate in the project was affected. During the project, we were impressed by the ability of the elderly to use the digital solution and their creative thinking.

## Feedback from SME: -

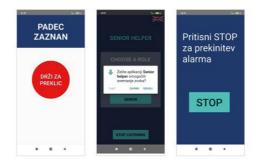
The SME already used the method of co-creation and they agree it is useful, because they can change the product by the needs of end-users. They will also use this approach in the future.With the suggestions from the end users they manage to improve the application and addapt it to the needs of elderly.

## Feedback from participants/users:

For the end-users the co-creation method was new but they agreed that it is the future of developing services and products for the end consumer. They were excited that they can help change the future and see their options for home care solutions. As the project was mostly online, it was harder to express their option and to connect with other people participating. Therefore, their motivation decreased and some of the end-users even decided to leave. Most of the solution-related feedback was positive, the biggest problem for the elderly is whether they will be able to learn to use digital solution. Further testing will continue with the elderly and their family members to gather additional feedback about the designed solution.

## Key learnings:

Silver generation does not shy away from digital solutions, if they are properly introduced and used. Key element is the right mixture of human contact and digital tools. We learned this lesson while trying to adopt the expected meeting format (physical meetings) with Covid reality where only virtual meetings were possible. Another important lesson was that significant part od Silver generation, seniors living at their homes, has at least basic digital skills. We noticed that the most important part of the co-creation process is getting the trust of all participants and regular communication with them.



# Smart HomeCare system

SME: Caretronic Partner: BSC, Business support centre L.t.d., Kranj Duration: 02/2021 - 06/2023

# Product description: —

Smart HomeCare system provides a solution for elderly to live longer and better at home and at the same time provide their formal or informal caregivers a tool to efficiently care for the elderly. It combines advanced touch-screen carephone, safety wristbands and smart pill dispensers. Moreover, the system can be further upgraded by different sensors and health-care measurement devices.

System provides all of the most important functions: fall detection, automatic health connectivity, alerts/reminders, smart home integration and social connectivity. Battery life will be considerably longer while the bundle will still support voice calls, fall detection, positioning (also outside), activity monitoring and more. In combination with HomeTab (advancedtouch screen device) it will reduce the time for caregivers to document services and reduce documentation failures. Voice recognition, smart alerting and health-care documentation of services in one device are not available in any home-care solution.

## Participants:

**End users:** 11 seniors and family members, 61 - 93 years old, most of them living at home, only one residing at the retirement home. During the project some regularly perticipated in activities, some decided to leave and some joined few meetings.

**External Expert:** Prof. Ddr. Ovsenik - a top Slovene gerontologist, professor, author, researcher and practionist.

Tjaša Čebašek- head geriatric nurse for institutionalised caretakers.

Jelka Humar– head geriatric nurse for caretakers living at home and 2 geriatric nurses. **Public service provider:** Retirement home Kranj.

## Methods used:

open dialogs, interviews, citizen walkthrough, diary studies, sticky notes, mind maps, online questionnaires

The biggest drawback was the covid-19 pandemic situation. It was a challenge to adapt the project activities, e.g. as motivation of the end-users to participate in the project was affected. During the project, we were impressed by the ability of the elderly to use the digital solution and their creative thinking.

#### Feedback from SME: -

For the participating SME, the method of co-creation was also new. They were satisfied with the feedback and insight they received from the elderly. In the future, they will try to incorporate the method even further.

#### Feedback from participants/users:

For the end-users the co-creation method was new but they agreed that it is the future of developing services and products for the end consumer. They were excited that they can help change the future and see their options for home care solutions. As the project was mostly online, it was harder to express their opinion and to connect with other people participating. Therefore, their motivation decreased and some of the end-users even decided to leave. Most of the solution-related feedback was positive, the biggest problem for the elderly is whether they will be able to learn to use digital solution. Further testing will continue with the elderly and their family members to gather additional feedback about the designed solution.

## Key learnings:

Silver generation does not shy away from digital solutions, if they are properly introduced and used. Key element is the right mixture of human contact and digital tools. We learned this lesson while trying to adopt the expected meeting format (physical meetings) with Covid reality where only virtual meetings were possible. Another important lesson was that significant part of Silver generation, seniors living at their homes, has at least basic digital skills. We noticed that the most important part of the co-creation process is getting the trust of all participants and regular communication with them.





