



Deliverable 3.2b Functional Testing Results

Project number: AAL-2017-023

Date: December 20, 2019

Level: Public

1. Introduction

In the SOULMATE project, a highly innovative, multi-suite travelling companion will be developed for the target group of older adults. This innovation will be based on existing mobile services, focused on route planning, route navigation, route training, and emergency help during trips, that are offered by the SME's that participate in the SOULMATE project. The goal of this deliverable is to present the results that have been gathered through initial design testing workshops with future end-users.

These functional testing sessions aim to test the limits of the most recent version of the SOULMATE application on functionality and accessibility specifically for the end-users. To gather tangible feedback from these end-users, they were familiarized with an early prototype version of the application. This prototype contains some of the core functions that the ultimate SOULMATE app aims to have, without most of the polish. The prototype thus creates a good feeling of what using the actual app would be like in terms of what it can do. Using this prototype, the focus of the gathered feedback lies on how well the included functionalities work. Important aspects include the accessibility of the functionalities, speed of operation and any found bugs end-users encounter.

This document is the second part of deliverable 3.2 testing and field trials results. Deliverable 3.2 Testing and field trials results will consist of three main parts.

- Part A: Initial design testing results,
- Part B: Initial functional testing results,
- Part C: Field trials.

This deliverable builds on D3.1 in which the overall testing and trial methodology of the SOULMATE service is described. The prototype application used in this phase is based on earlier co-creation sessions detailed in deliverable D1.3, as well as earlier design related feedback detailed in deliverable D3.2A. The results of the functional testing workshops are gathered and reported here, as part of the initial testing phase of the project. The results of this deliverable will therefore provide direct input for 1) the further functional development of the SOULMATE service, 2) the different evaluations that will be conducted within the project, and 3) methodological feedback that can be used in the set-up of the field trials; the next stage of initial testing.

Section 2 will shortly set out the methods used to set-up the functional testing workshops and gathering of feedback, followed by Section 3, in which the results of these activities will be discussed. To conclude, Section 4 provides some guidelines for the functional development of the SOULMATE service, which can be used to guide the application functionalities specifically for our intended end-users.





2. Initial Functional Testing Methods

In the initial testing phase, early versions of the SOULMATE application will be tested by a small group of motivated end-users in each of the three participating countries. In iterative loops, the design and functionality of the service will be tested and discussed by these end-users in order to shape the development of a solution they want and need. The initial testing phase will be split up in two stages; design testing and functional testing. Both stages will require extensive discussion and feedback of a select group of end-users. Selection of these elderly needs to be done carefully, based on 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. In addition to using the same selection criteria, the two stages of initial testing will also use the same set-up. These testing sessions will be (estimated) half-day workshops in a place that is familiar to the end-users (e.g., the office of an end-user organization) in small groups of 5 at a time. In these workshops the end-users are first introduced to some part of the SOULMATE service and then interact with it in a structured way. After these interactive sessions, participants will be asked to challenge the limits of the current version and provide feedback on the strengths and issues of this version of the application. TU/e and RRD have developed 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 analyzed and summarized by TU/e and RRD.

Here, the functionality of the SOULMATE solution will be reviewed by end-users. In contrast to the click-dummy used in the design workshops, an early version of the actual application has been developed for the functional testing workshops. Again, the version of the application that is used during the workshops will have English, German, and Dutch translations. This time, however, end-users were asked to test the functionality of the application. Functional aspects include finding bugs or things that do not work at all, but also making sure the functionality of the app works in ways that the end-users expect. The same general structure of the design testing workshops has been used again for the functional testing workshops (see Appendix B1). In general, these workshops spanned around half a day. During this time, end-users were introduced (or reminded of) the aim of the SOULMATE solution in general and the current version of the application more specifically. To guide participants through this version of the app, several scenarios were set-up, with content depending on the functionality that was available in the most recent version of the application at that time. Starting with full step-by-step directions on what to do, these scenarios would also continuously decrease in the amount of specific instructions that were included. More so than with the design testing workshops, end-users were asked to seek the limits of that version of the application; through experimentation with different functions and button combinations. Eventually, users would run into functions that did not work, or at least not as they expected them to. A short description of the background of "bugs" is included in the workshop, to illustrate what is meant with this term. Near the end of the workshop, written feedback on the functionality of the prototype was asked from participants. A short questionnaire was designed to guide end-users in giving this feedback (see Appendix B2 & B3), including some quantitative (ratings) and qualitative (aspects and suggestions) items. In addition, participants were asked to fill out bug-reports regarding errors or unexpected things they encountered (see Appendix B4). These questions and bugs were discussed further during the workshop, to allow the end-users to expand on their answers further and weigh different opinions.



3. Functional Testing Results

As the workshop protocol and feedback forms show, three different kinds of results are being collected during the Functional Testing workshops. First, there are several closed-ended questions to get an overall rating of the look and feel of the application’s functionality. Then, there are several open-ended questions in which participants could voice their opinions on what worked well and what could be improved. Finally, there was a section where participants could report bugs they encountered while using the app. In terms of participation, the workshop in Belgium included 2 participants, the workshops in the Netherlands included 5 participants and Austria included 6 seniors. General results will be discussed, as well as data per country.

Closed ended questions

The feedback form contained 3 closed ended:

1. How well did the app function on a technical level?
2. How useful did you find the app?
3. How well did the app react to your actions?

Each closed ended question could be answered on a 5-point scale, with answering options ranging from ‘very negative’ (e.g., very bad, very useless) to ‘very good’ (e.g., very good, very useful). Table 1-3 show the answer frequencies of each question, Table 4 shows the average, standard deviation and average per country for each of the questions. All the answers given to the question can be found in Appendix C Results closed ended questions.

Table 1 - Frequencies technical functioning, on a scale of 1-5.

