SOULMATE Deliverable 1.1

Co-creation methodology and implementation plan

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Author(s): SOULMATE consortium
Contact: Tom.Bellemans@abeonaconsult.be
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1. Introduction

In the SOULMATE project, diverse travel wishes and needs of older adults (aged 65+) are addressed in order to engage in (and to ensure) an active, healthy and independent living in a secure way through active mobility and physical activity. The integrated SOULMATE consists of three complementary modules, training of the route (Activ84Health), security during the trips (Viamigo) and routing during the trips (Ways4All). In the project, the three service solution partners (i.e. Activ84Health, ABEONA Consult and FH Joanneum) are accompanied by a research partner with expertise in mobility and activity patterns (TU/e), a business partner with expertise in co-creation approaches (RRD), and two business partners with technical expertise in the development of services for elderly (c.c.com Moser GmbH and FRAISS). Three end user organizations (SlimmerLeven, Happy Aging and GEFAS STEIERMARK) will intensively test and evaluate the integrated solution from a user (primary, secondary and tertiary), technical and business perspective.

This document is part of work package 1 of the development process of the SOULMATE solution. The objective of the first work package is to analyse how, and which end-users can be involved in each of the different project phases, described in this document, how end-users should be recruited and mobilized, described in document D1.2 User Recruitment Plan, and conduct co-creation workshops which will provide input for the functional specification, described in D1.3 Functional Specifications. Figure 1 depicts the workflow between the partners of the SOULMATE consortium involved in work package 1.

The SOULMATE solution will be iteratively developed in co-creation with end-users themselves, and the solution will be intensively tested and evaluated in three different countries based on usability, technical and business aspects. End-users will be involved in the different project phases (co-creation process, initial testing and field trials), and in the business modelling (e.g. willingness-to-pay). This design approach is based on a user-centred design process. This but is also necessary in order to reveal and understand the actual user needs and to avoid making wrong assumptions based on generalizations of the developers’ personal experiences with end-users. This will help developing a product with a high usefulness for the end-user, increasing the likelihood of acceptance and actual use of the final product (Nedopil, Schauber, & Glende, 2013; Rubin & Chisnell, 2008). This document describes first, the end-user involvement in the development of the existing solutions and second, how and which end-users (primary, secondary and tertiary) are involved in each different project phase in the SOULMATE project, specifically the co-creation methodology.

