



Funded by EU's Horizon 2020



D 8.1

METHODOLOGY OF THE PILOT STUDY WITH SETS OF DATA COLLECTION INSTRUMENTS

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ACKNOWLEDGEMENT

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No.769661.



DELIVERABLE DOCUMENTATION SHEET

Deliverable:	D8.1 Methodology of the Pilot Study with Sets of Data Collection Instruments
WP No	8
Title:	Pilot Studies
Editor(s):	Zlatka Gospodinova, Nadejda Miteva
Contributor(s):	Irina Paraschivoiu, Magdalena Gaertner, Mojca Debeljak, Zlatko Matjačić, Senja Pollak, Saturnino Luz, Vera Veleva, Helena Burger
Type (R/DEC/OTHER):	Report
Version:	V 0.1
Submission Due Date:	30.09.19
Dissemination level:	CO
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- Approved by the WP Leader
 - Approved by the Technical Manager/Exploitation Manager¹
 - Approved by the Coordinator
 - Approved by the PSC
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PUBLISHABLE SUMMARY

In this deliverable, we present the design of the pilot studies to be conducted in WP 8 – Pilot Studies – and the context in which the pilot studies will be executed.

The deliverable sets out the theoretical framework and approach towards the design of interventions of the SAAM system, the pilot studies and overall procedure for conducting them, as well as the time-frames for collecting and analysing pilot data. The deliverable also includes the instruments to be used in the process.

The main target groups of this deliverable are:

- SAAM recruiters and researchers who will work in the field supported by their respective teams within the SAAM partner organisations and
- SAAM researchers working with pilot studies data

The deliverable is based on extensive desk research targeting modelling of interventions in ageing user groups and on quality of life, data collection methods on technology acceptance, user experience, and measuring state in specific life domains. The desk research is informed by iteratively referring to the data collected within T1.1, WP1.



QUALITY CONTROL ASSESSMENT SHEET

Version	Date	Comment	Name of author/reviewer/contributor
V0.1	31.05.2019	First Draft	Zlatka Gospodinova, Nadejda Miteva, Irina Paraschivoiu, Magdalena Gaertner, Mojca Debeljak, Zlatko Matjačić, Senja Pollak, Saturnino Luz, Vera Veleva
	07.06.2019	Review First Draft	Zlatka Gospodinova, Nadejda Miteva, Irina Paraschivoiu, Magdalena Gaertner, Hanna Braun, Mojca Debeljak, Zlatko Matjačić, Senja Pollak, Saturnino Luz, Vera Veleva, Eva Reithner, Evelina Milusheva, Svetlana Gyoreva
V0.2	10.06.2019	Second Draft	Zlatka Gospodinova, Nadejda Miteva
	13.06.2019	1st Peer review	Alexander Meschtscherjakov
	14.06.2019	2nd Peer review	Saturnino Luz
V1.0	1.06.2019	Final Draft	Zlatka Gospodinova, Nadejda Miteva, Irina Paraschivoiu
			Tsutomu Fujinami
	17.06.2019	EAB Review	Ilse Kryspin-Exner Lada Timotijevic
	23.09.2019	WP Leader approval	
	27.09.2019	Coordinator approval	
	30.09.2019	PSC approval	
V1.0	30.09.2019	Submission to EC	



HISTORY OF CHANGES

For updating the Deliverable after submission to the EC if applicable

Version	Date	Change
V2.0		



PROJECT DOCUMENTATION SHEET

Project Acronym:	SAAM
Project Full Title:	Supporting Active Ageing through Multimodal coaching
Grant Agreement:	GA № 769661
Call identifier:	H2020-SC1-2017-CNECT-1
Topic:	Personalised coaching for well-being and care of people as they age
Action:	Research and Innovation Action
Project Duration:	36 months (1 October 2017 – 30 September 2020)
Project Officer:	Jose Albacete VALVERDE
Coordinator:	Balkan Institute for Labour and Social Policy (BILSP) Jožef Stefan Institute (JSI) University of Edinburgh (UEDIN) Paris-Lodron Universität Salzburg (PLUS) Scale Focus AD (SCALE)
Consortium partners:	Interactive Wear AG (IAW) Univerzitetni rehabilitacijski inštitut Republike Slovenije (SOČA) Nacionalna Katolicheska Federacia CARITAS Bulgaria (CARITAS) Bulgarian Red Cross (BRC) Eurag Osterreich (EURAG)
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ABBREVIATIONS

CBT	Cognitive behavioural therapy
COPM	Canadian Occupational Performance Measure
SAAM DoA	SAAM Description of Action
LCP	Local contact point
LTP(s)	Long-term pilot(s)
PU	Primary user
SAAM	Supporting Active Ageing through Multimodal Coaching
SS(s)	Single session(s)
SU	Secondary user
TAM	Technology Acceptance Model
UEQ	User Experience Questionnaire
UTAUT	Unified Theory of Acceptance and Use of Technology
UTAUT 2	Unified Theory of Acceptance and Use of Technology, second generation



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1. INTRODUCTION

In this deliverable, we outline the SAAM concept and theoretical framework. Based on this, we present the pilot studies research design, the main features of which include studying SAAM from two distinct perspectives: technology acceptance and user experience, and coaching and well-being. The latter is studied in further details from the point of view of several domains, namely mobility, activity, social activity, sleep, cognition, and emotion. The methodology also details the practical pilot studies setup, including the approach used for data collection in the field.

Pilot studies present a challenging environment for data analysis due to many existing confounding factors. These are outlined in the presented approach towards data analysis, pilot studies considerations and limitations, and ethics, gender and risks sections.

SAAM is a coaching system meant for senior users who wish to maintain their independent living for as long as possible. SAAM was devised with the understanding that seniors will be able to achieve this in a natural way if they are supported in maintaining a homeostasis of wellbeing. SAAM is designed to be unobtrusive and therefore it will be able to provide support through directly coaching the seniors and through indirectly coaching them with the help of their social circles.

During the pilot studies, SAAM will be put to the test of real-life seniors and their social circles in various settings, ranging from long-term pilots to single sessions to stakeholder feedback gathering activities. SAAM will be tested in terms of technology acceptance and user experience, and appropriateness of coaching, among others. Effectiveness of coaching will be studied through a mix-method approach to arrive at a deeper understanding of system's interactions with seniors and its effect on their lives.

Pilot studies participants will be recruited with the help of SAAM consortium social partner organisations after a thorough recruitment process. It will involve a detailed presentation of SAAM to all potential participants and obtaining their informed consent. The rights of all pilot studies participants will be observed at all times.

1 SAAM CONCEPT AND THEORETICAL FRAMEWORK

1.1 Definitions

Here we provide the definitions on which we base our understanding of supporting active ageing through multi-modal coaching and its assessment.

Active ageing

“Active ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age.” (WHO 2002)

Other terms used interchangeably: healthy, successful, optimal, vital, productive, positive, ageing well

Coaching

“An explicit & implicit intention of helping individuals to improve their performance in various domains and to enhance personal effectiveness, personal development & personal growth.” (Hamlin, Ellinger and Beattie 2008)

E-coaching system

“An e-coaching system is a set of computerized components that constitutes an artificial entity that can observe, reason about, learn from and predict a user’s behaviours, in context and over time, and that engages proactively in an ongoing collaborative conversation with the user in order to aid planning and promote effective goal striving through the use of persuasive techniques.” (Kamphorst 2017)

Health

“A state of complete physical, mental, and social well-being not merely the absence of disease...” (WHO 2006)

Key informants

Key informants are representatives of the stakeholders’ group who are able to provide key opinions to SAAM researchers due to having a systemic role in the business, state or local communities.

Living independently

“A person is able to live independently if they are able to perform basic day-to-day activities and run their household adequately.” (Government of the Netherlands 2019)



Personalisation

"...the process of making something suitable for the needs of a particular person..." (Cambridge University n.d.)

Pilot participant

SAAM primary user (PU), secondary user (SU), key informant or community representative taking part in the pilot studies.

Primary user (PU)

Senior person whose needs SAAM will cater to.

Quality of life

"Quality of Life is an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment" (WHO 2019)

"Quality of life is the notion of human welfare (well-being) measured by social indicators rather than by "quantitative" measures of income and production." (OECD 2005)

Secondary user (SU)

Members of a senior's person social circle (e.g. caregivers, family, friends, neighbours, volunteers, general practitioners).

Stakeholders

People or organisations other than the primary and secondary users, who will be affected by SAAM's existence, including those who are potentially business-to-business partners.

Support

"...to agree with and give encouragement to someone or something because you want him, her, or it to succeed..." (Cambridge University n.d.)

Technology acceptance

"The positive feeling about the utility of technology in our daily lives." (Singh, et al. 2016)



User experience

"...a person's perceptions and responses that result from the use or anticipated use of a product, system or service" (ISO 2010)

Well-being

"...the balance point between an individual's resource pool and the challenges faced..." (Dodge, et al. 2012)

1.2 SAAM Theoretical Framework

We design the SAAM system interventions with the aim of supporting seniors to remain active and live independently for as long as possible. In our view, this aim is only accomplishable if the senior is put in the centre of all supporting activities, and their understanding about their own life and well-being is respected at all times. We do not assess seniors against predetermined benchmarks for active ageing as ageing is an extremely individual process in terms of physics, physiology, cognition, sociability etc. (for example, see (Gur and Gur 2002, Weber 2016, Stones, Kozma and Hannah 1990, Tosato, et al. 2007) and many more. This is why our coaching approach is highly personalised and the main benchmark we consider is the senior person himself or herself. This is why we perceive individual quality of life (understood as wellbeing) to be the adequate measure for active ageing.

The SAAM system supports the seniors in maintaining themselves in personal homeostasis with respect to well-being by balancing between available individual resources and challenges (Dodge, et al. 2012). Resources and challenges are assessed in domain-specific terms within a given situation (Felce and Perry 1995; questionnaire from quantitative survey in WP1). A situation is a daily snapshot of PU's specific context compared to daily snapshots from previous periods. Our assumption is that if we support the wellbeing homeostasis of the senior in single situations (Gastil 1961, Heckhausen 1991), we contribute to supporting their overall wellbeing. For a visual representation of our theoretical model, see Figure 1 SAAM interventions theoretical model below.

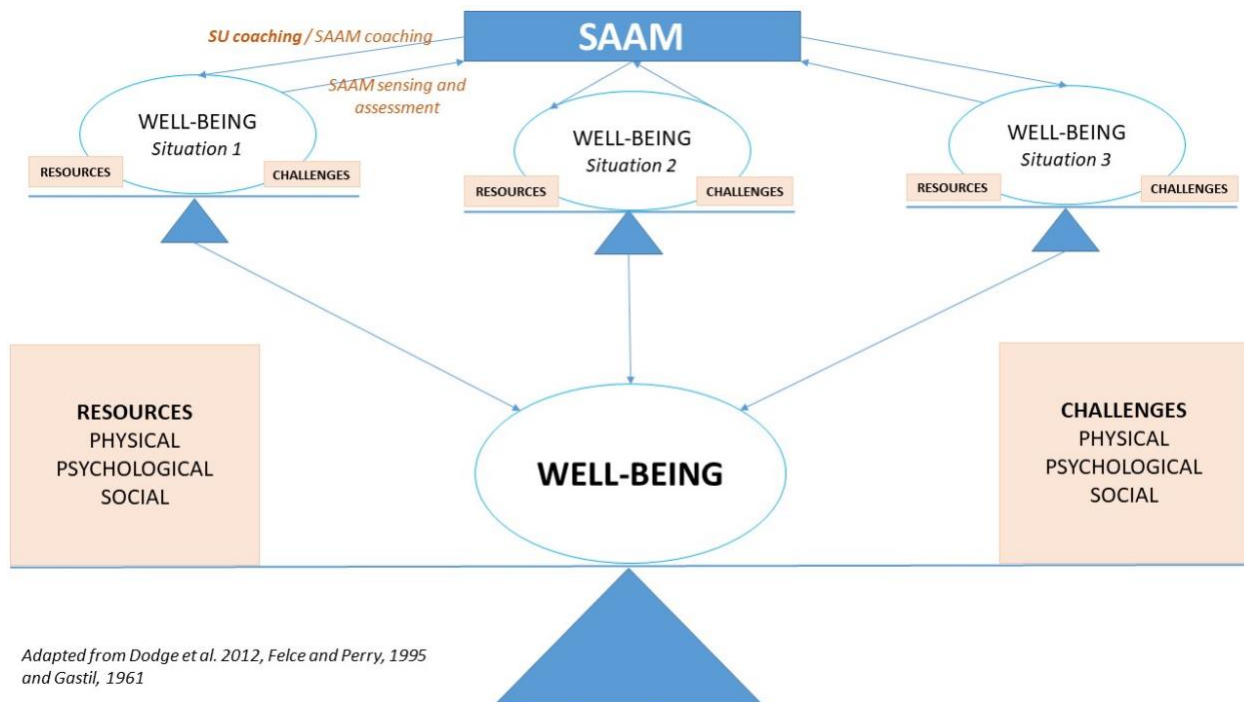
From the perspective of what needs arose in the needs and requirements survey (quantitative and qualitative in WP1), what the domains of quality of life are, what is feasible for creating the SAAM system as inexpensively as possible, and what seniors understand to be unobtrusive, we will be intervening in the following wellbeing domains (based on Felce and Perry 1995):

1. Physical - mobility, fitness, sleep and health²;

² With limited application in the health domain - cardiovascular and dietary. Only in limited environments.

2. Development and activity - homelife/housework, leisure/hobbies, productivity/ contribution, competence/ independence³;
3. Social wellbeing - interpersonal relationships and community involvement and their subcomponents;
4. Emotional wellbeing⁴

Within this intervention model, the SAAM system is an unobtrusive coach that intervenes only if there is a negative trend or when the senior sets positive goals for themselves.



Adapted from Dodge et al. 2012, Felce and Perry, 1995 and Gastil, 1961

Figure 1 SAAM interventions theoretical model

1.3 SAAM concept

SAAM strives to provide unobtrusive and relevant coaching to seniors for specific situations in an effort to help them improve and maintain their independence and functional capacity, as well as preserve their physical and social well-being.

³ The latter is with restricted monitoring and no coaching in the cognition and emotion (speech and language assessment) domain.

⁴ With restricted monitoring and no coaching in the cognition and emotion (speech and language assessment) domain.

As of the start of the project, the SAAM consortium researches user needs and preferences in several ways: face-to-face interactions with seniors and members of their social circles, continuous discussions with SAAM social partner organisations (their local and central divisions), and key informants on seniors' wellbeing issues.

The conceptualisation of the SAAM system has undergone several stages:

1.1 Initial technological research on feasible solutions for monitoring and coaching

1.2 Mapping user needs and requirements with respect to monitoring and coaching, incl. defining SAAM base and advanced system and its respective monitoring and coaching domains.

The domains of SAAM base system include:

1.2.1 Mobility

1.2.2 Activity

1.2.3 Sleep

1.2.4 Social activity

The domains of SAAM advanced system include:

1.2.5 Cardiovascular

1.2.6 Cognition and emotion

1.2.7 Dietary

1.2.8 Allergy

1.2.9 Emergency

1.3 Matching the feasible technological solutions with monitoring the above domains. Creating coaching pipelines describing in discrete steps the decision making process of the SAAM system - from monitoring the PU (i.e. sensing) to providing coaching (i.e. actuation). The developed coaching pipeline model is described in Figure 2 Coaching pipeline model below.

Within the pilot studies, the domains that will be piloted in a real-life environment (i.e. monitored and coached upon) are those from the SAAM base system.

The advanced system components will be tested primarily in a laboratory setting. Cognition and emotion is a domain, which will be monitored, but not coached upon, in limited numbers only with volunteers from Caritas and BRC. The dietary domain may be activated for collecting data for research purposes but not coached upon with specific users, should there be interest among pilot organisations, recruited users and adequate ethics clearances. Provided that it is feasible and acceptable for the users to test the dietary domain, an Annex to this methodology will be drafted and submitted for ethical approvals. The cardiovascular domain is a specific case - its piloting is subject to regulatory constraints external to the SAAM Consortium. Two cardiovascular devices could be plugged in SAAM – a smart blood pressure monitor and a smart ECG sensor. There is some uncertainty whether plugging them in SAAM would render the whole SAAM system a medical device. We are currently investigating the legal and ethical context in Bulgaria and this is why we will apply for ethical approvals for piloting the cardiovascular domain at a later



stage of the pilot studies. Provided that it is feasible and legally acceptable to test the cardiovascular devices, an Annex to this methodology will be drafted and submitted for ethical approvals. This Annex will outline the scientific approach and instruments to be used for the cardiovascular pilot study. Only volunteers from Caritas and BRC will be recruited for this domain.

The SAAM system is devised in such a way that it takes into account and adapts to PU's personal needs, preferences, living environment, and their social connections, including through machine learning and feedback loops along a coaching pipeline model (see Figure 2 Coaching pipeline model below). Sensing is achieved through the hardware components of the SAAM system, while actuation refers to delivering coaching actions to the PU. The steps between sensing and actuation are completely invisible for the users, thus they are unobtrusive. Sensing is done as unobtrusively as possible. Coaching actuation is designed to be variable according to PU's preferences (see D3.6 User Interface and User Interaction Variations Based on Persuasive Strategies). On the other hand, the timing for coaching actions in different pipelines is combined in order not to overwhelm PUs with coaching instances. Thus, coaching is as unobtrusive as possible. Moreover, it is actuated through two main channels – through the SAAM system itself and through SUs themselves – which is a countermeasure to boredom and technology rejection by PUs. In this way, PUs who are not technologically apt can also benefit from SAAM coaching through their SUs.

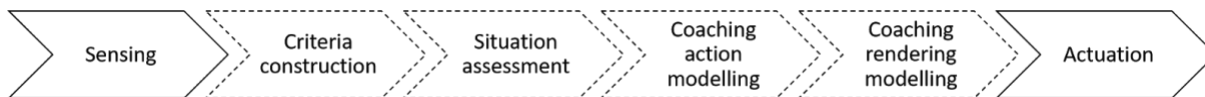


Figure 2 Coaching pipeline model

The pilot testing will be performed on strictly voluntary basis, where the users will choose to test the SAAM system either for 3 or for 6 months, which is considered to be within the mid range of duration of coaching interventions. In Excellence in Coaching – The Industry Guide (Passmore 2010), Jonathan Passmore argues that coaching should be reviewed as a shorter-term intervention compared to mentoring for example, and that is usually applied from 2 to 12 months.

The most appropriate conceptual framework to conduct effective coaching is combining in an integrative way several psychotherapeutic approaches (synthetic approach). Each approach, when applied individually, has its own strengths and limitations – especially when these approaches are applied among culturally diverse person populations. The synthetic approach developed to be applied in SAAM follows a set of principles in psychotherapy that take into account the common elements between and among most psychotherapeutic approaches or the so called **common factors approach** (i.e. focusing on effective therapeutic practices that are common for all approaches) (Kozaric-Kovačić 2008; Castonguay and McAleavey 2015). Such approaches are empathic listening, developing a working union, work on own conflicts, self-reflection, and feedback among others. Psychotherapeutic integration is focused on the link

between effective practice and its theoretical and empirical grounds (Norcross and Goldfried 2005). User's response is a critical point to consider when assessing the effectiveness of these methods.

Using psychological techniques is based on solid theoretical constructs, such as Reality Therapy (Glasser 1992), WDEP system (Wubbolding 2000), Cognitive Behavioural Therapy (CBT; Beck 1963, Beck, Depression: Causes and Treatment 1972), Motivational Interviewing (Miller and Rollnick 1991), Solutions in Brief Theory (de Shazer 1988, de Shazer 1991, Walter and Peller 2013, Thoburn and Sexton 2016).

Reality Therapy (Glasser 1992) focuses on what persons do and on ways to evaluate whether their current decisions work for them. People are primarily motivated to fulfill their need of meaningful relationships. The WDEP system is based on Choice Theory (Glasser 1998) and supports people in fulfilling their basic needs through several change-enabling strategies. CBT targets firm past-based internal assumptions and beliefs and focuses on replacing them with effective beliefs. Motivational Interviewing is based on a person-centric philosophy and focuses on current and future conditions. Motivational Interviewing empowers users to find ways to achieve their goals independently. Solutions in Brief Therapy deals with the present and the future of users. It operates around the idea that people create meaning through talking with others. This postmodern approach avoids seeking the causes of problems, but rather addresses revealing the strengths and resources of users. SAAM coaching is mostly based on the latter.

The e-coaching in SAAM is active, centered on the present, but limited in time influence that aims at engaging the user with a concrete plan on doing here and now. Asking questions skillfully is a main technique in the above-mentioned systems and is used in the whole coaching process for the PU in a combination with informative statements on PU's behaviour. The questions to the user are focused on *what, how* and *when*. The question *why* is purposefully not employed, because coaching is focused on user's behavior rather than the user's motives and feelings. The coaching pipeline model is applied for each SAAM domain that will be piloted. Pipelines allow for the SAAM system to collect timely data and, as a consequence, to deliver timely coaching. E-coaching is applied only when the situation assessment based on system sensing shows that PU's behavior is not consistent with her habits and/or when goals set by the PU herself are not met. E-coaching does not include diagnostics, nor interpretation. It works directly with the user's responsibility and the search for opportunities for effective change in the user's behaviour models. Impact is based on gradual behavioural modelling, behavioural repetition oriented towards the process, and an accent on self-management strategies. E-coaching is administered for a certain amount of time assisting the PU in meeting her goals. E-coaching will be considered effective when the PU continues meeting her goals even without coaching, thus, revealing a sustainable behavioural change.

The goal of this approach is for **the user to focus on her own actions in order to satisfy her own needs and wishes**. Change in thoughts and emotions follows from the change in behaviour. In this sense, our coaching approach is user-centered and it respects the wisdom and autonomy of the user. The user is prompted to become more active in managing her life without using an imperative tone.



Having in mind that SUs can be people with widely different psychological profiles (from a family member to friend or caregiver), **the most appropriate coaching technique for SUs are inviting messages (suggestions)**. The form of suggestions, invocations, also highlights the resources and competences of SUs by encouraging them to take best actions supporting the PUs. The e-coaching to SUs focuses on the current PUs' behavior by stressing the devising of concrete plans for concrete actions. Emphasis is put on taking actions. This way SUs become key assistants to the PUs in the process of change.

1.4 Input from other WPs and Deliverables

The SAAM system is developed continuously. The development process is multi-faceted and incorporates several dimensions: a technological dimension (hardware and software), a user dimension (continuous review of user needs and requirements), a human-computer interaction dimension, and an ethical dimension (of both system and research with humans).

D1.2: Ethics Review Codex, Informed Consent Procedures and Templates introduces the practical approach towards ethics issues in the SAAM project. The adopted approach on ethics is to constantly monitor and discuss within the Consortium what the ethics issues and considerations are. Ethics is also continuously discussed with EAB members. Ethics risks are also managed externally through submission of applications for ethical clearance at the domestic level, where applicable.

D1.3: Basic User Profiles (Updated) outlines the user profiles derived from the quantitative (questionnaires) and qualitative (in-depth interviews, home tours, observations, key-informant interviews and focus groups) surveys on user needs conducted within WP1. The results show a great variety among user profiles within the social partners' cohorts with respect to aptitude to technologies, age, urbanisation, education, health issues, among others. User profiles are clustered within two or four groups depending on each organisation. The clusters were used to create detailed user personas and draft conclusions and input for the development of the system, in particular the domains that will be tested during the pilot studies.

D1.4: Four Use Cases Scenarios for Each Pilot Study (Updated) defines use cases based on the personas, domains and conclusions from D1.3 Basic User Profiles (Updated). The use cases drafted cover the pilot testing of four basic domains - mobility, activity, sleep quality and social activity, and two advanced domains – heart-related problems (cardiovascular domain) and cognitive function (cognition and emotion). Stemming from the domains and personas, the use cases concern changes in physical activity and mobility, fall prevention (safety in transfers), sleeping quality, social activity quality, and cardiovascular issues. The SAAM system is able to detect situations associated with these challenges and render relevant coaching suggestions as per the use cases.



D1.6: User Interaction Ethical Review Report is compiled with the aim of presenting all Consortium partners with the ethics dimensions of SAAM and to serve as a reference during the development of the project in time, including the preparation and execution of the pilot studies and analysis of obtained data.

D1.7: System Functionality and User Interface Specifications consists of initial guidelines for user interfaces for SAAM system and its basic functionalities. Four groups of interfaces are specified, one for each of the main user groups. Basic elements of the interfaces are specified in a form of a style guide, allowing for coherency across the various mediums. The report includes screen prototypes for the screen-based interfaces, as well as overview specifications for future development.

D1.8: System Technical Specifications consists of initial system technical specifications required to ensure full integration of devices and components used in SAAM system as well as to support the targeted platform functionality and services. It provides the overall system architecture and specifies the large diversity of operating, computational and communication capabilities and requirements of individual devices, components and platform segments. Thus, this report represents a blueprint document for subsequent development and integration of individual hardware and software components used in SAAM system.

D2.4: Ready for Use, Centralised, Cloud-based VOIP and Messaging Solution is integrated with the SAAM system to provide functionalities for notifying users by either sending messages or initiating calls. It also provides the functionality to send automated notifications based on schedules or pre-defined thresholds. VOIP and messaging functionality is an important part of the coaching pipeline as it provides communication channels for reaching users' social circles and initiating communication between them. The VoIP and Messaging Solution of SAAM will be accessible for the Primary and Secondary users through a web-browser based interface and an android application on their mobile devices (mobile phone / tablet (with Android OS)) and PCs.

D2.5: User-Side IT Infrastructure Architecture Specification describes in detail the user-side infrastructure of the SAAM system primarily responsible for unobtrusive collection of context data about the monitored senior in her/his home environment. Furthermore, sensing and monitoring devices, as well as technologies and protocols used for the communication between devices and data exchange principles are defined. We use this deliverable in order to present to recruiters and field researchers the list of devices they will need to present to (potential) pilot participants.

D2.6: Demonstrator for SAAM Person Application Prototype Running SAAM Virtual Coach demonstrates the person-application prototype that is used as a base for the further development of the SAAM web and Android-based application. It allows the pre-pilot testing team to interact with the platform and evaluate whether the initially planned functionalities for the application are corresponding to the platform's objectives and evaluate the direction for the next development phase.



D2.7: System Monitoring Interfaces Specifications contains specifications of the monitoring and testing measures the SAAM team undertakes in order to ensure optimal performance of the platform and to minimise the threat of downtime or any other potential issues as well as to timely react when any malfunctions occur.

