

“CARU cares”

**Concept for the Co-Creation Workshops for
the new CARU features in Austria,
Switzerland and Belgium**

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Discussion paper 3/2019 of the Research Institute for Economics of Aging,
WU Vienna University of Economics and Business

Vienna, October 2019

Acknowledgements

The project "CARU cares - emergency call, speech recognition, care documentation" (2019-2022) has received funding from AAL JP, cofounded by the European Commission, the National Funding Authorities of Austria, Switzerland, and Belgium and the individual project partners. Collaborating partners in the "CARU cares" project are CARU AG (Lead Management), Johanniter Österreich Ausbildung und Forschung gGmbH, Schneeweis Wittmann Grafik Design Werkstatt, the WU Vienna University of Economics and Business (Research Institute for Economics of Aging), the University of Applied Science Wiener Neustadt (Institute for Informatics), bonacasa AG, the Lucerne University of Applied Science and Arts (iHomeLab), and the Senior Living Group. The "CARU cares" project runs from June 2019 until May 2022.

This publication would not have been possible without co-funding from the WU Vienna and FSW (Fonds Soziales Wien/Vienna Social Fund).

We thank Susanne Müller (CARU AG), Martin Biallas (ihomelab), Nadine Sturm (Johanniter Österreich Ausbildung und Forschung gGmbH), Cornelia Schneider (University of Applied Science Wiener Neustadt) for valuable feedback on the concept and Taylor Rosemeyer (Vienna University for Economics and Business) for proofreading.

gefördert durch / co-funded by



Projekt Partner / project partner



How to cite this paper:

Trukeschitz, Birgit; Kieninger, Judith; Ebner Friedrich (2019): "CARU cares" – Concept for the Co-Creation Workshops in Austria, Switzerland, and Belgium. Discussion Paper 3/2019 of the Research Institute for Economics of Aging, Vienna University of Economics and Business (WU), Vienna.

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1 Introduction

The project “CARU cares” aims to develop **three new features for the smart sensor “CARU”**:

1. The **extended communication** feature allows users to communicate via voice messages recorded or played using CARU. Alternatively, CARU can be used for calling a care provider.
2. The **documentation feature** aims to facilitate care documentation or other documentation tasks by using verbal commands.
3. The **notification feature** allows clients to get estimates of the expected time of arrival for the professionals visiting them. This feature builds on the crew schedules (precision level 1), GPS data (precision level 2), and traffic data (precision level 3).

All three features aim to facilitate the exchange of information between professional (care) providers in assisted living or home care settings.

This paper aims to provide a **concept for the Co-Creation Workshops (CCWS)** to take place in Austria, Belgium, and Switzerland. The concept addresses the new features only. As the CARU emergency feature has already been developed and is about to be tested in Switzerland in 2020, it will be excluded from the CCWS.

This paper goes as follows: Section 2 gives an overview of the general aims and principles for the “CARU cares” CCWS. Section 3 details the aims and provides objectives for the CCWS for each of the new features. Section 4 deals with the remaining tasks to be completed before the CCWS can start. Section 5 gives insights into the methods for the CCWS. Section 6 includes the structure of the CCWS, illustrated with the example for Austria. Finally, Section 7 addresses the reporting requirements.

2 General aims and principles for the “CARU cares” co-creation workshops

The **„CARU cares” co-creation workshops (CCWS)** aim to (i) better understand the context of use and (ii) to involve end users (and technical partners) in creating the new features (Figure 1). In order to better understand the context of use, we suggest spending time during the CCWS discussing daily working routines of the care workers or other professionals. The second part aims to get feedback on the first mockups of the new CARU features. In addition, the second part aims to derive requirements that have to be met or

appear to be useful for the successful implementation of the new features in the trial settings of "CARU cares" (i.e. assisted living and home care).

Figure 1: Aims of the "CARU cares" CCWS



Principles for the CCWS

- Understand professionals' work and challenges (related to the new CARU feature)
- Bring professionals into the design process
- Empower the professionals to get involved and to express their ideas
- Get in the right frame of mind for innovative and creative work
- Gain insights into the planned CARU features from the users' point of view
- Note the lessons learned for developing the features

3 Objectives of the "CARU cares" co-creation workshops

3.1 General objectives of the CCWS

- To better understand the context of use
 - To identify and specify daily working routines that relate to the planned features of CARU
 - To identify and specify challenges in the daily working routine that may be addressed with the new features of CARU
- To collect ideas and visions about CARU's new features using creative methods
- To identify and specify challenges and problems of the planned features that matter to users
- To get feedback on acceptance in terms of interest, skepticism, perceived usefulness, and attitudes towards using the CARU smart sensor
- To develop user-centered requirements for the development
- To develop interactions between users and CARU based on care workers' needs and work situation

3.2 Specific objectives relating to the planned features of CARU

Options for changes: Decide on features to be addressed by the CCWS. All features need to be covered in the co-creation phase – either in the CCWS or in the interviews with staff managers.

