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D2.3 Use Case Analysis

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Table of Content

List of Figures

List of Tables

Glossary

Acronym	Meaning
MCI	Mild Cognitive Impairment

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1. Introduction

Cognitive decline is one of the diseases that the risk grows with the age. In the 2015 World Ageing Report by United Nations describes that by 2030 older persons are expected to account for more than 25 per cent of the population in Europe (1). That leads a more demand from the formal care sector and an overload for the informal care sector.

The CoME project aims for a service that facilitates the health self-management and, through the monitoring of seniors, the possibility to access to valuable information of some aspects of his lifestyle and patterns by informal caregivers and/or formal caregivers. The service aims to give reliable information about health in general, and the interrelation of the different actors. The main goal is give reliable advice on those modifiable risk factors to prevent MCI through a healthy lifestyle such as physical activity, cognitive training or healthy habits. Those habits are not only valuable for the MCI risk, but also for diseases associated to age. Also the detection of possible red flags in seniors lifestyle is one of the goals of the project.

As described in the image by Baumgart et al. (2) physical activity have a strong evidence of decreasing the risk of cognitive decline, while aspects like the diet or cognitive training have a moderate evidence, other modifiable factors increase the risk like obesity, current smoking or sleep disturbance for example.

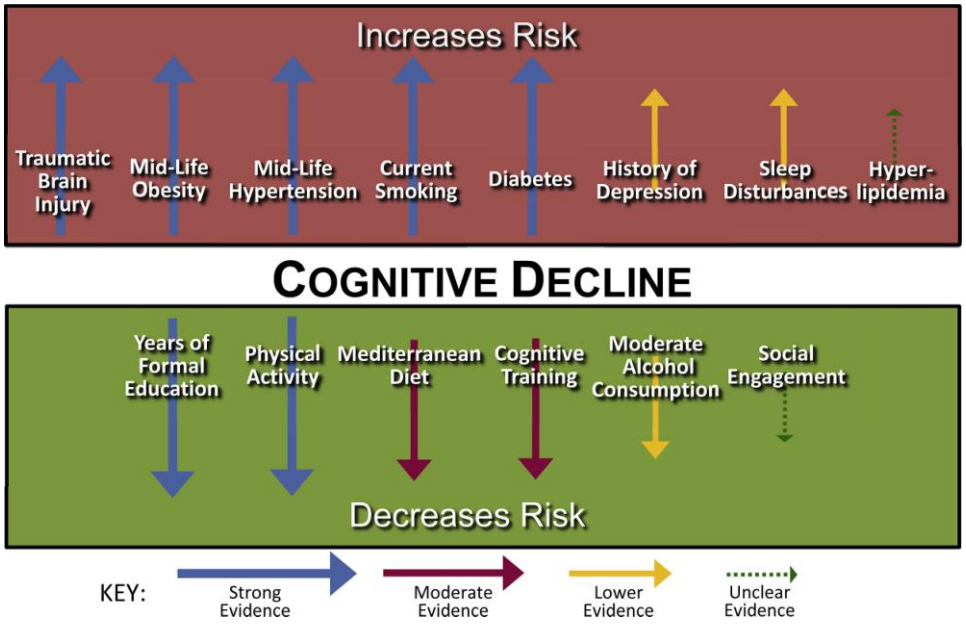

Figure 1 Strength of evidence on risk factors for cognitive decline.

For the reasons explained formal and informal caregivers are likely to be users of the CoME service in relation with seniors.

In order to explain the functionalities of the service and how it affects daily life of the end users, this document presents a number of use cases that defines and includes the different services, applications and functionalities considered in CoME and that will be also taken into account when performing the user acceptance tests and validation phases during the final part of the project.

A use case is a list of steps, typically defining interactions between an actor and a system to achieve a goal. In general, each use case has one basic course of action and one or more alternate courses of actions. The basic course of action is the main start-to-finish path that the use case will follow, where as the alternate courses represent the infrequently used paths and exceptions, error conditions.

The correct approach of use cases is of primary importance in a project's analysis phase. Their purpose is to document the business process that the application must support. Use cases should serve as an effective communication tool between users and technologists.

The use case collects together all the possible scenarios CoME application can solve. All the details of each scenario can be found in the section 4 of this deliverable.