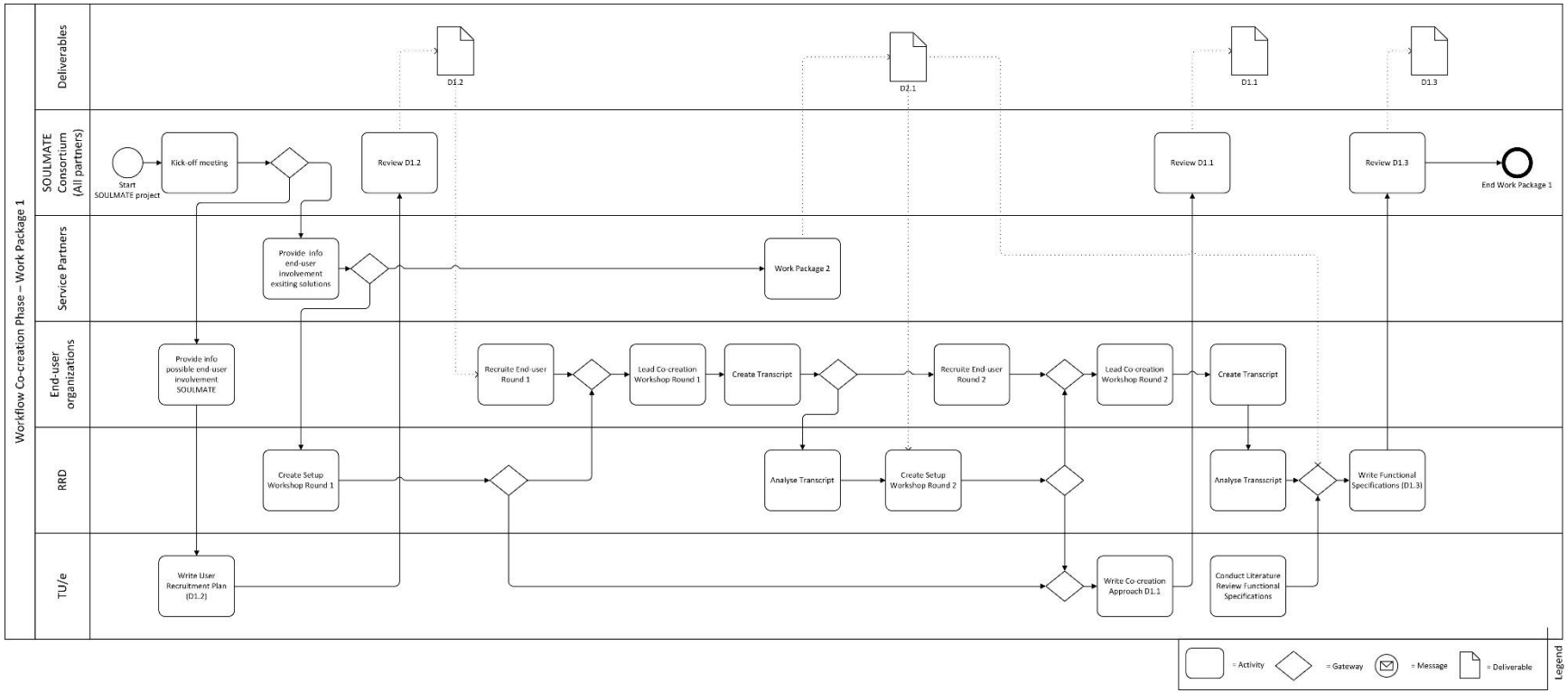

Figure 1 Workflow WP1

2. End-user involvement of existing solution

The SOULMATE project builds an integrated solution consisting of different types of mobility support: training of the route, security during the trips and routing during the trips. SOULMATE will integrate three service solutions, improve their functionalities towards the transport needs of the end-user, and combine them in a mobility solution to fit the diverse and varying mobility needs of elderly. The involvement of end-users in the development of the existing service solutions is described shortly in the following section.

Ways4All

The ways4all App / project (http://ways4all.at) was developed with the inclusion of the end-users from the beginning on. The project started in the year 2008 and from this moment the following organisations were participating within the different projects of the Ways4all line: The Hilfsgemeinschaft – the Austrian Association in support of the blind and visually impaired; Blinden- und Sehbehindertenverband Vienna, Upper Austria and Burgenland; Österreichische Blindenwohlfahrt and the Österreichischer Behindertenrat, Umbrella Organisation of the Austrian Disability Associations. These organisations were represented by their members who were visually impaired, blind and/or physically disabled. The first year most of the time was spend on defining the needs of the several user groups by questionnaires, workshops and test cases. One of the main results was that the end users don´t want separate, for them developed, technical devices, but off-shelve devices which are adapted on the software side so people with disabilities can use it. Important was also the steadiness and reliability of the solutions. The last main result was, that every technical solution which is added within the white cane won´t be accepted since the cane will weigh too much and a normal user consumes two sticks per year. Within the Project durations, they project members of these organisations were the source of knowledge what the end-user group would expect from the solution by usage, user friendliness, surface of the app and so on. Each of the projects within the Ways4all-Line were completed by a larger scale user test. Here, a bigger group of end users were testing the app and it functionalities on several aspects, like user friendliness, correctness in wayfinding, integration of several components, etc. The test group always consisted of the project members of the several disability organizations as well of test persons who had never seen or used the app before. In this way the strength and weaknesses of the solutions could be collected as well as the future needs for the future developments.

Activ84Health

The concept behind Activ84Health's Memoride technology (https://memoride.eu) was initially developed by Jan Smolders, Activ84Health co-founder and Director of Nursing Home Witte Meren in Mol, Belgium. Therefore, Memoride development started based on a concept from within the care home sector itself, based on the needs and expectations of different end-users within the nursing home setting. In the first phases of the development, a lot of testing was done in Witte Meren, as immediate access to the target audience was available. In the early days, students contributed by spending several days at Witte Meren, talking to elderly users, explaining them what we wanted to achieve, and learn from them through close interaction and end-user feedback. Many different features of Memoride were initially tested by the end-users before the optimal solution was identified (e.g. the fluidity of the hyper lapse, the colours of the arrows, etc.). Apart from watching how elderly users interact with Memoride, obviously close contact was kept with the nursing home staff. In February and March 2018, about 30 of the early

customers (nursing homes, hospitals, rehabilitation) were revisited to discuss how Memoride was used in their setting. This allowed for identification of which features work, what issues can be improved, and which features could/should be added to improve customer satisfaction. It also allowed to gain better insight into the way Memoride was implemented in the care process of each individual customer.

Viamigo

Viamigo (https://viamigo.be) is an update and extension of V-Pad, developed to support the independent outdoor mobility of persons with intellectual disabilities and to reduce their caregivers' burden. In order to supervise the V-pad user, SMS technology was initially used. In 2013, the V-Pad instrument was updated in a collaboration between the Transportation Research Institute (IMOB, Hasselt University) and the Research and Knowledge Centre Inclusion & ICT (K-point, Thomas More). Viamigo is a completely new implementation that was developed by IMOB and that is not based on SMS anymore, but on state-of-the-art communications technology. During the different development phases of Viamigo (and before V-Pad), Viamigo was tested in some pilot projects with several end-users (persons with intellectual disabilities) and their feedback was collected. During this user-centred design development process of Viamigo, the heterogeneous needs, preferences, and constraints of the target group (PwIDs) are fully taken into account, ensuring that the resulting solution is tailored to the target population and therefore meets all key user requirements. Besides this actual testing of Viamigo by several end-users, we also obtained detailed feedback about Viamigo by interviews/demonstrations with/to different types of stakeholders (e.g. different types of end-users as well as care professionals and experts). For persons with intellectual disabilities, we had some meetings with end-users and their coaches, by which a route was demonstrated in which the 'thinking out loud' method was used to get immediate feedback about the different screens/notifications and the general working of Viamigo. For persons with autism spectrum disease, we discussed the working of Viamigo with some primary end-users in detail to get more feedback about the different functionalities, as well as if, and how, it can be used for this target group. For children with disabilities, we had some meetings with local coordinators of special education schools, to discuss whether/how Viamigo can be used to support the travel needs of these children. For elderly with beginning dementia, we had some discussions with WGK (service in the field of non-hospital care) to discuss the use and importance of technological support tools for elderly, and how they can be implemented.