Question 1	Very bad	Bad	Acceptable	Good	Very good
<i>BE</i>	2	-	-	-	-
<i>AU</i>	-	1	3	1	1
<i>NL</i>	1	3	-	-	-
Total	3	4	3	1	1



Table 2 - Frequencies usefulness, on a scale of 1-5.

Question 2	Very useless	Useless	Somewhat useful	Useful	Very useful
BE	1	-	-	1	-
AU	1	-	1	2	1
NL	-	2	3	-	-
Total	2	2	4	3	1

Table 3 - Frequencies reactivity, on a scale of 1-5.

Question 3	Very bad	Bad	Acceptable	Good	Very good
BE	1	1	-	-	-
AU	-	2	3	1	-
NL	2	3	-	-	-
Total	3	6	3	1	-

Table 4 - Results of closed ended questions

	AVERAGE	STD. DEV.	Average BE	Average AU	Average NL
Question 1	2.42	1.19	1	3.3	1.8
Question 2	2.92	1.19	2.5	3.4	2.6
Question 3	2.15	0.86	1.5	2.8	1.6
Overall	2.49	1.15	1.67	3.18	2.00

The results in Table 4 indicate that participants score the apps functionality, usefulness and in general with a 2.49 (between bad and acceptable). Noticeable is that the average in Austria is higher than in Belgium and the Netherlands. This can be explained by the Austrian facilitators having the technical support at location during the workshop and approaching the participants as beta-testers lowering their expectations of the app.

Open ended questions

The results of open questions are discussed per question. The answers are categorized, for a full overview of the open questions see Appendix D. Note again BE: n=2, AUS: n=6, NL: n=5.

Open question 1: Which functions of the app worked well?

Table 5- Open question 1

	<i>BE</i>	<i>NL</i>	<i>AU</i>	<i>All</i>
Quick response	0	0	1	1
Correct Information	0	0	1	1
i-button	0	0	2	2
Nothing	2	4	2	8

The most mentioned function of the app that worked well is “Nothing”. This is a negative comment and explains the low average scores in the previous questions.

Open question 2: Which elements of the app can we improve?

Table 6- Open question 2

	<i>BE</i>	<i>NL</i>	<i>AU</i>	<i>All</i>
Route creation	4	1	7	12
Navigation	0	1	6	7
POI's	0	0	5	5
SOS function	4	1	2	7
Coach function	4	1	1	6
Everything	2	0	2	4

All functionalities of the app are mentioned as “needing improvement”. The creation of a route is mentioned most often.

Additional feedback

During the workshop the app was also discussed which resulted in additional feedback on functionality and the design of the app (see Table 7 and 8).

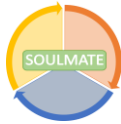


Table 7 - App functionality feedback

Positive/ Negative	Feedback	Times mentioned
Positive	Emergency button is useful	3
Negative	Autocomplete for address is confusing	1
Negative	Keyboard is difficult to use (want voice input)	1
Negative	Coach is required before starting navigation	1
Negative	Not possible to save emergency contact that is not in phonebook	3
Negative	No message when error with coach/contact occurs	2
Negative	No message that contact gave (or denied) permission	1
Negative	No searching through contacts only scrolling	1
Negative	No dialing sound when using SOS function	2
Negative	SOS function, coach must perform too many steps	2
Negative	Too technical for elderly	1
Negative	Unclear what next step in the app is	1
Negative	App functions differently on different android versions	2

Table 8 - App design feedback

Positive/ Negative	Feedback	Times mentioned
Positive	App is user-friendly	1
Positive	Big buttons are easy to find	1
Positive	Good colors and contrast	1
Positive	POI button is easy to find	1
Negative	App is NOT user-friendly	1
Negative	App does not suit elderly	2
Negative	Settings button is too small	1
Negative	Different languages in Dutch version	1
Negative	Font size address input too small	1
Negative	Poor contrast on the map	2
Negative	(POI) Symbols are confusing	2
Negative	Adding contacts under settings is confusing	2
Negative	Contact should be first in SOS list, not emergency services	2
Neutral	More than one coach should be possible	1
Neutral	Will it be possible to use the app in other countries	1

Tables 7 and 8 show the additional remarks regarding app design and app functionality that were made during the workshops. These tables show that there is some positive feedback, but also a lot of improvements that can be made on the app design and app functionality. Some of these aspects were already mentioned during previous rounds of





co-creation workshops (e.g. voice input) but did not make it in the Minimal Viable Product. This additional feedback is useful for further development but does not provide actionable points at the moment.

Bug testing

In Belgium and the Netherlands there was no technical support available during the workshops. This resulted in very poor performance of the app, which left the respondents with the feeling that nothing worked. Due to not being able to properly test the app no bugs were reported in Belgium and the Netherlands. In Austria technical support was present during the workshop and the bugs were discussed verbally with the technical parties in detail. These bug reports can be found in appendix E1.

Additional Bug testing

Additional bug testing by the TU/e resulted in 10 separate bug reports and one report containing several bugs encountered during an outdoor test, see appendix E2. All bugs found have been communicated to the development team.

4. Conclusions and Guidelines

Based on the feedback forms and general notes that have been collected during the Functional Testing workshops, some conclusions can be made. First and foremost, the heterogeneity of (even this small) user-group needs to be addressed. While general trends and feedback points can be distinguished, there are also contradicting points of feedback between end-users. In general, participants are critical of how well the current version of the application functions. With the overall rating for the application scoring well below average, the users send a clear message of needed improvement. It should be noted that the ratings in the Austrian workshops are more positive, even though they remain just above average. The presence of technology partners at this meeting is a likely reason for this, allowing for an easier back-and-forth with the end-users and a more pronounced “tester” role for participants. These factors could have made these participants feel more comfortable with encountering bugs and failures of the application. The message of improvement comes through in the open-ended feedback as well, showing a majority of negative comments.