2. Actors

In this section we describe the group of persona models involved in CoME service, who are seniors not diagnosed of MCI, informal caregivers and formal caregivers

Also the main functionalities of CoME are explained, as CoME is specially designed to cover the needs of each of the persona models around an elderly who wants to carry out a healthy lifestyle, be more autonomous in their health management and improve those modifiable risk factors to prevent MCI.

2.1. Elderly Non-MCI Diagnosed

CoME service is focused on seniors non-MCI diagnosed who live alone, with their wife or husband or with other relative (sons, daughters, sisters, brothers, etc). The seniors are capable to do their daily tasks without help but wants to be autonomous in their daily living for as long as possible, improving their habits and their health self-management.

The principal objective of CoME is to help seniors to lead a healthier lifestyle bringing strategies and tools to facilitate the health self-management.

In the platform they can find reliable information about health and more specifically about MCI, mental activities and a communication tool with other seniors. Also they can access to the data retrieved by the monitoring device such as physical activity, calories burned, sleep patterns or heart rate. They decide to who and what data wants to share.

CoME helps the elderly to improve healthy habits and in consequence their health self-management and their autonomy.

2.2. Informal Caregivers

Informal caregivers are the persons who take care of the senior in their daily life. In typical case of a care, almost 80% of the daily care tasks are responsibility of the informal caregivers. They are usually family, partners or even neighbours of the senior. Informal caregivers are the main responsible of the decisions and advises related to the senior.

CoME aims to facilitate the informal caregivers' lifestyle and to help them to reorganize work and social life. With CoME they would increase their confidence and improve their efficiency as caregivers. Also, CoME offers them some freedom and peace of mind because they can access to data retrieved by the monitoring device and see some patterns of the elderly (heart rate, sleep and physical activity).

Informal caregivers have many worries and difficulties and the main worry is the future of the elderly. It is a 24 hours a day, 7 days a week job to which they need to have full commitment. This means that caregivers give up a big part of their freedom in order to give care. When they leave the senior alone they are usually worried about possible complications that could arise and is very important to understand if/when such complications arise and act upon these as soon as possible.

CoME helps the family to be calm and unworried since they can know the basic lifestyle patterns of the elderly in a timely and accurate manner, and through following of those patterns, recognize some red flag related to the health of the senior and specifically related to MCI development.

CoME will provide to the informal caregivers information about the MCI roadmap, including information on what are the modifiable risk factors, behaviours and attitudes to prevent it. CoME will also have a possibility to form a network of the informal caregivers inside the platform, enabling them to feel supported and helping to resolve some doubts.

2.3. Formal Caregivers

Formal caregivers are professionals prepared to provide practical day-to-day care to the patients. They take care of the patient in specific situations, especially when the informal caregiver isn't available.

Their care tasks include home and care away from the home. The services included are visiting nurse services, homemaker services, respite care and home health aid services, and the promotion of health and health education.

Formal caregivers have to look after a lot of different kinds of patients, each with different needs. This means, that in some situations they may be stressed and they are only able to take care a patient along a very small part of the day. As said in the introduction, in the future years there will be a significant rise of number of elderly people in Europe and worldwide to take care of, so the promotion of health, health education and the health self-management will become essential.

CoME will provide a platform to facilitate the health self-management by seniors, as well as the guidance for reliable information by professional caregivers.

3. Use Case Creation

In this section we explain how the use cases are created. A use case describes a sequence of actions that provide something of measurable value to an actor. It is a narrative that describes the sequence of events (including the variants) of an actor using a system to complete a process.

In use cases, actors must be able to make decisions. They are the synthesis of his name and a description of his interests, his goals, his life circumstances, his appearance and his preferences. First of all, we need a good persona description. It might describe someone's skills, attitudes, environment and goals, i.e., behavior patterns (psyche, performance in everyday life, fears, activity, hobbies...). We have taken some of the specific details of the people interviewed in the project to compose a person description. These interviews were used to create the user requirements too.

Once we have the critical design information, we have added few personal details in order to adapt use cases to the real life. To add this information we have used the interview details too.

With all the descriptions, we have a summary of a number of people required to obtain the key goals and behaviour patterns.