3. End-user involvement in the development of SOULMATE

The end-user group of elderly is defined by age, in this case 65 years and older. However, the elderly population is comprised of increasingly diverse individuals with different wishes and needs regarding travel that can no longer be considered a homogenous group. In general with an increase in age, health declines and the number of impairments rise. This does not mean that all elderly people are mobility impaired and the needs of older people are the same as impaired people. Fiedler (2007) found that the travel patterns and needs of older people differ from those who are mobility impaired. Even elderly with mobility impairment and elderly without mobility impairment show different travel patterns and travel needs (Hildebrand, 2003). Other studies indicate that, in addition to mobility impairment, a migration background may also play a role in travel behaviour of people. Both Blumenberg & Shiki, (2007) and Harms (2007) found differences in terms of preferred transport mode and number of trips between natives and immigrants that were still present when controlling for the difference in sociodemographic variables such as income, car ownership, and urban density. These studies made no distinction between age groups but the differences

between immigrant and non-immigrant are expected to also exist for older adults. In addition, older adults with a migrant background often experience language barriers which prevents them from using the available modes of public transport (Haustein, et al., 2013). Not only mobility impairment and migration background but also home location should be taken into account when examining the travel needs and wishes of older adults. Over the last decade the shops and services in rural areas and city centres have disappeared or moved to the commercial areas on the outskirts of urban areas outside of walking or cycling distance. This has increased the car dependency for daily life. When growing older it becomes more difficult or impossible to drive, and the availability of alternative transport modes differs for different urban density levels. For example, trains only support travel between or within cities but do not service small towns in rural areas; here the bus and taxi are more used alternatives. In addition, in rural areas it is difficult to maintain profitable public transport, and without public transport and shops or services within walking or cycling distance it has become difficult to live independently when driving has become difficult or impossible (Fiedler, 2007). Several studies found a difference in preference for public transport modes between rural and urban areas (Bell, et al., 2013). This implies different user needs for elderly in rural and urban areas. It is important to keep in mind that older adults are a very diverse group, some migrants experience the language barriers but not all, and some find it difficult to drive, but there are also many that don't experience this problem.

The three characteristics discussed above (mobility impairment, migration background and urban density) are often mentioned to be the reasons why older adult's transportation needs and wishes are diverse. In order to discover whether these differences have implications for the functional specifications of the SOULMATE solution, end-users involved in the co-creation process will differ on:

- Mobility impaired or not;
- Migration background (natives vs. immigrants).
- Urban density level of neighbourhood (urban vs. rural areas);

The number of end-users that will be recruited and involved in each of the phases are defined in careful consideration with the end-user organizations in the 3 countries (Belgium, Austria and the Netherlands). The end-users must of course be willing to engage in the testing, must be able to participate (some with help of secondary end-users) and test the SOULMATE solution, and give and discuss their feedback. Each participant will be asked to sign an informed consent form. End-users participating in the development of SOULMATE must comply with the following criteria:

- 65 years or older,
- Willing to participate and sign informed consent form,
- Able to participate, discuss and give feedback.

Besides elderly themselves, also secondary end-users (e.g. family members, caregivers, neighbours or voluntary workers) will be involved in the testing phases, especially for elderly with a challenge (e.g. mobility or cognitive impaired, or difficulties in communication). Finally, tertiary end-users like governmental organizations (e.g. care home organizations or senior associations), will be involved as well.

Table 1 shows a specific overview of number and characteristics of end-users involved in the various phases of the process.

Table 1 Overview of number and characteristics of end-users involved in the various phases of the SOULMATE project

	Co-creation Workshops ("Service Design" & "Feature Selection")		**Initial testing**	**Field trials**		**Benchmark Survey & WTP**
AU	Natives: 6 + 6	Immigrants: 6 + 6	5	Natives: 20	Immigrants: 20	100
B	Complete mobile: 6 + 6	Mobility impaired: 6 + 6	5	Complete mobile: 20	Mobility impaired: 20	100
NL	Urban: 6 + 6	Rural: 6 + 6	5	Urban area: 20	Rural area: 20	100
Total	72		15	60	60	300

Over the different phases of the development process of SOULMATE the motives for including end-users differs:

- Co-creation process: getting familiar with the needs, wishes and functionalities of end-users,
- Initial testing: acquire extensive feedback on prototype,
- Field trails: examine the impact on real-life,
- WTP survey: market perspective.

The following chapters describe each phase and how the end-users are involved in the development process (See also document D1.2 for more detailed information about the recruitment of end-users in each phase).

4. Co-creation workshops SOULMATE

During the co-creation phase, 4 workshops with a duration of at maximum 2 hours each, with a heterogeneous group will be organized by the end-user organizations (SlimmerLeven, Happy Aging & GEFAS) in 2 rounds, in each of the 3 countries (Austria, Belgium, the Netherlands). Based on availability, in each workshop 2 to 4 secondary and tertiary end-users will participate. Round 1 will focus on the development of a service model and exploring the target groups, and round 2 will focus on the functionalities of a service solution; during this round a paper prototype is developed. A detailed setup of the co-creation workshops is developed (by RRD) and discussed with all end-user organizations to get the required output. All countries will use the same set up, however there might be some small adaptions because of the different cultures in each country. For example, in the 'inventory of troublesome situations' (see Appendix A1 Setup Round 1 Co-creation workshop) the journeys are adapted to the transport modes used in a specific country (e.g., in Austria elderly people hardly cycle, while this is an important transport mode for this group in the Netherlands). The detailed setup of the co-creation workshop of round 1 and 2 can be found in Appendix A and B respectively. Each co-creation workshop will be recoded and transcribed by the end-user organization leading the workshop. Austria is an exception; here transcripts will be made during the workshops themselves as the

Austrian end-user organization anticipated that participants would have privacy objections towards audio recordings. RRD will lead the analysis of the transcripts, supported by TU/e.