When asked which functionalities of the current application worked well, “none” is the most common response. Similarly, participants mention several points of improvement to each specific functionality. Especially the ‘creating routes’ function is stated as a major point of improvement by various comments, with user statements mentioning routes not showing up, their position not showing up on the map, and overall the functionality not working as they expected. For an example of the latter; workshop participants expected that they would be able to use the map shown in the route creation screen to directly specify their destination, but they had to fill in an address instead. The navigational functionalities show much room for improvement as well. Participants state disappointment that only walking routes can be generated with this version of the application, and the routes that are generated are often not the fastest or easiest way to the specified destination. Finally, while participants deem the SOS functionality as useful, they also state it needs more improvement. These comments range from not receiving feedback regarding whether the contact has accepted or rejected their call, to the video call at times not working altogether.





A final note from these workshops is that it remains difficult to separate design from function (which can be hard in general, but specifically for end-users without technical backgrounds). Many design related comments, such as the color and contrast of the application (or specific parts), the inclusion of a speech command, and size of buttons and text were made. Although they were not part of the current aim of the functional workshop and feedback, these things bear mentioning.

Concluding, the current version of the SOULMATE application shows a lot of room for (functional) improvement. Even when end-users were asked to evaluate the application as a work in progress, the majority shows a negative evaluation of the functionality of the app. Although the application is under constant development, many improvements will need to be made to meet the expectations of end-users. In future workshops/measurements with end-users, it should be stressed that they are part of the development process and a technological expert should be present. Additionally, the specific feedback points included in this report will be dealt with, and the bugs that are reported will be fixed. In its current state, the application is not yet fit for broader testing with end-users and thus an iteration with major technical improvements is being made to make sure the functionality meets the targeted quality standards.

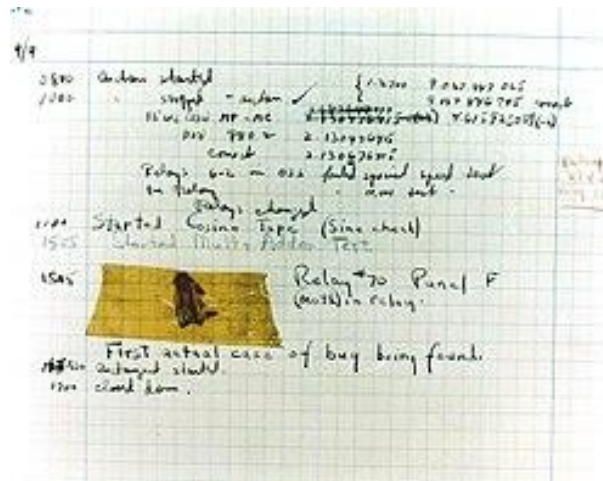


Appendix A Background on ‘Bugs’

In 1946, when computer pioneer Grace Hopper was released from active duty in WWII, she joined the Harvard Faculty at the Computation Laboratory to put her mathematical skills to good use. Here she continued her work on the Mark II and Mark III, early computers with both electrical and mechanical parts. When the Mark II suddenly stopped working, the operators traced the error back to a moth trapped in one of the relays. The moth was carefully removed from the machine and taped to the logbook, making history as the first ever computer bug. Stemming from this first bug, today we call errors or glitches in a computer program a bug. (Modified from Wikipedia)

So, what is a bug exactly? Here, we consider bugs to be anything the app does other than what we expect it to do. A button that does nothing after pressing? That’s a bug. Same for the application crashing or showing a blank screen after pushing two buttons at the same time. Or, the app returning to the login screen without you doing anything. Keep in mind that the app does not need to ‘break’ necessarily for something to be a bug. If you press to button for ‘options’, and end up in a route selection screen, that can be considered a bug as well. To some extent, words being in the wrong place or errors in spelling can even be considered bugs.

Errors and glitches in the application may vary in how severe they are. A typo or word in the wrong place might not be a big problem, but the app crashing or showing a blank screen is another story. This is why we want to categorize the bugs as Big (prevents you from continuing; such as crashing, freezing, page not loading entirely) or Small (might be annoying but the functionality still works; such as buttons or words in the wrong place, one image not loading).





Appendix B1 Setup Initial Testing: Functional Testing

Setup SOULMATE Initial Testing session 2

Authors: Jaap van der Waerden (TU/E), based on co-creation script by Lex van Velsen (RRD) & Marit Dekker (RRD)

Version: 1.0

Date: 16- 09, 2019

Duration: 130 Minutes

Location: NL, BE, AUT.

Session goals:

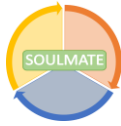
- Testing the overall functionality of the first MVP version of the SOULMATE solution.
- Find bugs or functions that work differently than expected.

Participants:

- Older adults that are familiar with using smartphone technology, in such a way that they can find report on bugs and irregularities that may come up while using the app.

	What	Who	Time	Material
1	Walk-in		5 min	<ul style="list-style-type: none"> - Name signs - Coffee & Tea & Cookies - Laptop & Beamer - Large screen/White wall - Pens
2	Introduction initial testing session - Introduction of moderators		5 min	