D2.9: Hardware and Software APIs and Interfaces defines how every user request is logged in order to improve service stability, user experience and for auditing purposes (including visualization of the logged data).

D3.3: Video and Audio Collection System - in the scope of SAAM project, we want to capture audio-visual information, which could help us in identifying cognitive decline (T6.2) and emotions (T4.3) of users. However, the users do not want to be recorded audio-visually due to privacy concerns, so we have developed a system addressing the user's privacy issues by only storing features that are privacy preserving (paralinguistic features such as fundamental frequency and mel-frequency cepstral coefficients extracted from the audio stream). Unfortunately, the computing power of user-side SAAM system does not allow for capturing of privacy preserving features from the video stream, so we have limited ourselves to the audio information.

D3.5: Natural Language Interface describes one of the interfaces contributing to creating a robust and easy to use coaching system for elderly people.

D3.6: User Interface and User Interaction Variations Based on Persuasive Strategies consists of initial recommendations for user interface and user interaction based on persuasive strategies and supports the development of the coaching modelling and coaching rendering targeting primary and secondary users. The report is a blueprint of persuasion elements which will be integrated in the user coaching system and the social coaching system and it provides an overview of the persuasive strategies employed, based on different interactions, interfaces and modalities available in SAAM.

D6.1: Expert Model for Health and Well-being Trajectoring in Ageing and Intervention Strategies outlines the health and well-being contexts in which SAAM's advanced modules are being developed.

D9.1: Review of Existing Longitudinal Population Datasets reviews a selection of population datasets related to ageing, including cognitive function, with the aim of assessing the availability of relevant data to be used in technological development of the project, and identifying opportunities for including data generated longitudinally by the SAAM technology into the existing datasets, as well as for testing the SAAM technologies. With data from the SAAM pilot studies, we aim to contribute to suggesting enhancements to existing population data sets in T9.2.

D10.2: Data Management Plan describes the main elements of the SAAM consortium data management policy for the datasets generated by the project. In particular, it aims to address all relevant aspects of making data FAIR- findable, accessible, interoperable and re-usable, including information about what



data the project will generate, whether and how it will be made accessible for verification and re-use, and how it will be curated and preserved.

2 PILOT STUDIES RESEARCH DESIGN

2.1 Research Goal

The overall goal of pilot studies is to test and evaluate the functionalities of the SAAM system in relevant real world environments, as well as to assess whether SAAM has a positive impact (through its personalised recommendations and coaching) on preservation of physical, cognitive, mental, and social well-being of ageing citizens for as long as possible. The assessment of SAAM's impact on the user's well-being will be constrained with the limited duration of the pilot studies. Before the system is deployed in practice, a more thorough assessment of the SAAM's coaching impact would have to be performed. Such an assessment is out of scope of the SAAM project, whose aim is primarily to develop an innovative coaching system.

2.2 Research Objectives

The SAAM system prototype will be tested and validated in the pilot studies. Thus, the research objectives of the pilot studies are:

1. *“To investigate the persuasive effect of the system and long-term usability and efficacy... To test and verify the system’s use and efficacy with real users of varying ages, abilities, and needs, and to ensure maximal ease of real world use, as well as positive user experiences... Through the pilot studies we want to refine the system and achieve a high degree of user acceptance, usability, and user experience... To prove viability, test and verify the system’s usability, acceptance and positive experience in controlled environment with real users, stakeholders and communities.”* (SAAM, Description of Action (DoA))

To achieve this, **we investigate the SAAM system from two perspectives: technology acceptance and user experience perspective, and coaching perspective. We divide the latter in general and domain-specific coaching perspective**, in order to clarify further in which of SAAM's targeted domains the system has the largest effect. Furthermore, we plan to have **at least two long-term SAAM system iterations** with PUs. Long-term pilots are long-term installations at PU's homes for three months with the possibility to extend them for up to six months for a limited number of PU's depending on their willingness to participate. Additionally, we will have **at least two single sessions SAAM system iterations**. Single sessions are defined as one pilot participant trying out SAAM. Pilot participants within each iteration will be continuously surveyed about their acceptance of the technology, and their opinions on usability and user experience. In addition, caregivers, families, and personal networks members (friends, neighbours), as well as experts in the field will be surveyed on their opinions and attitudes towards the SAAM system.



2. *“To confirm that any working practices are safe and comply with organisational and/or statutory standards.” (SAAM, DoA)*

Before the start of the pilot studies, the SAAM system setup and installation is informed by considerations of the project social partners - SOČA, EURAG, BRC, and Caritas. As of May 2019, a pre-piloting phase is taking place at SOČA premises in Slovenia in coordination with SAAM technical partners JSI, IAW, and ScaleFocus.

To measure the success of pilot studies in achieving the research objectives and the overall goal, we introduce the Key Performance Indicators related to piloting from the DoA. These are as follows:

- Effectiveness of coaching and personalised recommendations
- Validation of non-obtrusive ICT for enhancing user well-being
- Validation of system designed by different communities and the society as a whole
- Advances in user-centred design and acceptance
- Enhancing cost-effectiveness through independent living and self-care

The measurement of the first and last KPI follows from SAAM system measurements. These will be crosschecked with data from the tools used in the coaching and wellbeing perspective and its respective domains (see Sections 4, 5, and 7.2 below).

The measurement of the other three KPIs are also based on SAAM system measurements, but they are crosschecked with the instruments in the technology acceptance and user experience perspective (see Sections 3 and 7.2 below).

Data, which will feed into KPI measurement during the data analysis phase, will be collected according to the schedule and setup in Section 6 below. The target values of KPIs are presented in Section 10.

2.3 Investigative Approach

The investigative approach that will guide the pilot studies under WP8 of SAAM project is multidisciplinary and user-centred. This methodology and its instruments combine knowledge from the fields of information systems theories, user experience design, social science, coaching and psychology, with different theories taken into account from each branch. This diversity is reflected in the two employed perspectives: technology acceptance and user experience perspective and coaching perspective.

The study of SAAM’s presence in people’s lives, is also user centred. User-centeredness is ensured through making the SAAM system highly personalisable (see below in Figure 3 Personalisation in SAAM system on how this is done).



- Personalisation at SAAM user profile setup for each PU. This includes user background information such as: constraints that affect mobility and rendering, PU's interests, SU availability and level of involvement, personal coaching goals, available hardware, and coaching action rendering preferences, among others. A detailed user profile offers the ground for better user acceptance from the start of the testing period and supports us in managing the cold-start problem⁵. In addition, there will be a period of passive observation and profile learning by the system (1-3 weeks for calibration). During this period, the SAAM system will conduct data collection and situation assessment activities, but will use the gathered information only for tuning of the system's parameters and will not be providing coaching.
- User-centred design is also ensured through directly and indirectly surveying user needs and requirements (in WP1, the information which we make use of in WP8), user experiences (positive and negative), satisfaction and recommendations of PUs, SUs, communities and key informants. The latter are investigated from two main perspectives: Technology acceptance and user experience perspective and coaching and wellbeing perspective (see below). We expect to see domain-based differences within the coaching and wellbeing perspective. This is why we will further investigate SAAM from a general and domain-specific (mobility, activity, sleep, social activity, cognition and emotion) coaching and wellbeing perspective.
- SAAM system improvements will be done iteratively - at least twice after each long-term pilot study iteration. These improvements will be based on SAAM system data indicating needs for improvements and gathered information from the users during face-to-face data collection.

Figure 3 Personalisation in SAAM system

On the other hand, potential and actual SAAM users are also at the center of SAAM's assessment. They will be surveyed continuously throughout the pilot studies with a range of instruments. However, when selecting relevant assessment instruments, one of the main criteria of selection was for them to be as user friendly as possible. Having said this, the qualitative and quantitative instruments selected for the assessments during the pilot studies contribute individually to the research objectives and the overall research goal to create a full picture of the experience of SAAM users and the system's impact on their lives. See Section 5, Section 6, and Section 7, and Annexes I and II for details on the instruments and how they relate to each other and the pilot studies objectives.

2.4 Target Group

According to the WHO (WHO 2018; WHO, Regional Office for Europe 2017), a key issue for public-health action is dealing with the sheer diversity of cultural, behavioural, health, and functional states experienced by older people. In choosing sites for pilot testing, the partners have tried to encompass as broad and diverse a cohort as possible reflecting different cultures, environments, lifestyles, levels of activity, and behaviours. The composition of populations studied in SAAM was designed to reflect such diversity. The Austrian care system is very advanced with a high level of quality of life for the elderly, while Slovenia has

⁵ "The cold-start problem appears when the system cannot draw any, or an optimal, inference or recommendation for the users (or items) since it has not yet obtained the sufficient information of them." (Igal and Seguí 2017, 167)



significantly lesser life quality standards owing to slower economic development, and Bulgaria represents a more extreme situation, with very high poverty, secluded village living, and a non-technologically enabled elderly population.

The survey conducted under WP1 proved this diversity not only between the participating countries, but also between target groups within the same country (Bulgaria) and contributed to a more detailed planning of coaching interventions, in particular the domains and rendering modes that will be tested. The domains were derived from both the quantitative and the qualitative survey, taking into account the seniors' report of their perceived challenges while ageing, and the expert knowledge of the social partners in the three countries and the four organisations. This data was used to create Basic User Profiles and personas to inform the creation of Use Cases and plan the pilot testing scenarios.

One of the most important outcomes of the survey was the established level of use of technologies by the target groups, in particular the use of smartphone or tablet. For example, in Bulgaria less than 10% of the surveyed use such technologies, in Slovenia above 30% use a smartphone and more than 40% use a tablet, while in Austria nearly 50% use a tablet and nearly 80% use a smartphone. This conclusion necessitated an organisation-based approach to the rendering modes, in particular whether coaching will be rendered directly to the PU using a smartphone or a tablet and, in some cases other modes like light and vibration for example, or through a SU, where the SU would convey the coaching suggestion through a phone call or a face-to-face contact. This organisation-based approach led to a pilot-study design defined for four distinct target groups of seniors, i.e. those of Caritas, EURAG, BRC, and SOČA.

3 TECHNOLOGY ACCEPTANCE AND USER EXPERIENCE PERSPECTIVE

3.1 Research Questions

1. How do pilot participants accept SAAM in their daily lives?
 - 1a. How useful do pilot participants find SAAM?
 - 1b. How easy to use do pilot participants find SAAM?
2. How is SAAM perceived in terms of user experience?
3. How do the different interfaces in SAAM compare to each other in terms of the user experience and acceptance?
4. How is SAAM perceived in terms of obtrusiveness, privacy and security?
5. Are data collection methods acceptable to the users?



3.2 Research Design

The pilots will run in parallel in Austria, Bulgaria and Slovenia as a one group pre-test – post-test design. We aim to administer a technology acceptance and experience questionnaire one week after the installation of the system in the home of the users, midway through the pilots, as well as at the end of the study. For reasons of data comparability, the users who will pilot the system for 3 months will receive the questionnaire after the first week, after 1.5 months and after 3 months. Users who would receive the system for 6 months will answer the questionnaire after 1 week, 1.5 months, 3 months, and at the end of the 6-month period. Qualitative data will be gathered through semi-structured interviews both in the beginning and at the end of the pilots and users will receive diaries where they can write down their observations about the interaction with SAAM. Additionally, data will be collected from the system regarding usage type, intensity and frequency.

3.3 Standards

The adapted Technology Acceptance Questionnaire by Steinke et al. (2014) for AAL is an adapted version of the Technology Acceptance Model measuring perception of Ambient Assisted Living systems. The questionnaire was tested and validated with its 292 participants from 50 to 93 years of age. This valid and reliable instrument was adapted based on existing scales in TAM and trust. The user experience questionnaire (UEQ) is a widely used questionnaire to measure the subjective impression of users towards the user experience of products. The UEQ is a semantic differential with 26 items. Filling out the UEQ takes approximately 3-5 minutes, i.e. the UEQ is already reasonably efficient concerning the time required to answer all items. The UEQ is validated currently in over 20 languages.

3.4 Dimensions and Constructs

The analysis of user experience and technology acceptance is based on constructs derived from academic literature. The table below summarises the constructs measured through the questionnaire, their definition and their academic sources.

Table 1 Questionnaire constructs and academic sources

Construct	Definition	Source
Ease of use	The degree to which a person believes that using a particular system would be free of effort.	Steinke et al., 2014
Usefulness	The degree to which a person believes that using a particular system would enhance his or her job performance	

Reliability	Understood as perceived reliability and is influenced by the number of errors occurred.	
Trust	The attitude that an assistive technology supports an impaired person within [its] social environment in an uncertain and vulnerable situation.	
Intention to use	Behavioural intention to use and upstream to the actual system use, determination of a person to use the technology.	
Interest in technical devices	The user's handling of and attitude towards electronic devices.	
Security	The extent to which the user believes that SAAM is secure for transmitting sensitive information.	(Cheng, Lam and Yeung 2006)
Privacy	Selective control of access to the self or to one's group.	(Serenko and Fan 2013)
Obtrusiveness	Evaluation by the user based on characteristics or effects associated with the technology that are perceived as undesirable and physically and/or psychologically prominent.	(Mehl and Holleran 2007)
Social influence	Degree to which the user perceives that others believe he or she should use the new system.	(Venkatesh, Thong and Xu 2012)
Habit	Tendency to perform behaviours automatically because of learning.	
Price value	Consumers' cognitive trade-off between the perceived benefits of the applications and the monetary cost for using them.	
Attractiveness	Overall impression of the system. Whether users like or dislike SAAM, if it is attractive, enjoyable or pleasing.	(Schrepp, Hinderks and Thomaschewski 2017)
Perspiciuity	Ease of getting familiar with SAAM. Whether it is easy to learn, to understand and is unambiguous.	



Efficiency	Whether the users can solve their tasks without unnecessary effort. Is the interaction efficient and fast, does the system react to user input quickly?	
Dependability	The sense of control of the interaction. Whether the user can predict the system's behaviour and whether the user feels confident when working with SAAM.	
Stimulation	Is it exciting and motivating to use the product? Is it enjoyable to use?	
Novelty	Is the product innovative and creative? Does it capture the user's attention?	
Health improvement	Perceived positive change in health status.	(Lee and Allaway 2013)

The constructs **ease of use**, **usefulness**, **reliability**, **trust**, **intention to use**, **interest in technical devices** are adapted from Steinke et al. (2014) and represent an adaption of the Technology Acceptance Model and other constructs for ambient and assisted living technologies. **Security**, **privacy** and **obtrusiveness** are critical for the success of AAL; therefore, we adapted scales from Cheng et al. (2006), Serenko and Fan (2013), and Mehl and Holleran (2007). While we adapted technology acceptance measurements from Steinke et al. (2014), we decided to add three constructs from the extended Unified Theory of Acceptance and Use of Technology (UTAUT 2), based on Venkatesh et al. (2003): **value** (referred to in UTAUT as compatibility), **social influence**, **habit**, and **price value**. We also included a measurement of **control**, adapted from Tapal et al. (2017). For the user experience, we included the constructs from Schrepp et al. (2017), namely **attractiveness**, **perspicuity**, **efficiency**, **dependability**, **stimulation** and **novelty**. Finally, we included a single item question on overall perception of **health improvement**, adapted from Lee and Allaway (2002). All of the items are adapted from valid and reliable questionnaires, tested with consistent samples.

In order to measure both the overall perception of the system as well as the individual interfaces, several constructs will be evaluated both on a system level as well as at an interface level. The table is an overview of the measurement of the different constructs and questionnaire items. Items 1 to 45 will be rated on a 7 point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Items 46 to 53 will be rated on a 5-point Likert scale, ranging from 1 (not at all) to 5 (a great deal). Items 54 to 79 will be rated on a 7-point Likert scale, where each item consists of a pair of terms with opposite meanings. The answers are scaled from -3 (fully agree with negative term) to +3 (fully agree with positive term). Half of the items start with the positive term, the others with the negative term (in randomised order).



Table 2 Questionnaire items and interface / system evaluation

Construct	Items	SAAM- Bracelet	SAAM- Cylinder	SAAM- App	SAAM- System
Ease of Use	1. I think it would confuse me to use SAAM-X.	x	x	x	x
	2. I think I would often make errors when using SAAM-X.				
	3. I think the handling of SAAM-X is frustrating.				
	4. I think I would often need the manual when using SAAM-X.				
	5. I think interacting with SAAM-X requires a lot of my mental effort.				
	6. I think I would find it cumbersome to use SAAM-X.				
	7. Overall, I think that SAAM-X would be easy to use.				
Usefulness	8. SAAM-X improves the quality of living in my own household.	X	x	x	x
	9. I would find it convenient to be supported by SAAM-X in my home environment.				
	10. SAAM-X supports living in my own household.				
	11. SAAM-X allows me to live longer in my own household than I would otherwise be able to.				
	12. The possession of SAAM-X increases my reputation in my environment.				
	13. SAAM-X makes it easier to extend living in my own household.				
	14. Overall, I would consider having SAAM-X in my own household as useful.				
Reliability	15. SAAM-X appears to be reliable.	x	x	x	x
	16. SAAM-X appears to be precise.				
	17. SAAM-X appears to be safe.				
	18. SAAM-X appears to be honest.				
	19. I think SAAM-X will work correctly.				
	20. SAAM-X shows reliability for me.				

Construct	Items	SAAM- Bracelet	SAAM- Cylinder	SAAM- App	SAAM- System
Trust	21. SAAM-X would appear deceptive to me.	x	x	x	x
	22. I would trust that SAAM-X provides security to me.				
	23. I would be wary of SAAM-X.				
	24. I would rely in SAAM-X.				
	25. I am suspicious of the intentions, actions or consequences of SAAM-X.				
	26. The activities of SAAM-X will have a harmful or injurious outcome.				
	27. I trust in SAAM-X.				
Intention to use	28. It is probably that I would use SAAM-X.	x	x	x	x
	29. I would at least try to use SAAM-X.				
	30. As soon as the opportunity arises, I would use SAAM-X.				
Interest in technical devices	31. I inform myself about electronic devices even if I do not have any buying intention.				
	32. I love to have new electronic devices.				
	33. I am excited when a new electronic device enters the market.				
	34. I like to go to dealers specializing in electronic devices.				
	35. I have fun trying an electronic device.				
Security	36. I would feel secure sending sensitive information across SAAM-X				x
	37. SAAM-X is a secure means through which to send sensitive information				
	38. I would feel totally safe providing sensitive information about myself over SAAM-X				
	39. Overall, SAAM-X is a safe place to transmit sensitive information				

Construct	Items	SAAM- Bracelet	SAAM- Cylinder	SAAM- App	SAAM- System
Privacy	<p>40. Overall, SAAM-X provides an acceptable level of privacy.</p> <p>41. SAAM-X ensures my privacy very well.</p> <p>42. I am fully satisfied with how SAAM-X addressed my privacy issues.</p> <p>43. Every time I use SAAM-X, I feel that my privacy is fully protected.</p> <p>44. SAAM-X addresses my privacy concerns in a very professional manner.</p> <p>45. Every time I interact with SAAM-X, I feel that my privacy is invaded.</p>				X
Obtrusiveness	<p>Self-reported obtrusiveness for participants: To what degree . . .</p> <p>46. . . . were you generally aware of SAAM-X?</p> <p>47. . . . did you feel uncomfortable having SAAM-X?</p> <p>48. . . . did SAAM-X impede you in your daily activities?</p> <p>49. . . . did SAAM-X change your actual behavior?</p> <p>50. . . . did SAAM-X influence your way of talking?</p> <p>Self-reported obtrusiveness for bystanders: To what degree . . .</p> <p>51. . . . were people around you aware of SAAM-X?</p> <p>52. . . . did you talk to people around you about SAAM-X?</p> <p>53. . . . did SAAM-X influence the behavior of people around you?</p>	X	X	X	X
Attractiveness	<p>54. Annoying / enjoyable</p> <p>55. Good / bad</p> <p>56. Unlikable / pleasing</p> <p>57. Unpleasant / pleasant</p> <p>58. Attractive / unattractive</p> <p>59. Friendly / unfriendly</p>	X	X	X	X
Perspicuity	<p>60. Not understandable / understandable</p> <p>61. Easy to learn / difficult to learn</p> <p>62. Complicated / easy</p> <p>63. Clear / confusing</p>	X	X	X	X



Construct	Items	SAAM- Bracelet	SAAM- Cylinder	SAAM- App	SAAM- System
Efficiency	64. Fast / slow	X	X	X	X
	65. Inefficient / efficient				
	66. Impractical / practical				
	67. Organized / cluttered				
Dependability	68. Unpredictable / predictable	X	X	X	X
	69. Obstructive / supportive				
	70. Secure / not secure				
	71. Meets expectations / does not meet expectations				
Stimulation	72. Valuable / inferior	X	X	X	X
	73. Boring / exciting				
	74. Not interesting / interesting				
	75. Motivating / demotivating				
Novelty	76. Creative / dull	X	X	X	X
	77. Inventive / conventional				
	78. Usual / leading edge				
	79. Conservative / innovative				

We are distinguishing between the different interfaces because we want to give the opportunity to users to rate the interfaces differently and get a more detailed overview of what is perceived positively and what needs to be improved. The terminology for each of the interfaces will be adapted in a user-friendly way (e.g. the MicroHub will be identified as ‘the bracelet’ for those who receive it as a bracelet).

4 COACHING AND WELLBEING PERSPECTIVE: GENERAL

4.1 Research questions

Does SAAM support seniors in maintaining and improving their individual objective wellbeing?

Does SAAM affect seniors’ individual subjective wellbeing?

4.2 Research design

The pilot will be conducted as a one group pre-test post-test design. The system will be installed in the home of the users and will be allowed 1-3 weeks for data collection and benchmarking, in parallel to the data collected by the system. Prior to the system being installed, the OPQOL-35 questionnaire will be conducted with all PUs. The OPQOL-35 will then be administered once a month and at the end of the study. Additionally, an in-depth semi-structured interview about individual wellbeing will be conducted before or in the first few days after the SAAM system installation and will be repeated monthly, including



at the end of the study. The OPQOL-35 and interview data will be used to compare with data collected by the system and, during the pilot studies, to adjust coaching actions accordingly.

4.3 Standards

OPQOL-35 - the Older People's QoL 35-item Questionnaire (OPQOL) is a relatively new but already established instrument derived from bottom-up interactions with seniors that provides insights into their quality of life (Bowling and Stenner 2011). It measures overall quality of life of seniors in several areas, namely: life overall, health, independence, control over life, freedom, home and neighbourhood, psychological and emotional well-being, financial circumstances and religion/culture. The OPQOL-35 has been validated among diverse populations, including UK, Czech, Italian and Australian seniors among others (Bowling and Stenner 2011, Mares, Cigler and Vachkova 2016, Bilotta, et al. 2011, Kaambwa, et al. 2015). It performs better than the WHO quality of life questionnaire (WHOQOL, WHO 2019) and CASP-19, and ASCOT among others (Bowling and Stenner 2011, Kaambwa, et al. 2015).

4.4 Dimensions and Constructs

Well-being operationalised through **quality of life** in the following dimensions:

- Life overall
- Health
- Social relationships/leisure and social activities
- Independence, control over life, freedom
- Home and neighbourhood
- Psychological and emotional well-being
- Financial circumstances
- Religion/culture

Subjective wellbeing operationalised through happiness and assessed in qualitative terms.

Information on financial circumstances, religion/culture, home and neighbourhood will be collected for validation purposes, but no direct SAAM interventions are planned for those.

4.5 Hypotheses

Table 3 Coaching and well-being perspective hypotheses

No.	RQ	H ₀	H ₁
1.	Does SAAM support seniors in maintaining and improving their individual objective wellbeing?	Individual objective wellbeing, as measured by OPQOL, does not differ	Individual objective wellbeing, as measured by



No.	RQ	H ₀	H ₁
		before and after use of SAAM.	OPQOL, differs before and after use of SAAM.
		The coaching goals set by PUs are not met.	The coaching goals set by PUs are met.
2.	Does SAAM affect seniors' individual subjective wellbeing?	Seniors' habits have not changed after use of SAAM.	Seniors' habits have changed after use of SAAM.
		Perceptions of independence and autonomy do not differ before and after use of SAAM.	Perceptions of independence and autonomy differ before and after use of SAAM.

5 COACHING AND WELL-BEING PERSPECTIVE: DOMAIN SPECIFIC

5.1 Mobility Domain

5.1.1 Research questions/working hypothesis

Will PUs who receive adequate SAAM coaching maintain or even improve their mobility abilities (while the group that will not receive coaching will show decline in their mobility abilities)?

5.1.2 Research design

Our working hypothesis is that SAAM group that will receive adequate coaching will maintain or even improve their mobility abilities. There will be a control group at SOČA that will not receive coaching. Our working hypothesis is that they will show decline in their mobility abilities. The data gathered by the SAAM system will allow for studying correlations between the valid clinical outcome measures and features extracted from the data gathered by the SAAM system.

At SOČA, testing will focus on mobility monitoring and coaching services for people with lower limb loss or disabilities, living at homes. Five participants with lower limb loss and fitted with a prosthesis that have completed rehabilitation and fulfil inclusion/exclusion criteria and have volunteered will be equipped with SAAM system providing monitoring and coaching at their homes. An additional group of five participants with lower limb loss and fitted with a prosthesis that will be selected to be similar to the SAAM group will be tested with the same battery of clinical tests at the beginning and at the end of three-month period living at their homes but without SAAM system. The data gathered by the SAAM system will allow for studying correlations between the valid clinical outcome measures and features extracted from the data



gathered by the SAAM system. This may in future alleviate a need to engage healthcare professionals to perform face-to-face assessments of mobility abilities but this could rather be reliably inferred from the selected SAAM based features for which good/excellent correlation will be established.

5.1.3 Outcome measures

Timed Up and Go Test – this test is used to determine fall risk and measure the progress of balance, sit to stand, and walking. The patient starts in a seated position and stopwatch is started. The patient stands up upon therapist’s command walks 3 meters, turns around, walks back to the chair and sits down. The time stops when the patient is seated.

L-test – this test is similar to the Timed Up and Go Test. It requires ambulation over 20 meters, two transfers, and three turns, and was specifically designed for people who wear prosthesis.

6 Minute Walk Test - the 6 Minute Walk Test is a sub-maximal exercise test used to assess aerobic capacity and endurance. The distance covered over a time of 6 minutes is used as the outcome by which to compare changes in performance capacity. An increase in the distance walked indicates improvement in basic mobility.