# IAA - intelligent audio analysis in the area assisted living

SME: TU Chemnitz Partner: CCS GmbH Duration: 02/2021 - 06/2022

#### Product description: -

The developed intelligent audio analysis helps to monitor health- (e.g. brushing teeth, breathing) and safety- (e.g. crying, calling for help) relevant noises in the home environment. If predefined thresholds are exceeded, an alarm is triggered to help the senior. The alarm has individual settings:

- visual (push-up images)
- audio signal (spoken text or melody)
- notification of family members or caregivers via short message or phone call.

The aim is to detect irregularity in daily routines and alert the senior. The support enables seniors to live independently in their own homes for as long as possible.

# Participants:

**End users:** 11 seniors and 11 family members, all between 65 and 85 years old. Most in good health, some normal age-related complaints, some chronic diseases. Due to death or disease, we had to recruit new participants but joining the running project was often difficult.

**QH-Partner:** 3 partners from each helix were involved to support some activities and to give pilot test feedback.

**External Expert:** 3-4 gerontologists or geriatric nurses supported the process by providing opinion and feedback.

**Public service provider:** University Hospital Dresden accompanied the process and provided support, if needed.

#### Methods used: -

diary study, guided interview, user journey, citizen walkthrough, involvement of extreme users, online-questionnaires, mind maps, diagrams

Physical meetings are important to keep seniors and family members motivated. Due to COVID-19 pandemics, few could be organized. During physical meetings we noticed high interest of the participants and the closer interaction between them, which can be a boost for the project progress. It was possible to test and to ask questions directly. Also the interaction between the seniors was very impressive and resulted in valuable feedback.

#### Feedback from SME:

For the development partner the co-creation method was new. They were highly impressed by the valuable feedback they received from participants. In the future they want to work with end users as well, because the insights regarding the needs and the inclinations towards new technologies, which they get in workshops and interviews are very important for an efficient development process.

#### Feedback from participants/users:

The seniors were very honest about the usability of the tested version. Even though most of the feedback received was negative, it is this feedback that helps in further development and improvement. Seniors were not too motivated, as they had expected more.

#### Key learnings:

- If possible, regular physical meetings are important for motivated participants in the co-creation process. Regularity plays an essential role in the co-creation process in general and especially in working with seniors.
- Meetings should always start with a short summary of what has already happened to pick up the participants and focus attention on the task ahead.
- Seniors have difficulties imagining specific features. Provide them with examples.
- Be patient with seniors, have several (virtual) meetings with them and take little steps to reach the final stage.
- Transparent communication about the concrete vision is essential for successful development.



# Tino DTB

#### SME: DTB Gesellschaft für digitale Therapiebegleitung mbH

Partner: CCS GmbH

Duration: 12/2020 - 03/2022

# Product description: ——

The Tino DTB is a digital therapy companion for cancer patients on oral therapy. The app serves as a communication platform between the patient and their personal medical care team. It helps patients to better navigate their therapy, maintain an overview and inform the medical care team in real time about how they are feeling. The Tino DTB app offers a cancer patient the following supportive functions:

- Therapy plan
- Information on therapy
- Documentation
- Health status
- Medication intake
- Vital signs
- Side effects

# Participants: —

**End users:** 11 seniors and 11 family members, between 65 and 85 years old. Most in good health, some normal age-related complaints, some chronic diseases. Due to death or disease, we had to recruit new participants but joining the running project was often difficult.

**QH-Partner:** 3 partners from each helix were involved to support some activities and to give pilot test feedback.

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## Methods used: -

diary study, shadowing, guided interview, citizen walkthrough, involvement of extreme users, online-questionnaires, mind maps, diagrams

Physical meetings are important to keep seniors and family members motivated. Due to COVID-19 pandemics, few could be organized. During physical meetings we noticed high interest of the participants and the closer interaction between them, which can be a boost for the project progress.

Shadowing is a good possibility to check the seniors ´ abilities to use the product.

#### Feedback from SME: -

For the SME partner the co-creation method was new. They were higly impressed about the valuable feedback they received from participants. They were suprised and deeply impressed how the Co-creation method facilitates the product development process and increases its efficiency. They are very grateful for this experience and want to use the method in future as well.

#### Feedback from participants/users: -

One senior (72) was particularly impressed by the first feedback round. He thought it was great that his suggestions were taken into account and especially how promptly the changes happened. This gave him the feeling of "being noticed and valued". The organisation of the project was rated as very good by the seniors. They always felt well informed and knew from the beginning what the solution was good for and could be used for.

#### Key learnings:

If possible, regular physical meetings are important for motivated participants in the co-creation process. Regularity plays an essential role in the co-creation process in general and especially in working with seniors.

Meetings should always start with a short summary of what has already happened to pick up the participants and focus attention on the task ahead.



