SHAPES

Smart and **H**ealth **A**geing
through **P**eople **E**ngaging in supporting **S**ystems

D1.2 – SHAPES Quality Plan

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Lead author	Michael Cooke (NUIM)
Contributors	NUIM
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Revision History

Table 1 Revision History

Revision #	Date	Editor	Comments
1.0	29/02/2020	Michael Cooke (NUIM)	Total document
1.2	01.10.2020	Niamh Redmond (NUIM)	Additions to deliverable review template

Table of Contributors

Table 2 Deliverable Contributors

Section	Author(s)
Table of Contents	Michael Cooke (NUIM)

Table of Acronyms and Abbreviations

Table 1 Acronyms and Abbreviations

Acronym	Full Term
EC	European Commission
EU	European Union
GA	General Assembly
H&C	Health and Care
IA	Innovative Action
MS	Milestone
MXX	Month XX
PMB	Project Management Board
SMEs	Small and Medium sized Enterprises
EAB	External Advisory Board
WHO	World Health Organization
WP	Work Package

Keywords

Quality, peer review, ageing

Disclaimer

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Executive Summary

The SHAPES Quality Management Plan details the quality management and control processes intended to ensure that the SHAPES project achieves its individual and collective objectives through the specification of standards and processes to be followed by beneficiaries engaged in the production of SHAPES outputs.

This includes the specification of the processes for the production of deliverables as well as their internal assessment through a quality control process conducted by expert peers. This document also identifies the key responsibilities held by beneficiaries and individual personnel assigned to the production and review of the quality of SHAPES deliverables and outputs to standards appropriate to the nature of the output.

The SHAPES Project Handbook (D1.1) has already outlined the processes for quality management and this document specifies these in more detail.

The processes for Risk Management are detailed in the Project Handbook (D1.1) and the monitoring of ethical standards are outlined in D8.1 Baseline for Project Ethics.

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1. Introduction

1.1. Purpose

The SHAPES Quality Management Plan (QMP) presents the methods and processes to be followed by the SHAPES consortium to ensure a high standard of results and consistency of presentation and production to ensure the efficient integration of individual outputs and the achievement of the overall aims of the SHAPES project.

The objectives of this QMP are to outline:

1. The SHAPES Quality Assurance (QA) methods and processes and standards to be maintained;
2. The processes for monitoring the KPIs, both internal and external for the project;
3. The procedures and responsibilities involved in the review and approval of deliverables to the Commission;
4. The processes for ensuring the quality and effectiveness of technological deliverables, such as software, particularly in terms of their suitability for purpose and interoperability;
5. The procedure for monitoring the standard and of external communications and dissemination including consistency to the SHAPES visual identity and objectives & the fair acknowledgement of contribution by partners (also discussed in D10.1 SHAPES Dissemination And Communication Plan);
6. The processes for ensuring that the project milestones are achieved on time and with the achievement of their objectives consistent with the GA and project timeline acknowledging the high degree of interdependency between work packages and tasks'

1.2. Structure of the document

The introductory Section 1 Introduces the purpose of quality review in SHAPES and the overall objectives of the deliverable. Section two discusses the processes, relative timelines, and procedures for SHAPES quality review while section 3 presents the criteria for evaluating the SHAPES deliverables. Section 4 concludes with emphasis on the need for iterative risk monitoring and collaborative activity to ensure the quality of SHAPES and the achievement of the project's objectives.

1.3. Relation to other work in the project

The processes for Risk Management and the guidelines for the preparation and reporting of meetings and other events are outlined in the project handbook, D1.1. The

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communication and dissemination plan is detailed in D10.1 including quality and consistency criteria for the message and identity fo SHAPES.

Details on the criteria for assessing and monitoring the quality of the technological outputs of shapes will be described in the corresponding deliverables, particularly D4.3 Integration Plan and Test Cases 1, D4.4 Integration Plan and Test Cases 2, and D4.6 SHAPES Interoperability Reference Testing Environment.