30 Seconds Sit to Stand Test – the purpose is to test leg strength and endurance. The subject is instructed to sit in the middle of the chair, which is 43 cm high, and to place hands on the opposite shoulder crossed. The feet should be kept flat on the floor, the back straight, and arms against the chest. On command, the subject should rise to a full standing position, and then sit back down again. This is repeated for 30 seconds. The number of successful stand-ups is recorded and compared to normative below average scores for particular age group. If a subject is not able to stand-up without use of hands, he/she will be allowed to use hands and this will be ranked.

5.1.4 Hypotheses

Table 4 Mobility domain hypotheses

No.	RQ / Sub-RQ	H ₀	H ₁
1.	Will PUs who receive adequate SAAM coaching maintain or even improve their mobility abilities	(SOČA specific) The control group that will not receive coaching will show decline in their mobility abilities.	SAAM group that will receive adequate coaching will maintain or even improve their mobility abilities.

5.2 Activity Domain

5.2.1 Research questions

Will PUs who receive adequate coaching maintain or even improve their performance and satisfaction with performance of activities?

5.2.2 Research design

All enrolled participants who chose to pilot the activity domain will be tested at the beginning and at the end of three-month period with a semi-structured interview, i.e. the Canadian Occupational Performance Measure (COPM). The data gathered by the SAAM system will allow for studying correlations between the valid clinical outcome measure (COPM) and features extracted from the data gathered by the SAAM system.

At SOČA, testing will focus on activity monitoring and coaching services at homes. Five participants with lower limb loss and fitted with a prosthesis that have completed rehabilitation and fulfil inclusion/exclusion criteria and have volunteered will be equipped with SAAM system providing monitoring and coaching at their homes. An additional group of five participants (control group) with lower limb loss and fitted with a prosthesis that will be selected to be similar to the SAAM group will be tested with the clinical test at the beginning and at the end of three-month period living at their homes but without SAAM system. The data gathered by the SAAM system will allow for studying correlations between the valid clinical outcome measure (COPM) and features extracted from the data gathered by the SAAM system. This may in future alleviate a need to engage healthcare professionals to perform face-to-face assessments of participant activities but this could rather be reliably inferred from the selected SAAM based features for which good/excellent correlation will be established.

5.2.3 Outcome measures

COPM - Canadian Occupational Performance Measure is an evidence-based outcome measure designed to capture a person's self-perception of performance in everyday living, over time. It was developed as a person-centred instrument to enable individuals to identify and prioritize everyday issues that restrict or affect their performance in everyday living. One of the strengths of the measure is its broad focus on occupational performance in all areas of life, including self-care, leisure and productivity, taking into account development throughout the lifespan and the personal life circumstances. The measure serves to identify issues of personal importance to the person and to detect changes in a person's self-perception of occupational performance over time. The COPM, which initiates the conversation with persons about performance issues in everyday living, provides the basis for setting intervention goals. Multidisciplinary healthcare teams use the COPM extensively as an initial person-centred assessment. The COPM is



intended for use as an outcome measure, and as such, should be administered at the beginning of services, and again at appropriate intervals thereafter, as determined by the person and therapist.

5.2.4 Dimensions and constructs

The COPM is a semi-structured interview that enables an open dialogue between interviewer and person. On average, it takes 30 minutes (20-40). COPM guides you through 5 steps:

1. Problem Definition

The COPM is a personalized, person-centred instrument designed to identify the occupational performance problems experienced by the person. Using a semi-structured interview, the interviewer initiates the COPM process by engaging the user in identifying daily occupations of importance that they want to do, need to do, or are expected to do but are unable to accomplish. Areas of everyday living explored during the interview include self-care, productivity or leisure.

2. Rating importance

Once the interviewer is confident that the user has identified the occupational performance problems experienced in everyday living, the second step of the COPM process is undertaken. In step two, the user is asked to rate the importance of each of the occupations to his/her life using a 10-point rating scale.

3. Selecting Problems for Scoring

In the third step of the COPM process, the user chooses up to five of the most important problems identified in step two to be addressed in intervention. The interviewer enters the chosen problems and their importance ratings in the scoring section. This process serves as the basis for identifying intervention goals.

4. Scoring Performance and Satisfaction

In step four, the user is asked to use a 10-point scale to rate their own level of performance and satisfaction with performance for each of the five identified problems. The interviewer calculates an average COPM performance score and satisfaction score. These typically range between 1 and 10, where 1 indicates poor performance and low satisfaction, respectively, while 10 indicates very good performance and high satisfaction.

5. Person Reassessment

The fifth and final step of the COPM process takes place at the completion of intervention or at a pre-determined time after intervention was initiated. The interviewer again asks the user to self-rate

performance and satisfaction for the problems addressed. The interviewer then uses these scores to calculate the performance and satisfaction change scores.

For SAAM purposes: If the interviewer knows the user, it is possible to go directly to step 3 and 4, namely that the user defines five activities that he or she has problems with and then scores performance and satisfaction. The first part (step 1 and 2) is meant for finding activities (among include self-care, productivity or leisure) that are important for the user. The SAAM coaching should be adapted in a way that the user is supported by coaching in selected activities.

5.2.5 Hypotheses

SOČA's working hypothesis is that SAAM group that will receive adequate coaching will maintain or even improve their performance and satisfaction with performance of activities, while the group that will not receive coaching will show decline in their performance in activities. The data gathered by the SAAM system will allow for studying correlations between the valid clinical outcome measures and features extracted from the data gathered by the SAAM system. This may in future alleviate a need to engage healthcare professionals to perform face-to-face assessments of performance and satisfaction with activities but this could rather be reliably inferred from the selected SAAM based features for which good/excellent correlation will be established.

Table 5 Activity domain hypotheses

No.	RQ	H ₀	H ₁
1.	Will PUs who receive adequate coaching maintain or even improve their performance and satisfaction with performance of activities?	(SOČA specific) The control group that will not receive coaching will show decline in their performance of activities.	SAAM group that will receive adequate coaching will maintain or even improve in their performance of activities.

5.3 Sleep Domain

5.3.1 Research question

Does SAAM assist seniors in improving their sleep quality?

5.3.2 Research design

The system will be installed in the home of the users and will be allowed 1-3 weeks for data collection and benchmarking. Prior to the system being installed, the Pittsburgh Sleep Quality Index (PSQI) survey will be conducted with all users. The PSQI will then be administered once a month and at the end of the study. Additionally, the sleep diary survey (morning and evening) will be conducted daily from the moment the system is installed. In-depth interviews will also be conducted at baseline, in the middle and at the end of the study. The information provided in the first 2-3 weeks will be used for benchmarking, in parallel to the data collected by the system. Afterwards, it will be used to compare with data collected by the system and to adjust coaching actions accordingly. In Austria, a control group will be added. Eight (8) participants will receive sleep coaching via SAAM, whereas eight (8) participants will receive coaching via email. The PSQI will also be administered to the control group, before and after the pilot and once a month and comparisons will be made.

5.3.3 Standards

Pittsburgh Sleep Quality Index (PSQI) - the PSQI is a standardized instrument for measuring sleep quality, which consists of 19 individual items.

5.3.4 Dimensions and constructs

We will be measuring six different constructs related to sleep quality, based on the typology provided in the PSQI survey, a valid and reliable instrument used in sleep assessment. The six constructs are presented in Table 6 Sleep domain dimensions and constructs below.

Table 6 Sleep domain dimensions and constructs

1. Subjective sleep quality	The individual's perception of the quality of sleep
2. Sleep latency	The time needed to fall asleep
3. Sleep duration	Total sleep time

4. Habitual sleep efficiency	The ratio of total sleep time to time in bed
5. Sleep disturbances	Factors affecting the quality of sleep or causing the user to wake up
6. Use of sleeping medication	Whether the user has taken sleep medication to be able to sleep
7. Daytime dysfunction	Difficulties with attention and staying awake during daytime

5.3.5 Hypotheses

Table 7 Sleep domain hypotheses

No.	RQ	H ₀	H ₁
1.	Does SAAM assist seniors in improving their sleep quality?	SAAM does not assist seniors in improving their sleep quality	SAAM assists seniors in improving their sleep quality

5.4 Social Activity Domain

5.4.1 Research questions

Does SAAM support seniors in maintaining and improving their social relations?

5.4.2 Research design

The pilot will be conducted as a one group pre-test post-test design. The system will be installed in the home of the users and will be allowed 1-3 weeks for data collection and benchmarking, in parallel to the data collected by the system. Prior to the system being installed, the LSNS-R questionnaire will be conducted with all PUs. The LSNS-R will then be administered once a month and at the end of the study. Additionally, an in-depth semi-structured interview on social activity will be conducted before or in the first few days after the SAAM system installation and will be repeated monthly, including at the end of the study. The LSNS-R and interview data will be used to compare with data collected by the system and, during the pilot studies, to adjust coaching actions accordingly.



5.4.3 Standards

We will measure PU's social activity and any changes in it with the internationally recognised Lubben Social Networks Scale - revised (LSNS-R). This is a twelve-item questionnaire focusing on measuring social networks and perceived social support. According to a comprehensive comparative study done by Sansoni, et al. 2010, there are five suitable scales measuring social isolation, social support and loneliness, e.g. LSNS-R, De Jong Gierveld Loneliness Scale and Friendship Scale.

We selected LSNS-R among the other available instruments, as it is the most objective measure of social activity, it is designed primarily for older adults, it is very user-friendly, and its administration period suits our research design.

5.4.4 Dimensions and constructs

Social isolation is the inadequate quality and quantity of *social relations* with the other people at the different levels where human interaction takes place (individual, group, community and the larger social environment) (Zavaleta, Samuel and Mills 2016).

- *Social contact* allows for the most objective estimation of objective social isolation and is strongly linked to wellbeing
 - Frequency of social contact (Zavaleta, Samuel and Mills 2016, Kahneman and Krueger 2006, Krueger, et al. 2009)
 - Type of social contact (Lubben, et al. 2006) - kin and non-kin
- *Social support* - mobilisation or reliance on social network in special times (Rubinstein, Lubben and Mintzer 1994)
 - Personal relations
 - Family and friendship
 - Caregiving
 - Community and neighbourhood
 - Peer groups
 - Life stage (controlled for in the pilot studies)
 - Age stratification (controlled for in the pilot studies)

5.4.5 Hypotheses

Table 8 Social activity domain hypotheses

No.	RQ / Sub-RQ	H ₀	H ₁
1.	Does SAAM support seniors in maintaining and improving their social relations?	Social relations, as measured by LSNS-R, do not differ before and after use of SAAM.	Social relations, as measured by LSNS-R, differ before and after use of SAAM.
		Seniors do not perceive SAAM to have helped them improve the quantity and/or quality of social contacts.	Seniors perceive SAAM has helped them improve the quantity and/or quality of social contacts.

5.5 Cognition and Emotion Domain

5.5.1 Research questions

Can speech and language data (i.e. acoustic and text-derived features), predict cognitive status?

Do automated methods for speech and text assessment correlate with the emotional self-evaluation?

5.5.2 Research design

a) Scientific setting – by using available datasets from Pitt corpus (Becker, et al. 1994) and Carolina collection (Pope and Davis 2011), containing information on cognitive status, and providing speech and text data we are testing the hypothesis of dependence between language (speech and text) and cognitive status.

We are testing the methods which allow for data mining and correlation studies based on acoustic features and data mining classification based on text features.

b) Pilot studies setting – can language data (speech and text) of sufficient quality be obtained to allow for scientific approaches in a) to be tested in similar scenarios:

- are the collected data of sufficient quality when collected “in the wild”?

5.5.3 Standards

Montreal Cognitive Assessment (MoCA) – the Montreal Cognitive Assessment (MoCA) measures performance in a neuropsychological test, at baseline and at the end of the pilot period, (the test consists of assessing the following cognitive aspects: language, attention, short-term memory, visuospatial ability, and some executive functions).

Picture description – a picture description task will be used to link speech and language with cognitive status. This descriptions will be paired with the MoCA scores, and we will see if from the picture descriptions, it is possible to predict cognitive scores. The goal is to evaluate the feasibility of using machine learning techniques in predicting test scores (or discrete ranges of those) based on speech and language features collected in SAAM-like settings.

PU’s affective state will be measured through a simple application (SAAM MoodBox). Once activated (e.g. by a voice command) the application will record a few minutes of the user’s free commentary about how they feel today and end by asking the user to rate their mood, using the Affective Slider (e.g., on tablet) or speech version of it. This assessment would be self-administered, not involving intervention by the research team, other than explaining to the user how to use the MoodBox and encouraging them to use it often.

5.5.4 Dimensions and constructs

The MoCA test assesses the following cognitive aspects:

- Language
- Attention
- Short-term memory
- Visuospatial ability
- Some executive functions

5.5.5 Hypotheses

Table 9 Cognition and emotion domain hypotheses

No.	RQ / Sub-RQ	H ₀	H ₁
1	Can speech and language features predict cognitive status?	Classification accuracy does not differ from random baseline	Classification accuracy is significantly higher than baseline.



2	Does SAAM's audio and text feature capture setting generate adequate features for predictive modelling?	Diarisation error rates are not significantly different from accepted baseline.	Speech diarisation error does not exceed diarisation error of Carolina Conversations Corpus by a significant margin.
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6 PILOT STUDIES SETUP

6.1 Pre-pilots (SOČA)

The pre-pilots at SOČA premises have limited objectives mainly oriented towards technological verification, calibration, and safety compliance. The purpose of this study is, therefore, to install simple sensors for people with lower-limb amputation, to connect them with other sensors (ambient sensors, location detection sensors, smart electric meter), and to collect sensor a set of activities / mobility data. The data is collected in order to test if it is meaningful for further integration into a system with the aim to provide greater security and better quality of life in the field of mobility and activity. The ultimate purpose is to locally monitor the user and with the permission of the user to provide information to specific persons (family, friends, neighbours) in order to encourage the user to maximize activity with an emphasis on safety. The pre-pilots at SOČA premises are related to KPI: Validation of non-obtrusive ICT for enhancing user well-being and KPI: Advances in user-centred design and acceptance.

6.2 Single Sessions (BRC, EURAG, SOČA)

Single sessions will focus on technology acceptance and user experience. **Single sessions are defined as one pilot participant trying out SAAM.** Feedback from single sessions may be gathered individually from each user (in a short interview) or collectively from multiple users (in a focus group). Pilot participants (seniors and their social circles) will be asked to validate the SAAM app and the social support services component of the SAAM system by, for example, creating their own real-life profiles of PUs and SUs, be invited to activities/events. At SOČA, single sessions will take place during the pre-piloting phase, while at BRC and EURAG they will take place during the pilot studies (before or after the LTPs). The single sessions are related to KPI: Validation of non-obtrusive ICT for enhancing user well-being.

6.3 Long-term Pilots (BRC, Caritas, EURAG, SOČA)

Long-term pilots are long-term installations at PU's homes for three months with the possibility to extend them for up to six months for a limited number of PU's depending on their willingness to participate. LTPs will focus on technology acceptance and user experience, and coaching and wellbeing (general and domain specific). Pilot participants (seniors and their social circles) will be asked to validate



the whole SAAM system as it is installed in the PUs homes. The targeted number of participants in single sessions and long-term pilots are presented in Table 10 Number of participants in the pilot studies below. The long-term pilots are related to KPI: Validation of non-obtrusive ICT for enhancing user well-being, KPI: Effectiveness of coaching and personalised recommendations and KPI: Advances in user-centred design and acceptance.

6.4 Stakeholder Feedback Gathering Activities (BRC, Caritas, EURAG, SOČA)

These activities will run in parallel with the single sessions and the long-term pilots. Their aim is for SAAM to be validated by stakeholders other than SAAM PUs and SUs and measure public acceptance (related to KPI: Validation of system designed by different communities and the society as a whole and KPI: Enhancing cost-effectiveness through independent living and self-care). The target groups of the feedback gathering activities are:

1. Experts in the field of AAL, coaching professionals, care, user experience, and experts in further relevant areas
2. Potential future SAAM users - seniors not included in the long-term pilots, future seniors, caregivers and family members of seniors not included in the long-term pilots
3. Decision makers, public bodies, sponsors and professionals in the field of healthcare and social support

Stakeholders will be addressed individually and in groups (focus groups and community interviews) in order to validate with varied groups the coaching approach, software, and hardware, and to assess whether the SAAM concept and system are future-proof.

There are three different groups of users and stakeholders planned for each variation of the pilot studies (LTPs, SSs, stakeholder feedback). For the whole piloting period, the minimum number of participants in each variation is set in Table 10 Number of participants in the pilot studies below. The planned number of participants reflects the DoA with changes that are due to a changed context in the pilot countries.

Table 10 Number of participants in the pilot studies

		SS	LTP	Stakeholder feedback
BRC	PUs	15	15	-
	SUs	15	15	-

		SS	LTP	Stakeholder feedback
	Other stakeholders	-	-	8 key informants + 6 people X 3 focus groups + 6 people X 2 community interviews = = 8 + 18 + 12 = 38 people ⁶
Caritas	PU	-	15	-
	SU	-	15	-
	Other stakeholders	-	-	8 key informants + 6 people X 3 focus groups + 6 people X 1 community interview = = 8 + 18 + 6 = 32 people ⁷
EURAG	PU	10	8	-
	SU	0	8	-
	Other stakeholders	-	-	20 key informants + 6 people X 3 focus groups + 6 people X 2 community interviews = = 20 + 18 + 12 = 50 people ⁸
SOČA	PU	30 ⁹	5	
	SU	-	5	
	Other stakeholders	-	-	8 key informants + 6 people X 3 focus groups + 6 people X 1 community interviews = = 8 + 18 + 6 = 32 people ¹⁰

In the DoA, there was no pre-piloting activity planned. However, throughout the execution of the project it became obvious that both the technology under development (MicroHubs in particular) and coaching pipelines under development needed to be tested. This is why SOČA was designated to perform this piece

⁶ Based on SAAM DoA.

⁷ Based on SAAM DoA.

⁸ Based on SAAM DoA.

⁹ The single sessions in SOČA are conducted under a research protocol that was developed by researchers in SOČA for conducting the pre-pilots and uses a set of instruments that is different from the ones provided in this methodology.

¹⁰ Based on SAAM DoA.

of work which has been termed ‘pre-pilots’ and is a part of WP 8. As this work that was not initially planned, but is essential for the smooth execution of pilots requires considerable resources, these were partially assigned from WP 8 resources of SOČA. Consequently, we had to reduce the number of planned participants in the SOČA pilot.

At EURAG, the numbers for primary users and secondary users in the pilot were adjusted according to findings from WP1 related to basic user profiles and pilot domains. As one of the domains of interest to EURAG target group (dehydration) was not developed for pilot implementation, the number of primary users was adjusted to eight (8). Additionally, the target group of EURAG, as revealed in WP1 basic user profiles, is independent and active, benefitting from opportunities to socialising and integration with others. The questionnaires reflected that EURAG target groups are not comfortable with sharing information about their difficulties with family and friends and largely do not depend on caregivers. Out of the 13 seniors interviewed in Austria, seven (7) were not interested in sharing any data and/or the SAAM system at all, 4 would only share this kind of data with a doctor, and only 2 said they would share this kind of data also with family or friends. Therefore, we assume it will be possible to include one secondary user for each primary user, and we reduced the number of SUs to eight (8).

6.5 Pilot Studies Timeline

This section presents the timeline of the pilot studies. The pilot studies schedule is included in three consecutive Gantt charts that deal with the pilots’ preparation, execution, and analysis.

During the preparation phase for the actual pilots, there was pre-piloting done at SOČA according to the procedure set out in section 6.1 above. A full draft of the methodology was presented to consortium partners in the second half of June 2019, so that they could apply for ethics clearances in their respective ethics countries. Ethics clearances obtained by BRC, Caritas, PLUS, SOČA, and BILSP are included in Annex XXIV at the end of this document.

Recruitment at different pilot sites starts only after obtaining ethics clearances for conducting the pilot studies. Those consortium partners who deem it necessary can organise trainings for the recruiters and field researchers. Recruitment can be combined with demonstrations of the SAAM system to potential pilot participants. Recruitment will be ongoing until the end of the pilot studies for two reasons: as a mitigation measure for the risks associated with pilot participants dropping out of LTPs and to be able to hold Ss and stakeholder feedback gathering activities as the system matures during LTPs.

Demo installations will be done in order to facilitate the introduction of the SAAM system in each pilot country and for partners to be acquainted with it. The demo installations will also be available for conducting single sessions and stakeholder feedback gathering activities. One demo installation is already running at SOČA premises since the start of the pre-pilots. Another two demo installations were done at



BRC and ScaleFocus premises in the second half of September. PLUS and EURAG will also obtain demo installations in Austria in October 2019.

Actual system installations for long-term pilots are planned to start in October 2019.

Table 11 Gantt charts for pilot studies preparation, execution and analysis – preparation phase

PILOT STUDIES PREPARATION	M20	M21	M22	M23	M24	M25	M26
	May 2019	June 2019	July 2019	Aug 2019	Sept 2019	Oct 2019	Nov 2019
Ethics clearance		█					
Pre-piloting at SOČA	█						
Recruitment training			█				
Recruitment of pilot participants				█ until June 2020			
Field research training			█			█	
SAAM demonstrations to social partners and potential pilot participants					█		
System installations at pilot sites					█		

All three types of piloting activities are planned to run in parallel in the pilot countries. In general terms, there will be two waves of piloting, between which we plan to introduce a SAAM system update that incorporates feedback from the first wave of LTPs and SSs, mainly from LTPs as long-term participants will have the largest impressions from the system.

LTP pilot participants will have the option to participate in a three-month long piloting, with an option to extend participation to six months where this is feasible and does not contradict obtained ethics clearances. The timeline for LTPs shown in Table 12 below is more than three months. This is because we expect pilot participants will not be able to start their participation at the same time, but the end of the 1st and 2nd LTPs should be roughly at the same time for all participants. ...

Table 12 Gantt charts for pilot studies preparation, execution and analysis – execution phase

PILOT STUDIES	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34
EXECUTION	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	March 2020	April 2020	May 2020	June 2020	July 2020
1 st SS iteration	[Blue bar]									
1 st LTP iteration	[Blue bar]									
1st stakeholder feedback gathering activities		[Blue bar]								
SAAM system update				[Red bar: Design iterations based on 1 st LTP iteration.]						
2 nd LTP iteration						[Blue bar]				
2 nd SS iteration						[Blue bar]				

2nd stakeholder feedback gathering activities		
2nd SAAM system update		Final design iteration.

Data will be gathered and analysed throughout the pilot studies according to the schedule below. This will allow us to have gathered the documentation from the fieldwork and to deliver the final study report in accordance with the schedule set out in the DoA. ...

Table 13 Gantt charts for pilot studies preparation, execution and analysis – analysis phase

PILOT STUDIES ANALYSIS	M30	M31	M32	M33	M34	M35	M36
	March 2020	April 2020	May 2020	June 2020	July 2020	Aug 2020	Sept 2020
Data cleansing	<i>As of October 2019</i>						
Data analysis	<i>As of October 2019</i>						
Study review and recommendations							

7 DATA COLLECTION

7.1 Recruitment of Participants – Inclusion and Exclusion Criteria

A general inclusion criterion for all participants in the piloting activities is that they need to be 18 years or older in order to participate.

7.1.1 LTP inclusion and exclusion criteria

7.1.1.1 Inclusion criteria – PU and SU

Inclusion criteria – PU:

1. Older adults – 60-years-old or above.
2. Additional criteria for SOČA - people after lower limb amputation with prosthesis (and with age 55 years or above).
3. Living alone (including without pets living inside).
4. With internal electricity box (for participants tested at their own home).
5. Living in an area served with good network coverage (incl. 3G) by phone service provider/s.

Inclusion criteria – SU:

1. Provides regular support to the PU and/or is a family member or friend of the PU.
2. Can work with a smartphone and/or tablet and/or PC.

7.1.1.2 Exclusion criteria – PU and SU

1. Individuals who do not wish to participate.
2. Individuals who do not grant their consent (for participating in the pilot studies or for data processing).
3. Individuals who are not able to give valid informed consent.
4. Individuals who are not available/present in their home for the whole study period (only for PUs).

7.1.2 SS and stakeholders inclusion and exclusion criteria

1. No inclusion criteria are foreseen for the single sessions and stakeholder feedback gathering activities as they target communities at large.
2. Exclusion criteria:
 1. Individuals who do not wish to participate.
 2. Individuals who do not grant their consent (for participating in the pilot studies or for data processing).
 3. Individuals who are not able to give valid informed consent.



7.1.3 Recruitment of participants – general approach

1. Training together with training materials will be provided to social partners.
2. If PU is not the same as in WP1 – preliminary needs assessment will be done (questionnaire from the quantitative survey in WP1). If PU is the same as in WP1 – preliminary needs assessment will not be done.
3. BILSP will support recruiters throughout the recruitment process.

7.1.4 Recruitment of participants – country specificities in the recruitment process

7.1.4.1 Recruitment in Austria

- 1) Information of those seniors about the possibility to participate in the pilot study, who in the course of the SAAM project were already included in the questionnaire, interviews, home tours, and observations - invitation to participate in the pilot study by e-mail.
- 2) Information of senior citizens in the EURAG Austria network about the possibility of participating in the pilot study - invitation to participate in the pilot study by e-mail.
- 3) Telephone calls to known seniors who might be interested in the study.
- 4) Invitation to have a look at the installation in the EURAG office in order to get a better impression of the system and clarify all relevant questions concerning the participation in the study.

In Austria, we will specifically target seniors who are experiencing sleep difficulties and / or wish to improve their sleep quality.

7.1.4.2 Recruitment in Slovenia

The planned recruitment process in **Slovenia** is the following:

- 5) SOČA will recruit older people after lower limb amputation based on wishes to participate in pilots, expressed during WP1 (quantitative and qualitative methods with questionnaires, interviews and visits): the potential participants will receive a letter with contacts and the explanation that if they still wished to participate in pilots, they are asked to contact SOČA.
- 6) Patients that will be prescribed with a prosthesis and on rehabilitation programme will be asked via a PRM specialist if they wished to participate.

7.1.4.3 Recruitment in Bulgaria

The planned recruitment process in **Bulgaria** is the following:



- 1) BRC and Caritas will recruit participants from the seniors to whom they provide care or who are their volunteers. The first ones to be approached will be those who gave their consent to be contacted for the pilot studies during the needs and requirements survey in WP1.
- 2) If there are not enough recruits, BRC and Caritas will recruit participants from outside their immediate networks with seniors.
- 3) If needed, participants will be recruited by BILSP on the snowball principle.
- 4) In Bulgaria, PUs will be able to choose to pilot any and all base system domains and, if they want, they can also pilot the cognition and emotion domain. PUs will have to choose at least one base system domain in order to get involved in the piloting.

The recruitment process set out above will be applied for mainly LTPs, while participants for the other piloting activities will be recruited primarily by word of mouth.

