



## D1.2 Quality Assurance Plan

Ambient Assisted Living Joint Programme

AAL JP project number: AAL 2019-6-190-CP

Project Acronym: GUIDed

Project Title: Assisted-Living and Social Interaction Platform (GUIDed)

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## List of abbreviations (alphabetically)

Abbreviation	Full name
DoW	Document of Work
EE	External Evaluator
FRC	Frederick Research Center
HCI	Human-Computer Interaction
KI-I	Kompetenznetzwerk Informationstechnologie zur Förderung der Integration von Menschen mit Behinderungen
MAT	Materia
MC	Monitoring Committee
PM	Project Manager
QAP	Quality Assurance Plan
QC	Quality Committee
QM	Quality Manager
UCY	University of Cyprus
UI	User Interface
WP	Work Package



## Executive Summary

This document serves as the Quality Assurance Plan for the GUIDed project. All the technical and scientific activities of this project will be designed, implemented and monitored in strict accordance with established quality assurance processes. The Quality Assurance Plan lists the specific quality assurance elements that are to be implemented during the project. The quality of the technical and scientific activities of the project will be continuously ensured by following and maintaining this document.

# 1 Introduction

All of the activities of the project will be designed, implemented and monitored in strict accordance with established quality assurance processes. Specific quality assurance elements will be implemented in the project.

The purpose of the Quality Assurance Plan (QAP) is to ensure that all the technical, scientific and business activities of the project, as well as those that involve user-testing and demonstrators' realization, are performed in accordance to the plan and timeline set out in this project, and are also to the highest quality. Task activities include preparation and timely delivery of outputs/deliverables, contribution to yearly reports and the final report, which describe the achievements of work packages, and preparation and coordination work leading to project and review meetings.

The purpose of the Quality Committee (QC) is the verification and timely detection of problems that might appear within the framework of the activities of the GUIDed project. Moreover, this committee will monitor and evaluate the progress of GUIDed and ensure that all activities are properly enacted in accordance with the QAP. It is required that one person from each WP lead organisation is a member of the QC. Table 1 depicts the members of QC.

*Table 1: Members of Quality Committee*

Partner Organization	Representative Staff members
UCY	Christos Mettouris
MAT	Marina Polycarpou
KI-I	Stefan Parker
HARPO	Joanna Starosta-Sztuczka
Platus	Daniel Sturmair
Karde	Terje Grimstad

The Quality Manager (QM), UCY, will report to the Project Manager (PM), MAT, while the QM will be also directed by the QC. The QM is responsible for the establishment and control of the project quality procedures, as they are described in this document, hence in charge for implementing and monitoring in-house quality procedures based on the QAP. More specifically, a set of indicators are offered and will be approved by the QC. Once approved, these indicators are the basis for control and any significant deviation to the QAP should be reported to the PM.

The indicators will be monitored continuously and reported to the QC on a 6-month basis in order to ensure that effective progress is being made in all project phases. In case an indicator does not reach its expected threshold, it will be discussed during a live or virtual consortium meeting, and proper corrective actions will be taken. Both quantitative and qualitative impact indicators with short-/long-term perspectives have been set in this regard and are described in the following sections

## 1.1 Critical risks and mitigation measures

The general approach of GUIDed to address risks relies on distributing the contribution to realizing the goals across lead and participating contributors, which have the proper skill sets and expertise. Also, the Scientific Coordinator has direct responsibility for managing risks.

From the initially identified list (see Table 2) an active list register will be maintained during the course of the project. The risks will be classified by WP and the WP leader will be responsible for managing the risk:

- Each risk will be categorized with Probability (1-5) and Severity (1-5), 1: Low, 5: High.
- Each risk will also indicate other WPs directly affected either by the risk or by the proposed mitigation action.

In addition, and as previously mentioned, GUIDed has established a Quality Comitee (see Table 1) to provide further assurance and advice on risk management and mitigation actions.

