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1 Executive summary

Aim of the deliverable

The aim is to present the first outcomes of all SafeMove components' conceptual and development process by demonstrating a first impression. This report is part 1/3 and as such the basis for the further development of the SafeMove system and its integration.

Brief description of the sections of the document

Brief description of each component of the SafeMove basic pilot and an outlook on next steps.

Mayor achievements

A first pilot of each component is available and ready to be adjusted according to the consortium's feedback, the user's needs and to be integrated within the SafeMove system.

Summary of the conclusions obtained

Not applicable – report on practical output.

2 Output on the creation of the SafeMove system's components

2.1 SafeMove on tour

2.1.1 Overview

To support the elderly during outdoor activities and for reminder tasks, SafeMove On Tour is the mobile part of the SafeMove solution to provide it. It is an application for smart-phones (e.g. IOS or Android based systems) that supports elderly people in their daily life.

The application is connected to the SafeMove Cloud via mobile internet connection (mobile data, wireless LAN) and exchanges online: scheduled activities, tasks, personalized profile data, status information, and other system or client relevant data. In the portal SafeMove assist, and in future releases as well as in SafeMove At Home, created activities and tasks are transferred to the SafeMove On Tour using the SafeMove Cloud. Status and feedback information related to these tasks are sent back to the Cloud, and also to the SafeMove assist. In figure 1 a screenshot of the login into the SafeMove Cloud is shown.



Figure 1: screenshot after the successful login into the SafeMove Cloud

2.1.2 1st planned Activities

As a discussion basis for the target group, some activities were planed. All data were configured in a first (alpha) version of SafeMove assist using a framework service tool of megatel. In a first view the planed activity or task can be chosen, as shown in figure 2.



Figure 2: first view of task board in SafeMove On Tour

2.1.2.1 Hobby & Activities

The patient can plan activities e.g. go to a cinema, theatre concert. For that he is able to use short cuts to call a relative or to order tickets using the normal telephone function of his device. Telephone numbers were stored in the task data during the configuration step of that task.

Hobby & Activities			
\bigtriangledown O Select this week's activity	Aufgabe		
	Format	Werteliste 💌	
Activity	Label	Activity	
In company with	Typ des Ausgangswerts	statisch 💌	
🖍 Call David	Ausgangswert		
🖍 Call Margret	Pflichtfeld		
Call Ruth	Änderbar		
🖍 Call Carl	Sichtbar	_	
🖍 Order Cinema Tickets		Werteliste 🛉 💼	
Order Theatre Tickets		Label	Wert
Order Concert Tickets		Cinema	1
		Theatre	2
		Concert	3

Figure 3: configuration of the task Hobby & Activities



Figure 4: view of "Hobby & Activities" in SafeMove On Tour

2.1.2.2 Shopping list / buy things you need

The patient see and can select the things he need. During his shopping tour he is able to the see needed things (not actually bought) and the needed quantity of these things.

Shopping List		
$\nabla \equiv$ Please buy the following food	Aufgabe	
∇ O Staple Foods	* Format Abhängige Aufgabe	
eggs 🔻	Label eggs	
eggs bought	Aufgabe auswählen Abhängigkeit aufheb	en
	Ausgangswert Create a shopping list/Supply check/Staple F	oods/eggs/
se flour	Sichtbar 🔽	
🖍 flour bought	主 🚽 🥕	
🖍 bread	Sichtbarkeit Kennzeichnung	
🖍 bread bought	Ausgabe in Berichten	
▽ O Dairy Products	🔘 Nicht ausgeben	
🖋 milk	 Immer ausgeben Nur erfasste Werte ausgeben 	
💉 milk bought	0 ···	
🖍 cheese		
🖍 cheese bought		
yoghurt		
💉 yoghurt bought		
▽ ○ Vegetables		
🖍 tomatoes		
🖍 tomatoes bought		
🖍 cabbage		
🖍 cabbage bought		

Figure 5: configuration of the task "shopping List"

+	□ <u>1</u> 🔤 勰 ∦ 📶 53% <mark>=</mark> 17:01 m		
	Supply check		
	Staple Foods		
Please select the food and quantity you needed			
eggs	10 eggs 🗸 🗸		
flour	2 kg 🗸 🗸		
bread	1 loaf 1000 g 🗸 🗸		
Dairy Products			
milk	no milk needed 🛛 🗸		
cheese	no cheese needed 🛛 👻		
yoghurt	no yoghurt needed 🛛 🔻		

Figure 6: view of "shopping List" in SafeMove On Tour

2.1.3 Navigation and Location

To support the elderly to find the best route and to guide on the route, a development and implementation of navigation and localisation functions has to be done. An overview of user relevant key features in SafeMove On Tour application is given in figure 7. Depending on the impairment of the client, personalized constrains can be configured. Actually a map (by selection "Einsatzort") and some basic route functionalities are implemented. First visual impressions are shown in figure 8.