An information sheet and an informed consent will be provided to each pilot participant, irrespective of the pilot variation in which they participate. Information sheets and informed consents are included in Annexes XVI-XXIII.

7.2 Data Collection Instruments

To collect data during the pilot studies, we will use a mix of quantitative and qualitative instruments. These include the ones identified in the DoA (see ANNEX I), field tests and standardized scales for domain-specific quantitative measurements.

7.2.1 Long-term pilots

Data collection will have three main stages - pre-test, interim, and post-test data collection. The data collection instruments to be used in the long-term pilots are:

- Semi-structured (in-depth) interviews
- Detailed user scoreboards (questionnaire measuring technology acceptance and user experience)
- Diaries
- Cases
- Field tests (mobility tests)
- Standardised scales (domain-specific quantitative data collection)
- Distance automatic data collection (SAAM data)

7.2.2 Single sessions

Face-to-face data collection will be one-stage - only post-test data will be collected. The data collection instruments to be used in the single sessions are:



- Focus groups

7.2.3 Stakeholder feedback

The following instruments will be used for face-to-face stakeholder feedback activities:

- Key-informant interviews
- Community interviews
- Focus groups

A breakdown between domains and instruments and the information intended to be extracted from each of the instruments is presented below:

7.2.4 Technology acceptance and user experience

We will use four sources for measurement throughout the pilot study:

Questionnaire (measuring technology acceptance and user experience) - the questionnaire items and constructs are presented in Table 1 Questionnaire constructs and academic sources and Table 2 Questionnaire items and interface / system evaluation.

Semi-structured interviews - The interviews are intended to complement information provided in the questionnaires and will be conducted both in the beginning and at the end of the study. The interview questions aim for the users to detail their positive and negative experiences with SAAM, as well as suggestions for improving the interaction with the system.

Diary - Users will receive a diary to detail their daily experiences with SAAM, including observations, interruptions, disturbances, positive experiences.

SAAM data - information regarding the use patterns will be collected through the system, including:

- Frequency and duration of use of the wearable MicroHubs – bracelet and belt;
- Frequency and duration of use of the tablet / smartphone; statistics on different in-app and web app functionalities
- Frequency of interaction with the Matrix (voice command);
- How often the users forgot to charge the devices or check the system for notifications.

7.2.5 Coaching and wellbeing: general

We will use three different sources for measurement throughout the pilot study:

Older People's Quality of Life Questionnaire (OPQOL) - we will monitor scores at three predetermined time points during the long-term pilot studies. Changes in the scores of PUs will indicate SAAM effect on their well-being. We will also correlate scores with demographic characteristics that will be available from the questionnaire of the quantitative survey in WP1 and results in between OPQOL questions.

SAAM data - information regarding the activity of the users will also be collected through SAAM. This includes, for example, number of coaching actions actuated, number of coaching actions completed by the PU or SU, individual measurements which led to coaching.

In-depth interviews - in the initial, mid and final interviews, qualitative data will be gathered with respect to coaching goals, current situation as well as the perceived changes throughout the pilot.

7.2.6 Mobility

Timed Up and Go Test, L-test, 6 Minute Walk Test, 30 Seconds Sit to Stand Test – these field tests are designated to assess various aspects of mobility in SAAM. They are all performance-based measures that require a user/patient to perform a given set of tasks. These are all clinical outcome measures that are readily used for assessment of user/patient status in rehabilitation institutions before and after rehabilitation. These particular four outcome measures (Timed Up and Go Test, L-test, 6 Minute Walk Test and 30 Seconds Sit to Stand Test) are chosen for several reasons. A large amount of clinical evidence shows they are valid, have high intra- and inter-rater reliability, and have very good psychometric properties for different patient groups, as well as in elderly (Herman, Giladi and Hausdorff 2011). They are routinely used at URI-SOČA.

In-depth interview – general questions in the initial, mid and final interviews, qualitative data on mobility will be gathered (on a needs basis).

SAAM data - a set of performance features based on the processed mobility data from the SAAM system will be derived.

7.2.7 Activity

COPM – at the beginning and end of the pilot duration for each participant.

In-depth interview - In the initial, mid and final interviews, qualitative data on activity will be gathered.

SAAM data - a set of performance features based on the processed activity data from the SAAM system will be derived.

7.2.8 Sleep

We will use four different sources for measurement throughout the pilot study:

The Pittsburgh Sleep Quality Index (PSQI) - The PSQI is a standardized instrument for measuring sleep quality which consists of 19 individual items, ranked on a Likert scale of four ordered response levels, coded from 0 to 3, with 3 indicating a low quality of sleep. The answers are computed across 7 dimensions into a single index. The PSQI will be administered in the beginning of the study, once a month and at the end of the pilot.

Sleep diary - The Sleep Diary is intended to complement the SAAM system by providing specific information regarding the quality of sleep on a daily basis. The users will rank their quality of sleep every morning. The data will also be included in the coaching modelling for sleep, complementing the data provided by the sensors.

SAAM data - Information regarding the sleep behaviour of the users will also be collected through SAAM. This includes tosses and turns in bed during the night, time of lying in bed (laying down, getting up), possible sleep disturbances (noise, getting up during the night), contextual information through ambience sensors (temperature, humidity, luminance).

In-depth interview - In the initial, mid and final interviews, qualitative data will be gathered with respect to the sleep coaching goals and current situation, as well as the perceived changes throughout the pilot.

7.2.9 Social activity

We will use three different sources for measurement throughout the pilot study:

Lubben Social Network Scale scores (LSNS) - we will monitor scores at three predetermined time points during the long-term pilot studies. Changes in the scores of PUs will indicate SAAM effect on the state of their social activity. We will correlate scores with demographic characteristics that will be available from the quantitative questionnaire.

SAAM data - information regarding the social activity of the users will also be collected through SAAM. This includes, for example, number of calls through the SAAM app, number of visits at PU's home.

In-depth interviews - in the initial and final interviews, qualitative data will be gathered with respect to social activity coaching goals, current situation as well as the perceived changes throughout the pilot.

7.2.10 Cognition and Emotion (speech and language)

MoCA – MoCA test will be provided to users in different versions at the beginning and at the end of the piloting period in order to avoid users remembering their answers from a previous measurement. MoCA scores will be used to assess cognitive state.

Picture description – in the picture description task, users are asked to describe a picture they see (either orally and being recorded or in written form). The picture description will be administered at the beginning and at the end of the testing period, as long as possible. The variation of the task we are currently considering is cookie-theft picture description.

Monthly dialogue with social worker/caregiver together with a 1-5 score about how the user is feeling for having a mood detection dataset

Short weekly/daily report - short sentences about how you feel. It can be a daily or weekly setting. It includes a few sentence description and numeric score given. It could be combined with natural language interface. Oral/written (SMS-like) settings can be considered. Here we would like to use actual language, but if needed, we can also adapt it to content free mode. We envisage this as voluntary self-assessment by interacting with a instrument (SAAM MoodBox) specifically designed for this purpose.

For an overview of the instruments used per investigative perspective and domains within the coaching and wellbeing perspective, see ANNEX II.

8 QUALITY ASSURANCE

To ensure the quality of the data collected throughout the pilot studies, various measures are taken:

1. Whenever possible, validated questionnaires are used for quantitative data collection.
2. For qualitative data collection, interview guidelines are provided in order to ensure comparability between different interviewers.
3. The planned instruments and study set-up will be carefully discussed in the consortium. The different perspectives represented by the consortium (e.g. research institutes, end-user organizations etc.) allow for a thorough identification of inappropriate instruments or procedures.
4. The instruments selected by the consortium will be evaluated in a small-scale preliminary study. The focus will be on their feasibility and possible adverse events. Based on the outcome of this preliminary study, the instruments or the overall study design will be improved, if necessary.
5. Throughout the entire pilot study, data collection will be carefully coordinated in order to ensure comparability between the different countries, i.e. frequent communication and exchange between researchers from the different sites.
6. Immediately after the first inquiry in the pilot studies, the collected data is explored and logically tested. In case any adverse events are identified, the consortium can react to them at an early time point in the study.

9 CONSIDERATIONS. LIMITATIONS

There are several considerations, including limitations to the pilot studies and research limitations that we need to take into account when conducting the pilot studies.

9.1 Considerations

With respect to the pilot studies, research will be conducted within the following situation:

- Pilot studies are the final stage of the SAAM project.
- Pilot studies have two variations - long-term pilots and single sessions. The duration of the pilots will vary from 1 day for single sessions to 3 months for long-term pilots (6 months in exceptional cases when PUs agree to piloting the social activity domain twice).
- Pilot participants will be recruited primarily from among seniors and their social circles served by or participating in the SAAM social partner organisations - BRC, Caritas, EURAG and SOČA. In case we do not manage to recruit enough seniors from among those, we will extend the recruitment process outside of the organisations applying the same inclusion and exclusion criteria set in this methodology.
- Pilot participants will have different socioeconomic backgrounds, including income levels, residential situations, education and employment history, technological aptitude.
- Due to the system specifications/limitations, the pilot studies will be limited to include only senior participants living alone. No other living environments and circumstances are considered.

9.2 Pilot Studies Limitations

In the pilot studies, we are limited with respect to the time available for long-term installations. Our general approach is to have the long-term installations at PU's homes for three months with the possibility to extend them for up to six months for a limited number of PU's depending on their willingness to participate.

The three-month setup will allow us to have at least two LTP iterations with different users. However, we take into account the fact that this three-month arrangement is limited with respect to the data we will obtain.

In between the LTP iterations (see Table 11 Gantt charts for pilot studies preparation, execution and analysis), there is the possibility to update the SAAM models in case there is a need for it - this need may, for example, arise from new factors we ought to include in the models or remove factors that prove to be irrelevant. Such an update may have implications for the comparability of certain data subsets obtained from individual pilots from the first and second long-term iterations, as well as single sessions and stakeholder gathering activities. For example, based on user feedback, we may need to adjust elements



of the hardware, software, or coaching. Should this be the case, we will solely compare data subsets of the same properties, while all others will be analysed separately.

9.3 Research Limitations

9.3.1 Internal validity

Comparability between the outcomes of individual PUs are restricted due to considerable expected differences at baseline including the different socio-economic and cultural background between pilot sites and expected differences of piloted domains depending on PUs will (i.e. decision to participate).

Contingency measures: compare pre-mid-post results within individual SAAM PU use cases with respect to the coaching and wellbeing perspective.

9.3.2 External validity

1. We use a non-probability purposive sampling to engage seniors, their social circles and experts in piloting the SAAM system. Moreover, potential pilot participants (PUs and SUs) will be conveniently drawn from the pool of our SAAM social partner organisations.

Contingency measure: none. We acknowledge this limitation and we will reiterate it when we work on the analysis, study review and recommendations (T8.4). We will not attempt to extrapolate SAAM research results for users and situations outside of the pilot study. However, it does not undermine our research objectives, as the SAAM system is not a product and we are not conducting a market survey, but rather a pre-market assessment.

2. Prevalent use of qualitative instruments for assessment of the SAAM system. Mitigation measure: 1) we ensure that the perspectives of multiple stakeholders are gathered and analysed (triangulation through actors) and 2) we use quantitative measures (mainly through SAAM system logs).

10 DATA ANALYSIS

10.1 Initial Assessment of SAAM's Impact on Users' Lives

We will make an initial assessment of SAAM's impact on users' lives in view of the stated research questions. For this purpose we will make comparisons, perform thematic analysis and analysis in relation to KPIs.

10.1.1 Comparisons

We will be making comparisons between:

- Pre-, mid- and post-measurements of individual PUs.
- Post-measurements of PUs within the same organisation (BRC, Caritas, EURAG, and SOČA).
- Post-measurements of PUs in between organisations (BRC, Caritas, EURAG, and SOČA).
- Data collected by SAAM and data collected by investigators.
- Technology acceptance and user experience results in SAAM and similar research from other studies
- General coaching and wellbeing results in SAAM and similar research from other studies.
- Data/outcomes from project SAAM and data/outcomes obtained by the other projects within the SC1-PM-15-2017 "*Personalised coaching for well-being and care of people as they age*" aimed at creating personalised coaches.

10.1.2 Analysis per domain

Performance in each domain will be analysed by computing overall indices and interpreting the results from each instrument. The interview and questionnaire data collected in the project are analysed using rigorous methods. The evaluation of research questions that involve small samples (e.g. questions about sleep) relies on qualitative data analysis (e.g. thematic analysis, affinity diagram) and is supported, if appropriate, by descriptive questionnaire data. In the case of sufficiently large sample sizes (presumably for research questions involving acceptance), common inferential statistical methods are also used (e.g. correlation, t-test, ANOVA, regression or respective non-parametric alternatives). The specific method of analysis will be selected on the basis of its appropriateness to answer the respective research question. The analyses will be conducted with common analysis software (e.g. SPSS, R). In addition to the data obtained from the qualitative and quantitative surveys, data stored by the system will also be used for the analysis (e.g. coaching strategies, output modalities, amount and usage time of the different systems).

10.1.3 KPIs

KPI achievement will be assessed based on information from various sources. For the KPIs (1, 2, 4) directly related to individual usage, quantitative and qualitative input will be weighted. For the KPIs assessing



community impact (3 and 4), qualitative input from individual and group discussions will be weighted. For KPI 5, we will gather information on a coaching-event basis and will compare it to other possible interventions that are on the market. A possible comparison would be how much it would cost for a caregiver to receive a notification from their senior through another app, to take sleep medications, to instruct a senior with a lower limb amputation in a hospital setting instead of at home, to use a human coach to achieve the outcomes for a certain domain, etc. In the latter case, for example, a list of coaching events provided by the SAAM system can be used to compare to a human coach person-hours spent for providing an intervention of similar length and content. At the end of each LTP iteration, the gathered data will be analysed to extract information on the relevant KPIs. Scenario analysis (Kosow and Gaßner 2007) for cost effectiveness may also be performed.

For a summary of the KPIs related to the pilot studies, see Table 14 Summary of SAAM project KPIs related to pilot studies below.

Table 14 Summary of SAAM project KPIs related to pilot studies

No.	Impact/KPI	Measured how	KPI goal
1.	Effectiveness of coaching and personalised recommendations.	Improvement/effectiveness as measured through periodical end user/caregiver interviews/surveys keyed to measurable and declared lifestyle goals.	System assessed as having “significantly contributed” to meeting more than 75% of set goals.
2.	Validation of non-obtrusive ICT for enhancing user well-being	Technical measurement (success of ambient methods), user satisfaction as measured through surveys, and preference after prolonged system use for the “silent mode” (user acceptance).	Satisfaction as “very satisfied” more than 75%.
3.	Validation of system designed by different communities and the society as a whole	Acceptance by different communities such as families, neighbours, society measured by surveys.	Public acceptance more than 66%.

4. Advances in user-centred design and acceptance	Measured through technical means by monitoring of user interfaces, direct feedback and surveys/interviews with ageing users and their caregivers, and through usage statistics revealing what interface methods users actually use most and what activities and coaching events most closely link to changes in behaviour and user satisfaction per interface type.	Satisfaction as “very satisfied” more than 75%.
5. Enhancing cost-effectiveness through independent living and self-care.	Measured by assessing the number of coaching events that likely prevented a costlier intervention or support event.	A reduction of such events by 50% or more by prototype.

11 ETHICS, GENDER AND RISKS

11.1 Ethics

11.1.1 Ethical principles

The SAAM Consortium strictly abides by the principles agreed on in D1.6: User Interaction Ethical Review Report. This means that within the pilot studies, among other things:

- a. We always prioritise the interests of included seniors above all other interests – we follow this principle along several dimensions including:
 1. System design - by making the system as unobtrusive as possible.
 2. Pilot participants recruitment - by respecting pilot participants’ personal space, personal time, and answering all their questions.
 3. Pilot studies realisation - by respecting pilot participants’ personal space, personal time, and answering all their questions during and after the pilot studies. We are furthermore ready to discontinue the participation of each pilot participant immediately in all cases, in which this is necessary and whenever they require us to do so.
 4. Data processing – by following the requirements of personal data legislation, including safeguarding the data according to the best available technical and



organisational practices, restricting the external access to personal data and by anonymising the personal data gathered during the pilot studies at the end of the project, among others.

- b. We treat with respect all people with whom we interact whether potential or consented pilot participants, fellow researchers, or other SAAM project staff, according to the best practices available for research with humans and research ethics.
- c. The safety of pilot participants is our topmost priority, which we consider at all times - we follow this principle along several dimensions including:
 1. System design - by making the system as safe as possible, including using off-the shelf marketed hardware whenever this is possible.
 2. Data processing – by following the requirements of personal data legislation, including safeguarding the data according to the best available technical and organisational practices, by restricting the external access to personal data and by anonymising the personal data gathered during the pilot studies at the end of the project, among others.
 3. Pilot studies realisation – by insuring the homes of LTP pilot participants for the duration of their participation in the pilot studies.
- d. We respect the autonomy of all pilot participants – by continuously giving them sufficient information about the pilot studies and the data processing it includes. We provide them with sufficient time to understand this information and decide on whether to participate in the pilot studies.
- e. We strive to achieve greater wellbeing for our pilot participants and the society (i.e. beneficence) with the SAAM system as a whole. Where this is not possible, we shall do no harm (i.e. non-maleficence). For this, we are carefully planning the pilot studies. We will allow interactions of field staff (recruiters and field researchers) with the pilot participants after proper training is provided to the former. We will monitor the execution of the pilot studies with a particular focus on interactions with seniors. The External Advisory Board will have an active role in overseeing the execution of the pilot studies and their stance will be taken into account with priority.

Guidelines for 1) recruiters and 2) field researchers working with pilot participants describe the principles under which interactions with pilot participants should be conducted. The guidelines for recruiters and field researchers are provided in the Information sheets - PU - LTP.

We will further devise a detailed Privacy Policy, which will be presented to all potential participants.



11.1.2 Incidental findings

PIUs will be made aware that there is an incidental finding and will be given the opportunity to decide whether they want to know what it consists of. This possibility is explained in Information sheet - PIU - LTP.

11.1.3 Ethical clearance

The present Methodology passed through the ethical clearance process that is set up in D1.6 User Interaction Ethical Review Report and D1.2 Ethics Review Codex, Informed Consent Procedures and Templates. Additionally, for the pre-pilots at SOČA premises in Slovenia, SOČA applied for ethical approval from the National Medical Ethics Committee. The approval was obtained on May 9th, 2019.

Ethics clearances were also obtained for the pilot studies from the ethics commissions of the University of Salzburg, Caritas Bulgaria, Bulgarian Red Cross, BILSP, and the National Medical Ethics Committee of Slovenia. In Annex XXIV, we enclose the ethical clearance decisions (native language and translation in English language) of University of Salzburg, Caritas Bulgaria, Bulgarian Red Cross, BILSP. Ethical clearance from National Medical Ethics Committee of Slovenia is granted, but not officially sent to SOČA as of today.

11.2 Gender

We will investigate SAAM pilot testing outcomes also in terms of gender. This is why we will collect data about gender at the start of the LTPs (through the quantitative survey questionnaire from WP1), as well as within SAs and stakeholder interactions. We are aware that a great part of our PIUs may be women as they tend to live longer, thus tend to live alone, while at the same time women are more likely to volunteer (WHO 2007).

However, we will not make any preliminary assumptions on the results from the pilot testing with respect to gender in the framework of the pilot studies. We will investigate our pilot participants' technology acceptance, user experiences and wellbeing and then make ex-post assessment whether gender played a role in the former. We will also analyse coaching responses in terms of gender.

With respect to recruitment for the pilot testing, we will encourage both genders to participate in the pilots. If we obtain informed consents from both genders that surpass the number of planned PIUs who agree to participate, then we will randomly select those who will participate in the pilot with balancing this participation by gender according to the proportion of men and women who agreed. We will do this continuously throughout the pilot testing phase when recruitment is taking place.

The SAAM system itself is highly personalisable. Thus, pilot participants will be able to set it up according to their preferences including such arising keyed in gender wherever this is applicable for them personally.



11.3 Risks, Mitigation and Adaptation Measures

Below we introduce the risks regarding the pilot testing of the SAAM system that we have identified while drafting the present Methodology and will observe throughout the pilot studies and until the end of the project.

Each risk is accompanied by a qualitative assessment of its probability and impact on the pilot studies. One or more mitigation and/or adaptation measures that we will refer to follow each risk, should the risk happen in practice.

We divided into several categories, each represented by a separate table below. The categories include:

- Pilot execution
- Security
- Privacy
- Ethics

Table 15 Pilot execution risks

Risk	Probability	Impact	Mitigation or adaptation measures
The number of pilot participants having given their consent is less than required by the specifications of the pilot study	<i>Medium</i>	<i>Medium</i>	Recruit pilot participants from outside the partner organisations
Pilot participants withdraw their consent between recruitment and pilot initialisation or after the pilot has started	<i>Medium-Low</i>	<i>Medium</i>	A larger number of pilot participants than required are recruited
Pilot participants may pass away during their participation in the pilot studies	<i>Medium</i>	<i>Medium</i>	Recruit pilot participants from outside the partner organisations A larger number of pilot participants than required are recruited

Risk	Probability	Impact	Mitigation or adaptation measures
Pilot participants withdraw their consent during the pilots due to being overwhelmed by the SAAM wearable devices	<i>Medium-Low</i>	<i>Medium</i>	<p>Get people to know the SAAM system (including all parts) during recruitment (at least by the means of pictures). This way they are already aware of its functional range before they agree to participate in the pilot studies. Clarify to pilot participants at the beginning of the pilot studies that the wearables are part of the SAAM system that they are used when piloting the base domains, and that wearing them provides the best possible SAAM coaching.</p> <p>Clarify to pilot participants who feel overwhelmed during the pilot studies that they may stop using the wearables without needing to drop out of the pilot studies. Clarify that stopping wearing them means the quality of SAAM coaching may drop.</p> <p>Gather feedback on the reasons why pilot participants drop out if they finally decide to drop out (only if they are willing to share the reasons for dropping out). Remember that they can refuse to share this information.</p>
Pilot participants drop out due to feeling uncomfortable because of permanent monitoring	<i>Medium-Low</i>	<i>Medium</i>	<p>Social partner organisations and their associates are in many cases familiar with the participants. They act as persons of trust, with whom the participants can speak at any time if they feel uncomfortable.</p> <p>Get people to know the SAAM system (including all parts) during recruitment (at least by the means of pictures). This way they are already aware of its functional range before they agree to participate in the pilot studies.</p> <p>Recruit more participants than the number of actual pilot sites.</p> <p>Gather feedback on the reasons why pilot participants drop out if they finally decide to drop out (only if they are willing to share the reasons for dropping out). Remember that they can refuse to share this information.</p>
Pilot participants drop out due to feeling uncomfortable	<i>Low</i>	<i>Medium-Low</i>	<p>Social partner organisations and their associates are in many cases familiar with the participants. They act as</p>

Risk	Probability	Impact	Mitigation or adaptation measures
because of too intrusive coaching			<p>persons of trust, who the participants can speak to at any time, if they feel uncomfortable.</p> <p>Modify coaching preferences of the participant at the beginning of the pilot.</p> <p>Modify preferences during the pilot if necessary. Remind the participant that preference modification is possible.</p> <p>Gather feedback on the reasons why pilot participants drop out if they finally decide to drop out (only if they are willing to share the reasons for dropping out). Remember that they can refuse to share this information.</p>
Data collected through face-to-face interactions is skewed due to pilot participants attempting to please the researchers	<i>Low</i>	<i>Medium-Low</i>	<p>Explain to the participants the aim of the pilot studies correctly and emphasise the importance of their honest answers.</p> <p>Clarify to the participants that they are co-creators of the SAAM system and that their input has the potential to change the system.</p> <p>Perform quality control (WP 8, T 8.3) including through repeating some face-to-face interactions with different researchers. Obtain the same data twice. Compare the two instances of data collected. Accept the more unfavourable data to be more valid.</p>
No data collection due to not wearing the wearables (or forgetting to wear them)	<i>Medium-High</i>	<i>Medium-Low</i>	<p>Support the participants by explaining in the field how to use them, incl. charge them.</p> <p>Keep in contact with the senior.</p> <p>Investigate status of the wearable if it does not provide data.</p> <p>Escalate technical issues to respective SAAM staff</p>
Not able to fill in the different instruments/ answer requested info	<i>Medium-Low</i>	<i>Medium-Low</i>	Support the participant in their filling up information in the different instruments.

Risk	Probability	Impact	Mitigation or adaptation measures
No improvement in seniors' activities	<i>Medium</i>	<i>Low</i>	Improvements are expected to occur only in part of the cases, because SAAM supports current state and guides towards improvement where possible. Analyse quantitative and qualitative data and attempt to explain why no improvements happened in the cases where such are to be expected.
A SAAM device/s become/s defective during the pilot studies - individual PU home	<i>Low</i>	<i>Medium-Low</i>	Trained SAAM personnel (technical support) inspect the device/s. If defective, it is replaced. The defective device/s are assessed centrally and an overall remote check is performed for all such devices at other PUs' homes (if applicable).
SAAM system behaves adversely to what is expected by researchers.	<i>Low</i>	<i>Medium-High</i>	The SAAM system (devices, pipelines, decision making models and coaching) are made as transparent as possible. This allows SAAM researchers to trace SAAM behaviour and make necessary changes. If such changes affect significantly the performance of SAAM, the pilot studies will be stopped until normal SAAM behaviour is restored.
SAAM system behaves adversely to what is expected by pilot participants.	<i>Medium-High</i>	<i>Medium</i>	The SAAM system (devices, pipelines, decision making models and coaching) are made as transparent as possible. This allows pilot participants to: <ol style="list-style-type: none"> 1. access their own raw data (on request) 2. be explained the decisions and decision-making rules on which situation assessments and coaching is based.

Table 16 Security risks

Risk	Probability	Impact	Mitigation or adaptation measures
Personal data security breach	<i>Low</i>	<i>Medium</i>	<p>Secure communication and storage are ensured both in the local context in which smart home and body sensors exchange data with the user's devices, as well as in situations in which data is sent to the project's secure dedicated servers for processing and to devices of caregivers. No personally identifiable data is sent through unencrypted channels. SAAM utilises open cryptography standards in order to protect sensitive/personal information.</p> <p>All personal data kept on paper is secured in locked facilities. Whenever possible, personal data will be decoupled from research data (pseudonymised) through ID codes for each participant.</p>
Personal data misuse	<i>Low</i>	<i>Medium-Low</i>	<p>Access to data collected during the pilots is strictly denied to any other than the authorised key persons and confidentiality statement to be signed by all members involved in data gathering, analysis and reporting.</p> <p>After the end of the project, the data gathered during the pilots will be kept, but all personal data will be anonymised.</p> <p>Personal data that may prove legally binding for the pilot participants will not be collected.</p>

Table 17 Privacy risks

Risk	Probability	Impact	Mitigation or adaptation measures
Pilot participants intimidated by privacy implications, including from language gathering activities	<i>Medium-Low</i>	<i>Medium-Low</i>	Demo on features - privacy preserving setting - to show the users that they can select the mode, where no actual language content is kept.