Table 2: Preliminary Risk Register

WP1	Risk: R1	Probability: 1	Severity: 4
Description	Partners unable to contribute, delays and failure to meet time constraints.		
Mitigation	<ul style="list-style-type: none"> <li>• Close monitoring, internal reports, task assessment to prevent this.</li> <li>• Re-assign task(s) and/or increase resources to recover time.</li> </ul>		
WP2	Risk: R2	Probability: 1	Severity: 5
Description	End-user recruitment and evaluations not being doctuded in an ethical manner.		
Mitigation	<ul style="list-style-type: none"> <li>• Regular reviewing and updating of the ethical considerations for each task.</li> </ul>		
WP3	Risk: R3	Probability: 1	Severity: 5
Description	GUIDed platform components are not delivered on time		
Mitigation	<ul style="list-style-type: none"> <li>• Early kit assembly, design and specification, provide enough time for developing activities.</li> </ul>		
WP4	Risk: R4	Probability: 1	Severity: 4
Description	Difficulty for elderly users in using the Augmented Reality Health Care Expert		
Mitigation	<ul style="list-style-type: none"> <li>• Augmented Reality Health Care Expert will be designed to be simple to use and usable.</li> <li>• Consider feedback of elderly users to further optimize the product and its offered services.</li> </ul>		
WP5	Risk: R5	Probability: 1	Severity: 3
Description	Dissemination and exploitation is insufficient: does not present well the project's added value.		
Mitigation	<ul style="list-style-type: none"> <li>• Regular reviewing and updating of the dissemination and exploitation plans.</li> </ul>		

From a project management perspective (WP1), there are a number of common major risks. These are listed (see Table 3), along with several recommended corresponding solutions for each.

Table 3: Project Management Risks and Measures

Risk	Proposed Measures
Insufficient communication, cooperation and synchronization among partners.	<ul style="list-style-type: none"> <li>• Well-defined management</li> <li>• Strong coordination</li> <li>• Active involvement of partners in the management structure</li> <li>• Frequent communication</li> </ul>
Delays and/or mismatches in developing the project deliverables.	<ul style="list-style-type: none"> <li>• Strong control on deadlines by the Coordinator</li> <li>• Spare capacity in staff to support delayed partners.</li> </ul>
Shortage of human/financial/technical resources.	<ul style="list-style-type: none"> <li>• Early warning systems and binding agreements indicating available resources.</li> </ul>
Conflict among project partners on not clearly agreed project goals and priorities.	<ul style="list-style-type: none"> <li>• Project and scientific coordinators clarified the project goals and priorities well in advance (from the kick-off meeting).</li> </ul>
Conflict among project partners on delays in work schedules	<p>The project coordinator created the Project Management Handbook that specifically states the work schedule, responsibilities of partners and deadlines.</p>
Persistent conflict among partners	<p>The partnership will seek to avoid any conflicts by means described above. In case there is a rising conflict, it will be attempted to mediate it by:</p> <ol style="list-style-type: none"> <li>1. Preparing the parties for resolution: <ul style="list-style-type: none"> <li>• Acknowledging the conflict</li> <li>• Discussing the impact</li> <li>• Agreeing to communicate in a cooperative process</li> </ul> </li> <li>2. Understanding the situation <ul style="list-style-type: none"> <li>• Clarifying positions</li> <li>• Listing facts, assumptions and beliefs underlying each position and analysing them</li> </ul> </li> <li>3. Reaching agreement with all facts and assumptions being considered</li> </ol> <p>The decisions will be taken in accordance with the best benefit for the project's results.</p>



## 2 Quality Assurance of Technical and Scientific Tasks

The technical and scientific tasks of the project are described in Work Packages 3, 4 and 5.

The GUIDed platform will be extensively tested in different assisted living scenarios based on the individual well-attested needs (e.g., health, safety, mobility, communication) of older adults in different conditions. On the basis of these scenarios different demonstrators will be realized that target to showcase the benefits for the different stakeholders, i.e., device and application vendors, service providers, public authorities, but above all older adults that wish to be able to avoid dependency on family members, nursing homes and friends, preferring to continue to live independently in their own homes.