After having the descriptions, we select the most important goals of each persona to focus the use cases. We try to meet the life goals and experience goals that people want to feel when using CoME service. Most of these goals should be solved using a well-designed product or service. For that reason, each use case is focused on the behaviours and goals related to the specific domain of CoME services.

4. Use Cases

4.1. Use Case 1. Health Monitoring

USE CASE 1	
Name	**Health Monitoring**
Short Description	Gather information on health behaviour goals, status and trends
Actors	Senior (Mr. Stevenson), informal caregiver (Deborah Stevenson) and formal caregiver (Susan Clarens)
Actor Characteristics	Mr. Stevenson perceives himself to be very healthy, but is conscious of health risks. He is reluctant to use monitoring tools. Deborah Stevenson thinks her father is relatively healthy and is conscious of his health risks. She is open to use monitoring tools. Susan Clarens is a young professional caregiver that wants to improve her knowledge about MCI risks and prevention, so she sees CoME as a tool to improve her knowledge and through which contributing to the prevention of MCI among seniors.
Trigger(s) for using the solution	Deborah Stevenson thinks that her father could be at risk for health problems. To avoid future regrets, she decides to register her father in CoME in order to allow her father to change his health behaviours and be able to be trained about MCI risks and preventive actions at the same time that tracks her father progress through the use of monitoring tools. Susan Clarens is fully interested in MCI risks. She thinks that CoME could give her a chance to learn about seniors' ageing and factors that could force people to develop MCI; all in a real environment.
Functionalities included	• Set health goals provided by default in the platform • Customization of goals by the formal caregiver • Privacy settings • Access to the monitored data on the part of the formal and informal caregiver • Self-Reports carried out by the senior • Alerts sent to formal caregivers • Health recommendations and health reports provided by formal caregiver

	• View health behaviour goals, status and trends
Use case description	Deborah Stevenson registers in CoME. She tests the platform for some days herself and after having a positive experience with it, she encourages Mr. Stevenson to join. The next day, Mr Stevenson registers in CoME. He fills in the seniors' form where: • He adds some personal information: name, birth date, important illnesses, medications, etc. • He selects Deborah as his close informal caregiver • He selects some default health goals provided by CoME (physical activity, water intake, calories burned, etc.) • He selects asmart watch device to use. • He allows Deborah to access to his monitored data • He decides to receive reports from formal caregivers on Monday, to start with professional recommendations at the beginning of the week. In parallel, Susan Clarens registers in CoME as well. She is very motivated, so she decides to monitor as many seniors as possible who are randomly selected by the platform; among them, Mr. Stevenson is included. After registering, Mr. Stevenson starts to be monitored by CoME. He wears a monitoring watch all the time, as recommended, even when sleeping. He monitors every day his data and, based on his self-reports, he realizes that he is not able to meet the goals he selected when registering in CoME. Susan, reviews every day her seniors' dashboard. She stops in an alert indicating that Mr. Stevenson is not meeting his health goals and that he has an unusuallly high heart rate. Susan accesses to the data gathered by Mr. Stevenson and she finds that Mr. Stevenson faces high heart rates as consequence of the extra effort carried out by him in order to meet his physical activity goals. She decides to customize the goals for him in order to avoid the extra effort and offers him some recommendations based on the default exercise activities provided by CoME that more fits with Mr. Stevenson. Next Monday, Deborah and Mr. Stevenson receive the reports from Susan so they start to carry out the recommendations provided by CoME. Through his daily self-reports, Mr. Stevenson discovers that he is meeting his goals so he feels motivated to continue using CoME. On the other hand, Deborah feels happy with the physical activities daily carried out by her father because, in addition to improving his health, she is able to monitor if something goes wrong through the monitored data and learn more about this data thanks to the self-reports provided by him. Susan feels good to discover how she can help seniors as well as discovering how factors such as sleep patterns, physical activity, etc. affects seniors' health.