# Inspec Life

SME: Mediware Partner: DEX Innovation Centre Duration: 09/2021 - 04/2022

# Product description: —

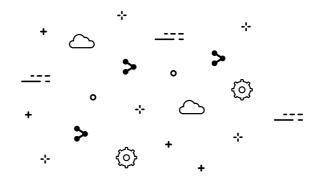
Inspect Life is a telemedicine tool that connects smart devices that map a patient's health status (e.g. blood sugar, pulse, temperature) using individual modules that together transmit the data to an online health mapping application with access for both the doctor and the patient.

## Participants:-

Seniors aged 80+, professionals representing seniors, researchers, NGOs, and SMEs. We also involved family carers with personal experience of caring for their loved ones.

#### Methods used:

interviews, brainstorming, discussions, long-term testing



It was crucial to finally be able to accommodate seniors, which was not possible at first, and it was also crucial to start long-term testing, selecting suitable modules for the experience and verifying the measurement results.

Particularly special for us were the meetings with seniors, when it was possible to hear their ideas and also to be in contact with them. It was the physical meetings that allowed us to create important moments that were key to the pilot.

#### Feedback from SME: -

The pilot deployment had its limits, but on the other hand we encountered the problems that come with working with such a target group.

#### Feedback from participants/users: -

It is important to keep the product as simple and easy to use as possible, this will help to increase interest in its use.

#### Key learnings: —

The key is to work with the same group for a long time, to have an established relationship with them and to always move the cooperation forward with clearly set rules and steps.



# Oscar

SME: Oscar Senior Partner: DEX Innovation Centre Duration: 09/2021 - 04/2022

#### Product description: ——

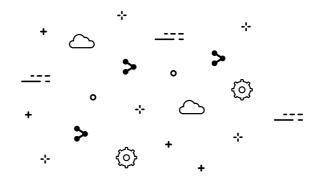
As part of the co-creation, Oscar senior decided to develop voice control for their app, which is aimed at seniors and their caregivers. As a result, the app designed for communication can now be controlled by voice, which will make the app easier to use, especially for seniors.

#### Participants:-

Seniors aged 80+, professionals representing seniors, researchers, NGOs, and SMEs. We also involved family carers with personal experience of caring for their loved ones.

#### Methods used: -

interviews, brainstorming, discussions, long-term testing



The key was to be able to finally meet the seniors, which was not possible at first, then the key was to start long term testing, and last but not least to create voice control and test it.

Particularly special for us were the meetings with seniors, when it was possible to hear their ideas and also to be in contact with them. It was the physical meetings that allowed us to create important moments that were key to the pilot.

#### Feedback from SME: -

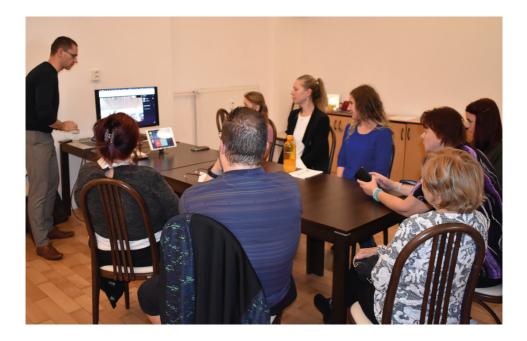
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#### Key learnings:

The key is to work with the same group for a long time, to have an established relationship with them and to always move the cooperation forward with clearly set rules and steps.



# CASASICURA

# **SME:** CASASICURA SNC

Partner: Cremona Chamber of Commerce

Duration: 12/2020 - 03/2022

# Product description: —

Casasicura innovative solution consists of:

- a tele-monitoring service of vital parameters and fall events, using wearable devices (watch and blood pressure and oxygen saturation level meters) connected wirelessly to a control unit that allows the values to be transmitted to an operation centre, which can provide assistance in case of alarm situations, by Casa-Sicura snc;

- a software that allows to profile the users, to store and visualize the data, to show analyses of the trends of the monitored parameters (blood pressure, body temperature, oxygen saturation level meters, activity data such as meters walked, etc.).

# Participants: -

**End users:** 13 seniors, 81 - 94 years old, 13 caregivers. All are located in the Cremona Province, they are affected by pathologies that require telemonitoring (e.g. pressure, temperature, etc.), they are frail and exposed at falling risk, they are assisted in ADI/SAD Regional Health Care measure. During the project 3 users left the pilot, because of death or deterioration of physical conditions, they have been replaced by new ones.

**QH-Partner:** all the 15 partners of the Cremona Co Creation Lab, representing the 4 helixes have been planning, monitoring and providing feedback throughout the pilot.