	<p>(- A brief description of the SOULMATE solution and goals could be added, if participants are not familiar with this yet.)</p> <p>- Explain goal of the session: To show off some scenarios that the SOULMATE solution will help participants with, and ask for their opinions and suggestions on how the app functions. We have some scenarios to go through, as well as a 'Bug Catching' segment. Stress the value of their input in the design process.</p>			
3	Gather Informed consent (+ use of photographs)		5 min	- Informed consent form with checkbox option for photo use
4	<p>Introduction round participants</p> <p>Please state your name and tell us (or ask on paper):</p> <ul style="list-style-type: none"> - your age - your living situation (alone, with someone else) - How often do you travel within your municipality (to do groceries, to (volunteer) work, etc.) - How familiar you are with smart technology (using a phone or tablet to: Browse the internet, use Whatsapp or Facebook, play games, use navigation) <p>If there are any, stakeholders can introduce themselves by stating their name and their reason for joining the session.</p> <p>Alternative: "Get to know each other game"</p>		10 min	<p>PPT sheet with the three questions (or on paper)</p> <p>Script "Never have I ever" (see appendix A1)</p>
5	<p>Explanation of the current MVP version of SOULMATE:</p> <ul style="list-style-type: none"> - Talk about what the participants are going to see/do in the scenarios; 		10 min	



	<ul style="list-style-type: none"> - Explain that the current version is an actual working app, which may still have some hiccups in different functions. - Explain what the point of the workshop is; a 'Bug Catching' as well as seeing if functions work the way they are expecting them to. - Give a little background on bugs. 			See Appendix A2 Background on 'Bugs'
6a	<p>< Scenarios></p> <ul style="list-style-type: none"> - Try to log in - Try to Create and Save a route (Create a very small route around the workshop place) - Try to Load the Saved route - With the route loaded, go outside with the group and walk a part of the route - While on the way, deviate from the route and deal with any warning that happens - Finish the route - Try to make an emergency call 		40 min	
6b	<p>Bug Catching (Maybe teams of 2?)</p> <ul style="list-style-type: none"> - Start from the <SOME SCREEN> screen, navigate around to different screens from there. Report bugs or crashes to the Master Bug Catcher (workshop leader). <i>Reproduce</i> the bug with the participant that found it and note the following; - On what screen did the bug happen; - What action causes the bug to happen? (e.g., clicking a button, entering certain information); - What kind of bug is it (e.g., blank screen, crash, goes to the wrong follow up screen); - <Other relevant info the Technical team might want> - Repeat for several screens. - Gather a bug report on how many different bugs the team has discovered. 		20 min	- Bug Catch Report (See appendix A5)

7	<p>Written feedback and discussion</p> <ul style="list-style-type: none"> - Ask participants to fill in the written questionnaire first (individually); - Feel free to let the participants tap through the different screens to find specific things they like or dislike (or show/discuss them plenary) - Communicate the Bug Catch Report back to the group (in a general way, i.e. 25 bugs were found!). <p>Discuss what the participants think is already working well, what could use improvement, and their suggestions. Moderate this discussion if required, and try to note the overall evaluation of the functionality and important points that come up.</p>		30 min	<ul style="list-style-type: none"> - Functional Feedback Form (see appendix A3 (Dutch) and A4(German)) for the workshop, per participant. - Discussion Notes
8	<p>Closure</p> <ul style="list-style-type: none"> - Explain the next steps within the Initial Testing process (most likely functional testing with an actual app prototype) and how we will use their input in the project (to keep the end users close and use their valuable input in the design process). We appreciate their input and how they will stay involved in all parts of the development. - Ask if there are any questions/comments - Thank participants 		5 min	
Total			130 minutes	



Appendix B2 Functional Feedback Form - Nederlands

Naam: _____

Plaats: _____

Datum: _____

Geef hieronder antwoord naar aanleiding van de scenarios die u zojuist heeft doorlopen. Er zijn geen goede of foute antwoorden, uw eerlijke mening helpt ons het meest. Wanneer u vragen heeft, kunt u die natuurlijk altijd stellen aan de begeleider van deze workshop. We stellen uw mening erg op prijs!

1. Over het algemeen, hoe goed vindt u de app op technisch vlak functioneren?

Erg slecht	Slecht	Acceptabel	Goed	Erg goed
1	2	3	4	5

2. Over het algemeen, hoe nuttig vindt u de functies van de app die u vandaag gebruikt hebt?

Erg nutteloos	Een beetje nutteloos	Een beetje nuttig	Best nuttig	Erg nuttig
1	2	3	4	5

3. Over het algemeen, hoe goed reageerde de app op uw acties? (Hoe correct en snel reageert de app)

Erg slecht	Slecht	Acceptabel	Goed	Erg goed
1	2	3	4	5





4. Welke functies van de app werkten volgens u al goed?

5. Welke functies van de app kunnen we nog verbeteren?

Heel erg bedankt voor uw bijdrage!





Appendix B3 Functional Feedback Form – Deutsch

Rückmeldungen auf die Funktionen der SOULMATE App

Initial Functional Testing in Österreich

11. November 2019

Beantworten Sie bitte die folgenden Fragen bezüglich der Funktion der App. Es gibt keine richtigen oder falschen Antworten. Bitte beantworten Sie die Fragen wahrheitsgemäß. Zögern Sie nicht, das Projektteam zu fragen, wenn etwas unklar ist. Wir schätzen Ihren Beitrag!

1. Wie gut funktioniert die App im Allgemeinen auf technischer Ebene?

Sehr schlecht	Schlecht	Akzeptabel	Gut	Sehr gut
1	2	3	4	5

2. Wie gut hat die App im Allgemeinen auf Ihre Eingaben reagiert?

Sehr schlecht	Schlecht	Akzeptabel	Gut	Sehr gut
1	2	3	4	5





3. Welche Funktionen der App haben Ihrer Meinung nach gut funktioniert?

A large, empty rounded rectangle with a light gray border and a fine grid of small dots inside, intended for the user to write their answer to the question above.

4. Wie nützlich finden Sie im Allgemeinen die Funktionen der App, die Sie heute ausprobiert haben?

Sehr schlecht	Schlecht	Akzeptabel	Gut	Sehr gut
1	2	3	4	5

5. Welche Funktionen der App fanden Sie besonders nützlich?



6. Was können wir an der App noch verbessern?

A large, rounded rectangular area filled with a fine grid of small dots, intended for users to provide feedback on the app.