Figure 7: user relevant navigation functions of SafeMove On Tour



Figure 8: basic input and interact methods to define tasks of a client

2.2 SafeMove assist

2.2.1 Overview

The SafeMove assist component is the part which is meant to be used by formal and informal caregivers (professional caregivers and/or family members etc.) The functionality focus lies on supervision, statistics and patient details so the core features of SafeMove assist are a detailed overview, monitoring and managing the clients and their activities.

Caregivers with more than one client are provided with a clear overview that communicates the current status and well-being of all of their clients. If a client needs their attention they can instantly respond via messaging or voice (and maybe video) -calling services.

A detailed description of the output on SafeMove assist is included in D2.4a Report on personalized user-environment interaction.



2.2.2 1st Visual Impression

Detailed Overview

- Scrolling, visually rich list with sections
- Menu on the left provides quick jumps to each section
- Can be implemented as HTML to work on any PC
- and across all devices

Figure 9: Overview and general handling

2.1.1 Demonstration Site

To visit the 1st developed templates and try out the look and feel, visit our demo site by using the access data below. Please consider that the best browser for experiencing the usability I Safari (SafeMove assist was programmed for and tested with it).

For visiting the SafeMove assist demo-site just click <u>here</u> and enter the following access data: User: neturaladmin + Password: don7cho

We recommend opening it with Safari to receive the best performance.

2.3 SafeMove at home

2.3.1 Overview

The Motivational Training Game is designed to support the overall SafeMove project and will address the following goals;

- 1. To inspire confidence in users that they are able to achieve and manage limited physical movement: we will achieve this by asking them to perform simple movements and providing positive reinforcement via verbal and visual feedback.
- 2. To inspire confidence in the users mental ability: we will achieve this by asking them to perform cognitive agility activities and providing positive reinforcement via verbal and visual feedback.
- 3. To inspire social confidence to encourage users to go outside their home and interact with other people within and outside of their social circle. We will do this by providing exercises around social intelligence, emotional intelligence and attempting to reduce the fear associated with some elements of modern living (for example seemingly threatening hoodies).

The game is all set in one environment, a park, where the user will be able to explore and launch 'mini games' which are each designed around the Physical, Cognitive and Social elements.

Physical, Cognitive and Social elements are not mutually exclusive and we expect a significant amount of cross over in the mini games.



2.3.2 1st Visual Impression

Figure 10: Main Menu



Figure 11: Mini games menu



Figure 12: Hoopla mini game

2.3.3 Demonstration Site

To try out the first pilot of the motivational training game <u>click here</u> to download. This will download a ZIP file. You will need to unpack this and launch the file named **SafeMoveVer3.exe.**

You will need a Windows Kinect device attached to your Windows PC (Windows 7 or 8). You will also need to download the Kinect SDK. Click here to launch the website. The SafeMove solution combines four components: SafeMove Cloud, SafeMove At Home, SafeMove Assist, and SafeMove On Tour. In figure 9 an overview of the architecture of these components in SafeMove solution is given. Contextual all components are connected to, and via the SafeMove Cloud. All data and information are stored in it, and are distributed (controlled by several permission checks) on demand. Technical the data are transferred using internet technologies, wired (Assist, At Home) and mobile data (On Tour).

In basic pilot of the SafeMove solution the implementations of all four components were started parallel, but separately, to get in very fast way test applications, and so the possibility to make assessments driven by and focused on the end users. In a second step all components have to be connected to the SafeMove Cloud. After that implementation step an assessment of the integration can be started to get an overall feedback by the end users. Actually only SafeMove On Tour (see above) has an operative interface to the Cloud. SafeMove assist and SafeMove At Home are actually in a status of definition and pre-implementation.



Figure 13: Overview of the architecture of SafeMove solution

4 Next steps

To proceed and reach the second stage of the SafeMove system's prototype the following procedure will take place:

- Adjust each component based on the feedback on usability and look and feel
- Adjust each component based on user trials.
- Create necessary gateways to combine the components and link them to each other and the cloud.

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