Using the Key Performance Indicators defined in the GUIDed DoW, quality metrics for each indicator have been defined in the following table. The aim is to ensure that each indicator will be met in a timely, efficient and appropriate manner and reflect the quality we sought to reach upon the inception of the GUIDed project.

Table 4: Quality Assurance for Key Performance Indicators

Type	Parameter	Measurement	Plan to evaluate Quality Metrics
<b>End-user</b>			
Quantitative	Number of pilots set up	2 piloting cycles in the 3 end-user countries (Cyprus, Norway, Poland).	<ul style="list-style-type: none"> <li>We have planned two trials with end-users in order to continuously assess the characteristics of the GUIDed platform.</li> <li>The pilots will be conducted in appropriate premises and by involving relevant end-user partners and carefully selected users, as per the requirements set out in the GUIDed DoW.</li> <li>Testing Phase 1 will be performed in a lab setting to ensure the appropriateness and functionality of the system as well as fine-tune its multifaceted aspects prior to its administration in real-life settings (Living Lab Approach).</li> <li>Testing Phase 2 and based on the experience in the Living Labs, is where end-users will evaluate the characteristics of the GUIDed platform in real-life settings.</li> </ul>
Quantitative	Number of end-users involved in the field trials	Test the GUIDed platform in different service configurations and house settings of older adults, based on their individual needs, wishes and any health-related issues.	<ul style="list-style-type: none"> <li>The offered services of the GUIDed platform will function without problems or errors in the houses of the older adults. For this to be achieved, proper tests will be conducted in identical to the houses environments by the technical team of the project, in order to observe whether the platform can cope with the</li> </ul>

Type	Parameter	Measurement	Plan to evaluate Quality Metrics
			<p>specifics of the environment, while at the same time the needs, wishes and health-related issues of the primary end-user are met.</p> <ul style="list-style-type: none"> <li>• Different house settings and different user needs/wishes/health related issues will be validated through tests with the platform whose services will be adapted accordingly.</li> <li>• More specifically, we expect to involve:               <ul style="list-style-type: none"> <li>a) During Testing Phase 1                   <ul style="list-style-type: none"> <li>a. 20 primary users per end-user site ( 5 out of them for the Living Lab)</li> <li>b. 10 secondary users per end-user site</li> <li>c. 1 tertiary per partner country (Cyprus, Austria, Poland, Norway)</li> </ul> </li> <li>b) During Testing Phase 2                   <ul style="list-style-type: none"> <li>a. 20 primary users per end-user site (10 x 2 iterations)</li> <li>b. 10 secondary users per end-user site</li> <li>c. 1 tertiary per partner country (Cyprus, Austria, Poland, Norway)</li> </ul> </li> </ul> </li> </ul>
Quantitative	User dropouts	A maximum of 20% seniors and carers will drop out from using the system.	<ul style="list-style-type: none"> <li>• We aim to employ three main strategies to minimize the chances of users to drop out of our testing phases.               <ul style="list-style-type: none"> <li>a) Develop a system according to their requirements and needs as set out by the results of T2.1.</li> <li>b) Continuously adapt and improve the system in order to avoid user frustration during their interaction with it.</li> <li>c) Respect users' dignity and personal rights before, during and after their interaction with the GUIDed system and proactively provide for their needs.</li> </ul> </li> <li>• Feedback will be collected in case of dropouts in order to better understand the reasoning behind their decision to stop using the</li> </ul>