Table 18 Ethics risks

Risk	Probability	Impact	Mitigation or adaptation measures
Participants do not understand the purpose, procedures and implications of the pilot studies as a whole or of some parts of it	<i>Low</i>	<i>Medium</i>	<p>Clearly outline pilot studies purpose, procedures and implications in the information sheet, informed consent and information pack that are handed out to potential participants.</p> <p>Provide recruiters with clear instructions on how to present verbally the pilot studies purpose, procedures and implications to potential participants.</p> <p>Provide participants with the opportunity to contact their LCP with any questions before, during and after the pilot studies.</p> <p>Provide participants with a contact telephone and email of each of the local SAAM partners engaged in the piloting on site.</p> <p>Provide participants with a contact telephone and email of the SAAM co-ordinator.</p>
Loss of privacy control by pilot participants	<i>Low</i>	<i>Low</i>	<p>Participation in the pilot studies is voluntary.</p> <p>Pilot participants are provided with an information sheet and informed consent outlining their rights at all times of the pilot study. Participants have, among others, the right to withdraw at any time from the pilot studies. The Information sheets and Informed consent forms are translated in the native language of the participant, in a clear and comprehensive language.</p> <p>Each participant signs an informed consent form before entering the study. A copy of both is for the participants to keep.</p>
Improper research practices	<i>Low</i>	<i>Low</i>	<p>Researchers handle research subjects, be they human, animal, cultural, biological, environmental or physical, with respect, care, and in accordance with legal and ethical provisions. Any suspicion for and instances of fabrication, falsification and plagiarism will be duly reviewed and acted upon within the SAAM consortium.</p>

Risk	Probability	Impact	Mitigation or adaptation measures
Occurring of harms, stress, anxiety, or humiliation	<i>Low</i>	<i>Medium</i>	<p>Researchers conduct their research and interact with pilot participants under the principles agreed by the SAAM Consortium in D1.6 and best practices in scientific research.</p> <p>Pilot participants are informed they can resort to their Local Contact Person (LCP) trusted person, who is a person of trust.</p> <p>Pilot participants have the right to withdraw from the pilot studies at any time as easily as they were included in the pilot studies.</p> <p>PUs homes are insured as part of their participation in the pilot studies.</p>
Incidental findings of health issues	<i>Low</i>	<i>Medium</i>	<p>Direct observation during the pilots might lead to findings related to the health status of participants. Research participants should be aware of this possibility and decide whether they want to know what the incidental findings are or not. Research participants will declare their wish to (not) be informed in the Informed consent form.</p>
Deterioration of health during pilots	<i>Medium-Low</i>	<i>Medium</i>	<p>Pilot participants will self-report about conditions and their progression at their own discretion.</p>

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ANNEX I: OVERVIEW OF INSTRUMENTS FROM DoA

In-depth interviews - *“one focus of the interviews will also be on the users’ personal experiences (with the system) by adopting a narrative interview approach (Flick 2000) aiming to evoke user narratives of everyday experiences. We will start with this instrument at the very beginning of the pilot studies and repeat it at least twice during practical testing.” (SAAM DoA)*

Key-informant interviews - *“The interviews will again be semi-structured, with approximately 40 people in Austria, Slovenia and Bulgaria. Interviews will be carried out at the beginning of the pilot testing and after the testing phase is completed.” (SAAM DoA)*

Focus groups - *“There will be three types of target groups for the purposes of focus grouping. The first will be the elderly users, the second, experts in the field, and the third, potential extended users of SAAM such as caregivers, families, and personal networks members (friends, neighbours, etc.). With respect to older users and the extended users’ focus groups, we plan to devise a step-wise procedure consisting of (i) ascertaining potential users’ personal needs, attitudes and technical affinity by discussing a fictional case; (ii) giving them a live presentation of system prototypes and discussing their impressions; (iii) letting them interact with the prototypes, solving simple tasks, followed by discussion about usability, functionality and design, and (iv) having final focus groups discussing impressions and experiences in order to guide the future design of the system. Initially we plan nine focus groups (minimum two per country), and three focus groups with experts (one per country).” (SAAM DoA)*

Community interviews - *“Community interviews will be done randomly among communities most likely to see possible SAAM introduction. There will be six community interviews (minimum of one per country). Possible participants include local communities, friends, families, and neighbours. The main goal of this instrument is to examine community attitudes towards technological engagement of their relatives’ and friends’ lives ... with the main objective to go into detail examining persons’ reactions, perceptions, explanations, ideas, process of adaptation, and difficulties in using SAAM.” (SAAM DoA)*

Cases - *“... with the main objective to go into detail examining persons’ reactions, perceptions, explanations, ideas, process of adaptation, and difficulties in using SAAM” (SAAM DoA)*

Detailed user scoreboards - *“Users scoreboards will allow some basic statistical analysis. We will get information from about 50 users from the three participating countries, and each scorecard will include information about systems usage, daily life integration, ideas for improvements, and difficulties encountered. The scorecards may be filled in by the ageing users themselves or with the assistance of caregivers or family members, friends, etc. They might be filled in on daily, weekly or monthly bases depending on the type of users and system elements, etc., and scoreboards will be used during the testing period of the prototypes. As long as the testing will be accompanied by simultaneous system developments they will be repeated couple of times... There will be logical tests during data processing, especially for the scorecards.” (SAAM DoA)*



ANNEX II: VISUALISATION OF INSTRUMENTS USED PER INVESTIGATIVE PERSPECTIVE AND DOMAIN

INSTRUMENTS / PERSPECTIVE OR DOMAIN	Interviews	Standardised scales	Field tests	Diary	SAAM data
Technology acceptance and UX	Semi-structured	Technology Acceptance Questionnaire & User Experience Questionnaire (UEQ)		Technology acceptance and UX diary	
Coaching and wellbeing - general	Semi-structured with PUs	OPQOL			DISTANCE
Mobility	Questions on a needs basis		Timed Up and Go Test, L-test, 6 Minute Walk Test, 30 Seconds Sit to Stand Test		AUTOMATIC DATA COLLECTION
Activity	COPM				
Sleep	Semi-structured	PSQI		Sleep diary	
Social activity	Semi-structured	LSNS			
Cognitive & Emotional	Picture description Weekly or monthly dialogue with social worker/ caregiver	MoCA 1-5 score for mood detection		Weekly/daily report about how you feel	



General guidelines - you as a recruiter:

- Create a SAAM folder where you will keep SAAM material, empty and filled-in informed consent and withdrawal of consent forms. Make sure you keep this folder in a **secure place, possibly locked during the time in which you are not actively using it.**
- We will conduct two types of pilots during the pilot studies - long term pilots (LTPs) and single sessions (SSs). Our recruitment priority are the long-term participants, including due to time constraints.
- There is one **List of participants** . You will use it in your daily work during the recruitment. Include information both on the approached and already recruited participants. Keep the list up to date. Communicate new entries to your local SAAM contact point.

General guidelines - when you meet potential pilot participants:

- **NB: Under no circumstances should you exercise any pressure for people to participate in the pilot studies of SAAM.**
- **Explain that you are their local contact person** and they can contact you if they have any question before, during and after the pilots.
- Provide potential participants with **an information sheet and informed consent form for them to keep.**
- If a potential participant is unable to write, but they are ready to consent, **ensure that there is a fellow recruiter, a researcher or a community representative to act as a witness** when the potential participant gives their consent. They will be the witness in case the potential participant agrees to participate.
- Always provide explanations of what the research entails **as clearly and concisely as possible in lay terms.**
- Give the potential PUs and SUs **two days** between informing them about the piloting and collecting their informed consent.
- At the time of the recruitment, provide information about the possibility to withdraw at any time from participating in the pilots. **Explain the withdrawal procedure in details only if asked.**

Withdrawal of consent:

- The procedure for withdrawal of consent is the following:

If you decide to withdraw from the study, please complete and sign the withdrawal of consent form provided by the local contact person. I will assist you in completing it. After you complete it, please give it to me and I have the obligation to send it to the local SAAM partner - as a picture in an email or via post/courier with return receipt by giving it to me, you will have withdrawn from the study on the date you have signed the withdrawal of consent form. We will confirm that your withdrawal has been successful. From the moment you withdraw from the SAAM project, your personal data will not be used in any further phase of the project. However, documents that have already been published or are parts of the study that have been finished before your withdrawal will not be altered.

WITHDRAWAL OF CONSENT FORM
<p><input type="checkbox"/> I want to withdraw from the SAAM system piloting.</p> <p><input type="checkbox"/> I want to terminate the processing of my personal data.</p> <p>Name and surname of the participant:</p> <p>.....</p> <p>Signature of the participant:</p> <p>Date:</p>

- If pilot participants request who have already consented request it, provide them with the withdrawal of consent form and information on the procedure of withdrawal. Give them time to think over their decision. Support them in filling up the form. Keep the form in your SAAM folder.
- Keep the SAAM recruitment and data collection organigram in mind when in need of the right person or the right information in the SAAM setting.

Communication with the potential participants – PUs:

- Build trust between yourself and the seniors and trust around the topic of the SAAM project and the pilot studies - present project and pilot studies information calmly, confidently and coherently.
 - Allow questions and comments from the seniors at all times during the recruitment.
 - If you are unsure of the answer to a question, reassure the senior that you will seek the answer from other SAAM colleagues and will let them know. Write down the question, contact your local SAAM contact point and discuss the question with them.
 - Be sure to follow up with SAAM staff on the answers to the questions posed by seniors. Be sure to present the answers to the seniors when you obtain them, but no later than when you contact them to ask them on their final decision.
- Respect seniors' personal spaces - ask the senior explicitly where they will feel most comfortable to speak with you
- Be flexible and respect seniors' schedules - contact them briefly at least a couple of days in advance to your planned recruitment session. Ask them about their availability during your preferred week and let them choose the date and time.
- Repeat important details from the recruitment and the piloting phases so that seniors have more cues to remember
- If potential participants are unsure what SAAM is after they read the information sheet, provide them with analogies to which they may relate more easily. For example, link the SAAM system profile setup with creating a profile in Facebook. If they ask about why the hardware is smart and what are the other options for interactions with SAAM, give the example of Google voice or lighting up the bulbs with clapping hands.
- Be mindful of the following:
 - Some seniors may be prone to wander off-topic while you recruit them. Take the time to listen to them and gently guide them back towards the topic of the conversation.
 - Modify your conversation style depending on the seniors who is listening to you - e.g. speak more slowly, speak loudly, or spend more time on explanations.
 - Observe the seniors for signs of physical and mental fatigue. If you notice such, confirm with the senior whether they want to continue with your talk. If needed, reschedule your recruitment session.
- If the senior agrees to participate, they should sign their informed consent form twice - one for them to keep and one for you to keep. Arrange a range of dates within the month of October when the senior will be available for installation.
 - Follow up on their availability a week before their first preferred date. If possible, set the date for installation. Communicate the set date with your local SAAM contact point.



Communication with the potential participants – SUs:

- Potential participants in the role of secondary users (SUs) are part of a PU’s social circle. They may be relatives, caregivers, friends, neighbours or others depending on each individual PU case.
- Build trust between yourself and the SUs and trust around the topic of the SAAM project and the pilot studies - present project and pilot studies information calmly, confidently and coherently.
 - Allow questions and comments from the SUs at all times during the recruitment.
 - If you are unsure of the answer to a question, reassure the SU that you will seek the answer from other SAAM colleagues and will let them know. Write down the question, contact your local SAAM contact point and discuss the question with them.
 - Be sure to follow up with SAAM staff on the answers to the questions posed. Be sure to present the answers to the SUs when you obtain them, but no later than when you contact them to ask them on their final decision.
- Respect their personal spaces - ask the SU explicitly where they will feel most comfortable to speak with you.
- Be flexible and respect SUs’ schedules - contact them briefly at least a couple of days in advance to your planned recruitment session. Ask them about their availability during your preferred week and let them choose the date and time.
- If potential participants are unsure what SAAM is after they read the information sheet, provide them with analogies to which they may relate more easily. For example, link the SAAM system profile setup with creating a profile in Facebook. If they ask about why the hardware is smart and what are the other options for interactions with SAAM, give the example of Google voice or lighting up the bulbs with clapping hands.
- If the SU agrees to participate, they should sign their informed consent form twice - one for them to keep and one for you to keep.

A. SAAM devices

These devices are provided to PUs by the SAAM project

1 x Edge Gateway (eGW)

1 x Power Measurement and Control device (PMC)

3 x UWB localization sensor (UWB)

1 x ambient sensors case (Matrix Creator)

Up to 3 x MicroHub sensing devices (on wristband, pocket and/or belt depending on piloted base domains and PU preferences)

1 x tablet

B. Other devices - PU's own devices

1 x Android smartphone - PUs can also use their own Android smartphone if they have one

C. SAAM application

Installed on tablet (and possibly Android smartphone) for each PU

ANNEX V: LIST OF DEVICES FOR SUs

A. SAAM devices - no specific SAAM devices will be provided to SU, except for an Android smartphone if the SU has no Android smartphone, PC or laptop.

B. Other devices - SU's own devices

PC or laptop

Android smartphone

C. SAAM application

Installed on PC and/or laptop and/or possibly Android smartphone for each PU



ANNEX VI: SAAM INSTALLATION MANUAL (CURRENT VERSION)

Introduction

The document includes basic information regarding SAAM device for baseline deployment. In particular, the high level description of each device is given with its photos, placing, mounting information, powering, connections, etc. It meant as a document which would help piloting partners when recruiting end users.

SAAM system hardware

In the following the user side SAAM devices chosen for the baseline piloting set are described from the perspective of the hardware installation and design.

WiFi router

In the SAAM user side infrastructure the WiFi router has a role of providing Internet access for the edge gateway and sensing devices. There are no particular requirements for the WiFi router and any off-the-shelf Wi-Fi router is suitable.

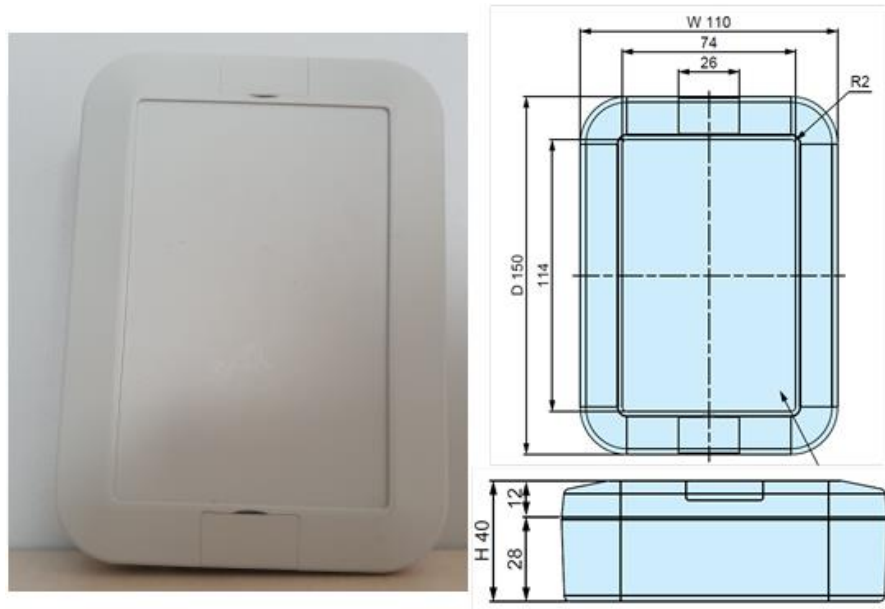
It will be connected to the WAN/4G modem by Ethernet cable. Its location should be selected based on the position of the modem and wireless coverage for providing WiFi connectivity to the eGW, PMC and RPi based sensing devices. Preferably, it should be placed by the WAN modem with no additional mounting efforts (drilling...).



WiFi router (symbolic picture)

Edge gateway (eGW)

eGW is the central SAAM component in user side infrastructure, on one side serving as an access point for various sensing devices and on the other side providing infrastructure connectivity to the remote SAAM infrastructure through the WiFi router using WiFi or Ethernet. The device can be powered over Ethernet (PoE), connected to the mains 110 V – 230 V AC or powered by 12 V DC.



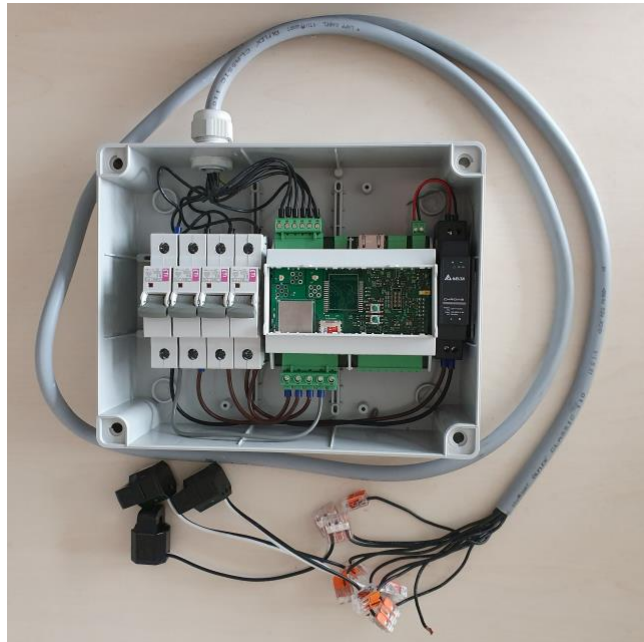
Edge gateway (eGW) and enclosure dimensions

eGW and its dimensions (15 cm x 11 cm x 4 cm) are depicted above. It will be mounted on the wall (by tape or screws) or put on the shelf at the appropriate height which will be determined mainly by the included localization sensor (to be defined). Preferably, it will be powered by 12 V DC adapter plugged in a wall outlet (if needed or possible socket-on-socket solution will be used).

Power Measurement and Control Device (PMC)

The role of PMC device, below, in SAAM is to unobtrusively monitor the operation of electricity powered devices and appliances in user's home and by using advanced load disaggregation algorithms provide additional context information about user's presence and activities, habits, patterns, and deviations. This contextual information will be fed to the SAAM platform to support creation of better informed coaching actions.

PMC device needs to be installed next to the energy meter, so that it can connect with its measurement interfaces to the power line. It will be equipped with a WiFi module and will connect to the eGW via local WiFi router.



Power measurement and control device (PMC) in the installation box (240x190x112)

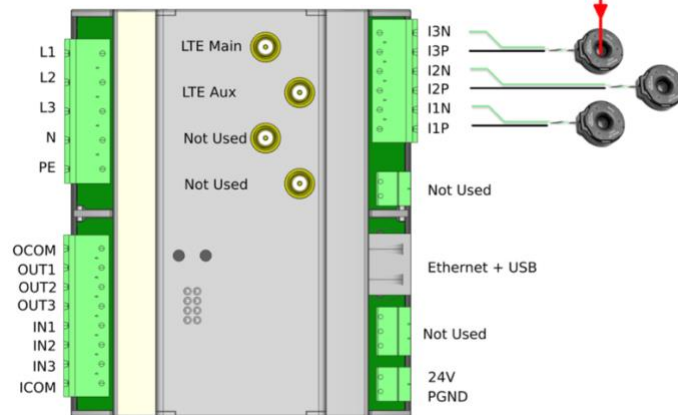


Installed PMC

PMC device has several connectors providing connectivity for the power grid monitoring, controlling the connected devices, communication interfaces and power supply interface (see below).

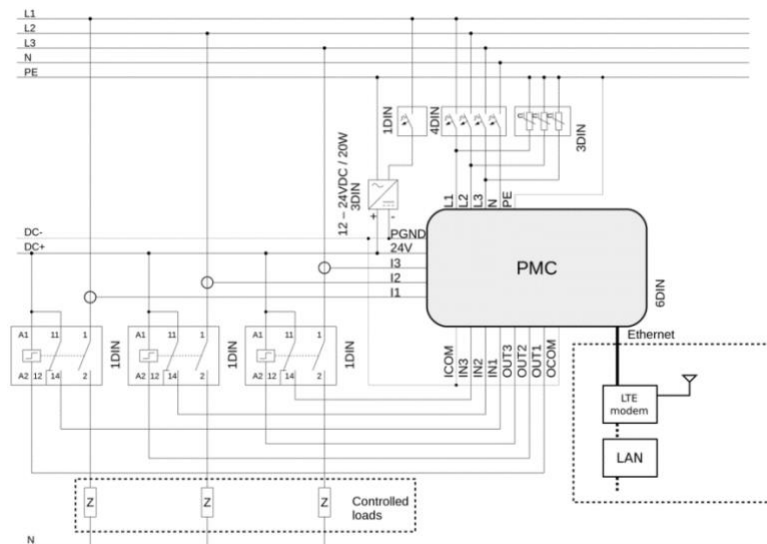
Power grid monitoring interface consists of two connectors. The first connector denoted by L1, L2, L3, N, and PE signs represents the voltage interface for the power grid monitoring. The second connectors denoted by I3N, I3P, I2N, I2P, I1N, and I1P serves as a power grid current measurement input. Three current measurement coils have to be connected to the input for each phase, respectively.

Device control interface connector denoted by OCOM, OUT1, OUT2, OUT3, IN1, IN2, IN3, and ICOM holds three digital input and three digital output ports to control and sense three consumer devices or more generally three supply lines.

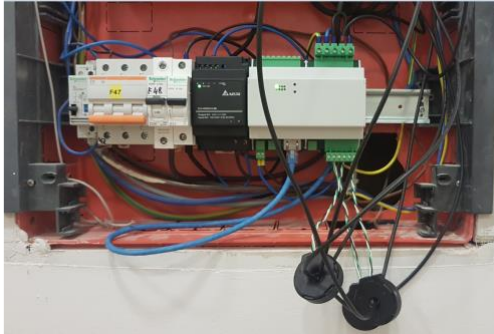


PMC connectors' layout

The PMC device has to be installed in a fuse box. The wiring and the test setup at JSI premise are shown below. In the installation at the JSI an additional black box for powering the PMC can be denoted.



PMC fuse box wiring



Deployment at JSI – PMC and power supply (black box)

Additional detailed step-by-step mounting procedure (if possible also video) will be provided. Since the procedure for correct installation of the PMC is very demanding and complex, further information regarding the fuse boxes at chosen piloting sides should be gathered (photos of the fuse box at each selected location, number of fuses, number of phases).

UWB localization sensor

UWB localization sensors in SAAM are using pulse UWB radio DW1000 capable of communicating according to IEEE 802.15.4-2011 UWB standard. For the piloting, each apartment is planned to be equipped with three UWB sensors. The master UWB node will be part of the eGW, directly connected to the main eGW board as depicted in **Error! Reference source not found.**

eGW with UWB localization sensor

Through the master UWB node eGW will communicate with two additional slave UWB nodes via UWB radio. Depends on the mounting heights of the UWB sensor and the height of the wall outlet two solutions are planned. In the first solution slave UWB nodes will have socket-on-socket type of enclosure as indicatively shown below, so as to support easy deployment and powering of the node with embedded power supply while the second solution would be implemented in a small housing with the external 12V power adapter plugged in a wall outlet (if needed or possible socket-on-socket solution will be used). It

would be mounted on the wall or furniture (tapped or screwed) at the appropriate size defined by localization solution.



UWB transceiver for indoor localization

Raspberry Pi based ambient sensing device (RPI-AS)

Additional contextual information will be provisioned by RPI-AS including a selection of sensors of temperature, acoustic/noise sensors, luminance sensors, humidity sensors, barometric pressure sensors, etc. Recording and advanced processing of audio signals can be used as a rich data source on its own, to enrich the context of other sensors and as a communication interface with the system.

The RPI-AS device will be built of commercial RPi Zero or RPi 3+ platforms and different HATs. Dimensions of the device housing, depicted below are 7cm x 9.6cm x 2.5cm (this is just an example, the final solution is not chosen yet). It will be mounted on the wall or furniture in main living area by specialized double-sided tape or screwed. It will be powered by 12V power adapter (if needed or possible socket-on-socket solution will be used).

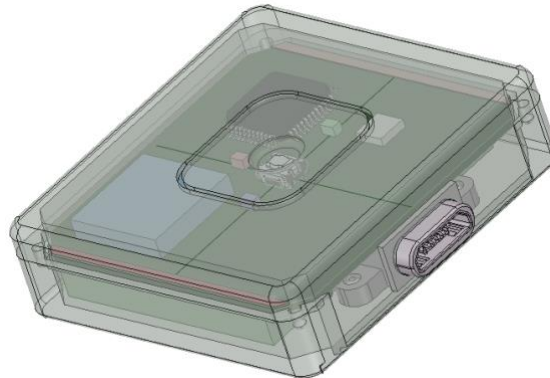


RPi ambient sensing device

MicroHub based devices

The MicroHub, microcontroller based platform with a set of embedded or externally connected sensors and actuators, is in SAAM used in a form of wearable devices (wristbands, clipped to belt or placed inside a pocket) and embedded in a mattress as a sleep sensing device (simple mechanical docking solution). The wearable version is battery powered and charged via micro USB connector while the fixed one will be connected to a power outlet. Connectivity towards the eGW is provided via Bluetooth v4.2.

The device of approximate size of 35mm x 35mm x 10mm is shown below.



MicroHub for bracelet/wristband application

Mounting remarks

It must be noted that drilling the holes and mounting the equipment by screws will be avoided to the larger extend. Also, the blockade of the wall outlet in the cases where the number is critical low will be avoided by using socket-on-socket solutions.

Adapted Technology Acceptance Questionnaire by Steinke

Items	SAAM- Bracelet	SAAM- Cylinder	SAAM- App	SAAM- System
1. I think it would confuse me to use SAAM-X.	X	X	X	X
2. I think I would often make errors when using SAAM-X.				
3. I think the handling of SAAM-X is frustrating.				
4. I think I would often need the manual when using SAAM-X.				
5. I think interacting with SAAM-X requires a lot of my mental effort.				
6. I think I would find it cumbersome to use SAAM-X.				
7. Overall, I think that SAAM-X would be easy to use.				
8. SAAM-X improves the quality of living in my own household.	X	X	X	X
9. I would find it convenient to be supported by SAAM-X in my home environment.				
10. SAAM-X supports living in my own household.				
11. SAAM-X allows me to live longer in my own household than I would otherwise be able to.				
12. The possession of SAAM-X increases my reputation in my environment.				
13. SAAM-X makes it easier to extend living in my own household.				
14. Overall, I would consider having SAAM-X in my own household as useful.				
15. SAAM-X appears to be reliable.	X	X	X	X
16. SAAM-X appears to be precise.				
17. SAAM-X appears to be safe.				
18. SAAM-X appears to be honest.				
19. I think SAAM-X will work correctly.				
20. SAAM-X shows reliability for me.				