1.4. Glossary of acronyms

Table 2: Glossary of acronyms, initialisms and abbreviations

Acronym	Full Term
AHA	Active and Healthy Ageing
AHA	Active and Healthy Ageing
CM	Configuration Management
CO	Consortium Only
D	Deliverable
DL	Deliverable Leader
DMP	Data Management Plan
DoA	Description of Action
DPC	Deputy Project Coordinator
DT	Deliverable Team
EB	Executive Board
EIP – AHA	European Innovation Partnership on Active and Healthy Ageing
EU	European Union
EUCI	EU Classified Information
GA	General Assembly
GDPR	General Data Protection Regulation
H&C	Health and Care
IR	Internal Review
KPI	Key Performance Indicator
PC	Project Coordinator

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PMB	Project Management Board
PR	Peer Reviewer
PU	Public
QA	Quality Assurance
QM	Quality Manager
QMP	Quality Management Plan
RAM	Risk Assessment Matrix
RIA	Research and Innovation Action
TL	Task Leader
WP	Work Package
WPL	Work Package Leader

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2. Quality assurance

Quality Assurance (QA) identifies and describes the processes that are put in place to ensure that the project and the deliverables adhere to the project quality requirements.

This section describes the top-level mechanisms that will be used throughout the project in order to ensure the high quality of the project outcomes, especially the contractual document and software deliverables.

The SHAPES project is committed to QA in order to provide the appropriate visibility into the processes being used by the project and to set up and run a framework to evaluate processes, record non-conformances, analyse them and reduce deviations from the policies, processes and desired standards.

2.1. SHAPES Quality Management Roles

The SHAPES Quality Manager works alongside the coordinator and is in charge of the overall QA process. The QM reports to the Project Management Board (PMB).

Table below lists the current composition of the Quality and Data Management team who will be involved in the quality review process when required.

Table 3 Quality Management Roles

Name	Project Role	Affiliation
Michael Cooke	Shapes Quality and Risk Manager	NUIM
Sari Sarlio-Siintola	SHAPES Ethics Manager	LAUREA
Nina Alapuranen	Data Security Manager	LAUREA
Ann McKeon	Data Protection Officer	NUIM
Malcolm MacLachlan	Project Coordinator (PC)	NUIM
Niamh Redmond	SHAPES Project Manager	NUIM
Niamh Redmond	SHAPEs IPR manager	NUIM
Artur Krukowski	SHAPES Technical Manager	ICOM
Mark Wheatley	Accessibility Manager	EUD
Alexander Berler	Standardisation and interoperability managerThe Data Security Manager.	GNO

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2.2. Quality Assurance Schedule

The Coordinator and the deliverable Leader will identify 2 experts from with the consortium including an end users representative as appropriate to perform a formal internal peer review and providing a short report when the deliverable is in a sufficiently complete draft form to allow for a full review.

To reduce the risk of deliverables being considered unsuitable for submission following the formal review, deliverable progress will be managed on an ongoing basis starting with the publication of a detailed table of contents on Teams and presentation of the deliverable plan at WP level and/or task level meetings/telcos, with progress reported at PMB.

Any substantial problems with the proposed content and method for completion should be identifiable early on an difficulties emerging in terms of process, content production, and partner contribution, will be managed proactively.

By the time a deliverable is sent for formal review it is considered unlikely that any blocking issues for submission will be present. However, the advice of the reviewers will be considered carefully and action taken to improve the deliverable, through small or large measures, will be taken by the appropriate responsible partners.

The reviewers will be nominated by the lead authors and requested by the coordinator to agree to perform the role. They should be chosen based on having sufficient relevant expertise to evaluate the quality of the document, even if not a subject matter expert. They will, however, not be contributors to the production of the deliverable.

The report by the reviewers (see next section) will be considered advisory and the decision on release for submission or remedial action will be taken by the coordinator/quality manager. The coordinator may seek the additional advice of thematic managers where required.

The following section will describe the instruments to be used for conducting and reporting the review and making recommendations for improvement.

Table 4 Quality schedule

Days in advance of submission	Procedure	Responsibility
>60	Lead Deliverable partner to post ToC not later than 60 days prior to due date, ideally within 1 month of task initiation, on Teams	Lead participant

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>60	Ethical/Data protection review of proposed content	Ethics Manager/DPO
>60	Deliverable authors nominate to coordinate two internal reviewer not involved in deliverable production	Lead participant
30	Deliverable submitted for internal review to coordinator.	Lead participant
30	Coordinator/quality manager performs initial QA check and sends draft for review to designated reviewers,	Coordinator/Quality Manager, EAB
20	First reviews returned.	Reviewer(s)
7	Revised version submitted to coordinator/quality control manager	Lead participant
10	Approved version submitted to EAB & IPR Manager (as required) for review.	Coordinator
3	Final approved version sent to Project Coordinator.	EAB, IPR Manager (as required)
2	Final version, approved for Release and submitted following final QA check	Coordinator

Figure1 below outlines the quality review process.