Type	Parameter	Measurement	Plan to evaluate Quality Metrics
			system. This will help in future improvements of the system to help minimize future dropouts for the same reasons.
Quantitative	User satisfaction	90% of the users will express their satisfaction for the GUIDed system using a likert scale questionnaire. Measures i.e. the project's questionnaires will be developed according to a well-researched and validated model, such as the Technology Acceptance Model [1], User Satisfaction Questionnaire, or System Usability Scale.	<ul style="list-style-type: none"> <li>The Technology Acceptance Model for examples is a scientifically validated approach to confirm that the services and technology offered by GUIDed are accepted by the end-users. The model examines the users' Perceived Usefulness (the degree to which a person believes that using a particular system would enhance his or her job performance) and the Perceived Ease-of-Use (the degree to which a person believes that using a particular system would be free from effort). For GUIDed, Perceived Usefulness indicates the degree to which an older adult believes that using the GUIDed platform and services would enhance his or her performance on the tasks to which GUIDed offers solutions through its services. In terms of the Perceived Ease-of-Use for GUIDed, it is the degree to which a person believes that using the GUIDed platform and services would be easy and trouble free.</li> <li>Our consortium opts to employ proactive and reactive measures to enhance users' satisfaction with our product.</li> </ul>
Quantitative	User post project involvement	50% of users will express their interest in paying for the system and continue using it.	<ul style="list-style-type: none"> <li>The project will offer a product of great quality at a competitive price. A business plan and business model will be developed during the project that will consider critical aspects contributing to a quality product. Moreover, the business plan and business model will be produced in two distinct phases; intermediate (M15) and final (M30). This enables us to produce an improved and final plan at the end of the project, taking into account results and feedback from project activities and tasks, such as those that involve end-users.</li> <li>For older people, community</li> </ul>

Type	Parameter	Measurement	Plan to evaluate Quality Metrics
			<p>groups, families and therapists access to technology that can help in fulfilling the daily duties and activities of these people, improving their well-being and overall condition will be crucial. The technical solution cannot be too complicated, so as not to deter users from using it. The price of the device will also be crucial.</p> <ul style="list-style-type: none"> <li>• Different variants of the product are planned to be available depending on the user's needs. The full product cost with the hub (includes the middleware software and the AR/VR Android application) and all smart devices is considered. The prices refer to the selection of all five services to be installed at the house and used by the older adult.</li> <li>• The middleware architecture of the smart platform allows users to select the services to purchase based on their needs and the available budget. For example, if the older adult would like to purchase initially only the videoconferencing service (S5) then the cost will be the lowest and this will account only to the purchase of the Smart Hub and its peripherals, as well as the Wide Angle Lens for a more holistic view of the call participants. This is the minimal package/service configuration for the product. In another case, a different user may also want to purchase and use the Smart Sensors for safety reasons. Therefore, the product cost will be relatively higher and the user will have access to the S5 and S4 services. Finally, the user can select also the Smart Bulb (x3) which will cost more than above and will provide access to S5, S4 and S2 services, while in this full package price access to the software services S1 and S3 is also included. This is an initial estimation of three product packages, which means that during the project execution and the final business plan definition a</li> </ul>

Type	Parameter	Measurement	Plan to evaluate Quality Metrics
			different set with more product packages and prices could be proposed. A tablet device per kit is also planned to be provisioned.
<b>Technology</b>			
Qualitative	Usability	The learning program will be designed and implemented respecting the special needs and constraints of the older adults to avoid technology abandonment, address technophobia, enable ease of use of the services. Evidence will be collected by monitoring the competence development and assessing the learning outcomes. The system is easy and straightforward to use and accessing its services is intuitive and multi-platform applicable.	<ul style="list-style-type: none"> <li>About three quarters of older adults lack confidence in their ability to use devices to complete online tasks [2]. Furthermore, studies have found that fear of technology is more prevalent in older generations who did not grow up with computers. Since studies have shown that older adults who face technophobia and avoid technology respond better if they are supported by younger adults (children and grandchildren, local program officers) who assume the role of mentors and help them to overcome their fears, the GUIDed consortium will actively engage secondary users in the project methodology as follows. The 1-day health care professional driven learning program will be designed to continuously support the older adults in adopting and using the technology. The primary aim for older adults is not to abandon the technology. The learning program will be tailored to the specific learning needs and abilities of the end-user, avoiding pressure and anxiety for producing results.</li> <li>The social communication service (i.e., videoconferencing) will be designed to be easy-to-use by the older adults in order to be able to effortlessly and quickly communicate with their family members, healthcare providers and friends. A simple user interface (UI) design will be pursued (e.g a one-button UI approach). Also, the UI of the respective smartphone/tablet social app of the secondary users will also be designed to be user-friendly and quick.</li> </ul>
Qualitative	Functionality	The core functionalities will be implemented successfully and integrated in a robust product.	<ul style="list-style-type: none"> <li>The Platform and its services will be thoroughly tested after development completes.</li> </ul>