Analysis of the transcripts of the first round of workshops has the following goals:

- To inventory problems that older adults experience while travelling
- To create a service model for the SOULMATE technology

The first goal will be served by a thematic analysis of the values that older adults mention with respect to travelling, and the problems that they experience. Since these values or problems can be mentioned anywhere during the session (and not necessarily when we discuss the topic only), the whole transcripts will be scrutinized for these issues. This will result in list of values and problems, quantified and distributed over the different groups that are involved during the co-creation workshops (urban, rural, etc.). The generation of the service model is not something that depends on quantified outcomes. Instead, single statements can be potentially of large influence (when they denote an important rationale). Therefore, all statements regarding the way that the SOULMATE technology can be used will be considered together and a single service model will be drafted by RRD (in the form of an activity diagram), based on these statements. This service model will subsequently be revised by TU/e and the participating end-user organizations. Then, a next iteration will be created in collaboration with the technical partners of SOULMATE, so that the service model also aligns with technical possibilities and economic strategies.

Analysis of the transcripts of the second round of workshops has the following goals:

- To elicit (non)functional requirements
- To assess end-user acceptance of the individual SOULMATE technologies

The co-design sessions will result in very simple, paper mock-ups, generated by the end-users, stakeholders, and participating SMEs. During a plenary presentation all creators are asked to present their mock-ups and to provide the rationale for their design decisions. Analysis of this section will focus on inventorying these rationales. Based on these rationales, (non)functional requirements will be drafted, using FICS classification (Functions & events, Interaction & navigation, Content & structure, Style & Aesthetics) categories (Benyon & Macaulay, 2002) and MoSCoW[1] prioritization. Priority will be set in collaboration with the technical partners. Furthermore, wireframes will be used for easy communication about the technology in the SOULMATE consortium. Data that is collected when discussing end-user acceptance of the current SOULMATE technologies will, again, be done thematically.

5. Initial testing SOULMATE

In the initial testing, the initial versions of the instrument will be tested by 5 motivated end-users per country in iterative loops. Based on pre-set travel scenario's these end-users will be asked to test the functional limits of our solution, for a number of consecutive prototypes. Selection of these elderly needs to be done carefully, based on

[1] The MoSCoW method classifies a requirement as Must have, Should have, Could have, or Won't have.

the probability that end-users are capable of carrying out pre-set scenario's and deal with bugs and uncertainty in the solution; have the ability to give extensive verbal feedback and are cognitively able to reflect on their interaction with the solution. A match between the module to be tested and the specific needs of the test user will be sought for to produce relevant feedback. During regular, bi- to four-weekly meetings with the end-users, in a place familiar to them (e.g., the office of the end-user organization), their use of and experience with the SOULMATE solution will be extensively discussed and includes among others perceived usefulness, integration in everyday life, usability, acceptance, and safety. The results will be discussed with the developers to continuously evaluate and improve the instrument until a final version of the instrument is ready to be extensively tested. TU/e and RRD will develop a structure for the initial testing and contact moments with the end-users, which will guide the end-user organization during the meetings with the end-users. Feedback and outcome of the initial tests will be analysed and summarized by TU/e and RRD.

6. Field trials SOULMATE

During the field trials, 40 end-users per country will use the SOULMATE solution during their real-life trips. The living labs, created by the end-user organizations, will be the end-users single point of contact during the field trail, and are responsible for recruitment of end-users as well as keeping them engaged (e.g. by community building activities). At the start, after 3 months (middle) and after 6 months (end of field trials), the travel behaviour, quality of life and physical activity of the participants will be measured by means of a survey and interviews with the participants will clarify the findings of these surveys. The next section will discuss this in more detail.

These quantitative measurements will be supplemented by interviews with the end-users to explain the findings of the surveys and to gather a deeper understanding of why people (do not) use the technology in certain situations. Document D3.2 will elaborate on the experiment design and the results of the field trails of the SOULMATE project

7. Impact of SOULMATE

In order to determine the impact of the SOULMATE solution, the travel behaviour, quality of life and physical activity of the end-users participating in the field trails will be measured. This is replicated threefold during the field trials: at the start, after 3 months (middle of field trials) and after 6 months (end of field trails) using the SOULMATE solution. The indicators measured at the start of the field trails will form a baseline of the travel behaviour, quality of life and physical activity of the end-users. The following indicators will be measured by means of a survey:

- Actual travel behaviour of end-users will be measured by GPS and combined with activity diaries to gather information on their mobility patterns. This includes among others: activity space, number of trips, activity locations and travel party.
- QoL & perceived autonomy score: (QoL-OLD survey) to test for, among others: sensory abilities; autonomy; past, present and future activities; and social participation.
- Activity patterns will be measured by an activity diary & the Activity Restriction Scale (GARS).
- Social network will be analysed using the social network analysis approach (Van den Berg, 2012).
- Loneliness: The 6-item loneliness scale contains items on overall, emotional and social loneliness.