Vielen Dank für Ihren Beitrag!



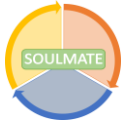


Appendix B4 Bug Catch Report

Bug	Info
ID#	
What happened	
What screen	
What action	
Severity (Low/High)	

Bug	Info
ID#	
What happened	
What screen	
What action	
Severity (Low/High)	





Appendix C Results closed ended questions

Country	BE	BE	AU	AU	AU	AU	AU	AU	NL	NL	NL	NL	NL	AVERAGE	STD. DEV.	Average Be	Average AU	Average NL
Question 1	1	1	2	3	3	3	4	5	1	2	2	2	-	2.42	1.19	1	3.3	1.8
Question 1	4	1	1	3	4	4	5	-	2	2	3	3	3	2.92	1.19	2.5	3.4	2.6
Question 3	1	2	2	2	3	3	3	4	1	1	2	2	2	2.15	0.86	1.5	2.8	1.6
														2.49	1.15	1.67	3.18	2



Appendix D Results open ended questions

Question 1	<i>Which functions of the app worked well?</i>	Category
AU	Walking time Info is correct	Correct info
	Information button	Info button
	Information button was easy to understand	Info button
	Nothing	Nothing
	App responds quickly	Quick response
BE	Nothing	Nothing
	Nothing	Nothing
NL	Nothing	Nothing
	Nothing	Nothing
	Nothing	Nothing
	Nothing	Nothing

Question 2	<i>Which elements of the app can we improve?</i>	Category
AU	ability to directly target stores	Route creation
	Direction arrow when navigating	Navigation
	The command "Go" is not clear	Navigation
	Not all POI's are displayed on map	POI's
	Information screen crashes	system crash
	Coach must always be selected before navigation, cannot be turned off	Coach function
	Everything	Everything
	Everything	Everything
	Point of location is unclear	Navigation
	Information on the map is incorrect	Navigation
	Directions should be clearer	Navigation
	3D map is confusing	Navigation
	Do not show POI's that are not of current interest	POI's
	Additional POI's	POI's
	Customizable POI's	POI's
	Information on the map is irrelevant	POI's
	enter address completely myself	Route creation
	Route creation by means of a map	Route creation
	Selecting address box before input	Route creation



Question 2	Which elements of the app can we improve?	Category
BE	Saving the route should be improved	Route creation
	Route planning is only walking	Route creation
	selecting a route is unclear	Route creation
	Additional numbers as SOS	SOS
	SOS call has a mute button that is not desirable	SOS
	Everything	Everything
	Everything	Everything
	No message that contact gave (or denied) permission	Coach function
	No searching through contacts only scrolling	Coach function
	No dialling sound when using SOS function	SOS
	SOS function, coach has to perform many too many steps	SOS
	No message that contact gave (or denied) permission	Coach function
	No searching through contacts only scrolling	Coach function
	No dialling sound when using SOS function	SOS
SOS function, coach has to perform many too many steps	SOS	
NL	No routes are created	Route creation
	No routes are created	Route creation
	"My location" does not work	Route creation
	"My location" does not work	Route creation
	Adding a contact	Coach function
	Route planning is only walking	Route creation
	GPS while Navigating does not work	Navigation
SOS process takes too long	SOS	



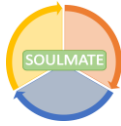
Appendix E1 Bug reports Austria

FEHLER / BUG	#AT G1	
Was ist passiert?	Wir wollten den Weg zum Schlossberg vorab erkunden – leider hat das nicht funktioniert.	We wanted to explore the way to Schlossberg in advance - unfortunately that did not work.
In welcher Ansicht?		
Bei welcher Aktion?	Weg erkunden	Explore the way
Wie schlimm ist der Fehler?	sehr schlimm – aber wir konnten Amsterdam erkunden.	very bad - but we could explore Amsterdam.
Anmerkungen	Die Bilderabfolge der Demo läuft zu schnell ab!	The image sequence of the demo runs too fast!
FEHLER / BUG	#AT G2	
Was ist passiert?	Wir wollten die Route abspeichern, mussten aber eine Vertrauensperson bestimmen – das wollten wir nicht.	We wanted to save the route but had to appoint a confidant - we did not want that.
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?	etwas	something
Anmerkungen		
FEHLER / BUG	#AT G3	
Was ist passiert?	Nach der Info-Erklärungen hat sich die App geschlossen.	After the information explanations, the app has closed.
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?	mittel	medium
Anmerkungen		
FEHLER / BUG	#AT E1	
Was ist passiert?	bei manchen Kontakten Fehler – vereinzelt.	with some contacts errors - isolated.
In welcher Ansicht?	Wählen der Kontaktperson	Choose the contact person
Bei welcher Aktion?		
Wie schlimm ist der Fehler?	korrigierbar	Correctable
Anmerkungen		

FEHLER / BUG	#AT E2	
Was ist passiert?	bei Videoanruf sind Symbole zu klein	For video calls, icons are too small
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?	nicht so schlimm	Not so bad
Anmerkungen		
FEHLER / BUG	#AT E3	
Was ist passiert?	3D Ansicht in der Karte ist verwirrend.	3D view in the map is confusing.
In welcher Ansicht?	Route durch Grazer Innenstadt	Route through Graz city center
Bei welcher Aktion?	Navigation	Navigation
Wie schlimm ist der Fehler?	korrigierbar	Correctable
Anmerkungen		
FEHLER / BUG	#AT E4	
Was ist passiert?	Schriftgrad generell zu klein, Farbgebung grau auf weiß schwer lesbar -> daher zurechtfinden schwierig	Font size generally too small, gray to white coloring difficult to read -> therefore difficult to find
In welcher Ansicht?	Route durch Grazer Innenstadt	Route through Graz city center
Bei welcher Aktion?	Navigation	Navigation
Wie schlimm ist der Fehler?	schlimm	Bad
Anmerkungen		
FEHLER / BUG	#AT W1	
Was ist passiert?	Route starten funktioniert nicht (später bemerken wir, dass man auf die blau gepunktete Linie klicken muss)	Start route does not work (later we notice that you have to click on the blue dotted line)
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?	sehr	Very
Anmerkungen		
FEHLER / BUG	#AT W2	
Was ist passiert?	Anruf funktioniert nicht (bei manchen Kontakten funktioniert es gar nicht, bei anderen Kontakten öffnet sich die Videochatoberfläche).	Call does not work (some contacts do not work at all, other contacts open the video chat interface).
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?	sehr	Very
Anmerkungen		