**External Expert:** one expert in gerontology was involved as expert, as well as 3-4 geriatric nurses. Their opinion and feedback was collected and used in the develop-ment process.

**Public service provider:** Lombardy Region has always been deeply involved in the process as a policy partner.

# Methods used: -

mapping, guided interviews, focus group meetings, supporting participants, monitoring progress and balance in the team, diagrams, collective intelligence, Identifying existing good practices, questionnaires, external experts involvement

Despite the COVID-19 pandemic situation when physical meetings were difficult to organise, the level of engagement of the user representatives proved to be high, thanks to the interviews and the online meetings.

#### Feedback from SME: -

The SME partner was positively impressed by the co-creation method. They appreciated the valuable feedback they received from participants. The co-creation approach allowed to improve the solution during the testing period and the SME declared its willingness to use this approach for future developments.

#### Feedback from participants/users: -

The received feedback on the solution varies among end-users. Answers concerning usefulness, false alarm calls and other features differ among participants which showed the SME possible space for improvement. On the other hand there were positive aspects which the SME can build on.

#### Key learnings:

In order to increase the effectiveness of the co-creation method, physical meetings are important for motivating participants in the process. For an effective management of the co-creation LAB, it is crucial that the high level of the QH organisations involved is directly engaged since the beginning of the process.





# IDEGO

#### SME: IDEGO srl

Partner: Cremona Chamber of Commerce

Duration: 12/2020 - 03/2022

#### Product description: -

Idego innovative solution consists of a home cognitive stimulation activity, by means of a tablet that allows a remote operator to provide the service, with innovative methods and with the support of a team of experts, by Idego srl. A software assures the user interaction needed, creating a user friendly environment.

# **Participants:**

**End users:** 12 seniors, 83 - 90 years old, 12 caregivers. All the users are located in the Cremona Province, they are affected by initial cognitive impairment (mild or mild/moderate level), they are assisted in open RSA Regional Health Care measure. During the project 4 users left the pilot, because of death or deterioration of physical conditions, and they have been partially replaced by new ones.

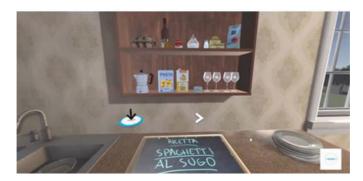
**QH-Partner:** all 15 partners of the Cremona Co Creation Lab, representing the 4 helixes, have been planning, monitoring and providing feedback throughout the pilot.

**External Expert:** one expert in gerontology was involved, as well as 3-4 geriatric nurses. Their opinion and feedback was collected and reported.

**Public service provider:** Lombardy Region has been involved in the process as a policy partner.

#### Methods used:

mapping, guided interviews, focus group meetings, supporting participants, monitoring progress and balance in the team, diagrams, collective intelligence, Identifying existing good practices, questionnaires, external experts involvement



Despite the COVID-19 pandemic situation when physical meetings were difficult to organise, the level of engagement of the user representatives proved to be high, thanks to the interviews and the online meetings.

#### Feedback from SME:

The SME partner was positively impressed by the co-creation method. They appreciated the valuable feedback they received from participants. The co-creation approach allowed to improve the solution during the testing period and the SME declared its willingness to use this approach for future developments.

#### Feedback from participants/users:

Although some positive feedback was given by seniors, others were rather anxious and reluctant to use the solution at home, without physical assistance of operator as shows the answer of one senior: "It takes effort; I prefer to interact in person. I have to be helped by the caregiver." This was probably caused by condition of the users, affected by moderate cognitive impairment. Caregivers were more positive in their attitude.

#### Key learnings:

In order to increase the effectiveness of the co-creation method, physical meetings are important for motivating participants in the process. For an effective management of the co-creation LAB, it is crucial that the high level of the QH organisations involved is directly engaged since the beginning of the process.



# MEDNOTE care@you

#### SME: MEDNOTE SRL

Partner: Cremona Chamber of Commerce

Duration: 12/2020 - 03/2022

## Product description: -

MEDnoTE has developed an IT system for integrated use between specialist and home that allows the digitization and recording of clinical data and all home services Through an access device - such as a tablet or smartphone or PC – the user of the caregiver talk to the GP or specialist doctor, qualified personnel, share in real time clinical data, vital parameters, the results of blood tests performed at the patient's home, of the ECG etc.

A key advantage is avoiding unnecessary trips to the hospital, thanks to the remote assistance assured by the app. The solution provides an increased level of serenity to the users and their caregivers, by knowing that the user is always monitored.