Items	SAAM- Bracelet	SAAM- Cylinder	SAAM- App	SAAM- System
21. SAAM-X would appear deceptive to me.	X	X	X	X
22. I would trust that SAAM-X provides security to me.				
23. I would be wary of SAAM-X.				
24. I would rely in SAAM-X.				
25. I am suspicious of the intentions, actions or consequences of SAAM-X.				
26. The activities of SAAM-X will have a harmful or injurious outcome.				
27. I trust in SAAM-X.				
28. It is probably that I would use SAAM-X.	X	X	X	X
29. I would at least try to use SAAM-X.				
30. As soon as the opportunity arises, I would use SAAM-X.				
31. I inform myself about electronic devices even if I do not have any buying intention.				
32. I love to have new electronic devices.				
33. I am excited when a new electronic device enters the market.				
34. I like to go to dealers specializing in electronic devices.				
35. I have fun trying an electronic device.				
36. I would feel secure sending sensitive information across SAAM-X				X
37. SAAM-X is a secure means through which to send sensitive information				
38. I would feel totally safe providing sensitive information about myself over SAAM-X				
39. Overall, SAAM-X is a safe place to transmit sensitive information				
40. Overall, SAAM-X provides an acceptable level of privacy.				X
41. SAAM-X ensures my privacy very well.				
42. I am fully satisfied with how SAAM-X addressed my privacy issues.				
43. Every time I use SAAM-X, I feel that my privacy is fully protected.				
44. SAAM-X addresses my privacy concerns in a very professional manner.				
45. Every time I interact with SAAM-X, I feel that my privacy is invaded.				



Items	SAAM- Bracelet	SAAM- Cylinder	SAAM- App	SAAM- System
Self-reported obtrusiveness for participants: To what degree . . .	x	x	x	x
46. . . . were you generally aware of SAAM-X?				
47. . . . did you feel uncomfortable having SAAM-X?				
48. . . . did SAAM-X impede you in your daily activities?				
49. . . . did SAAM-X change your actual behavior?				
50. . . . did SAAM-X influence your way of talking?				
Self-reported obtrusiveness for bystanders: To what degree . . .				
51. . . . were people around you aware of SAAM-X?				
52. . . . did you talk to people around you about SAAM-X?				
53. . . . did SAAM-X influence the behavior of people around you?				
54. Annoying / enjoyable	x	x	x	x
55. Good / bad				
56. Unlikable / pleasing				
57. Unpleasant / pleasant				
58. Attractive / unattractive				
59. Friendly / unfriendly				
60. Not understandable / understandable	x	x	x	x
61. Easy to learn / difficult to learn				
62. Complicated / easy				
63. Clear / confusing				
64. Fast / slow	x	x	x	x
65. Inefficient / efficient				
66. Impractical / practical				
67. Organized / cluttered				
68. Unpredictable / predictable	x	x	x	x
69. Obstructive / supportive				
70. Secure / not secure				
71. Meets expectations / does not meet expectations				
72. Valuable / inferior	x	x	x	x
73. Boring / exciting				
74. Not interesting / interesting				
75. Motivating / demotivating				
76. Creative / dull	x	x	x	x
77. Inventive / conventional				
78. Usual / leading edge				
79. Conservative / innovative				



Pre-study interview guideline

- 1) What are your expectations from SAAM?
- 2) What are your goals you want to achieve with SAAM?
- 3) What are your concerns about using SAAM?
- 4) Do you feel that you will need support in living autonomously/independently in the next years?
- 5) What is your first impression from the devices installed?
- 6) Have you told other people about participating in the study? Why/ why not? Who? What did you say?

Post-study interview guideline

- 1) What has been the most positive/negative experience that you have had with SAAM? *Interviewer guidelines: clarify to the interviewee that these are meant for the SAAM technology (devices and software) and not coaching.*
- 2) Were your expectations met? In what way? *Interviewer guidelines: clarify to the interviewee that these are meant for the SAAM technology (devices and software) and not coaching.*
- 3) Did you monitor your data as provided by the system in the application (tablet, smartphone, web)? What did you understand from the data and how did you use it?
- 4) With respect to the coaching support offered by SAAM, was there a particular type of interaction that you found most efficient or adequate? Was there a coaching modality you preferred (audio, visual, text, etc.)? Why?
- 5) Did you have any negative experiences with the system from the point of view of your interaction with it (difficulty in using the system, modalities used –sound, visual, text, etc.)?
- 6) Do you have any suggestion for improving the system?
- 7) Do you feel comfortable now with using SAAM?
- 8) How does SAAM compare with other technology or AAL technology experiences (if that is the case)?
- 9) Did you prefer messages from your (secondary user) or from SAAM? Why?
- 10) Did others in your social circle notice that you were using SAAM? What questions did you receive about the system? Did that affect in any way your use of the system?
- 11) What is your attitude towards the SAAM-X*?
- 12) Would you use SAAM-X *in your daily life?

*SAAM-X stands for SAAM system element which shall be assessed with the user (sensors, power meter, voice tracking and recognition system, etc.)



Topics to explore during single sessions

- 1) Explore the current needs of the interviewee/s with respect to care for seniors - e.g. technological, personnel, financial, etc.
- 2) Explore attitudes, reactions, perceptions, impressions towards SAAM. If appropriate, nudge interviewees to describe SAAM in a haiku style (in three lines, with as few as 15 words. First line describing where it happens or to whom, second line describing what is happening, third line describing when it occurs,).
- 3) Explore suggestions and ideas about future system design.
- 4) Explore system drawbacks (imaginary or experienced).
- 5) When the discussion is with interviewee/s who have had real interactions with SAAM, explore their process of adaptation, incl. difficulties in using the system.

Stakeholders feedback gathering activities: Key informant interview, focus group, community interview guideline

Participants in key informant interviews, focus groups, and community interviews will be contacted and invited by using:

- Publicly available email addresses;
- Field visits;
- Seniors' associations;
- Newspapers and electronic media;
- Official invitations to institutions/organisations;
- SAAM Consortium partners.

1. Key informant interviews and community interviews

Key informant and community opinions will be collected through interviews. The purpose of the interviews is to acquire *a systemic view* of the environment in which SAAM is operating.

General interviewer guidelines:

Allocate suitable amount of time for the interview, which is **up to 1h (without the introductory stage)**.

If possible, make the interviewee/s familiar with the procedures of the interview beforehand in recruitment process, and allow them to decide whether they wish to participate. Prepare your set of materials (guidelines, audio recorder, and others) accordingly.



Make sure you have obtained the informed consent of the interviewee/s (i.e. signed Informed consent form) before proceeding with the interview.

Your responsibility as an interviewer is to obtain truthful information. You have the freedom to formulate the questions in the guideline in the form appropriate to the situation. These guidelines serve as a checklist of the information we would like to gather.

Explain the project, the pilot studies and its desired outcome before the interview. Explain the process of the interview and make sure that all of their questions they may have are answered truthfully and in an understandable manner.

- Make sure that the informed consent is read, understood and signed before you start the interview.
- Depending on the interviewee/s and their expertise, focus on the topics they have experience with.
- Do not ask leading questions.
- Try to avoid yes or no questions.
- Let them elaborate on their answers. Do not push or stop them!
- Stimulate an answer in changing a question a little bit, if the answer you got was not useful, or when the interviewee did not understand the question the first time.
- Be polite. Be respectful of their time and space.

Do not focus on taking extensive notes of the interview but focus on keeping up a positive atmosphere for talking, to be responsive and empathic. If an audio recording is allowed by the interviewee, note down meta perceptions (facial expressions, gestures, underlying feelings), which would not necessarily be extractable from the audio recordings. Take notes that are more detailed if there is no audio recording.

Note down if a comment of the interviewee/s strikes you as especially important to the project or, for example, contradictory to what was said before.

2. Focus groups

The attempt will be to have separate focus groups for the various types of participants, in order to be able to maintain the focus of discussions better. Nevertheless, it may be possible to form focus groups for various types of the above participants.

Materials needed for recruitment:

Easy-to-comprehend project description including benefits of the project for the seniors and the other stakeholders (project information sheet) and informed consent form.



General moderator guidelines

Allocate suitable amount of time for the focus group, **up to 1.5 hours (without the introductory stage)**. If possible, make the participants familiar with the procedures of the focus groups beforehand in recruitment process, and allow them to decide whether they wish to participate. Make sure that the informed consent is read, understood and signed. Explain the project and the pilot studies, and their desired outcome.

Prepare your set of materials (project information sheet, informed consent form, guidelines, audio recorder, and others) accordingly.

Make sure you have obtained the informed consent of the focus group participants (i.e. signed Informed consent form) before proceeding with the focus group.

As a moderator, your responsibility is to obtain relevant information. You have the freedom to lead the discussion and use the questions in the guidelines at your discretion. These guidelines serve as a checklist of the information we would like to gather. These guidelines ensure all topics are covered but are not to be used rigidly, like a checklist or questionnaire. Rather the purpose of the group setting is to encourage participants to explore topics in depth, to reflect, to raise their own issues, etc.

Questions should be:

- Short and to the point
- Focused on one dimension each
- Unambiguously worded
- Open-ended or sentence completion types
- Non-threatening or embarrassing
- Worded in a way that they cannot be answered with a simple “yes” or “no” answer (use “what”, “why” and “how” instead)

Other considerations:

Consider appropriate probes (questions to elicit information that is more specific).

Consider ways to engage all participants:

- “Are there other ways of looking at this?”
- “Who else has an idea?”
- “Let me see if I'm understanding you...(paraphrase a comment)
- “Am I getting this right?”

If there is an assistant moderator, they could take notes only of notable statements, body language, etc. The recorded audio may be transcribed for later analysis.



3. Topics to explore during the key informant, community interviews and focus groups

1. Explore the current needs of the interviewee/s with respect to care for seniors - e.g. technological, personnel, financial, etc.
2. Explore attitudes, reactions, perceptions, impressions towards SAAM. If appropriate, nudge interviewees to describe SAAM in a haiku style (in three lines, with as few as 15 words. First line describing where it happens or to whom, second line describing what is happening, third line describing when it occurs).
3. Explore suggestions and ideas about future system design.
4. Explore system drawbacks (imaginary or experienced).
5. When the discussion is with interviewee/s who have had real interactions with SAAM, explore their process of adaptation, incl. difficulties in using the system.



Older People's Quality of Life Questionnaire (OPQOL)

OPQOL items coded 1-5; scoring = – reverse coding of positive items; sum sub-scales – names as marked in table headers; sum total for overall score +/-OPQOL: reverse coding of positively worded items + (5-1) so higher scores represented higher QoL.

OPQOL items:

Please indicate the extent to which you agree or disagree with each of the following statements (5-point Likert response scale: Strongly disagree, Disagree, Neither agree nor disagree, Agree Strongly agree coded 1-5 as indicated in questionnaire)

Life overall

1. I enjoy my life overall.
2. I am happy much of the time.
3. I look forward to things.
4. Life gets me down.

Health

5. I have a lot of physical energy.
6. Pain affects my well-being.
7. My health restricts me looking after myself or my home.
8. I am healthy enough to get out and about.

Social relationships/leisure and social activities

9. My family, friends or neighbours would help me if needed.
10. I would like more companionship or contact with other people.
11. I have someone who gives me love and affection.
12. I would like more people to enjoy life with.
- 12a. I have my children around which is important.

Independence, control over life, freedom

13. I am healthy enough to have my independence.
14. I have social or leisure activities/hobbies that I enjoy doing.
15. I try to stay involved with things.
16. I do paid or unpaid work or activities that give me a role in life. 14. I can please myself with what I do.
17. The cost of things compared to my pension/income restricts my life.
18. I have a lot of control over the important things in my life.
19. I have responsibilities to others that restrict my social or leisure activities.

Home and neighbourhood

20. I feel safe where I live.
21. The local shops, services and facilities are good overall.
22. I get pleasure from my home.
23. I find my neighbourhood friendly.

Psychological and emotional well-being

24. I take life as it comes and make the best of things.
25. I feel lucky compared to most people.
26. I tend to look on the bright side.
27. If my health limits social/leisure activities, then I will compensate and find something else I can do.

Financial circumstances

28. I have enough money to pay for household bills.
29. I have enough money to pay for household repairs or help needed in the house.
30. I can afford to buy what I want to.
31. I cannot afford to do things I would enjoy.

Religion/culture

32. Religion, belief or philosophy is important to my quality of life.
33. Cultural events/festivals are important to my quality of life.
34. Religious events/festivals are important to my quality of life.

Pre-study interview guidelines

1. Do you feel that you are living independently and autonomously? Why/ why not?
2. Please, define what happiness means to you.
3. Do you feel happy now? If yes, why? If no, why not?
4. When was the last time you felt happy? Why do you think you were happy then?
5. In what way do you expect SAAM coaching to help you feel happier?
6. Could you think of some goals to achieve a happier life?

Mid- and post- study interview guidelines

1. Do you feel that SAAM has improved your quality of life? Why/ why not?
2. Do you feel that SAAM has helped you to live more independently or autonomously? Why/ why not?
3. Have your habits changed? In what way? If yes, do you think SAAM has contributed to this? In what way?
4. Do you think SAAM coaching was appropriate? Why/ why not?



5. With respect to your coaching goals in SAAM, how do you feel that SAAM has supported you reaching them?
6. Please, define what happiness means to you.
7. Do you feel happy now? If yes, why? If no, why not?
8. When was the last time you felt happy? Why do you think you were happy then?
9. Do you think SAAM coaching is helping you feel happier? If yes, why? If no, why not?
10. Do you think the coaching in SAAM can be improved? If yes, in what way?
11. Did you feel more connected to your (secondary users) through SAAM? How?



MOBILITY

Timed Up and Go Test – this test is used to determine fall risk and measure the progress of balance, sit to stand, and walking. The patient starts in a seated position and stopwatch is started. The patient stands up upon therapist’s command walks 3 meters, turns around, walks back to the chair and sits down. The time stops when the patient is seated. Instructions can be found at:

[https://www.physio-pedia.com/Timed Up and Go Test \(TUG\)](https://www.physio-pedia.com/Timed_Up_and_Go_Test_(TUG))

L-test – this test is similar to the Timed Up and Go Test. It requires ambulation over 20 meters, two transfers, and three turns, and was specifically designed for people who wear prosthesis. Instructions can be found at:

[https://www.physio-pedia.com/The L test](https://www.physio-pedia.com/The_L_test)

6 Minute Walk Test - the 6 Minute Walk Test is a sub-maximal exercise test used to assess aerobic capacity and endurance. The distance covered over a time of 6 minutes is used as the outcome by which to compare changes in performance capacity. An increase in the distance walked indicates improvement in basic mobility. Instructions can be found at:

[https://www.physio-pedia.com/Six Minute Walk Test / 6 Minute Walk Test](https://www.physio-pedia.com/Six_Minute_Walk_Test_/6_Minute_Walk_Test)

30 Seconds Sit to Stand Test – the purpose is to test leg strength and endurance. The subject is instructed to sit in the middle of the chair, which is 43 cm high, and to place hands on the opposite shoulder crossed. The feet should be kept flat on the floor, the back straight, and arms against the chest. On command, the subject should rise to a full standing position, and then sit back down again. This is repeated for 30 seconds. The number of successful stand-ups is recorded and compared to normative below average scores for particular age group. If a subject is not able to stand-up without use of hands, he/she will be allowed to use hands and this will be ranked. Instructions can be found at:

[https://www.physio-pedia.com/30 Seconds Sit To Stand Test](https://www.physio-pedia.com/30_Seconds_Sit_To_Stand_Test)

ACTIVITY

THE CANADIAN OCCUPATIONAL PERFORMANCE MEASURE – found at <http://www.thecopm.ca/>

The instrument is proprietary and cannot be included in the methodology. The instrument will be purchased before the start of the measurements at the relevant pilot sites.

SLEEP

Pittsburgh Sleep Quality Index questionnaire

INSTRUCTIONS: The following questions relate to your usual sleep habits during the past month only. Your answers should indicate the most accurate reply for the majority of days and nights in the past month. Please answer all questions.

During the past month

1. How long (in minutes) has it taken you to fall asleep each night?
2. What time have you usually gotten up in the morning?
3.
 - A. How many hours of actual sleep did you get at night?
 - B. How many hours were you in bed?

5. During the past month, how often have you had trouble sleeping because you	Not during the past month (0)	Less than once a week (1)	Once or twice a week (2)	Three or more times a week (3)
A. Cannot get to sleep within 30 minutes				
B. Wake up in the middle of the night or early morning				
C. Have to get up to use the bathroom				
D. Cannot breathe comfortably				
E. Cough or snore loudly				
F. Feel too cold				
G. Feel too hot				
H. Have bad dreams				
I. Have pain				
J. Other reason (s), please describe, including how often you have had trouble sleeping because of this reason (s):				
6. During the past month, how often have you taken medicine (prescribed or "over the counter") to help you sleep?				



7. During the past month, how often have you had trouble staying awake while driving, eating meals, or engaging in social activity?				
8. During the past month, how much of a problem has it been for you to keep up enthusiasm to get things done?				
9. During the past month, how would you rate your sleep quality overall?	Very good (0)	Fairly good (1)	Fairly bad (2)	Very bad (3)

SCORING

Component 1	#9 Score	C1 _____
Component 2	#2 Score (<15min (0), 16-30min (1), 31-60 min (2), >60min (3)) + #5a Score (if sum is equal 0=0; 1-2=1; 3-4=2; 5-6=3)	C2 _____
Component 3	#4 Score (>7(0), 6-7 (1), 5-6 (2), <5 (3))	C3 _____
Component 4	(total # of hours asleep) / (total # of hours in bed) x 100 >85%=0, 75%-84%=1, 65%-74%=2, <65%=3	C4 _____
Component 5	# sum of scores 5b to 5j (0=0; 1-9=1; 10-18=2; 19-27=3)	C5 _____
Component 6	#6 Score	C6 _____
Component 7	#7 Score + #8 score (0=0; 1-2=1; 3-4=2; 5-6=3)	C7 _____

Global PSQI is the sum of the seven component scores. A total score of 5 or greater is indicative of poor sleep quality.

Waketime diary template

1. How well did you sleep last night?

Very good (0) Fairly good (1) Fairly bad (2) Very bad (3)

2. Went to bed at:

3. Minutes until fell asleep:

4. Woke at:

5. After falling asleep, woke up this many times during the night:

0 1 2 3 or more

6. Did you have trouble sleeping because:

- Cannot get to sleep within 30 min
- Wake up in the middle of the night
- Use bathroom
- Cannot breathe comfortably
- Cough or snore
- Feel too hot
- Feel too cold
- Have bad dreams



4. Please, describe what you do evening before you go to bed.
5. What are your expectations regarding sleep from SAAM?
6. What are your goals regarding sleep from SAAM?
7. What are your concerns, if any, about the SAAM system regarding sleep?

SOCIAL ACTIVITY

LUBBEN SOCIAL NETWORK SCALE – REVISED (LSNS-R)

FAMILY: Considering the people to whom you are related by birth, marriage, adoption, etc.

1. How many relatives do you see or hear from at least once a month?
0 = none 1 = one 2 = two 3 = three or four 4 = five thru eight 5 = nine or more
2. How often do you see or hear from the relative with whom you have the most contact?
0 = less than monthly 1 = monthly 2 = few times a month 3 = weekly 4 = few times a week 5 = daily
3. How many relatives do you feel at ease with that you can talk about private matters?
0 = none 1 = one 2 = two 3 = three or four 4 = five thru eight 5 = nine or more
4. How many relatives do you feel close to such that you could call on them for help?
0 = none 1 = one 2 = two 3 = three or four 4 = five thru eight 5 = nine or more
5. When one of your relatives has an important decision to make, how often do they talk to you about it?
0 = never 1 = seldom 2 = sometimes 3 = often 4 = very often 5 = always
6. How often is one of your relatives available for you to talk to when you have an important decision to make?
0 = never 1 = seldom 2 = sometimes 3 = often 4 = very often 5 = always

FRIENDSHIPS: Considering all of your friends including those who live in your neighborhood

7. How many of your friends do you see or hear from at least once a month?



0 = none 1 = one 2 = two 3 = three or four 4 = five thru eight 5 = nine or more

8. How often do you see or hear from the friend with whom you have the most contact?

0 = less than monthly 1 = monthly 2 = few times a month 3 = weekly 4 = few times a week 5 = daily

9. How many friends do you feel at ease with that you can talk about private matters?

0 = none 1 = one 2 = two 3 = three or four 4 = five thru eight 5 = nine or more

10. How many friends do you feel close to such that you could call on them for help?

0 = none 1 = one 2 = two 3 = three or four 4 = five thru eight 5 = nine or more

11. When one of your friends has an important decision to make, how often do they talk to you about it?

0 = never 1 = seldom 2 = sometimes 3 = often 4 = very often 5 = always

12. How often is one of your friends available for you to talk to when you have an important decision to make?

0 = never 1 = seldom 2 = sometimes 3 = often 4 = very often 5 = always

Scoring: The total score is calculated by finding the equally weighted sum of all items. For the LSNS-R, the score ranges between 0 and 60, with a higher score indicating more social engagement.

Pre-study interview guideline

1. Please, describe your social relationships with family, friends, neighbours and the wider community.
2. Are you satisfied with your current social relationships? If not, why?
3. Please, describe your reasons for visiting family, friends, neighbours, someone else.
4. Please, describe your reasons for calling family, friends, neighbours, someone else.
5. Please, describe your reasons for going out together with family, friends, neighbours, someone else.
6. Please, describe who you prefer to confide with - family, friends, neighbours, someone else.
7. What are your expectations from SAAM regarding your social relationships?
8. What are your goals regarding your social life that SAAM can help you with?
9. What are your concerns, if any, about the SAAM system regarding your social relationships?



Mid- and post- study interview guideline

1. Do you feel that SAAM helped you improve quantity and/or quality of social contacts? Why/ why not?
2. What has been the most positive/negative experience that you have had with social activity coaching from SAAM?
3. Were your goals about improvement of your social activity met? If yes, in what way?
4. With respect to your social activity goals in SAAM, how do you feel that SAAM coaching has supported you reaching them?
5. With respect to the social activity coaching support offered by SAAM, was there a particular type of interaction that you found most efficient or adequate?
6. Have your habits of interacting with your social circle changed? In what way?
7. Did you prefer coaching for social activity from your SU or from SAAM? Why?
8. Did you feel more connected to your social circle through SAAM? How?

COGNITION AND EMOTION

MONTREAL COGNITIVE ASSESSMENT

Questionnaires and instructions can be found at: <https://www.mocatest.org/paper/>

SAAM Consortium obtained permission to use the test on July 18, 2019 by an Occupational Therapist/ Psychometrician, on behalf of Dr Ziad Nasreddine, Neurologist, MoCA© Copyright Owner. Permission can be provided upon request.

PICTURE DESCRIPTION

An example of a picture to be described is The Cookie Theft picture (Goodglass and Kaplan 1972)



ANNEX X: PILOTS INTERVIEW STRATEGIES

SAAM field researchers are encouraged to use the piloting strategies developed by researchers at Harvard University (Harvard University 2019) as guiding material when they conduct interviews in the field.



Annex I Questionnaire quantitative survey

Title of the Project:	Supporting Active Ageing through Multimodal coaching (SAAM)
Website:	saam2020.eu
Coordinator:	Balkan Institute for Labour and Social Policy
Leading Local Investigator:	>Name of the Local Investigator<
Institution:	>Name of the Institution<
Financed by:	European Union
Programme:	Horizon 2020 research and innovation programme http://ec.europa.eu/research/participants/portal/desktop/en/home.html
Call:	H2020-SC1-2017-CNECT-1 SC1-PM-15-2017 Personalised coaching for well-being and care of people as they age
Project Start - End:	01.10.2017 - 30.09.2020

Demography

1. How old are you? (in years):
2. What is your gender?
 - a. Male
 - b. Female
3. What is your permanent country of residence?
4. What is your nationality?
5. What is your marital status?
 - a. Single
 - b. Married
 - c. Divorced
 - d. Widowed
 - e. Domestic partnership (living together with a partner but not married)
6. Where do you reside?
 - a. At home / apartment
 - b. At an institution (e.g., residential care home)
 - c. At home / apartment, but I visit care center frequently
7. Select what most accurately describes your living situation:
 - a. I own my apartment/house



- b. I rent my apartment/house
 - c. My apartment/house is owned by a family member
8. Which of the following best describes the area you live in?
- a. Rural / Village / Countryside
 - b. Suburban / Town
 - c. Urban / City (district capital)
 - d. Other
9. How many people live in your household?
- a. 1
 - b. 2
 - c. >2
10. What is your working situation?
- a. Retired
 - b. Unemployed
 - c. Voluntary work
 - d. Part-time employed
 - e. Full-time employed
11. If c, d or e in question 10, what is that you do?
-
12. What is the level of your education?
- a. Primary
 - b. Secondary
 - c. Tertiary

Social activity

13. Social relations are important to me:
- a. Strongly disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Strongly agree
14. How often do you meet/contact your friends and relatives?

	Not at all	Several times a year	Once a month	Several times a month	Once a week	Several times a week	Daily
I meet my relatives in person							
I contact my relatives by telephone / e-							



mail / mail / etc.							
I meet my friends in person							
I contact my friends by telephone / e-mail / mail / etc.							