FEHLER / BUG	#AT W3	
Was ist passiert?	im Testanruf erscheinen unter dem Symbol mit den drei Punkten ganz rechts teilweise englische Einstellungen, das ist verwirrend.	In the test call partial English settings appear under the icon with the three dots on the far right, which is confusing.
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?	nicht so schlimm	Not so bad
Anmerkungen		
FEHLER / BUG	#AT W4	
Was ist passiert?	wenn man im Testanruf eine Nachricht senden möchte wird hinter der Tastatur die Nachricht versteckt angezeigt.	If you want to send a message in the test call, the message is hidden behind the keyboard.
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?	eher schlimm	Rather bad
Anmerkungen		
FEHLER / BUG	#AT W5	
Was ist passiert?	Nach dem Tutorial schaltet sich die App aus.	After the tutorial, the app turns off.
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?	nur nervig – nicht schlimm	Just annoying, not bad
Anmerkungen		
FEHLER / BUG	#AT HB1	
Was ist passiert?	Nach dem Abspeichern der Route wird nach dem Notfallskontakt gefragt – das wurde anfänglich für einen Fehler gehalten.	After saving the route you will be asked about the emergency contact - that was initially thought to be a mistake.
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?		
Anmerkungen		

FEHLER / BUG	#AT HB2	
Was ist passiert?	Notfallkontakte eintragen funktioniert nur, wenn die Kontakte bereits im Telefonbuch gespeichert sind. Direkte Eingabe funktioniert nicht.	Enter emergency contacts only works if the contacts are already stored in the phonebook. Direct input does not work.
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?		
Anmerkungen		
FEHLER / BUG	#AT HB3	
Was ist passiert?	Die Namen der Straßen sind unlesbar.	The names of the streets are unreadable.
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?		
Anmerkungen	sie sollten fettgedruckt oder größer geschrieben sein.	they should be bold or capitalized.
FEHLER / BUG	#AT HB4	
Was ist passiert?	Die App reagiert nicht, wenn man auf „Los“ drückt.	The app does not respond when you press "Go".
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?		
Anmerkungen	man muss zuerst eine Adresse per Anklicken auswählen.	you have to first select an address by clicking on it.
FEHLER / BUG	#AT HB5	
Was ist passiert?	Der Standort via GPS ist sehr ungenau!	The location via GPS is very inaccurate!
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?		
Anmerkungen		



FEHLER / BUG	#AT HB6	
Was ist passiert?	ungenauere Ortsangaben	inaccurate location information
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?		
Anmerkungen		
FEHLER / BUG	#AT HB7	
Was ist passiert?	Die Tastatur ist zu klein zum Schreiben.	The keyboard is too small to write.
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?		
Anmerkungen		
FEHLER / BUG	#AT HB8	
Was ist passiert?	Die App bzw. Maps berechnet nicht die direktesten Wege sondern Umwege.	The app or maps does not calculate the most direct ways but detours.
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?		
Anmerkungen		
FEHLER / BUG	#AT EN1 (Samsung Galaxy S6)	
Was ist passiert?	Der Zentralfriedhof in Graz wird in der Zieleingabe nicht gefunden. LKH ebenso. Stattdessen zeigt es eine Adresse in Marokko an.	The central cemetery in Graz is not found in the destination input. LKH as well. Instead, it indicates an address in Morocco.
In welcher Ansicht?	Startadresse	start address
Bei welcher Aktion?	Start/Ziel eingeben.	Enter start / destination
Wie schlimm ist der Fehler?	schlimm!	Bad!
Anmerkungen		
FEHLER / BUG	#AT EN2 (Samsung Galaxy S6)	
Was ist passiert?	Bei Auswahl des Taxis stürzt das Gerät ab (Soulmate wurde angehalten).	If the taxi is selected the device crashes (Soulmate has been stopped).
In welcher Ansicht?	Kartenansicht	Map
Bei welcher Aktion?	Beim Drücken auf das Symbol	When pressing the icon
Wie schlimm ist der Fehler?	mittel	Medium
Anmerkungen		

FEHLER / BUG	#AT EN3 (Samsung Galaxy S6)	
Was ist passiert?	Reihenfolge der Kontakte	Order of contacts
In welcher Ansicht?	Kontakte	Contacts
Bei welcher Aktion?		
Wie schlimm ist der Fehler?		
Anmerkungen		
FEHLER / BUG	#AT J1 (Android 9.1, HUAWEI P20)	
Was ist passiert?	Tutorial: Drücken auf i-Button und „weiter“ 4x -> beendet die Soulmate-App	Tutorial: Pressing i-Button and "next" 4x -> ends the Soulmate app
In welcher Ansicht?		
Bei welcher Aktion?		
Wie schlimm ist der Fehler?	gering	Low
Anmerkungen	besser wäre es, wieder auf die Hauptansicht zurückzukehren.	It would be better to return to the main view again.
FEHLER / BUG	#AT J2 (Android 9.1, HUAWEI P20)	
Was ist passiert?	Aufbau der HILFE-Verbindung nicht möglich: „Kein Verbindungslink wird versendet!!“	Structure of the HELP connection not possible: "No link will be sent!"
In welcher Ansicht?	Hilfe-Ansicht	Help view
Bei welcher Aktion?	Hilfe-Kontakt (mobile Nummer)	Help contact (,obile number)
Wie schlimm ist der Fehler?	schlimm	Bad
Anmerkungen	Videoverbindung über HILFE sollte möglich sein!	Video connection via HELP should be possible!
FEHLER / BUG	#AT J3 (Android 9.1, HUAWEI P20)	
Was ist passiert?	Integration von „Ich möchte den Weg in der App erkunden“	Integration of "I want to explore the path in the app"
In welcher Ansicht?	Auswahl ‚gespeicherte Wege‘	Selection 'saved paths'
Bei welcher Aktion?	z.B. Schlossberg	e.g. Schlossberg
Wie schlimm ist der Fehler?		
Anmerkungen	Sollte ohne „Log-In“ / „Organisation Log-In“ funktionieren.	Should work without log-in / organization log-in.