3.2.1 Objectives for the CCWS regarding the notification function

- Understand context of use
 - To gather information about the daily route planning of care workers (formal and informal planning strategies, processes and procedures to be followed as well as the extent of rescheduling)
 - To identify care workers' needs
 - To identify the current solutions' shortcomings
- To identify the potential of the planned feature (for care workers and clients)
- To identify the characteristics of the notification feature (e.g. the keyword(s) to activate this CARU function) needed to be easily implemented in the setting (assisted living or home care)
- To identify the advantages for care workers using a GPS tracker (i.e. stress reduction?)
- To identify skepticism for the planned solution

3.2.2 Objectives for the CCWS on the documentation function

- Understand context of use
 - To get an idea of the (pre-CARU) documentation process and identify existing problems
 - To identify documentation standards to comply with
 - To identify those sections of care documentation that could be simplified with CARU
- To identify the potential of CARU and the use of voice commands (e.g. time saving, ease of use, transparency)
- To specify concrete use cases for each care profession group participating (e.g. written sketches) considering the requirements of day-to-day practice
- To identify the characteristics of the documentation feature needed to be easily implemented in the setting (assisted living or home care)
- To identify challenges for the documentation features and solutions how to overcome them.
- To identify the advantages for care workers using voice-controlled documentation (e.g. so having voice messages instead of typing something up or filling out a form)

- To pinpoint possible restrictions (e.g. sensitive information) for voice-controlled documentation in the presence of the care client

3.2.3 Objectives for the CCWS on the extended communication

- Understand the context of use
 - To get an idea of the communication between professionals and clients/customers (e.g. who communicates, about what, and how often)
 - To get an idea of typical communication processes between the residents and the concierge service (assisted living facility) or care workers and their clients
- To identify useful scenarios based on the usual communication process between care workers and clients
- To figure out what content may be useful to be sent via voice message
- To identify the potential of CARU voice messages (improved communication) for care workers
- To identify which communication processes could be enhanced with the use of CARU
- To identify obstacles that may prevent residents from calling the concierge service (assisted living facility)
- To identify the potential of CARU for particular services (e.g. medication reminder, appointment confirmation)
- To identify the characteristics of the notification feature needed to be easily implemented in the setting (assisted living or home care)

3.2.4 Other objectives

Collect other use cases of CARU that come up when discussing work life challenges for professional as well as potential and obstacles of CARU features from a professional's point of view.

4 Preparation of the "CARU cares" Co-Creation Workshops

This section focuses on the arrangements that have to be made before the actual workshop takes places. It involves the composition of the group, the selection of the CARU functions relevant for the workshop, the room setting and the necessary material.

4.1 Decide on the workshop members

When planning the workshop, please consider the total number of participants and the host-participant ratio. Please note that the presence of too many members of the project team may block creativity instead of boosting it.

Hosts (“CARU cares” project team members)

- 2-3 facilitators/moderators (if participants split into 2 groups)
- Technicians (depending on availability within each country)

Participants

Participants should at least meet the following criteria:

- Sufficient work experience in running field trials (minimum 3 years) and good understanding of the organizational structure and processes
- Regular client contact
- Experience using electronic nursing software
- Interested in using speech assistance for home care services and ready to contribute one’s ideas
- Work in areas that may be supported by the CARU features
- Good proficiency in the national language
- Men and women – gender distribution reflecting the distribution of the care sector
- All age groups – age distribution according to care sector

The **composition of the group of participants** depends on the trial populations of the corresponding end-user organization (setting) for the pilot (field trial 1) and the final field trial (field trial 2). The group of participants has to involve care staff who could use the CARU functions in their daily work. If the participants comprise staff of different hierarchical levels or professional groups, it is advised to create **subgroups**. Hierarchical separation often facilitates co-creation processes by enabling participants to more freely express their ideas and thoughts.

Example for Austria:

- Home care setting
- Selected participants involve 2 professional groups
 - Group A: home helpers (support peoples’ daily activities, i.e. personal care, basic cleaning of the house, grocery shopping, ...)
 - Group B: nursing assistants (support clients’ more complex activities of daily living and medical needs)

4.2 Getting familiar with the context of use beforehand

Not every detail can be addressed by the CCWS. In fact, successful workshops often rely on well-informed project members. Thus, make yourself familiar with the new CARU features you would like to discuss and their context of use before the CCWS starts.