15. How often do you attend?

	Not at all	Several times a year	Once a month	Several times a month	At least once a week
Religious services					
Senior centre activities (clubs, organised trips, etc.)					
Celebrations (birthdays, anniversaries, etc.)					
Cultural events (concerts, theatre, cinema, etc.)					
Other group activities (write what kind)					

16. Overall are you satisfied with your social life?

- Very dissatisfied
- Dissatisfied
- Neutral
- Satisfied
- Very satisfied

Physical state

17. What chronic health issues do you have? (can select multiple)

- None
- Amputation
- Arthritis
- Diabetes



- e. Chronic kidney disease
- f. Obstructive lung disease
- g. High blood pressure
- h. High cholesterol
- i. Coronary heart disease
- j. Heart failure
- k. Heart attack
- l. Stroke
- m. Depression
- n. Alzheimer's Disease or dementia
- o. Other

18. Do you have vision issues?
- a. No
 - b. Minor
 - c. Minor even with glasses or lenses
 - d. Major
 - e. Major even with glasses or lenses
 - f. Complete vision loss

19. Do you have hearing issues?
- a. No
 - b. Minor
 - c. Minor with aid
 - d. Major
 - e. Major with aid
 - f. Complete hearing loss

20. How often do you see a doctor?
- a. Not at all
 - b. Several times a year
 - c. Once a month
 - d. Several times a month
 - e. At least once a week

Functional activity

21. Indicate what describes you the most accurately
- a. I walk by myself
 - b. I walk with a cane / walker
 - c. I walk with support of others
 - d. I move on a wheelchair by myself
 - e. I move on a wheelchair propelled by others
22. Indicate what best describes your overall ability to perform activities like laying down and getting up, sitting down and standing up, getting into and out of the bathtub or shower, etc.:
- a. I do it by myself
 - b. I use an object to support myself



c. I require support of others to do so

23. How often do you require assistance in these areas?

	No assistance needed	Less than once a week	Once a week	Several times a week	Daily
Personal hygiene					
Grooming and dressing					
Shopping					
Food preparation					
Housekeeping (cleaning, laundry, gardening)					
Transportation (being driven, using public transport)					
Taking medication					
Paying bills, filing documents, etc.					

24. If assisted, then by whom? (can select multiple):

- a. Professional caregiver
- b. Family member
- c. Friend or acquaintance
- d. Neighbour
- e. Other.....

25. Do you care for a pet?

- a. Yes
 - i. If yes, what kind?
- b. No



Technology

26. What is your attitude towards technology (technology in a sense of: mobile phones, tablets, computers, audio recorders, cameras, wearable devices, etc.)?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Technology is my friend					
I enjoy learning new technologies and hearing about new technologies					
People expect me to know about technology and I don't want to let them down					
I usually succeed in learning technology					
I relate well to technology and machines					
I am comfortable learning new technology					
I know how to deal with technological malfunctions or problems					
Solving a technical problem seems like fun challenge					
I find technology easy to learn					
I feel as up-to-date on technology as my peers					

27. Do you own:

a. Landline telephone

i. Yes

1. How often do you use it?

- a. Not at all
- b. Less than once a week
- c. Once a week
- d. Several times a week
- e. Daily

ii. No

1. Would you like to have one?

- a. Yes
- b. No

iii. I don't know it



- b. Basic mobile phone
 - i. Yes
 - 1. How often do you use it?
 - a. Not at all
 - b. Less than once a week
 - c. Once a week
 - d. Several times a week
 - e. Daily
 - ii. No
 - 1. Would you like to have one?
 - a. Yes
 - b. No
 - iii. I don't know it
- c. Smartphone
 - i. Yes
 - 1. How often do you use it?
 - a. Not at all
 - b. Less than once a week
 - c. Once a week
 - d. Several times a week
 - e. Daily
 - ii. No
 - 1. Would you like to have one?
 - a. Yes
 - b. No
 - iii. I don't know it
- d. Computer
 - i. Yes
 - 1. How often do you use it?
 - a. Not at all
 - b. Less than once a week
 - c. Once a week
 - d. Several times a week
 - e. Daily
 - ii. No
 - 1. Would you like to have one?
 - a. Yes
 - b. No
 - iii. I don't know it
- e. Tablet computer
 - i. Yes
 - 1. How often do you use it?
 - a. Not at all
 - b. Less than once a week
 - c. Once a week
 - d. Several times a week
 - e. Daily
 - ii. No





- 1. Would you like to have one?
 - a. Yes
 - b. No
 - iii. I don't know it
 - f. Radio
 - i. Yes
 - 1. How often do you use it?
 - a. Not at all
 - b. Less that once a week
 - c. Once a week
 - d. Several times a week
 - e. Daily
 - ii. No
 - 1. Would you like to have one?
 - a. Yes
 - b. No
 - iii. I don't know it
 - g. TV
 - i. Yes
 - 1. How often do you use it?
 - a. Not at all
 - b. Less that once a week
 - c. Once a week
 - d. Several times a week
 - e. Daily
 - ii. No
 - 1. Would you like to have one?
 - a. Yes
 - b. No
 - iii. I don't know it
 - h. Health monitor (like blood pressure monitor, blood sugar monitor, ...)
 - i. Yes
 - 1. How often do you use it?
 - a. Not at all
 - b. Less that once a week
 - c. Once a week
 - d. Several times a week
 - e. Daily
 - 2. What kind of monitor do you own?
.....
 - ii. No
 - 1. Would you like to have one?
 - a. Yes
 - b. No
 - iii. I don't know it
 - i. Activity tracker





- i. Yes
 - 1. How often do you use it?
 - a. Not at all
 - b. Less that once a week
 - c. Once a week
 - d. Several times a week
 - e. Daily
 - ii. No
 - 1. Would you like to have one?
 - a. Yes
 - b. No
 - iii. I don't know it
- j. Smart watch
- Yes
 - 1. How often do you use it?
 - a. Not at all
 - b. Less that once a week
 - c. Once a week
 - d. Several times a week
 - e. Daily
 - ii. No
 - 1. Would you like to have one?
 - a. Yes
 - b. No
 - iii. I don't know it
- k. Facebook
- Yes
 - 1. How often do you use it?
 - a. Not at all
 - b. Less that once a week
 - c. Once a week
 - d. Several times a week
 - e. Daily
 - ii. No
 - 1. Would you like to have one?
 - a. Yes
 - b. No
 - iii. I don't know it
- l. Skype / Viber / WhatsApp / Messenger
- Yes
 - 1. How often do you use it?
 - a. Not at all
 - b. Less that once a week
 - c. Once a week



- d. Several times a week
 - e. Daily
 - ii. No
 - 1. Would you like to have one?
 - a. Yes
 - b. No
 - iii. I don't know it
- m. The Internet
 - Yes
 - 1. How often do you use it?
 - a. Not at all
 - b. Less that once a week
 - c. Once a week
 - d. Several times a week
 - e. Daily
 - ii. No
 - 1. Would you like to have one?
 - a. Yes
 - b. No
 - iii. I don't know it
- n. Email
 - Yes
 - 1. How often do you use it?
 - a. Not at all
 - b. Less that once a week
 - c. Once a week
 - d. Several times a week
 - e. Daily
 - ii. No
 - 1. Would you like to have one?
 - a. Yes
 - b. No
 - iii. I don't know it



ANNEX XII: LIST OF RECRUITERS

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW						
E3						
	A	B	C	D	E	F
	No.	SAAM organisation	Operating region <i>(may be more than one)</i>	Name	Telephone	Email
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						





ANNEX XIII: LIST OF FIELD INVESTIGATORS (FOR DATA COLLECTION)

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW

D6 : [X] [✓] [fx]

	A	B	C	D	E	F
	No.	SAAM organisation	Operating region <i>(may be more than one)</i>	Name	Telephone	Email
1						
2						
3						
4						
5						
6						
7						
8						





ANNEX XIV: LIST OF PARTICIPANTS

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW Sign in

G2

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	No.	PU or SU	Name	Telephone	Address	Date of approachment	Reason for rejecting to participate (if available)	Informed consent form filled (yes or no)	Reserve (yes or no)	LTP or SS	Date for installation (complete only for LTP)	Date for installation confirmed (complete only for LTP; complete with yes or no)	Has tablet (yes or no)	Has smartphone (yes or no)	Reason for refusal (free text)	Withdrawal of consent form filled (yes or no)
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																



ANNEX XV: ISSUE IDENTIFICATION CHECKLIST

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW									
K1									
	A	B	C	D	E	F	G	H	I
	No.	Date of issue identification	Identified by <i>(name and organisation)</i>	Type of global issue <i>(hardware, software, device charge, connectivity)</i>	Type of specific issue <i>(It depends on the type of global issue, select from dropdown)</i>	Details <i>(free text)</i>	Date of escalation	If necessary - escalated to <i>(name and organisation)</i>	Resolved <i>(yes or no)</i>
1									
2									
3									
4									
5									
6									
7									
8									
9									



Project title

SAAM

Supporting Active Ageing through Multimodal
coaching

Website

www.saam2020.eu

Co-ordinator

BILSP, Bulgaria

**Local contact
person**

>Insert name of the local contact person<

**Local SAAM
partner**

>Insert name of the local SAAM partner<

Financed by

European Union

**Programme
and call**

Horizon 2020 Research and Innovation Programme
SC1-PM-15-2017

Project Start

01.10.2017

Project End

30.09.2020

i. WHO WE ARE, WHAT WE DO AND WHY WE ARE CONTACTING YOU



We are a partnership of ten organisations (caregiver organisations, research institutes, universities, and companies) implementing project **SAAM – Supporting Active Ageing through Multimodal coaching** in Austria, Bulgaria, Germany, Slovenia, and the United Kingdom. The European Union finances and oversees our project. The goal of the project is to create SAAM system to help senior Europeans remain active and live independently for as long as possible.

As a senior person, we kindly invite you to participate in the pilot testing of the SAAM system. With the pilot testing, we would like to see if the SAAM system we have developed serves the needs of seniors like yourself, if it is easy to use, and if you like it. The pilot testing will involve an installation of the SAAM system in your home. The SAAM system will monitor your daily activities and will give you suggestions if it detects a situation that is unusual for you or if you have set goals, you want to achieve for yourself when we install the system. We take our work and the participants' safety and privacy very seriously, so we ensure compliance with the law at all times.

This document is an information sheet for participating in the pilot testing. In it, you will find information about what the SAAM system is and what it will do. There is an informed consent form accompanying the information sheet, which you need to fill in if you agree to participate in the piloting. Please, take your time to read these two documents carefully. They will help you decide whether you want to participate in the piloting or not. You can keep them.

Participation and data processing are freewill, voluntary, and free of charge. Your participation does not bind you with any obligations towards us and you can stop with it at any time, without giving us any explanation on the reasons and without any consequence for you. There will be no consequences if you decide to decline our invitation to participate either. We will cover the costs directly linked to the installation of the SAAM system in your home.

If you want, feel free to discuss your potential participation with a close person. Please, ask us any questions you may have – now or after. At the end of this information sheet, you will find several ways to contact us.

If you decide to participate in the pilot testing, **we will safeguard your interests above any other and to the best of our abilities.**

ii. HOW WE USE YOUR DATA

During the pilot testing we will collect and analyse data. Some of this data is personal, which means that from it your identity might be revealed. We will protect your personal data at all times, since we have made the SAAM system as secure as possible.

We will be collecting data via the SAAM system and through some of our colleagues regularly visiting you. This means we will collect and analyse your data automatically and manually. We will analyse your data in two ways: individually, to improve the suggestions we offer to you or together



with other people's data, who have agreed to participate in the pilot testing, to analyse if the system serves its purposes.

If you do not grant your consent for participation in the pilot testing or for personal data processing, we will not be able to include you in the pilot testing.

Our SAAM project ends at the end of September 2020. If you decide to take part in the pilot testing, we will keep and use your personal data until the project ends based on your written consent. The SAAM partners and institutions that have the legal right to access your data may exchange it. We may exchange very limited amount of personal data with third parties in order to provide you with a larger amount of services within SAAM, such as voice recognition. However, you are in control of this exchange and we will specifically ask you whether you agree to third-party exchange of data at the time when we set up your profile in the SAAM system.

We may further use the data we collect during your participation for scientific purposes after the end of the project. However, we will only do that after removing all parts of the data, based on which your identity may be revealed. After we do this, the data will no longer be personal.

You can withdraw from the pilot testing at any time by contacting your local contact person and letting them know you want to withdraw. They will explain how you can do that.

If you decide to take part in the pilot testing, you have the following rights at all times:

- the right to request access to your personal data
- the right to ask BILSP to rectify any inaccuracies in your personal data
- the right to receive your personal data in an understandable and common format
- the right to have your personal data transferred to another organisation
- the right to complain to your national personal data authority
- the right to ask BILSP to erase your personal data, if you decide to withdraw from the piloting

We may publish results from the pilot testing in journals, conference articles or books. All your data is confidential and we will not report it publicly in a manner that reveals who you are. After the end of the pilot testing, we will inform you of its general findings. If you are curious about it, we will also tell you where you can find more details about any specific findings.

You can find further details on data processing in our Privacy Policy.

iii. WHAT ARE WE GOING TO DO TOGETHER WITH YOU IF YOU DECIDE TO PARTICIPATE

We invite you to participate in the pilot testing of the SAAM system up to three months from the day of the installation of the system, with a possibility to extend your participation to six months. At the beginning of your participation, a SAAM researcher will visit you to create your personal profile in the SAAM system together with you. For your profile, s/he will ask you questions like what your interests are, what your preferences are, how you want the SAAM system



to look like when you use it, and who among your closest people may be interested in using the SAAM system during the pilot testing together with you. We ask these questions in order to ensure that the SAAM system provides you with relevant suggestions. You are free to answer or not answer these questions. However, if you choose not to answer them, then the SAAM system may not work in the best way it can and it may not be as useful for you.

We will also explain to you how to use the SAAM system in your daily living and what interactions with it you can normally expect during the pilot testing. We created the SAAM system in such a way that it will require your attention as little as possible, unless you want it otherwise.

We divided the SAAM system into several main areas that we offer to you to try out during the pilot testing. In order for us to be able to receive meaningful results from the pilot testing we will monitor your participation in each of the areas via the SAAM system. What you may choose is to receive coaching in as many of the areas as you want, but it needs to be at least one. The areas are:

- **Mobility** – in this area, we want to understand together with you where your current strengths and issues are when you move your extremities and move around the house and provide you with relevant suggestions to improve your stamina and mobility or to inform professionals about your limitations so they could best support you.
- **Activity** – in this area, we want to understand together with you where your current strengths and issues are in when you perform basic daily tasks such as cooking, showering, cleaning and others and support you in your daily activities.
- **Sleep** – in this area, we want to understand together with you where your current issues are when you sleep and support you in improving your sleep quality.
- **Social activity** – in this area, we want to understand together with you whether you see your closest people as often as you need in order to feel good and support you in maintain healthy social status, based on your preferences and goals.

In each area, the SAAM system will collect information daily from the devices installed in your home. Based on it, the SAAM system will automatically decide whether your activities correspond to what you do any other day, whether there are extraordinary situations and whether there is room for improvement in your activities that may help you be more active. After, the SAAM system will check your own profile and preferences and then will give you suggestions through one of its devices installed in your home or through a person you choose. When you get its suggestions you are free to decide to follow it or not in each situation. Suggestions may come daily or more rarely for the whole period during which you participate in the pilot testing of the SAAM system.

You may also choose an additional area to pilot - **thinking and emotions** – in this area, we want to understand your levels of awareness and thinking and your emotions. In this area, you will not receive any suggestions.



iv. WHAT ARE THE RISKS WE SEE. WHAT MAY CAUSE YOU DISCOMFORT. WHAT THE BENEFITS ARE FOR YOU

We will install the SAAM system in your home. For this, our SAAM team will have to come to your home and work there for some time that will usually take up to one day. If at any point you feel uncomfortable during the installation, let our team know and they can take a break. Alternatively, we can continue with the installation in the following day.

During the installation, we may have to make some minor rearrangements in the rooms where the SAAM system devices will be placed. For example, we may need to put an extension in case there are not enough power sockets in the rooms. In such a case, we will take care of recovering the room as close to its original condition as possible, once we have installed the devices. We will also pay for any cosmetic recovery works needed.

Some of the devices have not been used before in persons' homes, so they may sometimes produce sounds, lights or text messages that are unusual. If this happens, please inform your local contact person. We will try to fix the issue from a distance. If this does not help, then your local contact person or another colleague from the SAAM project may need to visit you and to fix the problem at your home. If the issue cannot be fixed, we will replace the defective device.

As in the pilot testing of any new system, the SAAM system may not always react the way you expect it to react. This means it may give you suggestions that sometimes do not make much sense. You may ignore suggestions that don't make sense to you. Later, when your local contact person comes and asks you for such cases, please tell them about such cases.

You may also find it uncomfortable to be monitored in your daily life by the SAAM system. Should you feel uncomfortable, you are free to inform your local contact person and/or to stop your participation in the pilot testing for any period of time or indefinitely.

Several times during your participation, colleagues from the SAAM team may visit you to ask you personally, whether the SAAM system works properly and whether it genuinely assists you. During such visits we will use simple questionnaires, will ask you to perform very basic tests, and will have free conversations with you. Our colleagues will ask you several days in advance if they can visit you on a certain day. You can agree to their visit for that day or agree with them for another day, more convenient for you. As an option, we would like to make audio recordings of these visits. These visits are a necessary part of the pilot testing and will generally be once a month.

When we analyse your participation, we might discover something that we have not expected to discover about you. We call such cases 'incidental findings' and we think they are highly unlikely within the SAAM project. At this point, we would like to know if you want to be informed of such findings. You have the option to be informed or not to be informed.



There is an unlikely risk that somebody, who does not have the right to, might access your personal data. We take this risk very seriously. This is why we follow Europe's best practice and we have made the SAAM system as secure as possible.

There are several direct benefits for you if you take part in the pilot testing of the SAAM system. We will pay for your home's insurance for the duration of your participation in the pilots. We will provide to you internet for free during your participation if you don't have internet in your home.

Your participation will benefit other people besides yourself too. We hope that through the SAAM system the people closest to seniors will become more involved in the seniors' lives, thus improving their mutual relationship. In the future, we wish that the SAAM system becomes available for seniors who can enjoy it, including because of your valuable participation, which gives us the opportunity to improve the system.

v. HOW YOU CAN REACH US

For more information, questions or complaints during the pilot testing, please contact us:

Name of local contact person	each social partner organisation to fill in for themselves
Telephone of local contact person	each social partner organisation to fill in for themselves
Email of local contact person	each social partner organisation to fill in for themselves

Name of local SAAM partner	each social partner organisation to fill in for themselves
Address of local SAAM partner	each social partner organisation to fill in for themselves
Email of local SAAM partner	each social partner organisation to fill in for themselves

Name of SAAM project co-ordinator	BILSP
-----------------------------------	-------

Address of SAAM project co-ordinator	Bulgaria, 1113 Sofia, 24 Tsarigradsko shosse Blvd., entrance A, ground floor
Name of the leading investigator	Zlatka Gospodinova
Telephone	00359 2 971 25 58
Email	office@bilsp.org



Project title

SAAM

Supporting Active Ageing through Multimodal
coaching

Website

www.saam2020.eu

Co-ordinator

BILSP, Bulgaria

**Local contact
person**

>Insert name of the local contact person<

**Local SAAM
partner**

>Insert name of the local SAAM partner<

Financed by

European Union

**Programme
and call**

Horizon 2020 Research and Innovation Programme
SC1-PM-15-2017

Project Start

01.10.2017

Project End

30.09.2020



INFORMED CONSENT

Please indicate your willingness to participate in the pilot testing by signing this informed consent.

I understand the informed consent and the information sheet. I have been given a copy of both. I had the opportunity to ask any questions. My questions were answered to my satisfaction and I understand the objective of the pilot testing.

I agree to have the SAAM system installed in my home. I agree to receive suggestions from the SAAM system or my close people, who also use it. I agree for the SAAM system to monitor my participation in each of the areas of the pilot testing (mobility, activity, sleep, social activity, thinking and emotions).

I authorise the use and analysis of data from my participation in the pilot testing by the SAAM partners for the purposes indicated in the information sheet. I understand that the information from my participation will be collected automatically and manually.

Please, mark all of the following with which you agree by ticking the boxes on the left-hand side:

- I agree to receive suggestions in the mobility area.
- I agree to receive suggestions in the activity area.
- I agree to receive suggestions in the sleep area.
- I agree to receive suggestions in the social activity area.
- I agree to pilot test the thinking and emotions area.
- I agree my personal data to be processed for the purposes outlined in the information sheet.



I agree for SAAM team monthly visits to be audio recorded.

I agree to be informed of any incidental findings.

Signing this informed consent does not imply me giving up on any rights. I voluntarily accept to participate in the pilot testing of the SAAM system, carried out by the partnership of the SAAM project.

I am informed and I do understand that I am entitled to withdraw my consent to participate and for personal data processing at any time by contacting<name of LCP>..... without any restrictions, obstructions, penalties and other similar.

I am informed and I do understand that the withdrawal of the consent for processing personal data shall not affect the lawfulness of processing based on this consent before its withdrawal.

Name and surname of the participant:

.....

Signature of the participant:

Place:

Date:

Name and surname of the recruiter:

.....

Signature of the recruiter:



Project title

SAAM

Supporting Active Ageing through Multimodal
coaching

Website www.saam2020.eu

Co-ordinator BILSP, Bulgaria

**Local contact
person**

>Insert name of the local contact person<

**Local SAAM
partner**

>Insert name of the local SAAM partner<

Financed by European Union

**Programme
and call** Horizon 2020 Research and Innovation Programme
SC1-PM-15-2017

Project Start 01.10.2017

Project End 30.09.2020



i. WHO WE ARE, WHAT WE DO AND WHY WE ARE CONTACTING YOU

We are a partnership of ten organisations (caregiver organisations, research institutes, universities, and companies) implementing project **SAAM – Supporting Active Ageing through Multimodal coaching** in Austria, Bulgaria, Germany, Slovenia, and the United Kingdom. The European Union finances and oversees our project. The goal of the project is to create SAAM system to help senior Europeans remain active and live independently for as long as possible.

As a close person to a senior, we kindly invite you to participate in the pilot testing of the SAAM system. With the pilot testing, we would like to see if the SAAM system we have developed serves the needs of seniors, if it is easy to use for them and for their close people, and if you like it. For you, the pilot testing will involve you using the SAAM app. In it, you will normally receive information about your close senior's status and suggestions for actions you may take for your close senior person We take our work and the participants' safety and privacy very seriously, so we ensure compliance with the law at all times.

This document is an information sheet for participating in the pilot testing. In it, you will find information about what the SAAM system is and what it will do. There is an informed consent form accompanying the information sheet, which you need to fill in if you agree to participate in the piloting of the SAAM system.

Please, take your time to read these two documents carefully. They will help you decide whether you want to participate in the piloting or not. You can keep them.

Participation and data processing are freewill, voluntary, and free of charge. Your participation does not bind you with any obligations towards us and you can stop with it at any time, without giving us any explanation on the reasons and without any consequence for you. There will be no consequences if you decide to decline our invitation to participate either.

If you want, feel free to discuss your potential participation with a close person. Please, ask us any questions you may have – now or after. At the end of this information sheet, you will find several ways to contact us.

If you decide to participate in the pilot testing, **we will safeguard your interests above any other and to the best of our abilities.**

ii. HOW WE USE YOUR DATA

During the pilot testing, we will collect and analyse data. Some of this data is personal, which means that from it your identity may be revealed. We will protect your personal data at all times, since we have made the SAAM system as secure as possible.

We will be collecting data via the SAAM app you will be using and the SAAM system installed in the home of your close senior. This means we will collect and analyse your data automatically and manually. We will analyse your data in two ways: individually, to improve the suggestions we offer to you or together with other people's data, who have agreed to participate in the pilot testing, to analyse if the system serves its purposes.

If you do not grant your consent for participation in the pilot testing or for personal data processing, we will not be able to include you in the pilot testing.

Our SAAM project ends at the end of September 2020. If you decide to take part in the pilot testing, we will keep and use your personal data until the project ends based on your written consent. Only the SAAM partners and institutions that have the legal right to access your data may exchange it.

We may further use the data we collect during your participation for scientific purposes after the end of the project. However, we will only do that after removing all parts of the data, based on which your identity may be revealed. After we do this, the data will no longer be personal.

You can withdraw from the pilot testing at any time by contacting your local contact person and letting them know you want to withdraw. They will explain how you can do that.

If you decide to take part in the pilot testing, you have the following rights at all times:

- the right to request access to your personal data
- the right to ask BILSP to rectify any inaccuracies in your personal data
- the right to receive your personal data in an understandable and common format
- the right to have your personal data transferred to another organisation
- the right to complain to your national personal data authority
- the right to ask BILSP to erase your personal data, if you decide to withdraw from the piloting

We may publish results from the pilot testing in journals, conference articles or books. All your data is confidential and we will not report it publicly in a manner that reveals who you are. After the end of the pilot testing, we will inform you of its general findings. If you are curious about it, we will also tell you where you can find more details about any specific findings.

You can find further details on data processing in our Privacy Policy.

iii. WHAT ARE WE GOING TO DO TOGETHER WITH YOU IF YOU DECIDE TO PARTICIPATE

We invite you to participate in the pilot testing of the SAAM system up to three months from the day of the installation of the system in your close senior's home, with a possibility to extend your participation to six months. At the beginning of your participation, a SAAM researcher will meet with you to create your personal profile in the SAAM system together with you. For your profile, s/he will ask you, for example, questions about your relationship with your close senior



who is testing the SAAM system, what your preferences are, how you want the SAAM app to look like when you use it. We ask these questions in order to ensure that the SAAM system provides you with relevant suggestions. You are free to answer or not answer these questions. However, if you choose not to answer them, then the SAAM system may not work in the best way it can and it may not be as useful for you.

We will also explain to you what interactions with the SAAM system through the SAAM app you can normally expect during the pilot testing. These are normally receiving information about your close senior's status and suggestions for actions you may take for your close senior person. The suggestions will normally come up in the SAAM app when the SAAM system detects an unusual situation with your close senior. Depending on his/her choice, your senior may be testing one or more of the following areas: mobility activity, sleep, social activity, and thinking and emotions. This means you may receive suggestions in the SAAM app for one or more of these areas.

iv. WHAT ARE THE RISKS WE SEE. WHAT MAY CAUSE YOU DISCOMFORT. WHAT THE BENEFITS ARE FOR YOU

We will install the SAAM system in your close senior's home and you will get the SAAM app. We will have to meet with you to set up your profile in the SAAM app. For this, we will approach you several days in advance and set an appointment with you. If at any point during the setting up of your profile you feel inconvenient, we may reschedule it for the next day.

As in the pilot testing of any new system, the SAAM system may not always react the way you expect it to react. This means it may give you suggestions that sometimes do not make much sense. You may ignore suggestions that don't make sense to you. Later, when your local contact person comes and asks you for such cases, please tell them about such cases.

A couple of times during your participation, colleagues from the SAAM team will meet with you to ask you personally, whether the SAAM system works properly and whether it genuinely assists you and your close senior person. Our colleagues will ask you several days in advance if they can meet with you on a certain day. You can agree with them for that day or another day, more convenient for you. As an option, we would like to make audio recordings of these meetings.