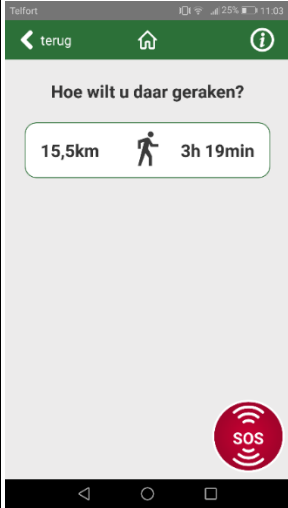
Appendix E2 Bug reports TU/e

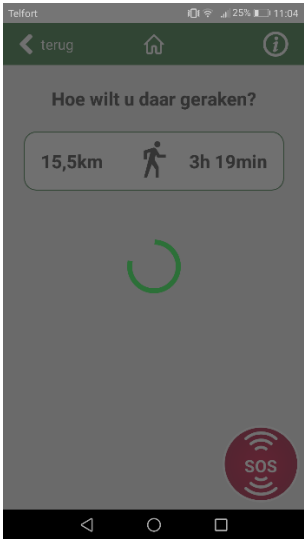
ID number	TUE001
Name	SOS call does not connect
Reporter	Floor L
Submit Date	28/11/2019
Summary	When making an SOS call, do not hear it ringing, eventually I can see myself and it seems I have a connects. My coach gets a text with a link that does not work.
Screenshot	
Platform	Smartphone
Operating System	Android 7.0
App version	V0.1.1.20191126001
Severity	
Assigned to	
Priority	

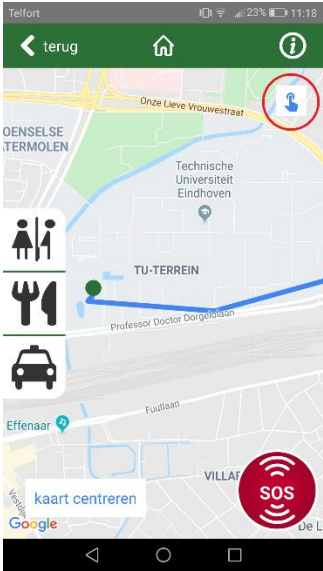
Description

When making an SOS call, do not hear it ringing, eventually I can see myself and it seems I have a connects. My coach gets a text with a link that does not work.



ID number	TUE002
Name	Only walking available transportation mode
Reporter	Floor L
Submit Date	28/11/2019
Summary	When I have given my location and start point the app only gives walking as an available transportation mode. Resulting in a walk of 3h 19min.
URL	
Screenshot	
Platform	Smartphone
Operating System	Android 7.0
App version	V0.1.1.20191126001
Severity	
Assigned to	
Priority	

ID number	TUE003
Name	Using back button of phone
Reporter	Floor L
Submit Date	28/11/2019
Summary	Using back button of phone results in green donut
URL	
Screenshot	
Platform	Smartphone
Operating System	Android 7.0
App version	V0.1.1.20191126001
Severity	
Assigned to	
Priority	

ID number	TUE004
Name	Redundant button
Reporter	Floor L
Submit Date	28/11/2019
Summary	Button on screen while navigation that does nothing.
URL	
Screenshot	
Platform	Smartphone
Operating System	Android 7.0
App version	V0.1.1.20191126001
Severity	
Assigned to	
Priority	



ID number	TUE005
Name	Loading times toilets
Reporter	Floor L
Submit Date	28/11/2019
Summary	Loading time toilets is very long
URL	
Screenshot	
Platform	Smartphone
Operating System	Android 7.0
App version	V0.1.1.20191126001
Severity	
Assigned to	
Priority	

Description

When navigating and selecting the toilets the loading time is (sometimes) extremely long.





ID number	TUE006
Name	Battery life
Reporter	Floor L
Submit Date	28/11/2019
Summary	App drains battery of phone
URL	
Screenshot	
Platform	Smartphone
Operating System	Android 7.0
App version	V0.1.1.20191126001
Severity	
Assigned to	
Priority	

Description

When using the app, the battery of my phone drains very fast. No other apps are open, and the screen brightness is at its lowest. (This is will cause people to ditch the app quick if it is not fixed.)





ID number	TUE007
Name	Route does not start
Reporter	Floor L
Submit Date	28/11/2019
Summary	After selecting a route and entering a name, you remain at the route selecting screen. This is confusing. You need to manually go back and reselect the route in order to start the route.
URL	
Screenshot	
Platform	Smartphone
Operating System	Android 7.0
App version	V0.1.1.20191126001
Severity	
Assigned to	
Priority	

Description

After selecting a route and entering a name, you remain at the route selecting screen. This is confusing. You need to manually go back and reselect the route in order to start the route.