4.3 Adjust the CCWS concept according to your settings

The trial settings in Austria, Belgium, and Switzerland are likely to differ. Adjust the CCWS concept, in particular the aims, materials, and the selection of new CARU features according to the characteristics of the settings. Stick to the CCWS methods as closely as possible.

4.4 Written consents signed

A precondition for holding the workshop is an informed consent form signed by the participants. In order to avoid time-consuming paper work during the workshop, please make sure that participant signed the written consent (including consent to audio recording and photo shoots) beforehand.

4.5 Photo permission

Photo permission is covered by the informed consent.

Please note: If you plan to **take photos** (which is recommended) you must inform the participants (in the invitation for the workshop or at the beginning of the workshop) about the planned photographs and purpose. The participants should have the possibility to reject photo shots in which they are portrayed in a recognizable way, thus participants need to be asked about their preferences beforehand. The photos can be taken considering the participants' (dis-)agreement. **We also recommend taking photos that do not easily allow identifying single participants** – e.g. showing a group of people or people from the back.

4.6 CARU and mock-ups for the planned CARU features

- The selection of CARU features that the CCWS will focus on depends on the composition of the group and the corresponding field of activities that may involve the use of CARU
- Selected CARU functions addressed by the CCWS have to involve features that relate to the care staffs' field of activities

Example for Austria:

As the group of participants in Austria involves home-help (Heimhilfen) and nursing assistants (Pflegeassistent/innen, Pflegefachassistent/innen) the workshop mainly focuses on the documentation function and the notification function. The extended communication function seems less relevant for the CCWS with these groups in Austria, as direct communication between clients and their care workers is not part of their daily practice and there is no desire to change that. However, perceived usefulness of CARU communication and care workers' intention to use it may also be discussed. The extended communication features will thus be discussed in more detail with the care managers (interview settings).

- Use the mock-ups or illustrations you have prepared. Visual support often facilitates discussion and is therefore highly recommended.

4.7 Room settings

- Ideally a bright and friendly room to create a warm and creative atmosphere
- A room big enough to allow two groups to discuss at the same time without disturbing each other (a room divider may be useful)
- Enough chairs for all participants
- The possibility to put CARU in a visible position for demonstration purposes
- Drinks and Snacks

4.8 Materials

- Projector
- PowerPoint Slides ("CARU cares – Co-Creation Workshops")
- Mock-ups (provided by the technical partners)
- Flip chart
- Poster (provided by Fabian & Ulla)
- Colored paper, post-its
- (Colored) pencils
- Voice recorder (2 recorders if participants split in 2 groups)
- Extension cable (to place CARU in a visible location)
- CARU prototype(s) (1-2 smart sensors)
- Written consent forms (signed beforehand)
- Attendance list (name, institution, position, signature)
- Camera, if you are allowed to take photos (it is included in the informed consent)

- Medicine packages and a drug dispenser (for simulating care measures and the documentation process)

4.9 Profiles of (care) service users (Appendix)

We have provided two profiles of care service users with different levels of dependence. These profiles can facilitate brainstorming on the documentation feature. The profiles have been developed for home care settings and may need to be adjusted for other settings. Please prepare such profiles for the CCWS in your country.

4.10 Reporting requirements

Please look at the reporting requirements when planning your CCWS. To gather this information, you may deviate from the concept provided in this paper, if necessary. However, please provide reasons for deviations and explain the methods you applied. (-> see **CARUcares_CCWS_Report template.docx**)

Please note that according to the proposal, recordings need to be transcribed verbatim and translated to English. “[...] *co-creation session data will be transcribed verbatim and translated to English*”. (p 9). As none of the project partners disagreed, transcripts and translations of the CCWS will be replaced by country reports that cover the methods and most relevant findings in each country. A summary of the most important findings across the three countries will be provided by WU.

5 Methods for the Co-Creation Workshops

A wide range of methods and creative techniques from different disciplines are available for integrating users in the co-creation process (see e.g. Nedopil et al., 2013). To achieve our goals, outlined in the first section, two methods were selected for the creative phase and core phase of the co-creation workshop. A **combination of a reflection technique and a creative technique** allows for visualizing the daily routines and processes in the first place and to subsequently generate concrete ideas for the use of CARU in the daily work environment of care workers.

The techniques should be applied for all features that are discussed in the co-creation workshop, beginning with the “reflection of daily routines” for the new CARU feature 1, followed by the “three-phases of the Walt Disney method” for feature 1 and a short group discussion. The process is repeated until all relevant features have been discussed.