Type	Parameter	Measurement	Plan to evaluate Quality Metrics
			<ul style="list-style-type: none"> <li>• <b>Platform Verification Testing:</b> After the completion of the software development process, and in order to ensure high quality results, testing and validation techniques on components of the platform are aimed to be applied. To verify the performance of the platform, unit testing on the software components and load testing on the servers will be performed.</li> <li>• <b>Unit testing:</b> Unit testing is a well-known software testing method by which units of source code are tested to identify possible bugs and performance issues. By doing so, developers identify and fix software bugs before going live, and make sure each code unit performs the task that is meant to perform. The unit testing method on all the software components/services of GUIDed are going to be applied to ensure a correct function, as well as that they have the desired behaviour both in terms of functionality and performance.</li> <li>• <b>Load testing:</b> Load testing procedure simulates heavy traffic towards the servers, aiming to ensure their proper behaviour under heavy load. It is planned to perform tests by simulating realistic traffic from an incremental (as the number of tests progresses) number of end users. Load testing will be conducted only in case the consortium uses own servers, as opposed to using cloud services.</li> </ul>
Quantitative	Functionality	Implement and support a maximum of 5 different smart (device-based) services (e.g., smart light) and software services (e.g., telepresence video call), which offer AR functionality as the coaching expert for older adults.	<ul style="list-style-type: none"> <li>• The final list of smart services will need to be selected in coordination with the end-users by following a co-creation approach, but it will be in accordance to the five categories and the proposed examples described in the project. The technical team is free to define a set of services to propose and describe to the end-users, but the final selection should be made according to the end-users' needs as expressed to the end-user organizations during the analysis of user-requirements and</li> </ul>

Type	Parameter	Measurement	Plan to evaluate Quality Metrics
			testing phases. The technical team will provide feedback and approve this final list to ensure that the requested services are both technically feasible and also that do not deviate from the categories, the suggested examples described in the DoW and are in accordance to the effort and budget defined in the proposal. This ensures that the services to be offered indeed meet the end-users needs, wishes and health-related issues.
Qualitative	Successful development (Quality of Service – QoS)	GUIDed system will be developed and integrated in accordance with end-user requirements and business perspectives. The modular, extensible and plug-and-play nature of the platform will be demonstrated via the pilots by enabling to add and remove device and software services dynamically, in the case of future arising needs, as well as for satisfying the diverse requirements of the older adults based on their health status, their aspirations and wishes.	<ul style="list-style-type: none"> <li>The Smart Middleware of the platform will adapt and extend the services offered by software solutions and plugins developed in the context of open-source projects, as well as develop additional services aiming to provide social interaction functionalities and social presence for older adults.</li> <li>The software reuse of components and platforms as stated above, will allow the technical team to adopt and use software modules that are solid, bug-free and function properly, and to use these modules as the basis for further development. This process also allows the technical team to proceed faster with developments.</li> </ul>
Qualitative	User Interface	The Human-computer interaction (HCI) methods and in particular the simple and easy to use UIs will enable the older adults to adopt and use the services in plain, simple and with the least possible steps and actions. Evidence will be collected by usability tests involving end users.	<ul style="list-style-type: none"> <li>Technical partners will design, develop and improve the GUIDed system according to end-users characteristics, demands and needs according to literature review, previous experiences, results of previous EU funded projects and active testing with users. For example, according to previous EU funded project results and literature review older adults prefer larger font sizes in interfaces due to visual difficulties, etc.</li> </ul>
Quantitative	Smart technology usage	Augmented Reality will be used as the Expert Training Coach.	<ul style="list-style-type: none"> <li>Augmented Reality (AR) is one of the most recent technological advances utilized in the field of training and education as according to research provides opportunities for experiential learning, learning through context discovery and</li> </ul>