Table 1 UC1: Health Monitoring

4.2. Use Case 2. Physical Exercise Monitoring

USE CASE 2	
Name	Physical Exercise Monitoring
Short Description	Gather information on physical exercise adherence, status and trends
Actors	Senior (Mr. Stevenson), informal caregiver (Deborah Stevenson), formal caregiver (Susan Clarens)
Actor Characteristics	Mr. Stevenson is hypertensive. He is reluctant to use monitoring tools and share some information. Deborah Stevenson wants him to follow the recommendations provided by his health professional related to walking every day. She is open to using monitoring tools. Susan Clarens is a young professional caregiver that wants to improve her knowledge about MCI risks and prevention, so she sees CoME as a tool to improve her knowledge and through which she will be contributing to the prevention of MCI among seniors.
Trigger(s) for using the solution	The need to follow the recommendations of the formal caregiver about walking every day for thirty minutes as part of the treatment for high blood pressure and to prevent the MCI risk
Functionalities included	• Set the physical activity goals and accompanying plan • Couple monitoring devices to treatment plan • Set privacy settings for the monitoring device • Couple exercise opportunities to treatment plan • Couple adherence information to treatment plan • View walking goals, status and trends • Customize goals based on the evolution
Use case description	Mr. Stevenson is 66 years old and he have high blood pressure. The treatment to follow is with drug therapy, control of the diet and physical activity. The control of the diet and the physical activity have more benefits than just the treatment for the high blood pressure, and is an important factor to prevent the MCI. Deborah knows that her father have difficulties to change his habits and for that reason joined to CoME platform, where they can see the recommendations to carry out a healthy lifestyle and what are the good habits related to diet and physical activity. Deborah is informed that a monitoring device can be coupled to the platform. She knows that her father is reluctant to use some kind of monitoring device, but the fact that the privacy settings can be chosen freely makes him accept to wear it. Mr. Stevenson sets the privacy and her daughter and the formal caregiver can see just the time that he walked, the number of steps

	and his heart rate. Deborah fulfills together with her father the profile and sets as a personal goal for his father to walk every day at least 30 minutes, that way he feels that his daughter thinks in him. Otherwise her daughter can see if he meets the walking goals every day, taking into account his heart rate. Susan Clarens, can see the patterns of Mr. Stevenson and modify the recommendations, even adding new goals; when after 4 months Mr. Stenveson heart rate starts reducing during walks, she establishes 40 minutes walking time as the new goal; and checks during the following month if the heart rate remains within the recommended values. She also provides more recommendations about habits changes; including recommendations for MCI monitoring.

Table 2 UC2: Physical Exercise Monitoring

4.3. Use Case 3. Health Coaching

USE CASE 3	
Name	Health Coaching
Short Description	Give feedback and recommendations on health behaviour status, trends as well as mood assessment
Actors	Senior (Mr. Stevenson), informal caregiver (Deborah Stevenson) and formal caregiver (Susan Clarens)
Actor Characteristics	Mr. Stevenson perceives himself to be very healthy, but is conscious of health risks. Deborah Stevenson thinks her father is relatively healthy and is conscious of his health risks. She is open to use monitoring tools so she joined CoME one year ago. Susan Clarens is a young professional caregiver that wants to improve her knowledge about MCI risks and prevention, so she sees CoME as a tool to improve her knowledge and through which she will be contributing to the prevention of MCI among seniors.
Trigger(s) for using the solution	Deborah Stevenson sees CoME as a tool to prevent and detect health problems for her father. Susan Clarens is fully interested in MCI risks. She thinks that CoME gives her a chance to learn about seniors' ageing and factors like emotional well-being that could force people to develop MCI; all in a real environment.
Functionalities included	• Monitoring of Daily Life Activities based on wereable devices • Senior Self-Reports • Definition of goals to improve senior well-being by the senior and customization by formal caregiver • Social emotional well-being Assessment – by the senior and based on wearable devices