5.1 Reflection of daily routines

Professionals have everyday routines in their job that follow certain patterns with regard to their daily route planning, their client visits, or their communication flow within the care organization. Insights into these routines and work processes are necessary to understand the participants' activities and behaviors in their working environment. The reflection technique makes the participants think about their (implicit) daily routines and helps to imagine concrete use scenarios for the particular CARU functions.

For this technique, you need something to write on – e.g. a sheet of paper - and a pen or pencil for each subgroup (e.g. group A and group B).

1. The facilitator asks the participants to think of a normal workday and a concrete process during that day relevant for CARU feature 1 (e.g. daily route planning for the notification function or a client visit including the care documentation for the documentation function).

Please note that we have provided **profiles of care service users** that can be used or adapted for the care documentation feature (Appendix). For Switzerland and Austria, profiles in German are available.

2. The participants are then asked to write down their activities, guided by a set of questions and certain scenarios that help them to think through their day. Project team members may assist in writing down these activities.
3. The visualization of the processes and structures creates an important basis for further discussing ideas and solutions regarding their tasks in the context of CARU.

Please note: for suggestions for the concrete implementation of the method for all three features, i.e. daily route planning (notification), client visit (documentation) and communication structure (extended communication), see Section 6.

5.2 Walt Disney Method for co-creating CARU features

The Disney Method is a creative strategy that aims at collecting ideas and visions, checking their implementation and reflecting them critically. It involves three different phases: (1) the dreaming phase, (2) the implementation phase and (3) the critical reflection phase (Steinhaus et al., 2018).

The method allows the participants to play different roles, (i) come up with original ideas and wishes, (ii) to engage in co-designing features and to (iii) use critical thinking to express fears and skepticism. As the core idea is to look at a task from different perspectives, it is essential to separate the three phases so that participants can brainstorm

freely in each phase (e.g. to take on the role of dreamers or makers or critics). In order to do so, it is important that the different phases are spatially separated (e.g in different rooms or corners of a room) to make sure that the participants switch their perspective according to their different roles.

Procedure:

1. The facilitator (or technician) presents the idea of the first CARU feature.
2. Optional: The participants split in two groups (separated according to professional groups) and move each in a different corner of the room
3. Participants start with phase 1 for the first new CARU feature to be discussed. After a certain period of time (about 15-20 minutes), the participants move on to another corner of the room and start with phase 2 for the first feature. The process is repeated until the end of phase 3 for the first feature is reached.
4. After completing the three phases, group A and group B each present their most promising ideas/results/thoughts on the new CARU feature and have time to exchange thoughts and give feedback.

Phase 1: Dreaming (Visionary, Idea supplier)

Key question:

If CARU was part of your work activity X, what should it be capable to do?

The participants start with the first phase and put themselves in the role of dreamers. The dreamers develop ideas and visions. They do not care about possible limitations and set their creativity free.

The following questions (select the most appropriate ones, if necessary) should guide them through the process of "dreaming" about the new CARU feature:

- What would be helpful/useful?*
- What do you want and need?*
- What can be addressed with CARU?*
- How could CARU ease my work?*
- What positive feelings arise?*

Phase 2: Implementation phase (Makers, Realists)

Key question:

If you would turn the most promising idea into an action plan, how would this look like?

The participants move on to the second phase and put themselves in the role of realists acting as if the ideas were achievable. They consider the steps required to put the ideas into practice and discuss possible ways to implement the ideas. In this phase, the technicians may support the process and define the technical framework for implementing the ideas.

The following questions (select the most appropriate ones, if necessary) should guide the participants through the process of realizing the new CARU feature:

- What is necessary to implement the ideas?*
- What possibilities are there to implement the idea?*
- Which basics are already available?*
- What are the single steps?*
- How is the interaction between users/different user groups and CARU to be designed?*

Phase 3: Critical reflection phase

Key question:

What are the obstacles and risks and how could we overcome them?

The participants move on to the last phase that allows them to assess the possible advantages and disadvantages of the idea and to express concerns and skepticism. In their role as critics, they define the contexts in which it may not work and offer any refinements to the ideas.

The facilitator should encourage the participants to overcome obstacles and end up with concrete ideas to further work on the new CARU feature using these questions (select the most appropriate ones, if necessary).

- How will it be possible to realize it?*
- What is missing? What are the obstacles?*
- How could it work?*
- What could be better?*
- What are the advantages and disadvantages/risks?*

6 Flow and structure of the workshop

The following schedule exemplifies the structure of the co-creation workshop focusing on two features: The **notification feature** and the **documentation feature**. If you decide to include the extended communication feature in the workshop (in addition to another feature or instead of it), please consider the approach discussed in section 6.3. The schedule is planned for a group that consists of two professional groups (subgroup A and B).