## Participants:

**End users:** 11 seniors, 69 - 90 years old, and 11 caregivers. All are located in the Cremona Province, they are affected by oncological pathology, they have the ability to use digital tools (i.e. smartphones) and the presence of a caregiver. During the project 3 users left the pilot, because of death or deterioration of physical conditions.

**QH-Partner:** 15 partners of the Cremona Co Creation Lab, representing the 4 helixes have been planning, monitoring and providing feedback throughout the pilot.

**External Expert:** one expert in gerontology was involved as expert, as well as 3-4 geriatric nurses. Their opinion and feedback was collected and reported.

# Methods used:

mapping, guided interviews, focus group meetings, supporting participants, diagrams, collective intelligence, Identifying existing good practices, questionnaires, external experts involvement



Despite the COVID-19 pandemic situation when physical meetings were difficult to organise, the level of engagement of the user representatives proved to be high, thanks to the interviews and the online meetings.

#### Feedback from SME: -

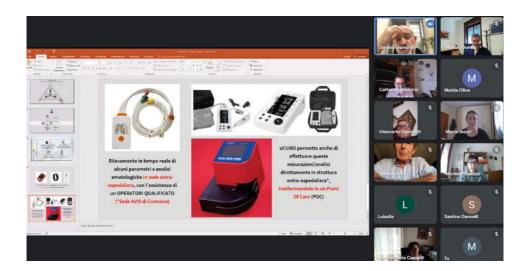
The SME partner was positively impressed by the co-creation method. They appreciated the valuable feedback they received from participants. The co-creation approach allowed to improve the solution during the testing period and the SME declared its willingness to use this approach for future developments.

#### Feedback from participants/users: -

In general, end-users have appreciated the features and benefits of the offered solution: "I have a way of gathering all of my clinical documents in one place, so I can go anywhere, even on vacation, without having to worry about taking huge amount of paper with me." said one participant. Another stated that "I finally have a way to interact with health workers dealing with my case from anywhere and I can expect a reasonably fast answer."

#### Key learnings:

In order to increase the effectiveness of the co-creation method, physical meetings are important for motivating participants in the process. For an effective management of the co-creation LAB, it is crucial that the high level of the QH organisations involved is directly engaged since the beginning of the process.



# Key learnings

In general, the learnings from conducted pilots can be summarized in a few specific areas. Some deal with the co-creation method itself, whereas others refer to organization of the process or are related to characteristics of the end-user group.

# **Co-creation method in general**

- adds value to product development and boosts marketing as the produced solution reflects end-users ´needs and expectations which would be hard without direct involvement and feedback from end-users
- can be demanding for SME's but pays off in the long run
- can be useful even though the solution is not successful itself as weaknesses are highlighted in time and feedback can be used for further improvements
- transparent communication is essential
- having business connections and contacts is an advantage as approaching relevant stakeholders is easier

# **Organization of co-creation process**

- regular, physical meetings are appreciated, seniors are more interested and motivated
- technical support during meetings is an advantage as well as preparing necessary devices
- repeating, wrapping up what has been achieved helps with motivation of participants



#### **End-users**

- seniors value someone else's interest in their opinions and needs
- they prefer physical meetings over virtual activities, they are more effective and motivated
- using examples and being patient helps with overcoming barriers clear communication about solution and its usefulness is positively rated by seniors

In general, feedback from SMEs reveals that even though the co-creation approach is new and thus sometimes demanding, they view it as a surprisingly and highly valuable contribution to their development activities. Frequently, the view and comments of the end-users bring unexpected insights which make the solution even more attractive and acceptable in the market.



# Notes

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# How to get involved

Do you want to enjoy the benefits of being part of the HoCare2.0 network? Please contact one of the project partners in your country to get detailed information.

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| Institute of social<br>services Prague 4<br>Project.hocare2@uss4.cz<br>www.uss4.cz                                    | <b>DEX Innovation Centre</b><br>Michal Štefan<br>michal.stefan@dex-ic.com<br>www.dex-ic.com   |
| Carus Consilium Saxony GmbH<br>Corina Röllig<br>corina.roellig@carusconsilium.de<br>www.carusconsilium.de             | Dresden University Hospital<br>Olaf Müller<br>olaf.mueller@ukdd.de<br>www.uniklinikum-dresden.de                                      |
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| Business support centre L.t.d.<br>Jelena Vidović<br>jelena.vidovic@bsc-kranj.si<br>www.bsc-kranj.si                   | <b>a:</b><br>HoCare2.0 project is co-funded<br>by the European Union funds (ERDF).  |