	• Send emotional assessment reports to formal and informal caregiver • Reminders of recommendations • Communication among formal and informal caregiver by asynchronous messaging • Analysis of MCI risk based on daily life activities monitoring and emotional assessment.
Use case description	Deborah is worried about the prevention of possible health risk that her father could face in future. That is the reason why she and her father joined CoME a year ago. Every day, Mr. Stevenson and Deborah monitor the daily life activities of Mr. Stevenson in order to meet the recommendations that every Monday Susan Clarens provides him. He usually wears a smart watch that monitors the number of steps he takes, his hearth rate, calories burned, etc. At night, he accesses to the platform. After logging in, a pop-up form appears asking him about his emotional status. He quickly fills in the form and goes to the self-reports section where he is able to carry out self-reports in order to know if he has met his goals. Although initially Mr. Stevenson selected the goals provided by default by CoME, after a year, he has defined his own goals, always reviewed by Susan. He also receives some reminders based on the recommendations provided by Susan, e.g. “Do not forget to drink at least a litre and a half of water”, “Be careful with sugar”, “Walk everyday”, etc. Today Mr. Stevenson feels very sad because his neighbor was died last week. This is the reason why he was not too much motivated to achieve his goals these days. When Susan Clarens reviews her seniors’ dashboard, she detects an alert in Mr. Stevenson. The emotion form indicates that he is sad and the galvanic skin response provided by a monitoring watch indicates “saddening”. She decides to customize his goals for next weeks, taking into account his emotional situation, and advices Deborah how to encourage her father.

Table 3 UC3: Health Coaching

4.4. Use Case 4. MCI Detection

USE CASE 4	
Name	MCI Detection
Short Description	Detect MCI development based on health behaviour status and trends
Actors	Senior (Mr. Stevenson), informal caregiver (Deborah Stevenson) and formal caregiver (Susan Clarens)
Actor Characteristics	Mr. Stevenson perceives himself to be very healthy, but is conscious

	of health risks. He is reluctant to use monitoring tools. Deborah Stevenson has realized her father is facing some memory problems so she is conscious of his father's health risks. She is open to use monitoring tools. Susan Clarens is a young professional caregiver that wants to improve her knowledge about MCI risks and prevention, so she sees CoME as a tool to improve her knowledge and through which she will be contributing to the prevention of MCI among seniors.
Trigger(s) for using the solution	Deborah Stevenson thinks that her father could be facing some memory problems that could derive on more serious problems. To avoid future regrets, and due to her father insists that he is healthy, she decides to register him in order to allow him to carry out preventive actions and detect if something goes wrong through the use of monitoring tools. Susan Clarens is fully interested in MCI risks. She thinks that CoME could give her a chance to learn about seniors' ageing and about the factors that could contribute to development of MCI; all in a real environment.
Functionalities included	• Memory exercises in the platform • Memory goals established by default in the platform • Share experiences and learning materials among informal caregivers • Assessment of memory problems • Customization of goals by the formal caregiver • Alarms for the formal caregiver in case MCI risk is detected or goals are not being achieved. • Communication among the formal and informal caregiver to get background details by asynchronous messaging • Detection of MCI risks
Use case description	Deborah Stevenson registers in CoME. She tests the platform for some days and after this, she encourages Mr. Stevenson to join. The next day, Mr Stevenson registers in CoME. He fills in the seniors' form where: • He adds some personal information: name, birth date, important illnesses, etc. • He selects Deborah as his close informal caregiver • He selects some default memory test goals provided by CoME • The smart watch device to use • He allows Deborah to access to his monitored data • He decides to receive reports from formal caregivers on Friday, to see his progress along the week. In the first week after registering, Mr. Stevenson carries out some memory games. Deborah, that has been exchanging experiences and consulting some guidelines realizes that his father has some problems but she prefers waiting for the professional report. Susan, reviews every day her CoME' dashboard. She stops in an alert indicating that Mr. Stevenson is not meeting his memory goals

	when completing memory exercises. She customizes the goals, with the lowest requirements for people of Mr. Stevenson's age and also sends a message to Deborah to see if she is observing something weird in her father's status. Next week, a new alert appears in Susan's dashboard, indicating that Mr. Stevenson is not meeting the goals again. Also, based on the background information from Deborah, Susan confirms that Mr. Stevenson is facing serious memory problems that could be linked with MCI. She sends a new message to Deborah indicating the situation of her father and encouraging her to see the doctor.