6.1 Duration

The co-creation workshop has been designed for a length of 4.5 hours in total, for covering two CARU features. Depending on the time resources of the participants, you may hold the workshop on one day with a longer break in between or split into 2 days (if needed, in a row). The structure of the schedule is tailored to a 2-day workshop. If you prepare the workshop for one day only (4.5 hours), please adapt the program accordingly.

6.2 Schedule Example (timing, topics, methods, materials and outcomes)

The timeline on the following pages gives only a rough estimate. Adjust if you require more or less time for a task, but assure that all relevant tasks are covered.

"CARU cares" – Co-Creation Workshop - Day 1, Example for Austria

| Estimated Duration | Topic | Details | Method | Who? | Materials needed | Outcome |
|--------------------|------------------------|--|---------------------------------|----------------------|---|--|
| Introduction phase | | | | | | |
| 5 min | Welcome | <p>Host welcomes the participants Goals and agenda of the workshop is presented</p> <p>Note: Communication at eye-level between all participants in the CCWS is important to provide room for creative thinking and productive collaboration</p> | Welcome speech and announcement | Host | Projector and PowerPoint Presentation if needed | All participants feel welcomed and know what they can expect from the workshop |
| 10min | Get to know each other | <p>All workshop members are asked to form a circle (optional: according to the alphabetical order of their names). They introduce themselves saying their name, their professional background, what they need for a successful workshop and their needs for good cooperation.</p> <p>*Optional: You may already start inspiring creativity and a playful atmosphere e.g. by including play dough in the introduction round - every participant forms an object that represents something they like or they use every day and</p> | Icebreaker activity | All workshop members | (*Optional: Play dough) | Participants know who is who and are warmed up |

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| | | present it to the others when introducing themselves. | | | | |
| 10min | CARU cares project | Brief introduction of CARU and the aims of the CCWS and the course of action *Optional: Demonstration of CARU emergency function to show the interaction with CARU | Presentation | Host | PowerPoint Presentation Beamer CARU | Participants have understood the main idea of CARU and its goals. |
| Co-creation phase FEATURE 1 (Notification function) Please note: The co-creation phase should be audio recorded. If the group is divided in subgroups, you need to audio record the subgroups individually. | | | | | | |
| 5min | Feature 1 Notification function | Presentation of the main idea and the first features of the notification function (slides provided by the University of Applied Science Wiener Neustadt) to give participants a basic idea of the function | Short explanation | Responsible technical or scientific/end user partner | Projector for presentation/poster/ mock-up | Participants have understood the basic idea of feature 1 |
| 20min | Exploring daily route planning | See also Section 3 and 5.1 Group A and Group B get a sheet of paper and a pencil and together complete the following task: Briefly describe your working day , answering the following questions (select most appropriate questions, if necessary): ▫ You get up and prepare for work. Where do you check your | Reflection of daily routines | Group A Group B Facilitator A Facilitator B | Sheets of paper (flip chart) and pencils for all participants | Groups A and B have come up with a flip chart containing information on daily routines for route planning |

| | | | | | | |
|-------|---------------------------|---|--|--|--|------------------------------|
| | | <p>schedule and what could this schedule look?</p> <ul style="list-style-type: none"> ▫ Where do you start and how do you plan the order of your visits? ▫ What time constraints do you have in fulfilling your tasks? ▫ Now imagine you took longer than planned for your first client and you are running late for your next client. What do you do? ▫ Let us imagine that an additional client is added to your tour list (e.g. was unexpectedly released from the hospital). How do you proceed and what happens to the other clients on your list? ▫ When do you decide to take your lunch break? ▫ Now let us go back to the beginning of the day: imagine you do not feel well that day and decide to stay at home. Whom do you inform? Who takes over the visits? | | | | |
| 15min | Short break & refreshment | | | | | Participants are refreshed 😊 |