- Physical activity will be assessed by means of collecting physical activity sensor data (which will be subsequently categorized as either sedentary, or low-intensity, moderate intensity, or vigorous activity), which will be provided to the field trial participants for the duration of one week.
- Self-reported health will be assessed by means of the Short Form (36) Health Survey (SF36).
- Patient empowerment will be assessed by means of the Patient Enablement Instrument (PEI).
- Burden on informal caregiver: we will question the end-users' informal caregivers about the burden they experience while taking care of somebody else (12-item version of the Zarit Burden Interview).

During the follow-up measurements the same indicators are measured and changes are compared to the baseline to test for the effect of using the SOULMATE solution. To test the acceptance and usability of the SOULMATE solution the Technology Acceptance Model will be used. Interviews with the end-users will further clarify the findings of the surveys and provide a deeper understanding of the acceptance and usability.

Furthermore, the survey data on the indicators will also be obtained from a larger group of 100 end-users per country. This survey will allow testing and quantifying the effects of using SOULMATE by the end-users and will provide information to the developers on how to maximize and personalize the capabilities of the instrument for a variety of end-users. Moreover, the survey will include a willingness to pay for and acceptance of (WTP&A) experiment to test what future users are willing to pay for the various components of the SOULMATE solution. This will provide input for the business plan and go-to-market strategy of the SOULMATE solution. Document D3.1 will elaborate on the experiment design during initial testing of the SOULMATE project.

Acknowledgements

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Appendix A1 Setup Round 1 Co-creation workshop

Setup SOULMATE co-creation session 1

Authors: Lex van Velsen (RRD), Marit Dekker (RRD)

Version: 2.0

Date: May 28, 2018

Duration: 2 hours.

Location: NL, BE, AUT.

Session goals:

- Eliciting older adults' values with regard to travelling;
- Eliciting troublesome situations that older adults' experience while travelling;
- Determining how the SOULMATE service can fit into the travel journey of older adults.

Participants:

- Older adults
- Informal caregivers
- SOULMATE SME's
- Other stakeholders (e.g., public transport company, municipality, elderly organization)

	What	Who	Time	Material
1	Walk-in		5 min	- Name signs - Coffee & Tea - Cookies - Laptop - Beamer - Large screen/White wall - Pens

2	Introduction design session - Introduction of moderators - Explain goal of the session: To explore how we can support older adults while traveling with new technology - Explain that the session will consist of two parts: 1) discus how you experience travelling nowadays, 2) explore how technology can support you while travelling. Alternative: Bingo/ coin game		5 min	Script from Judith
3	Gather Informed consent + permission for audio recording and use of photographs		3 min	- Informed consent form with checkbox option for photo use - Two audio recorders or phone or two people doing word-by-word typing (do not summarize) - Spare batteries
4	Turn on audio recorders		0 min	
5	Introduction round participants Please state your name and tell us (or ask on paper): - your age - your living situation (alone, with someone else) - How often do you travel within your municipality (to do groceries, to (volunteer) work, etc.) Stakeholders can introduce themselves by stating their name and their reason for joining the session. Alternative: “Get to know each other game”		10 min	PPT sheet with the three questions (or on paper) Script “Never have I ever” (see appendix A2)

6	Value elicitation Ask participants about what is important to them while travelling within and outside their municipality. Questions: Here you see the story of Martin, who travels a lot for work. When he travels, he values Fast rides, Comfort, and No time necessary for figuring out how to get somewhere. Please think about your own situation: - What is important for you while you travel? Make a round among the participants, make contradictions among participants explicit and make them explain why. Next question: - Did the things that are important for you while you travel change among the years? Follow up questions: - If not, why? - If so, how? Alternative: "What is on your radar?"		15 min	PowerPoint with scenario about Martin. (see appendix A3) Script from Judith (see appendix A4). Print the radar poster on photo paper. Use different colour Post-its (each participant has his own colour)
7	Inventory of troublesome situations We now give you a big sheet of paper on which you see two journeys, of a woman called Maria. She lives by herself at home, and cycles to the supermarket and back. She does this every day. On another day, she visits her daughter in [City 2]. So, she first walks to the bus stop, then takes the bus		20 min	- "Two journeys" annex (printed on A3 for each participant). Please mark which annex belongs to which participant. (see appendix A5) - 5 red dot stickers per participant

	to the train station, goes by train to [City 2], and there her daughter picks her up by car. These 2 journals are, we think, quite typical for all of you. Please think about similar trips you make, so going by bike to the supermarket, or using the bus, train, and a lift from a family member to visit this family member. Just like on the big sheet of paper. You have also gotten 5 stickers of a red dot. Please place a dot where you sometimes experience any kind of problems, or where you anticipate problems. Feel free to place multiple stickers at one place if this is a big problem for you. Customize Annex 1 to local situations. Include 1 familiar place and 1 unfamiliar place. Let people place stickers. Help them when necessary. Quickly walk along all sheets and see where people have placed or did not place any stickers. In plenary, discuss why people placed stickers where they did. Allow people to react to each other's decisions. Makes sure you find this out for: - Different modes of travel - Transit of one form of travel to the other - Necessity of communication			
8	Break		10 min	
9	The potential role of technology Before the break, we have discussed what problems you sometimes encounter while travelling. Within the SOULMATE project, we aim to develop technology that can help you. At the moment, we are very interested in where, you think, this technology might help. Or, if you think a technology is not helpful at all.		20 min	- "Two journeys" annex (printed on A3 for each pair). Please mark which annex belongs to which participant. Please use a NEW COPY. - "Technologies" annex (printed on labels, in Dutch: etiket) (see appendix A6).