Table 4 MCI Detection

4.5. Use Case 5. Care Support and Information

USE CASE 5	
Name	Care Support and Information
Short Description	Provide support to informal caregiver from personalized shared information provided by other forrmal and informal caregivers
Actors	Informal caregiver (Deborah Stevenson) and formal caregiver (Susan Clarens)
Actor Characteristics	Deborah Stevenson is conscious of her father's health risks. She has searched for specific information about ageing risks in the Internet however she feels that this information is sometimes fraudulent, false and misleading. She needs for source of reliable information which really helps her to elaborate preventive care plans and to know how to act in crucial situations. Susan Clarens perceives the lack of information about MCI risks that informal caregivers have and wants to contribute to broad the knowledge of informal caregivers in this field.
Trigger(s) for using the solution	Deborah Stevenson is feeling insecure about new care tasks she needs to perform and possible problems that her father could face because of ageing. Susan Clarens is aware of the need of training for informal caregivers and wants to extend her knowledge about problems caused by hypertension among population as a way of preventive tool.
Functionalities included	• Useful learning material: guidelines, tutorials and best practices provides by formal and informal caregivers • Communication with formal caregiver for advice • Communication with other informal caregivers for peer support • Forums for exchange experience and doubts • Exchange of experiences among informal caregivers
Use case description	Deborah Stevenson registers in CoME. She accesses to several forums and consults several learning materials about ageing available in the platform. Two months after joining CoME, Deborah's father is diagnosed with

	high blood pressure. Although is not serious, she feels obligated to care his father. She is very worried about how high blood pressure could speed up MCI and she would like to know which activities could benefit or affect this situation. Deborah searches for specific learning material about this topic in CoME because she wants more specific information than forums and contacts with other informal caregivers under the same situation can provide. Although she cannot find the information she searches, she finds that Susan Clarens has published several guidelines and tutorials about MCI and hypertension so she decides to contact her. Susan Clarens receives the message from Deborah. She is very much willing to help people but, especially, she is motivated to teach people about the problems that hypertension could cause. In addition, she is currently managing a study about the relation of MCI and hypertension so she feels happy with this topic. Susan Clarens answers Deborah and provides her some bibliography that could help her as well as a list of activities and foods that could benefit Deborah's father and slow down the problem derived from hypertension allowing her to create preventive care plans for her father.

Table 5 UC5: Care Support and Information

4.6. Use Case 6. Care Task Distribution

USE CASE 6	
Name	Care Tasks Distribution
Short Description	Share care tasks and information among care network members
Actors	Informal caregivers (Deborah Stevenson) and Marta (occasional caregiver)
Actor Characteristics	Deborah Stevenson won a cross-country trip in a radio show. She really desires to go with her husband but she feels that she must take care of her widow father, who last week broke his leg. Marta is an informal caregiver that joined CoME last year and who wants to offer herself as informal caregiver to avoid social isolation especially along the weeks her children spend with her ex-husband.
Trigger(s) for using the solution	Deborah Stevenson wants to go on holidays but she wants to be sure that her father is in safe hands.
Functionalities included	• Match-making search engine to look for a occasional informal caregiver with experience in CoME and MyGuardian platforms • Sharing senior specific documents or videos among informal and occasional caregiver • Possibility of uploading videos recorded through Augumented Reality (AR) devices • Possibility of the informal caregiver of consulting the data gathered by the wearable devices of the senior (if privacy

	seeting allowed so) • Messages among informal caregivers
Use case description	Deborah is a usual user of CoME that she uses to daily carry out health coaching of her father. Recently, she won a cross-country trip in a radio show, however, her father fell and broke his leg last week. She really wants to go on holidays but she feels that she has to stay with her father. Aware of the great disappointment that would case in her husband if they do not go on holidays, she decides to use the care distribution functionality that CoME offers. She has established close contacts with some informal caregivers so she is sure that her father will be in safe hands. She launches a demand of care. CoME takes into account Deborah's location and the profile of his father, the senior she takes care of, and based on this, it launches a search in CoME as well as in MyGuardian based on semantics that offers several informal caregivers as result. After reviewing them, Deborah finds Marta. She has a close relation with her because she lives in a nearby town and they have shared experiences several times. Deborah contacts her and they agree the days she must care of Deborah's father. In addition, and in order to ease the care of her father, Deborah records some videos and tutorials through her son's Google Glasses indicating the location of everything within the house as well as how to execute the health care tasks that she daily performs with her father in order to meet CoME goals. Thus, Deborah can go on holidays and monitor her father status thanks to the data collected by the wearable devices her father wears.