| | | | | | | |
|-------|-------------------------|---|-----------------------------|--|--|---|
| 15min | Ideas and visions | <p>See also Section 5.2</p> <p>The subgroups move to different corners of the room.</p> <p>Participants should think out of the box and develop ideas and visions for different options of the notification feature.</p> <p>The facilitator collects the ideas on a flipchart (or using colored papers)</p> | Disney method "Dreamers" | Group A Group B Facilitator A Facilitator B | Poster/props to represent the "dreaming phase" Flip chart, sheets of paper, pencils | Groups A and B have expressed their wants and needs and have created ideas and visions for the use of CARU (feature 1) |
| 20min | Action planning | <p>Group A and B move on to the next corner and discuss the practicality of the most promising ideas. How can the most promising ideas be implemented?</p> <p>The participants may develop a simple (written) sketch to make their idea tangible.</p> | Disney method "Realists" | Group A Group B Technician A Technician B | Poster/props to represent the implementation phase Flip chart, Sheets of paper, pencils | Groups A and B have discussed single steps necessary to implement the ideas. They have made their idea tangible and develop possible sequences for interacting with CARU. |
| 10min | Obstacles and solutions | <p>Group A and B discuss barriers, difficulties, and possible obstacles that may occur. Eventually, they are asked to think of possibilities and solutions to overcome these obstacles.</p> | Disney-method "Critics" | Group A Group B Technician A Technician B | Poster/props to represent the critical phase Flip chart, sheets of paper, pencils | Participants have expressed skepticism and obstacles and have made clear under what conditions the idea would work |

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|-------|---|---|---|-------------|--|---|
| 20min | Presentation and discussion of results in the group | One person of group A and one person of group B present the results to the others. Together they discuss the main ideas, obstacles and solutions. | Discussion in a circle | Everyone | The documented results (flip chart papers) | Groups A and B have exchanged and discussed their ideas together. They have developed new ideas together. |
| 5min | Announcement for the next day (in case of a 2-day workshop) | Feedback on day 1 Short outlook on the next day (e.g. focus on documentation feature). | Announcement "Homework" (to think about the next feature) | Facilitator | - | All participants are happy to come again! ☺ |

“CARU cares” – Co-Creation Workshop - Day 2, Example for Austria

| Duration | Topic | Details | Method | Who? | Materials needed | Outcome |
|---|--|---|--------------------|--|-------------------|--|
| Introduction Day 2 | | | | | | |
| 5min | Agenda | The facilitator presents the program for day 2 | Announcement | Facilitator | - | Participants are informed about the program of the day |
| 5min | Warm-up | All workshop members meet in a standing circle. One person starts throwing a ball saying a word (e.g. CARU). The person catching the ball makes an association with the word throwing the ball to the next person and so on. The game could end with a last round where the person catching the ball says an expectation for the day. | Association circle | All workshop members | Ball | Participants feel warmed up and are ready for co-creating the next feature |
| Co-creation phase 2 (Documentation function) Please note: The co-creation phase should be audio recorded. If the group is divided in subgroups, you need to audio record the subgroups individually. | | | | | | |
| 5min | Feature 2 CARU Documentation | Presentation of the main ideas of the demonstration function with the use of a mock-up | Presentation | Responsible technical or scientific/end user partner | (Software)-mockup | Participants know the main idea of feature 2 (e.g. documentation function) |

| | | | | | | |
|-------|---|--|-----------------------------|--|---|--|
| 20min | Exploring the daily routine of a client visit | <p>See also Section 3 and 5.1</p> <p>Group A and group B get each a profile of a home care client (see appendix 9.1 as an example). Based on the profiles and care needs, the participants are asked the following (select the most appropriate questions, if necessary):</p> <ul style="list-style-type: none"> ▫ How do you organize your visit? ▫ How do you document your activities/ care tasks in the household? ▫ Is there anything annoying or time consuming during the documentation process? What would you like to simplify? ▫ How much time do you usually take for documenting? ▫ How do you perceive the documentation process in general? | Reflection of daily routine | Group A Group B Facilitator A Facilitator B | Sheets of paper pencils | Group A and B reflected on the documentation process and collected their routines and answers to the question on a flip chart. |
| 20min | Ideas and visions | <p>See also Section 5.2</p> | Disney Method “Dreamers” | Group A Group B Facilitator A | Flip chart, post-it notes, colored papers | Groups A and B have expressed their wishes and |

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|-------|---------------------------|---|--------------------------|--|---|--|
| | | <p>The facilitator reminds them of the method and the group again splits in subgroup A and B. They are asked to imagine how the documentation process could be simplified. They should say aloud everything that comes to their mind.</p> <p>All ideas are collected on a flip chart or on post-its</p> | | Facilitator B | | needs to simplify the documentation process |
| 15min | Short break & refreshment | | | | | |
| 20min | Action plan | <p>Group A and B are now asked to assume the role of realists and to specify concrete use cases for the interaction with CARU. They are asked to implement the most promising ideas by writing down a possible interaction with the CARU device or develop simple sketches.</p> <p><i>For the group of care workers allowed to manage the medication: You may want to use the medication packages and the drug dispenser for simulating medication management.</i></p> | Disney Method "Realists" | Group A Group B Technician A Technician B | Flip chart, post-it notes, speech bubbles | Groups A and B have develop use cases and dialogue sequences |