	We would like to ask you to form pairs. Each pair will receive a big sheet of paper, similar to the one you received before. Additionally, you will receive a set of stickers that resemble different technologies. Discuss with each other where you think a technology can be helpful. Please place a sticker on the big sheet of paper, where you think the technology will be helpful. It's perfectly fine if you place the same sticker at more than one place. Help participants while doing the exercise. Note additional functionalities/ questions participants come up with.			
10	Presenting outcomes Let each pair present what they have come up with. Pay attention to: - Why did they put each technology at its specific point in the travel overview? - Why did they not include certain technologies? Please allow other participants to question or comment upon the presentations. Try to start a plenary discussion when it remains silent. Especially these interactions are very important for creating the service model		30 min	
11	Closure - Explain the next steps within the co design process and how we will use their input in the project (to create the service model, to design the technology) - Invite participants for 2nd co-creation session - Ask if there are any questions/comments - Thank participants		5 min	
Total			123 minutes	

Appendix A2 Script “Never have I ever”

To get to know each other in an original way, we are going play a game of “Never have I ever…”

Each participant gets 3 (or 5 if it´s a smaller group) cards stating “I have”, and in the middle of the table, there´s a vase or pot to collect cards. The person right of the quizmaster is the one to start the game. He or she names an activity that he or she never undertook.

For example: “Never have I ever…. Spent an entire day in pyjamas”

Or: “Never have I ever…. Met a celebrity”

Or: “Never have I ever…. Visited Disney Land Paris”

All people in the group that *have* done this activity, put one of their “I have” cards in the central vase or pot. Now the next person comes up with an activity etc. etc. The last person that still has an “I have” card, wins the game.

Tip: You maximize your chance of winning by coming up with things that you have never done, but other people most likely have.

Appendix A3 PowerPoint scenario

Martin's journey

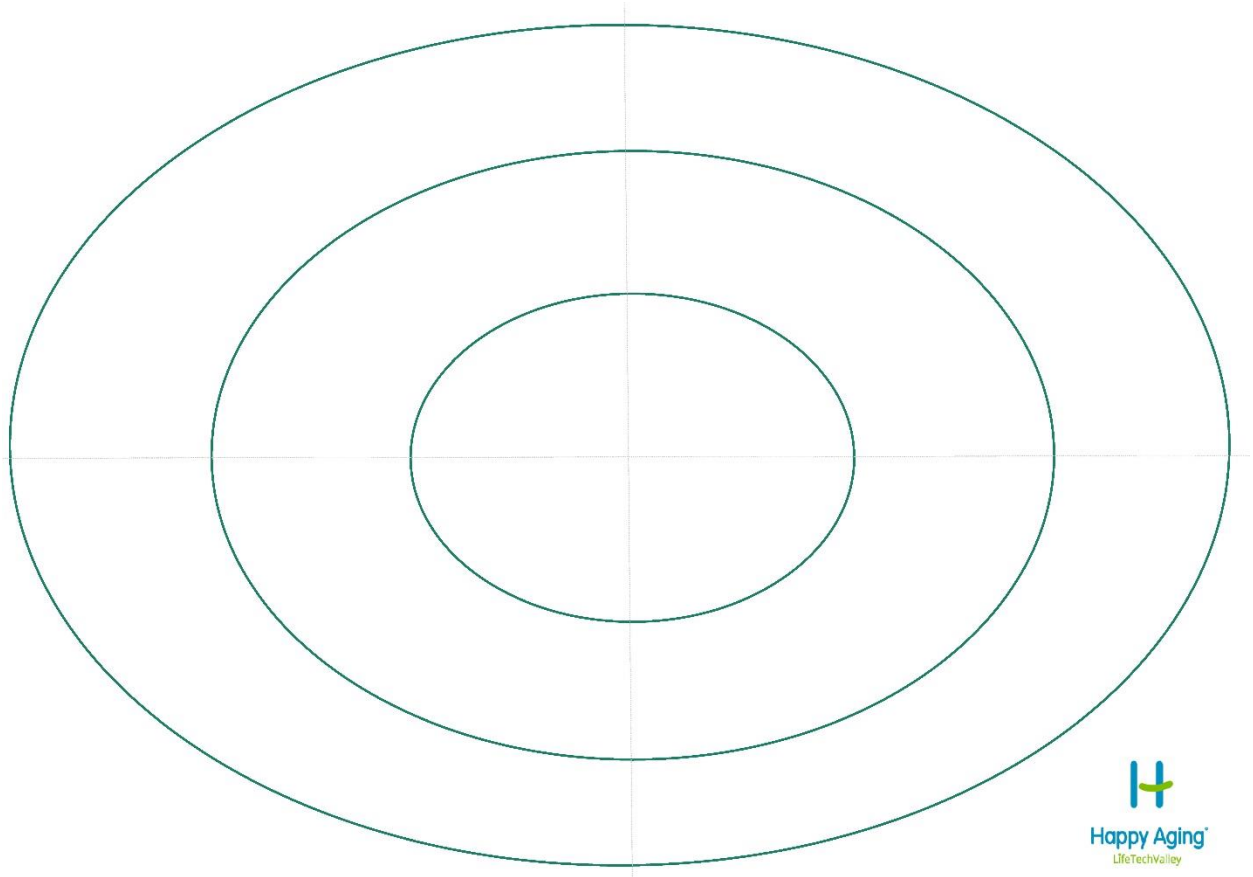
Martin lives in [City]. He travels a lot for work. When he goes to [City2], he takes his bike to the train station, so that he can evade traffic jams. When he goes by train he always takes first class, so that he can work. When he arrives in [City2] he takes the taxi to his final destination. In short, for Martin the following things are important while travelling:

- Fast rides
- Comfort
- No time necessary for figuring out how to get somewhere

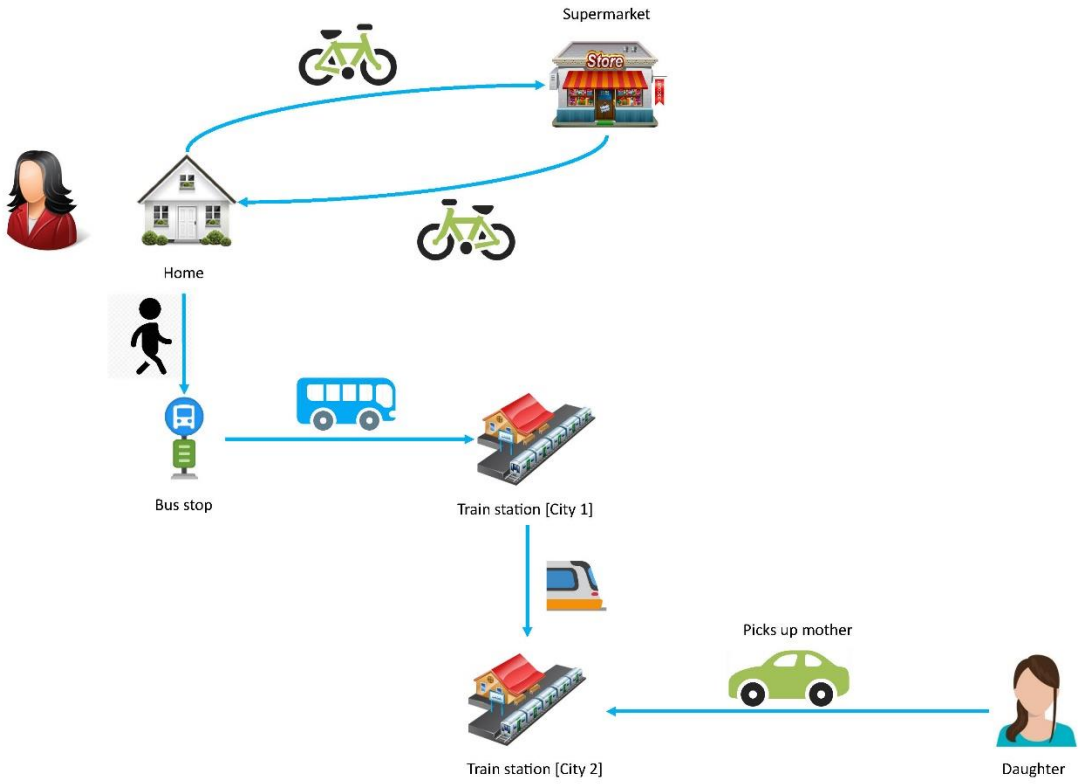
Appendix A4 Script “What’s on your radar”

Use the poster with the Radar, preferable printed in A0 size paper. Introduce the subject of discussion to the participants. In this case: start with the scenario of Martin, and point out what is important for his, while he is travelling.

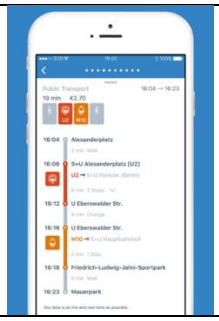
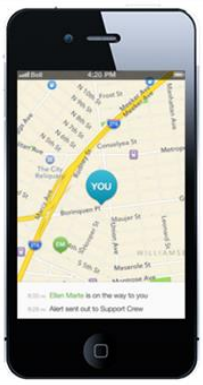
Then present the same question to the participants of the session: “What is important for you while you travel?” And “Did the things that you find important while travelling change over the years? If yes, what changed?”. Participants get 10 minutes to gather ideas. Every idea is written on a separate post-it and put on the Radar board. Additionally, 10 minutes are spent to prioritize all items, based on a group discussion. Items that are regarded as important to many members of the group move towards the middle of the radar, while items that are less important (or only important to a single group member) move towards the outer rings of the radar.



Appendix A5 “Two journeys”



Appendix A6 Technologies

Sticker	Explanation
	A navigation app on your smartphone. The app tells you where to go when you are walking or cycling.
Sticker	Explanation
	An app on your smartphone to plan your route. It takes into account walking, cycling, bus, tram, metro and train.
Sticker	Explanation
	An app on your smartphone that allows you to share where you currently are with specific people
Sticker	Explanation
	A button on your smartphone that lets you make an immediate call while travelling and when in need of help. You can choose who is called: your spouse, a family member, a friend, etc.