Table 6 UC6: Care Tasks Distribution

4.7. Use Case 7. Close Caregiver

USE CASE 7	
Name	Close Caregiver
Short Description	Formal caregiver joins to CoME as a professional but at the same time delivers specific health services to his patients thanks to the functionalities provided by MyGuardian
Actors	Formal caregiver (Susan Clarens) and Mr. Stevenson (senior)
Actor Characteristics	Susan has been working as a general practitioner for eight years now. She would like to help people to be healthier, but often does not have time to talk with them. She would like to use more technology in and after work to benefit her patients and provide them a more personalized health care. Mr. Stevenson is a patient of Susan. He perceives himself to be very

	healthy, but is conscious of health risks. He goes yearly to see Susan for medical examination. Both of them have a close personal relation.
Trigger(s) for using the solution	Susan wants to help people to be healthier through the use of technology. She regrets she cannot help them at work because of her limited time. Mr. Stevenson has been using CoME for one year. Although he is happy with the platform he regrets that he does not have a professional caregiver he trusts, like Susan, his practitioner for six years.
Functionalities included	• Personalized delivery of care among the professional caregiver and the informal caregiver through the close caregivers circle provided by MyGuardian platform. • Contacts and functionalities sharing among CoME and MyGuardian
Use case description	As every year, Mr. Stevenson visits his general practitioner, Susan, for medical examination. Both of them have a close relation since the previous practitioner of Mr. Stevenson was retired six years ago. After the examination, Susan tells Mr. Stevenson that, although he does not have any serious disease, there are some health aspects that he should take care of. Mr. Stevenson tells Susan that his daughter, aware of the health risks of ageing, registered him and herself one year ago in CoME. Through it, he performs daily activities to improve his well-being and slow down ageing health risks such as MCI. He is happy with the system but he regrets that CoME does not provide a personalized relation among the formal caregiver and the senior. At night, Susan decides to register in CoME, to see how it works and if it could help her to allow people to be healthier. While completing her profile, she discovers an option that says «Join to MyGuardian». She watches what it is MyGuardian about and decides to enable this option. After a week, pleased with the results of both platforms and friendly with their interfaces, Susan contacts Mr. Stevenson to tell him that if he enables the option of «Join to MyGuardian» is his profile, she could provide him a more personalized care, mixing the functionalities provided by both platforms; as in CoME his alerts will be preferentially send by the platform to her and at the same time they could have a more nearest contact by MyGuardian by synchronous messaging options, but using the information provided by the monitorisation and recommendations of CoME. Mr. Stevenson enables this option and adds Susan Clarens to his caregiver circle in MyGuardian. With this functionality, Mr. Stevenson feels safer because he has someone he trusts to look up his monitoring patterns, his self-reports, etc.

Table 7 UC7: Close Caregiver

5. Conclusions

In this deliverable, 7 selected CoME use cases are detailed trying to provide a complete overview of CoME possibilities. With all the use cases one can see how the CoME platform can help the actors – elderly people non-MCI diagnosed, informal caregivers and formal caregivers.

The cases shown above are only a sample of the wide range of possibilities that emerge thanks to CoME. The key aspects are the needs of the elderly people non-MCI diagnosed, giving them a service to help them to carry out a healthy lifestyle and be more autonomous in their health self management, at the same time their informal caregivers would feel more confident thanks to the monitoring tools and the involving of the formal caregivers.

CoME can provide the mechanisms to facilitate the information needed for informal caregivers and elderly people in health issues related to age, support in health care through asynchronous communication among informal or formal caregivers, with resources like videos recorded through augmented-reality devices, tutorials, guidelines, etc. as well as memory training materials for seniors.

The other key aspect is the monitoring of some aspects with a direct impact in the health of the seniors like heart rate; physical activity; calories burnt or sleeps patterns. Monitoring devices and the data retrieved can give information about patterns and if there is a change in it, to help an early MCI detection or if the goals related to physical activity or, in the major goal to carry out a healthy lifestyle, are met.

Finally we have to mention that although the data gathered by the monitoring device would be extremely useful for informal and formal caregivers, the final decision about what data and with whom is shared is exclusively of the seniors.