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| 15min | Obstacles and solutions | The facilitators announce the last phase, asking the group participants to step into the role of critics. The participants now have the possibility to express their concerns, fears and skepticism and think of barriers and obstacles in the context of a speech assistant for documentation purposes. Eventually they are asked to think of possibilities and solutions to overcome these obstacles. | Disney method "Critics" | Group A Group B Technician A Technician B | Flip chart, post-its, colored papers | Groups A and B have expressed risks and skepticism and have provided solutions |
| 20min | Presentation and discussion of results in the group | One person from group A and one person from group B present the results to the others. Together they discuss the main ideas, obstacles, and solutions. | Discussion in a circle | Everyone | Previous results written on flip charts | Groups A and B have exchanged and discussed their most promising ideas |
| Closing phase | | | | | | |
| 10min | Wrap-up & feedback | Feedback on day (1 and) 2 The facilitator wraps up the results of the workshop and shows the participants what they have accomplished. The participants are given the possibility to reflect on the (two) day(s). | Feedback round | Facilitator Everyone | Flip chart | Participants have expressed their feelings about the workshop and their hopes and expectations for CARU in the future |

6.3 Extra: Extended communication (additional component for a third feature)

| Co-creation phase 3 (Extended Communication) | | | | | | |
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| Please note: The co-creation phase should be audio recorded. | | | | | | |
| If the group is divided in subgroups, you need to audio record the subgroups individually. | | | | | | |
| | Feature 3 Extended Communication | The facilitator presents the main ideas of the extended communication function. For demonstration purposes, the facilitator could send a message via the CARU app and make the participants listen to it. | Presentation Demonstration | Facilitator | CARU Smart phone/tablet | The participants understand the basic idea of sending voice messages via CARU and activating CARU for telecommunication using keywords |
| | Reflection on daily communication processes | Groups A and B get a sheet of paper and a pencil and are asked to think of the daily telecommunication outside their organization (with their clients) and within their organization (with other care workers, with care managers and case managers). Thinking of the daily communication processes , the participants should answer questions that help them to be aware of the processes and structures. | Reflection technique | Group A Group B Technician A Technician B | Sheets of paper, pencils | Participants are aware of their daily communication processes |

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| | | <p>The following questions are sample questions that need to be adjusted depending on the occupation and work environment of the participants.</p> <ul style="list-style-type: none"> ▫ What information do care workers / the concierge service exchange with the client/resident via phone? ▫ Does communication via phone outweigh face-to-face communication between residents and concierge service (assisted facilities)? ▫ Who informs the client when a visit needs to be rescheduled (mobile care sector)? ▫ How often and in what situations do care workers communicate with the case manager (mobile care sector)? | | | | |
| | Ideas and vision | <p>Group A and B are asked to imagine how the daily communication with clients/residents could be simplified. They should think of scenarios in which voice</p> | <p>Disney Method "Dreamers"</p> | <p>Group A Group B Facilitator A Facilitator B</p> | <p>Flip chart, post-its, Poster/props to represent the dreaming phase</p> | <p>Groups A and B generated ideas for simplifying different communication processes of their everyday working practices</p> |

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| | | messages could ease the process. | | | | |
| | Action plan | Groups A and B are now asked to step in the role of realists and to consider the steps that are required to put their ideas into practice. What is required for the participants to realize those ideas? | Disney Method "Realists" | Group A Group B Technician A Technician B | Flip-chart, post-its, speech bubbles Poster/Props to represent the implementation phase | Groups A and B have developed a concrete sequence of steps to put their ideas into practice |
| | Obstacles and solutions | In the last phase, Groups A and B should take the position of critics and reflect on the advantages and disadvantages of the concrete ideas. What are the obstacles when implementing the idea in their working environment? What are possible solutions to make the idea work? | Disney method "Critics" | Group A Group B Technician A Technician B | Flip chart, post-its, colored papers, poster/props to represent the critical phase | Groups A and B have reflected on the disadvantages of voice messages and telecommunication via CARU and came up with possible solutions. |
| | Presentation and discussion of results in the group | One person from group A and one person from group B present the results to the others. Together they discuss the main ideas, obstacles and solutions. | Discussion in a circle | Everyone | Previous results written on flip charts | Groups A and B have exchanged their most promising ideas on the extended communication function |

7 Country report on the findings of all CCWS

Please report the findings of all Co-Creation Workshops in your country according to the template provided by WU (see **CARUcares_CCWS_Report template.docx**).

Please report in English. Bullet points are sufficient, if self-explanatory.