Type	Parameter	Measurement	Plan to evaluate Quality Metrics
			enhances users' motivation [3].
Quantitative	Reliability	Keeping the failure rate under 1% of total usage. Moreover, the number of errors of the system and the number of failed tasks by the end-users can be measured.	<ul style="list-style-type: none"> <li>Technical partners will proactively and reactively provide for the reliability of the GUIDed platform by designing a reliable and functioning system, performing frequent testings and continuously adjusting to correct bugs or malfunctionings.</li> </ul>
<b>Project management</b>			
Quantitative	Schedule	Keep the schedule with a zero-delay concerning all milestones and deliverables.	<ul style="list-style-type: none"> <li>The Task Leaders are responsible for the effective time-management and coordination of the contributions from partners, in order to deliver the final deliverables on time. Hence, Taks Leaders should start the preparations for the production of their deliverables at least one month before its official submission deadline. The process is described in more detail in D1.1 Project Management Handbook.</li> </ul>
Qualitative	Outcomes	Meeting or exceeding all the outcomes of the project.	<ul style="list-style-type: none"> <li>Consortium members have created a solid plan in order to reach all expected project outcomes including aspects such as ethics, achievement of milestones, excellence, etc. This plan will be adapted according to the prevailing circumstances in order to be up to date and effective.</li> </ul>
<b>Business</b>			
Quantitative	Ready to market	2 years until the product is ready to market.	<ul style="list-style-type: none"> <li>Two piloting cycles in the 3 end-user countries (Cyprus, Norway, Poland) with various end users involved in the project (co-design approach) throughout the duration of the project are to ensure that after the project the product will not need complex development to launch it on the market.</li> <li>Optimal user involvement will be assured through 3 experienced end user organizations (Materia, Karde and Harpo) in Cyprus, Norway and Poland,</li> <li>The 4 participating SMEs (Platus, Harpo, Materia and Karde) will ensure high impact on the market through their long years of experience in the field and their</li> </ul>



Type	Parameter	Measurement	Plan to evaluate Quality Metrics
			vast user contacts.
Quantitative	Creation of considerable community around the GUIDed system	At least 5 new end-user organizations will be contacted during the project lifetime to present the system and will provide a positive feedback.	<ul style="list-style-type: none"> <li>Two testing phases in the project duration with involvement of end-user organisations will provide feedback about the GUIDed platform and allow to create a community around the project.</li> <li>The Advisory Board comprising secondary and tertiary users that are supporters of GUIDed since the inception of the project, as well as other end-user organizations that will join the project should help in this aim.</li> </ul>
Quantitative	Ready to market	3 new potential end-user organizations will be approached to present the system.	<ul style="list-style-type: none"> <li>The involvement of end user organizations will ensure that end user contacts exist in the countries involved in the consortium and therefore a product can be created that will sell on the diverse markets that exist within the EU.</li> </ul>

### 3 Ethics

The GUIDed consortium has prioritized the emphasis on ethical aspects since it will involve end-users throughout the duration of the project. More specifically, two main channels of feedback regarding ethical standards will be utilized, namely, a) the Ethics Board and b) the D2.3 Report on ethical issues. In regards to the Ethical Board, it will be comprised of experts in ethical requirements and user-involvement who will monitor the compliance with relevant standards and legislations throughout the project duration. Secondly, D2.3 Report on ethical issues will be created from the beginning of the project and will include the steps taken to ensure the effective and appropriate approach towards ethical standards, respecting different legislation and boards for each end-user site.