There is an unlikely risk that somebody, who does not have the right to, might access your personal data. We take this risk very seriously. This is why we follow Europe's best practice and we have made the SAAM system as secure as possible.

There are no other foreseeable risk and no direct benefits for you if you take part in the pilot testing of the SAAM system. However, your participation will benefit other people besides yourself. We hope that through the SAAM system we will enable your close senior person and other seniors to remain in their homes longer, be active and live independently for as long as possible. We hope we will also contribute to improving their mutual relationship with you and other close people around them. In the future, we wish that the SAAM system became available



for seniors who can enjoy it, including because of your valuable participation, which gives us the opportunity to improve the system.

v. HOW YOU CAN REACH US

For more information, questions or complaints during the pilot testing, please contact us:

Name of local contact person	each social partner organisation to fill in for themselves
Telephone of local contact person	each social partner organisation to fill in for themselves
Email of local contact person	each social partner organisation to fill in for themselves

Name of local SAAM partner	each social partner organisation to fill in for themselves
Address of local SAAM partner	each social partner organisation to fill in for themselves
Email of local SAAM partner	each social partner organisation to fill in for themselves

Name of SAAM project co-ordinator	BILSP
Address of SAAM project co-ordinator	Bulgaria, 1113 Sofia, 24 Tsarigradsko shosse Blvd., entrance A, ground floor
Name of the leading investigator	Zlatka Gospodinova
Telephone	00359 2 971 25 58
Email	office@bilsp.org



Project title

SAAM

Supporting Active Ageing through Multimodal
coaching

Website www.saam2020.eu

Co-ordinator BILSP, Bulgaria

**Local contact
person**

>Insert name of the local contact person<

**Local SAAM
partner**

>Insert name of the local SAAM partner<

Financed by European Union

**Programme
and call** Horizon 2020 Research and Innovation Programme
SC1-PM-15-2017

Project Start 01.10.2017

Project End 30.09.2020



INFORMED CONSENT

Please indicate your willingness to participate in the pilot testing by signing this informed consent.

I understand the informed consent and the information sheet. I have been given a copy of both. I had the opportunity to ask any questions. My questions were answered to my satisfaction and I understand the objective of the pilot testing.

I agree to test the SAAM system together with a close senior of mine, which also includes receiving suggestions from the SAAM system for my close senior. I understand that the information from my participation will be collected and processed automatically and manually.

I authorise the use and analysis of data from my participation in the pilot testing by the SAAM partners for the purposes indicated in the information sheet.

Please, indicate if you agree with the statements below:

I agree for my feedback sessions with the SAAM team to be audio recorded.

I agree my personal data to be processed for the purposes of the above-mentioned pilot testing purposes and as it is described in the information sheet.

Signing this informed consent does not imply me giving up on any rights. I voluntarily accept to participate in the pilot testing of the SAAM system, carried out by the partnership of the SAAM project.

I am informed and I do understand that I am entitled to withdraw my consent to participate and for personal data processing at any time by contacting<name of LCP>..... without any restrictions, obstructions, penalties and other similar.

I am informed and I do understand that the withdrawal of the consent for processing personal data shall not affect the lawfulness of processing based on this consent before its withdrawal.



Name and surname of the participant:

.....

Signature of the participant:

Place:

Date:

Name and surname of the recruiter:

.....

Signature of the recruiter:



Project title	SAAM Supporting Active Ageing through Multimodal coaching
Website	www.saam2020.eu
Co-ordinator	BILSP, Bulgaria
Local contact person	>Insert name of the local contact person<
Local SAAM partner	>Insert name of the local SAAM partner<
Financed by	European Union
Programme and call	Horizon 2020 Research and Innovation Programme SC1-PM-15-2017
Project Start	01.10.2017
Project End	30.09.2020

i. WHO WE ARE, WHAT WE DO AND WHY WE ARE CONTACTING YOU



We are a partnership of ten organisations (caregiver organisations, research institutes, universities, and companies) implementing project **SAAM – Supporting Active Ageing through Multimodal coaching** in Austria, Bulgaria, Germany, Slovenia, and the United Kingdom. The European Union finances and oversees our project. The goal of the project is to create SAAM system to help senior Europeans remain active and live independently for as long as possible.

As a senior person or a close person to a senior, we kindly invite you to participate in the single-session pilot testing of the SAAM system. With the pilot testing, we would like to see if the SAAM system we have developed serves the needs of seniors, if it is easy to use for them and for their close people, and if you like it. For you, the pilot testing will involve you using the SAAM app and trying out its ability to propose and engage you in events that you like for up to one day or less. After, we will ask you about your opinion within a focus group discussion with other people who have participated in a single session. We take our work and the participants' safety and privacy very seriously, so we ensure compliance with the law at all times.

This document is an information sheet for participating in the pilot testing. In it, you will find information about what the SAAM system is and what it will do. There is an informed consent form accompanying the information sheet, which you need to fill in if you agree to participate in the piloting of the SAAM system.

Please, take your time to read these two documents carefully. They will help you decide whether you want to participate in the piloting or not. You can keep them.

Participation and data processing are freewill, voluntary, and free of charge. Your participation does not bind you with any obligations towards us and you can stop with it at any time, without giving us any explanation on the reasons and without any consequence for you. There will be no consequences if you decide to decline our invitation to participate either.

If you want, feel free to discuss your potential participation with a close person. Please, ask us any questions you may have – now or after. At the end of this information sheet, you will find several ways to contact us.

If you decide to participate in the pilot testing, **we will safeguard your interests above any other and to the best of our abilities.**

ii. HOW WE USE YOUR DATA

During the single-session pilot testing, we will collect and analyse data. Some of this data is personal, which means that from it your identity might be revealed. We will protect your personal data at all times, since we have made the SAAM system as secure as possible.

We will be collecting data via the SAAM app you will be using. This means we will collect and analyse your data automatically and manually. We will analyse your data together with other people's data, who have agreed to participate in the pilot testing, to analyse if the app serves its purposes.

If you do not grant your consent for participation in the pilot testing or for personal data processing, we will not be able to include you in the pilot testing.

Our SAAM project ends at the end of September 2020. If you decide to take part in the pilot testing, we will keep and use your personal data until the project ends based on your written consent. Only the SAAM partners and institutions that have the legal right to access your data may exchange it.

We may further use the data we collect during your participation for scientific purposes after the end of the project. However, we will only do that after removing all parts of the data, based on which your identity may be revealed. After we do this, the data will no longer be personal.

You can withdraw from the study at any time by contacting your local contact person and letting them know you want to withdraw. They will explain how you can do that.

If you decide to take part in the pilot testing, you have the following rights at all times:

- the right to request access to your personal data
- the right to ask BILSP to rectify any inaccuracies in your personal data
- the right to receive your personal data in an understandable and common format
- the right to have your personal data transferred to another organisation
- the right to complain to your national personal data authority
- the right to ask BILSP to erase your personal data, if you decide to withdraw from the piloting

We may publish results from the pilot testing in journals, conference articles or books. All your data is confidential and we will not report it publicly in a manner that reveals who you are. After the end of the pilot testing, we will inform you of its general findings. If you are curious about it, we will also tell you where you can find more details about any specific findings.

You can find further details on data processing in our Privacy Policy.



iii. WHAT ARE WE GOING TO DO TOGETHER WITH YOU IF YOU DECIDE TO PARTICIPATE

We invite you to participate in the pilot testing of the SAAM system up to one day or less. The single-session may be individual or in a group. At the beginning of the session, a SAAM researcher will talk with you and help you create your personal profile in the SAAM app together with you. For your profile, s/he will ask you questions like what your interests are, what your preferences are, how you want the SAAM system to look like when you use it, what your preferences are, how you want the SAAM app to look like when you use it. We ask these questions in order to ensure that the SAAM app provides you with relevant suggestions. You are free to answer or not answer these questions. However, if you choose not to answer them, then the SAAM app may not work in the best way it can and it may not be as useful for you. During the session we will ask you to interact with the SAAM app. At the end of the session, we may ask you a couple of questions like how you liked the app, what we can improve in it and if you would use it in the future.

iv. WHAT THE RISKS AND BENEFITS ARE FOR YOU

There are no major foreseeable risks and no direct benefits for you if you take part in the pilot testing of the SAAM system. However, your participation will benefit other people besides yourself. We hope that through the SAAM system we will enable seniors to remain in their homes longer, be active and live independently for as long as possible. We hope we will also contribute to improving their mutual relationship with their close people and society at large. In the future, we wish that the SAAM system became available for seniors who can enjoy it, including because of your valuable participation, which gives us the opportunity to improve the system.

As in the pilot testing of any new system, the SAAM app may not react the way you expect it to react. This means it may give you suggestions that do not make much sense.

There is an unlikely risk that somebody, who does not have the right to, might access your personal data. We take this risk very seriously. This is why we follow Europe's best practice and we have made the SAAM system as secure as possible.



v. HOW YOU CAN REACH US

For more information, questions or complaints during the pilot testing, please contact us:

Name of local contact person	each social partner organisation to fill in for themselves
Telephone of local contact person	each social partner organisation to fill in for themselves
Email of local contact person	each social partner organisation to fill in for themselves

Name of local SAAM partner	each social partner organisation to fill in for themselves
Address of local SAAM partner	each social partner organisation to fill in for themselves
Email of local SAAM partner	each social partner organisation to fill in for themselves

Name of SAAM project co-ordinator	BILSP
Address of SAAM project co-ordinator	Bulgaria, 1113 Sofia, 24 Tsarigradsko shosse Blvd., entrance A, ground floor
Name of the leading investigator	Zlatka Gospodinova
Telephone	00359 2 971 25 58
Email	office@bilsp.org

Project title

SAAM

Supporting Active Ageing through Multimodal
coaching

Website www.saam2020.eu

Co-ordinator BILSP, Bulgaria

**Local contact
person**

>Insert name of the local contact person<

**Local SAAM
partner**

>Insert name of the local SAAM partner<

Financed by European Union

**Programme
and call** Horizon 2020 Research and Innovation Programme
SC1-PM-15-2017

Project Start 01.10.2017

Project End 30.09.2020



INFORMED CONSENT

Please indicate your willingness to participate in the pilot testing (single session), by signing this informed consent.

I understand the informed consent and the information sheet. I have been given a copy of both. I had the opportunity to ask any questions. My questions were answered to my satisfaction and I understand the objective of the piloting.

- I agree to participate in the pilot testing (single session).
- I agree my personal data to be processed for the purposes of the above-mentioned pilot testing purposes and as it is described in the information sheet.

I authorise the use and analysis of data from my participation in the pilot testing by the SAAM partners for the purposes indicated above.

Signing this informed consent does not imply me giving up on any rights. I voluntarily accept to participate in the pilot testing of the SAAM system, carried out by the partnership of the SAAM project.

I am informed and I do understand that I am entitled to withdraw my consent to participate and for personal data processing at any time by contacting<name of LCP>..... without any restrictions, obstructions, penalties and other similar.

I am informed and I do understand that the withdrawal of the consent for processing personal data shall not affect the lawfulness of processing based on this consent before its withdrawal.

Name and surname of the participant:

.....

Signature of the participant:

Place:



Date:

Name and surname of the recruiter:

.....

Signature of the recruiter:



Project title

SAAM

Supporting Active Ageing through Multimodal
coaching

Website www.saam2020.eu

Co-ordinator BILSP, Bulgaria

**Local contact
person** >Insert name of the local contact person<

**Local SAAM
partner** >Insert name of the local SAAM partner<

Financed by European Union

**Programme
and call** Horizon 2020 Research and Innovation Programme
SC1-PM-15-2017

Project Start 01.10.2017

Project End 30.09.2020



i. WHO WE ARE, WHAT WE DO AND WHY WE ARE CONTACTING YOU

We are a partnership of ten organisations (caregiver organisations, research institutes, universities, and companies) implementing project **SAAM – Supporting Active Ageing through Multimodal coaching** in Austria, Bulgaria, Germany, Slovenia, and the United Kingdom. The European Union finances and oversees our project. The goal of the project is to create SAAM system to help senior Europeans remain active and live independently for as long as possible.

As a potential SAAM system user, we kindly invite you to participate in a key-informant interview/focus group/community interview¹¹. We would like to receive your opinion if the SAAM system we have developed serves the needs of seniors and if you like it and would use it in this interview/focus group¹². As an option, we would like to make an audio recording of our conversation with you. This means we will collect and analyse your data automatically and manually. Before we start our conversation with you, we will present to you the SAAM system.

This key-informant interview/focus group/community interview¹³ is part of the pilot testing of the SAAM system. Seniors and their close people are testing it in Austria, Bulgaria and Slovenia.

This document is an information sheet for participating in the key-informant interview/focus group/community interview¹⁴. In it, you will find information about what the SAAM system is and what it will do. There is an informed consent form accompanying the information sheet, which you need to fill in if you agree to participate.

Please, take your time to read these two documents carefully. They will help you decide whether you want to participate. You can keep them.

Participation and data processing are freewill, voluntary, and free of charge. Your participation does not bind you with any obligations towards us and you can stop with it at any time, without giving us any explanation on the reasons and without any consequence for you. There will be no consequences if you decide to decline our invitation to participate either.

Please, ask us any questions you may have – now or after. At the end of this information sheet, you will find several ways to contact us.

¹¹ **Note to SAAM researchers:** for each case, leave the applicable.

¹² Same as above.

¹³ Same as above.

¹⁴ Same as above.



ii. HOW WE USE YOUR DATA

Your opinion is very important for us because it will help us improve the SAAM system. We would like to make an audio recording of our interview/focus group¹⁵ with you, because this way we will be able to best represent and analyse your opinion. The audio recording contains personal data, which means that from it your identity might be revealed. We will protect your personal data at all times, since we at the SAAM partnership are the only ones who will be using the audio recordings.

Our SAAM project ends at the end of September 2020. If you agree to an audio recording, we will keep and use your personal data until the project ends based on your written consent.

We may further use the data we collect during your participation for scientific purposes after the end of the project. However, we will only do that after removing all parts of the data, based on which your identity may be revealed. After we do this, the data will no longer be personal.

If you decide to take part in the key-informant interview/focus group/community interview¹⁶, you have the following rights at all times:

- the right to request access to your personal data
- the right to ask BILSP to rectify any inaccuracies in your personal data
- the right to receive your personal data in an understandable and common format
- the right to have your personal data transferred to another organisation
- the right to complain to your national personal data authority
- the right to ask BILSP to erase your personal data, if you decide to withdraw from the piloting

We may publish results from the pilot testing including this key-informant interview/focus group/community interview¹⁷ in journals, conference articles or books. All your data is confidential and we will not report it publicly in a manner that reveals who you are. After the end of the pilot testing of the SAAM system, we will inform you of its general findings. If you are curious about it, we will also tell you where you can find more details about any specific findings.

You can find further details on data processing in our Privacy Policy.

¹⁵ Same as above.

¹⁶ Same as above.

¹⁷ Same as above.



iii. WHAT THE RISKS AND BENEFITS ARE FOR YOU

There are no major foreseeable risks and no direct benefits for you if you take part in the pilot testing of the SAAM system. However, your participation will benefit other people besides yourself. We hope that through the SAAM system we will enable seniors to remain in their homes longer, be active and live independently for as long as possible. We hope we will also contribute to improving their mutual relationship with their close people and society. In the future, we wish that the SAAM system became available for seniors who can enjoy it, including because of your valuable participation, which gives us the opportunity to improve the system.

There is an unlikely risk that somebody, who does not have the right to, might access your personal data. We take this risk very seriously. This is why we follow Europe's best practice and we have made the SAAM system as secure as possible.

iv. HOW YOU CAN REACH US

For more information, questions or complaints, please contact us:

Name of local contact person	each social partner organisation to fill in for themselves
Telephone of local contact person	each social partner organisation to fill in for themselves
Email of local contact person	each social partner organisation to fill in for themselves

Name of local SAAM partner	each social partner organisation to fill in for themselves
Address of local SAAM partner	each social partner organisation to fill in for themselves
Email of local SAAM partner	each social partner organisation to fill in for themselves

Name of SAAM project co-ordinator	BILSP
-----------------------------------	-------

Address of SAAM project co-ordinator	Bulgaria, 1113 Sofia, 24 Tsarigradsko shosse Blvd., entrance A, ground floor
Name of the leading investigator	Zlatka Gospodinova
Telephone	00359 2 971 25 58
Email	office@bilsp.org



Project title	SAAM Supporting Active Ageing through Multimodal coaching
Website	www.saam2020.eu
Co-ordinator	BILSP, Bulgaria
Local contact person	>Insert name of the local contact person<
Local SAAM partner	>Insert name of the local SAAM partner<
Financed by	European Union
Programme and call	Horizon 2020 Research and Innovation Programme SC1-PM-15-2017
Project Start	01.10.2017
Project End	30.09.2020



INFORMED CONSENT

Please indicate your willingness to participate in a key-informant interview/focus group/community interview¹⁸, by signing this informed consent.

I understand the informed consent and the information sheet. I have been given a copy of both. I had the opportunity to ask any questions. My questions were answered to my satisfaction and I understand the objective of the piloting.

Please indicate your willingness by ticking each of the boxes with which you agree:

- I agree to participate in a key-informant interview/focus group/ community interview¹⁹.
- I agree my personal data to be processed for the purposes of the above-mentioned pilot testing purposes and as it is described in the information sheet.
- I agree for our conversation to be audio recorded.

I authorise the use and analysis of data from my participation in the key-informant interview/focus group/community interview²⁰ by the SAAM partners for the purposes indicated in the information sheet. Signing this informed consent does not imply me giving up on any rights. I voluntarily accept to participate in the pilot testing of the SAAM system, carried out by the partnership of the SAAM project.

I am informed and I do understand that I am entitled to withdraw my consent to participate and for personal data processing at any time by contacting<name of LCP>..... without any restrictions, obstructions, penalties and other similar.

¹⁸ **Note to SAAM researchers:** for each case, leave the applicable.

¹⁹ Same as above.

²⁰ Same as above.



I am informed and I do understand that the withdrawal of the consent for processing personal data shall not affect the lawfulness of processing based on this consent before its withdrawal.

Name and surname of the participant:

.....

Signature of the participant:

Place:

Date:

Name and surname of SAAM researcher:

.....

Signature of SAAM researcher:



UNIVERSITY OF SALZBURG:



Ethikkommission
der Paris Lodron-Universität Salzburg

Kapitelgasse 4
A-5020 Salzburg – Austria
Europe

Vorsitzender
Univ.Prof.Dr.Frank WILHELM
frank.wilhelm@sbg.ac.at

Tel.: +43 / (0) 662 / 8044 – 5119

Salzburg, am 12.8.2019
EK-GZ: 22/2019

VOTUM DER ETHIKKOMMISSION

Arbeitstitel: SAAM – Supporting Active Ageing through Multimodal Coaching

Antragsteller: Center for Human-Computer Interaction (CHCI) – Universität
Salzburg (Alexander Meschtscherjakov)

Nach Beratung der Ethikkommission der Paris Lodron-Universität Salzburg am
3. Juli 2019 ergeht folgender Beschluss:

Es besteht kein Einwand gegen die Durchführung der Studie.

Bei unerwarteten körperlichen und psychischen Reaktionen ist die Studie
auszusetzen und die Ethikkommission darüber zu informieren.

Bei jeglichen Änderungen z.B. in der Themenstellung, der verwendeten
Methoden oder des ProbandInnenkreises ist die Ethikkommission erneut zu
befassen.



Univ.Prof. Dr. Frank Wilhelm
Vorsitzender der Ethikkommission



VOTE OF THE ETHICS COMMITTEE

Working title: SAAM - Supporting Active Ageing through Multimodal Coaching

Applicant: Center for Human-Computer Interaction (CHCI) - University of Salzburg
(Alexander Meschtscherjakov)

After consultation of the Ethics Committee of the Paris Lodron University Salzburg on July 3, 2019, the following resolution is passed:

There is no objection to conducting the study.

In the event of unexpected physical and psychological reactions, the study must be suspended and the Ethics Committee must be informed.

In the event of any changes, e.g. in the subject, the methods used or the target group, the Ethics Committee must be contacted again.

BULGARIAN RED CROSS:

СТАНОВИЩЕ

на Етичната комисия
на Българския Червен кръст

Относно: Съответствие между етичните норми, залегнали в Етичния кодекс на БЧК и предложената методология и инструментариум за реализиране на проект „Подкрепа за активно стареене чрез мултимодален коучинг“, финансиран по програмата „Хоризонт 2020 за изследвания и иновации“ на ЕС.

В отговор на молбата на дирекция „Социално-здравна политика“ в Секретариата на ИС на БЧК за изразяване на становище от страна на Етичната комисия на БЧК относно методологията и инструментариума за реализиране на проект „Подкрепа за активно стареене чрез мултимодален коучинг“, финансиран по програмата „Хоризонт 2020 за изследвания и иновации“ на ЕС, и тяхното съответствие с етичните норми, залегнали в Етичния кодекс на БЧК.

членовете на Етичната комисия на БЧК се запознаха подробно с предложените материали и на свое неprisъствено заседание, проведено на 29 август 2019 г., изразиха единодушно мнението си, че методологията и съдържателната страна на инструментариума на проекта не противоречат на Етичния кодекс на Българския червен кръст.

ПРЕДСЕДАТЕЛ НА ЕК:


/д-р Тенчо Тенев/



OPINION

of the Ethics Commission
of Bulgarian Red Cross

Re: Alignment between the ethical norms laid down in the Ethics Code of BRC and the proposed methodology and instruments for empirical study within project “Supporting Active Ageing through multimodal Coaching”, financed by the Horizon 2020 research and innovation programme of the EU

Answering the request of directorate “Social and Health Policy” at the Secretariat of the NC of BRC for the Ethics Commission of BRC to express an opinion regarding the methodology and instruments within the project “Supporting Active Ageing through multimodal Coaching”, financed by the Horizon 2020 research and innovation programme of the EU, *and their alignment with the ethical norms laid down in the Ethics Code of BRC,*

*the members of the Ethics Commission of BRC got acquainted in detail with the proposed materials for the study at their meeting in absentia, held on 29 August 2019, they unanimously expressed the opinion that **the methodology and the substantive side of the instruments of the study do not contradict the Ethics Code of the Bulgarian Red Cross.***

Chairman of the EC: *signed illegible*
/dr. Tencho Tenev/

*stamp of BRC National
Council – Sofia*



CARITAS BULGARIA:

Протокол от 133 УС на КБ
31 юли 2019 г.

Извлечение от Протокол № 133
от заседание на Управителния съвет на „Каритас България“
31 юли 2019 г.

Участие взеха конферентно:

Монс. Петко Христов (†ПХ) - Президент на „Каритас България“
о. Иван Топалски (о. ИТ) - член на Управителния съвет
о. Михаел Шлахцик (о.МШ) - член на Управителния съвет
Емануил Паташев (ЕП) – генерален секретар

Председателстващ Монс. Петко Христов
Протоколчик: Емануил Паташев

Председателстващият управителния съвет - Епископ Петко Христов, откри и предложи проекта за дневен ред на гласуване. Той беше приет единодушно. За протоколчик беше избран Емануил Паташев.

Решение 1. Управителният съвет приема Дневен ред:

1. ОДОБРЕНИЕ на D 8.1 МЕТОДОЛОГИЯ ЗА ПИЛОТНИТЕ ИЗСЛЕДВАНИЯ С НАБОР ОТ ИНСТРУМЕНТИ ЗА НАБИРАНЕ НА ИНФОРМАЦИЯ, наричана за краткост МЕТОДОЛОГИЯ (ДОК.1)

Дискусия

Генералният секретар представи изготвената МЕТОДОЛОГИЯ и набор от инструменти, за да бъде разгледана и одобрена в съответствие с принципите на „Каритас“.

В края на дискусията се взе следното решение:

Решение 2. Управителният съвет на Каритас България одобрява МЕТОДОЛОГИЯТА по D 8.1 проект „SAAM“, заедно с целия комплект приложени документи.

Н. Впр Епископ †Петко Христов закри заседанието на Управителния съвет.

Протоколчик:
Емануил Паташев
Генерален секретар



Extract from Protocol № 133

from a consultation meeting of the Management Board of “Caritas Bulgaria”
31 July 2019

The following participated in conference:

- Monsignor Petko Hristov (PH) – Chairman of “Caritas Bulgaria”
- Father Ivan Topalski (f. IT) – Member of the Management Board
- Father Mikhal Shlakhtsyak (f. MS) – Member of the Management Board
- Emanuil Patashev (EP) – Secretary General

Representative Monsignor Petko Hristov

Reporter: Emanuil Patashev

The Chairman of the Management Board – Bishop Petko Hristov opened and proposed a project for voting agenda. It was accepted unanimously. Emanuil Patashev was elected reporter.

Decision 1. The Management Board adopts the Agenda:

1. **APPROVAL** of METHODOLOGY OF THE THE PILOT STUDY WITH SETS OF DATA COLLECTION INSTRUMENTS (doc. 1)

Discussion

The Secretary General presented the prepared Methodology and set of instruments to be reviewed and approved in accordance with the principles of “Caritas”.

At the end of the discussion, the following decision was adopted:

Decision 2. The Management Board of Caritas Bulgaria approves the Methodology of project “SAAM”, together with the full set of attached documents.

H.E. Bishop PH Petko Hristov closed the meeting of the Management Board.

Reporter: (signed illegible)
Emanuil Patashev
Secretary General





РЕШЕНИЕ

на Етичната комисия на БИТСП

След постъпило Заявление за етична оценка на пилотните изследвания с възрастни хора, социалния кръг на възрастните хора и други заинтересовани страни в България по проект “Supporting Active Ageing through Multimodal coaching”, грантово споразумение № 769661 по програма „Хоризонт 2020“, на 03.07.2019 г. Етичната комисия към БИТСП разгледа заявлението и придружаващите го документи и реши, че те не противоречат на Етичния кодекс на БИТСП.

07.08.2019 г.

Председател на Етичната комисия към БИТСП:

.....
/доц. д-р Милена Стефанова/



DECISION

of the Ethics Commission at BILSP

After having received a Request for ethics evaluation of a pilot study with elderly people, the social circle of the elderly and other stakeholders within project “Supporting Active Ageing through Multimodal coaching”, grant agreement № 769661 under Horizon 2020 on 03.07.2019, the Ethics Commission at BILSP reviewed the request and all accompanying documents and decided that they do not contradict the Ethics Code of BILSP.

07.08.2019

Chair of the Ethics Commission at BILSP:

signed illegible, stamped

Doc. dr. Milena Stefanova