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| Send completed report to birgit.trukeschitz@wu.ac.at by 20 February 2020 . |
|--|

8 Literature

Nedopil, C., Schauber, C. & Glende, S. (2013) *Guideline the Art and Joy of User Integration in AAL Projects. White paper for the integration of users in AAL projects, from idea creation to product testing and business model development*. Brussels, pp. 51-51.

Steinhaus, L., Schields, M., Schrammel, M. & Feichtinger, J. (2018) *Guidebook on engagement and co-creation methodologies*.

9 Appendix

The following **two profiles** should serve as a basis for discussing the documentation feature. They depict **two fictional clients**, one in need of domestic help (Maria Kainz), the other one in need of care and nursing services (Hans Deng).

Please feel free to adjust these profiles (names, regions, services,...) so that they fit the settings of the CCWS.

Care Documentation

(adjust name and profile to the regions where the CCWS is being held)

Care client: **Maria Kainz**

Maiden name: Rachbauer
Schlossgasse 10
A-6065 Thaur
Born 22.03.1941 (78 years old)
Roman Catholic



Living Situation: Mrs. Kainz, born Maria Rachbauer, is 78 years old and lives alone in a single-family house close to Innsbruck. Her husband died six years ago from a heart attack.

Family Background: Maria is the mother of two children, named Max and Gerlinde, and has 5 grandchildren. Her daughter and son-in-law live in a neighboring home.

Biography: Maria worked in a tailor shop in Innsbruck up until her retirement. She reads well and often. Previously she also considered traveling one of her biggest hobbies. She still enjoys doing light gardening work.

Needs: Maria mainly needs support with household tasks. On Fridays, she takes a bath with the help of **Johanniter** (**adapt!**). Maria does the grocery shopping with her daughter. Maria places a lot of value on cleanliness and order, and a well-groomed appearance.

Her care level has been at Long-term Care Allowance Level 2 [**adjust according to your country's long-term care system**] for the past three months.

Medical Conditions:

- Coxarthrosis on both sides (degeneration of hip joints)
- Spondylarthritis (degenerative wear on the spine)
- Idiopathic Hypotension (low blood pressure)
- Presbyopia (age-related long-sightedness)

List of Medications (to discuss the **medication feature** of CARU DOCU with staff allowed to managing medication):

Nexium 20mg, daily, 0-1-0-0, Novalgin 500mg, daily, 1-1-0-0,
Astonin H 0.1 mg, daily, 1-0-1-0

Task List – Tuesday Mornings

Support time: 45 min. (to discuss, **e.g. the vital signs and checklist feature** of CARU DOCU)

- House cleaning
- Wash and iron the laundry
- Pick up prescription for Idiopathic Hypotension from the pharmacy
- Accompany home or to the doctor

Collect vital signs: blood pressure (Tuesday morning: 110/70) and weight (once a month, Tuesday morning: 62kg)

Care Documentation

(adjust name and profile to the regions where the CCWS is being held)

Care client: **Hans Deng**

Hallerstrasse 2,
A-6020 Innsbruck
14.09.1935 (84 years old)
Roman Catholic



Living Situation: Mr. Deng is 84 years old and lives together with his wife Franziska (80) in a small apartment close to Innsbruck. Since having a stroke in August 2016, Hans is paralyzed on half of his body.

Family Background: His wife Franziska takes care of the flat, the household chores, does the laundry, and goes shopping, but due to her age and her own health, she cannot afford to care for her spouse.

Need: The home medical care from Johanniter/Innsbruck has been working with Hans as a replacement since February 2017.

Six months ago his care level increased to Long-term Care Allowance Level 5 [adjust according to your country's long-term care system], as nightly care support has become necessary.

Medical Conditions:

Condition after the stroke and hemiplegia, stage 1 atrioventricular block (impaired impulse conduction in the heart), Hypertension (high blood pressure), Diabetes mellitus (Insulin dependence), urinary and stool incontinence

List of Medications: (to discuss the **medication feature** of CARU DOCU with staff managing medication):

Thrombo ASS tablets 100mg 0-1-0-0, Lisinopril 20mg/25mg 1-0-1-0,
Metformin 850mg 1-1-1-0, Sirdalud 4mg 0,5-0.5-0,5-0, Ibuprofen 400mg 1-1-1-0,
Halcion 0,25mg 0-0-0-0,5, Fentanyl 12µg/h 1-0-0-0 every 3 days transdermal,

Scenario 1: Ibuprofen is *almost empty*, only medication for a week available.

List of Actions – Tuesday Morning (to discuss, e.g. **the checklist feature** of CARU DOCU)

Care Time: 45 min.

- Set of measures for body care (Shower Day)
- Transfer between bed and wheelchair
- Taking over feeding activity
- Medication management: refill dispenser for all drugs