### 4 Quality Assurance in WPs

Ensuring that quality assurance is reflected within the tasks of WPs is a priority. Hence, the the QM is involved in the monitoring and timely execution of WPs activities in collaboration with the WP leaders and by following the intellectual outputs defined in the form of deliverables and milestones, as these are reported in the DoW. Therefore, the key target is to execute and ensure that the technical, scientific and business activities of work packages WP3-WP5 and the critical tasks of WP2 that involve user-testing and demonstrators' realization are performed in accordance to the plan and timeline set out in the DoW.

#### 4.1 Quality Assurance of Management Tasks (WP1)

The Project Management Handbook (D1.1) provides guidance in achieving the project objectives, effectively managing the progress of tasks and ensuring the timely delivery of

project results. As such, it contains information about effective and efficient administration, methods for the delivery of project products (e.g., templates), information about timeline and deadlines, means of storage for documents and also means of communication. It should be noted that it is a dynamic document which will be adapted throughout project progress to reflect the current practice in the GUIDed project. This is an important aspect that contributes to overall quality within this context of management.

Very importantly, the GUIDed project management structure supports quality assurance at all levels. More specifically, it consists of the Coordinator, Technical Manager, Impact Manager, User Research Manager, Work Package Leaders, Executive Board, Advisory Board (AB) and Ethics Board. One can refer to the Project Management Handbook for more detailed discussion on the structure, as well as on the overall management of the project.

## 4.2 Quality Assurance of End-User Tasks (WP2)

The WP leader (Materia), in collaboration with the QM (UCY) will monitor the timely and quality execution of WP2 activities regarding to:

- Identifying the main security and privacy issues related to ethics, safety and data collection by the end-users.
- Formulating the ethical board, who will monitor the compliance to ethical regulations throughout the project.
- Recruiting procedures of older adults.

## 4.3 Quality Assurance of Technical Tasks (WP3)

The WP leader (KI-I), in collaboration with the QM (UCY) will monitor the timely and quality execution of WP3 activities regarding to:

- Assembling the smart kits using existing customizable hardware boards and ensuring compatibility.
- Adapting and extending the services offered by existing software solutions and plugins developed in the context of other projects.
- Integrating the smart kit and platform and software services
- Optimising the product and services.

## 4.4 Quality Assurance of Technical User-testing and Demonstrators Tasks (WP4)

Whereas in WP4 Scenarios and Demonstrators, the WP leader (Karde), in collaboration with the QM (UCY) will monitor execution of the following activities:

- Defining the scenarios based on the needs and aspirations of the different end-users.
- Identifying and resolving any practical issues at each one of the older adult's' home that can hinder the demonstrator's implementation.
- Performing the setup of the device and platform and testing that services are fully operational.
- Educating and training the older adults on how to adopt and use the services as well as the Augmented Reality Training Expert for their well-being.
- Definition and Analysis of the Users' Scenarios.
- Product Setup, GUIDed Learning and Demonstrators Implementation.

## 4.5 Quality Assurance of Technical Business Tasks (WP5)

WP5 Dissemination, Outreach Activities and Commercialisation Plan will assure realisation of following goals:

- Development of the Dissemination and Outreach plans of the project.
- Definition and utilization of the appropriate communication channels for the diffusion of the project results at a local and international level, paving the way for the GUIDed product exploitation.
- Finalization of the commercialization and sustainability plan for the GUIDed product, which will include assessment and analysis of the dynamics for its commercial exploitation.

The WP leader (Platus), in collaboration with the QM (UCY) will monitor the timely and quality execution of WP5 activities regarding to:

- Laying down the exploitation plan, which will formulate the strategy of communication and engagement with the public, including local industry and international fellow researchers with whom the consortium partners have established relationships and research collaborations.
- Identifying target audiences (AAL and AT researchers, industry collaborators, policy makers etc.) and the ways to communicate, explain the potential of the project and its benefits for older adults; especially in partners countries.
- Social networking presence established via a mix of communication methods, including online social networks, webinars, and other media presence (radio, TV) as well as periodic Network's newsletter.
- Monitoring mechanisms established to make sure that the communication is on the right track, so that timely corrective actions might be taken when necessary.
- Formulating an actionable development plan including critical technical and business de-risking activities and prospective funding sources.
- Identifying and documenting the key milestones towards commercial development including direct customer and strategic partner targets.
- Gathering data through the product validation and testing for promotion of technology, preparation of applications for funding marketing and promotion activities and engagement with potential customers, licensees, and strategic partners.