ID number	TUE008
Name	Opening another app
Reporter	Floor L
Submit Date	28/11/2019
Summary	When navigating and opening another app on your phone, then returning to Soulmate the app opens again at the start screen and forgot you were navigating.
URL	
Screenshot	
Platform	Smartphone
Operating System	Android 7.0
App version	V0.1.1.20191126001
Severity	
Assigned to	
Priority	

Description


When navigating and opening another app on your phone, then returning to Soulmate the app it opens again at the start screen and forgot you were navigating.



ID number	TUE009
Name	Impossible routes
Reporter	Floor L
Submit Date	28/11/2019
Summary	A route is created where no paths or streets are (impossible).
URL	
Screenshot	
Platform	Smartphone
Operating System	Android 7.0
App version	V0.1.1.20191126001
Severity	
Assigned to	
Priority	

Description

A route is created where no paths or streets are (impossible). It runs through houses, gardens, across highways, etc.

ID number	TUE010
Name	No routes using ferries across water
Reporter	Floor L
Submit Date	28/11/2019
Summary	There are route routs across water (by boat, regular ferry) in the app, only by street and bridge.
URL	
Screenshot	
Platform	Smartphone
Operating System	Android 7.0
App version	V0.1.1.20191126001
Severity	
Assigned to	
Priority	

Description

There are route routs across water (by boat, regular ferry) in the app, only by street and bridge.



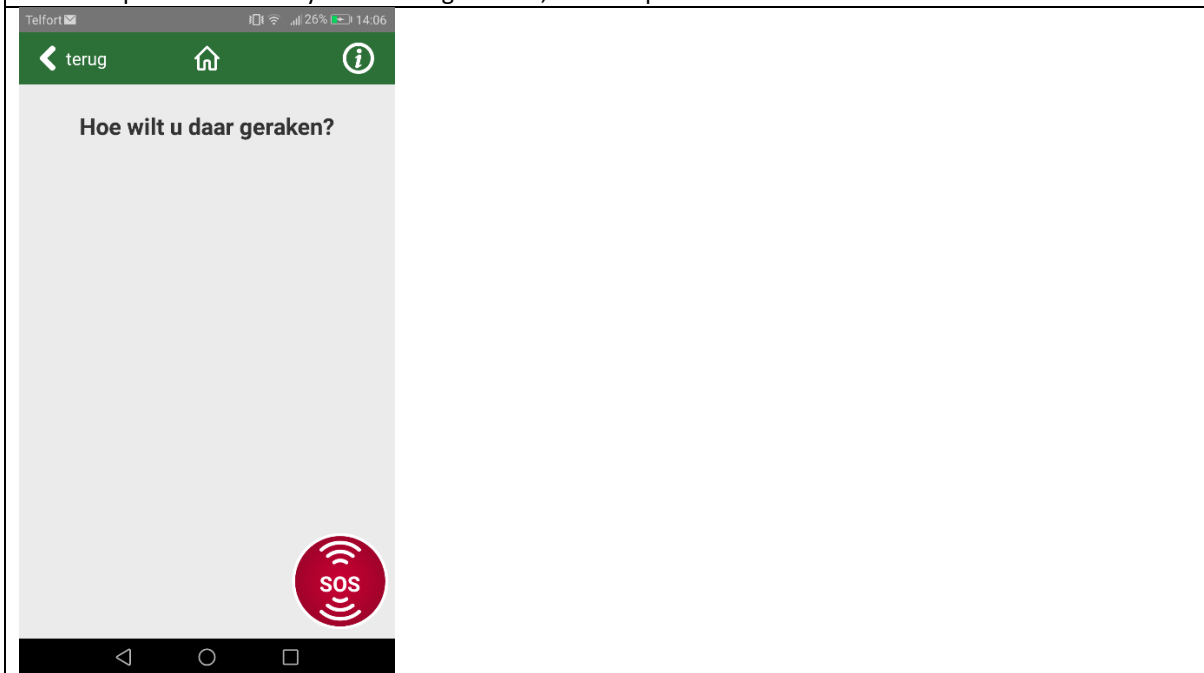
ID number	TUE011
Name	Life test gone wrong
Reporter	Floor L
Submit Date	28/11/2019
Summary	I just used Soulmate during my trip on foot from the TU/e to the GWK Eindhoven located in the train station and its performance is very poor. I will explain each step I took. With the prerequisite that I managed to download to app, login with my number and already added Jaap as my emergency contact (which he accepted), I have WIFI, data and GPS on.
Platform	Smartphone
Operating System	Android 7.0
App version	V0.1.1.20191126001
Severity	
Assigned to	
Priority	



Description

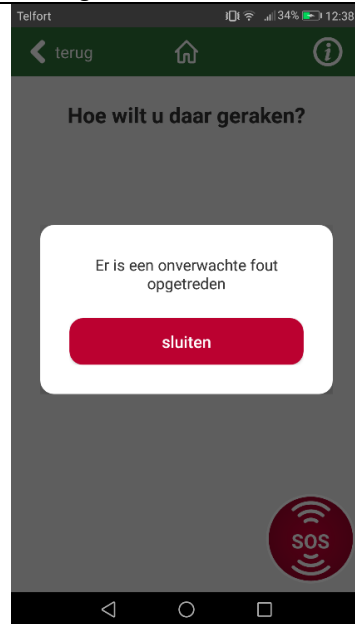
Creating a Route

While still in my office I tried to create this route. My destination is in the autocomplete list and is GWK Travelex Eindhoven, Stationsplein, Eindhoven. As my departure point, I select My location. And I get a screen with the question How do you want to get there, but no options. See Screenshot.



Creating a Route

I go back 1 screen (very long loading time) and type in Technische Universiteit Eindhoven. And I get an Error message. See screenshot below.



1.2 Creating a Route

So, I go outside (in the hope that my GPS does work there) and try again and I get the same Error message.