Sticker	Explanation
	An app on your tablet or computer that lets you practice your journey before you actually make it. On the app, you can travel like in real life: through the streets.

Appendix B1 Setup round 2 co-creation workshop

Setup SOULMATE co-creation session 2

Authors: Lex van Velsen (RRD), Marit Dekker (RRD)

Version: 0.9

Date: July 23, 2018

Duration: 2 hours

Location: NL, BE, AUT

Session goals:

- Co-design technology to prepare trips, to guide trips, and to call for help during trips
- Collect feedback on Soulmate technology

Participants:

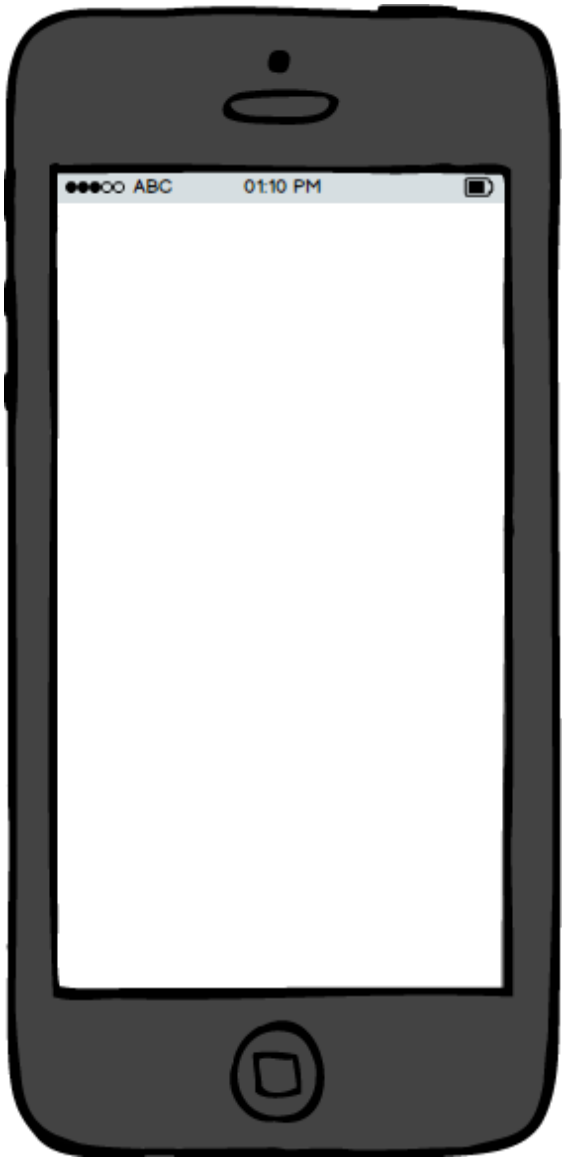
- Older adults
- Informal caregivers
- SOULMATE SME's
- Other stakeholders (e.g., public transport company, municipality, elderly organization)

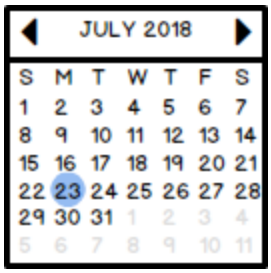
	What	Who	Time	Material
1	Walk-in		5 min	- name signs - Coffee & Tea - Cookies - laptop - beamer - Large screen/White wall - pens
2	**Introduction design session**		5 min	

	- Introduction of moderators - Explain goal of the session: To explore how we can support older adults while traveling with new technology - Explain that the session will consist of two parts: 1) co-designing your own technology and 2) demonstration of existing technology			
3	Gather Informed consent + permission for audio recording		3 min	- Informed consent form - Audio recorder - Spare batteries
4	Turn on audio recorder		0 min	
5	**Introduction round participants** Please state your name and tell us: - your age - your living situation (alone, with someone else) - How often do you travel within your municipality (to do groceries, to (volunteer) work, etc.) Stakeholders can introduce themselves by stating their name and their reason for joining the session.		10 min	PPT sheet with the three questions
6	**Co design** In pairs, or with three people, ask participants to design their own technology to help them travel. More specifically, the technology should cover: 1. Preparing a trip 2. Dealing with changes during a trip 3. Calling for help during a trip		30 min	Handouts with mobile phones and handouts with elements (see appendix B2). Markers, ballpoints, colours, everything is allowed.

	Ask the participants to draw three interfaces in groups of two or three people. They can use all their imagination. Please note that this will be a difficult task for the participants, and they will need guidance at the beginning. This is not something you can tell or explain them in a group. Rather, use 2 or 3 persons and sit down with the small groups. Ask them: what do you need here? What would this look like? Is there an app where you think this is done well? How would you like it to look?			
7	Break		10 min	
8	**Discussions of co design** In the group, discuss the design each group has made. Specifically ask them to explain why they inserted functionalities or options on the interface. Allow others to comment or suggest improvements		20 min	
9	**Soulmate technology** Give demos of the three Soulmate technologies. After each demo, ask the group: - What is your first reaction to this technology? - Do you think this would be useful for you? Why (not)?		30 min	Demos of Soulmate technologies
10	**Closure** **-** Explain how we will use their input in the project (to design the technology) - Ask if there are any questions/comments - Thank participants		5 min	
		Total	118 minutes	

Appendix B2 Hand-out prototype elements




JULY 2018
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15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31 1 2 3 4
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space
return