In WP5 deliverables will be produced that will document in detail the business tasks and their related quality assurance practices. These include the Intermediate & Final Dissemination and Exploitation Plan, and the Intermediate & Final Business plan and business model.

## 5 Quality Assurance of Deliverables

The process of ensuring the high quality of deliverables produced in the GUIDed project has been thoroughly described in deliverable D1.1 Project Management Handbook, and thus will not be discussed in this deliverable. In this document, the Quality Assurance Template is presented in ANNEX I. The Quality Assurance Template should be used for the reviews of all deliverables of the GUIDed project.

The quality of deliverables will be further proven via the authoring of scientific publications in journals and participation at related international conferences in order to present outcomes

of the project. In turn, this will stimulate interest in the GUIDed platform. In this regard, open access publishing will be considered.

## 6 Conclusions

The present document aims to define and list the specific quality assurance elements that are to be implemented during the GUIDed project. In particular, the quality of the technical and scientific activities of the project will be met and continuously ensured by following and maintaining this document.

The document describes Quality Metrics for all tasks described in the following activities of the project:

- Smart Kit Assembly and Platform Development
- Scenarios and Demonstrators
- Outreach Activities and Commercialization Plan.

The technical team of the project and all consortium members are responsible for consulting the present document in regular intervals to ensure that the implementation of the technical and scientific activities of the project are conducted by following the quality procedures defined in this document.

The Project Quality Assurance Plan is a dynamic document and will be adapted to new updates, information and collaborative decisions taken by project partners which cause alterations in any of its contents in order to reflect the current practices.

## 7 References

- [1] Lee, Y., Kozar, K. A., & Larsen, K. R. (2003). The technology acceptance model: Past, present, and future. *Communications of the Association for information systems*, 12(1), 50.
- [2] S. A. Becker. "A study of Web usability for older adults seeking online health resources," *ACM Transactions on Computer–Human Interaction*, 11(4): 387–406, 2004. doi: 10.1145/1035575.1035578.
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## 8 ANNEX I Quality Assurance Template



# Quality Assurance Template

Ambient Assisted Living Joint Programme

AAL JP project number: AAL 2019-6-190-CP

Project Acronym: GUIDed

Project Title: Assisted-Living and Social Interaction Platform (GUIDed)

Project partially funded by AAL Joint programme and “Research & Innovation Foundation” (CY), “The National Centre for Research and Development” (PL), “FFG Forschung wirkt” (AU) and “The Research Council of Norway” (NO) under the Grant Agreement number AAL-2019-6-190-CP.



<b>Deliverable No.</b>	
<b>Deliverable Title</b>	
<b>Deliverable Authors</b>	
<b>Reviewer Name and Organization</b>	
<b>Date of Review</b>	

## 1. Overall Peer Review Result:

<input type="checkbox"/> Fully accepted	<input type="checkbox"/> Accepted with revisions	<input type="checkbox"/> Rejected unless modified as suggested	<input type="checkbox"/> Fully rejected
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Overall rating (scale from 1: very poor to 5: very good): \_\_\_\_\_

Suggested actions:

1. Changes that should be implemented:

2. Missing sections/information:

3. Further improvements:

## 2. COMMENTS OF PEER REVIEWERS

### 2.1. Relevance

**Reviewer comment**

**Author response**

### 2.2. Accordance to user needs

**Reviewer comment**

**Author response**

### 2.3. Soundness of Methodology

**Reviewer comment**

**Author response**



## 2.4. Quality of Results

**Reviewer comment**

**Author response**

## 2.5. Quality of Presentation of Results

**Reviewer comment**

**Author response**

## 2.6. Deliverable Layout/Language

**Reviewer comment**

**Author response**