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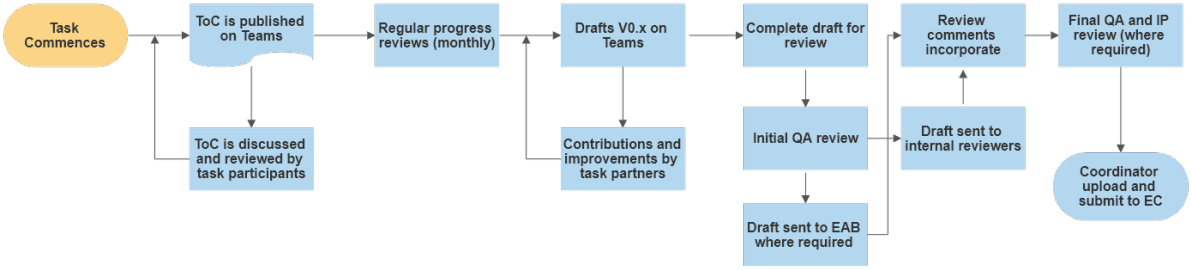

Figure 1 Quality Review Process

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3. SHAPES deliverable Review.

3.1. Document review

The following template is to be used to review deliverable drafts submitted for internal review. It is intended to be helpful to the author and substantial deficiencies should already have been identified earlier in the quality management process. It is therefore not a quantitative scoresheet but rather intended as an instrument to provide clear indications as to how the deliverable can be improved. Discretion is therefore required to decide where items indicated under the review categories are applicable to the particular document being reviewed and comments should be helpful, constructive, and specific.

For example, if a document lacks a required element, such as a table of contents or references section, that should be clearly stated as a requirement for improvement. Or, if a table containing technical details should be moved to an appendix or annex, that should be clearly stated.

On the other hand, statements such as “introduction should be improved” or “Language is not appropriate for audience”, are not helpful. Please point out specific deficiencies and additions that should be included where required and give examples of how language, expression or style can be improved. Reviewers are not required to edit or “repair” deliverables, but specific suggestions through track-changes and inserted comments in contexts are most beneficial.

SHAPES **Document Deliverable QA Checklist**	
Deliverable Title	Dx.x – Full title
Deliverable Version Reviewed	Vx.x
Reviewer and Org.	E.g., Michael Cooke (NUIM)
Date received for review	Day/month

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Deliverable due date	Day/month
Review Completed On	Day/month

1. Layout and Style **Check all the following items and check the corresponding column (N/A stands for not applicable).**				
Item	*Yes*	*No*	*N/A*	*Comments (please make clear recommendations for improvement or explanation why item is not applicable)*
1.1. The layout and structure of the document corresponds to the standard SHAPES deliverable template in Teams including front matter titles and tables, Table of Contents figures and tables, Executive Summary, Introduction, Conclusion, references?	☐	☐	☐	
1.2. The style of the document is consistent with the SHAPES deliverable template including visual style and logo, font, spacing, footers and headers, pagination, tables style, figures, etc. Each new section begins on a new page.	☐	☐	☐	
1.3. The document clearly displays the EU logo and acknowledgement on the title page and footers?	☐	☐	☐	
1.4. The use of language is clear and understandable to the intended audience (appropriate for audience), avoiding jargon and	☐	☐	☐	

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technical language where avoidable, and using clear English?				
1.5. The quality of expression is of sufficient standard (avoiding slang, idioms, colloquial language, and potentially offensive terminology)?	☐	☐	☐	

2. Content **Consider all the following items and check the corresponding column (N/A stands for not applicable).**				
Item	*Yes*	*No*	*N/A*	*Comments (please make clear recommendations for improvement or explanation why item is not applicable)*
2.1. The content of the document matches that which is described in the Description of Action as per the Grant Agreement	☐	☐	☐	
2.2. The contents of the deliverable clearly report the achievements of the associated task/s that produced it and outline clearly how the deliverable was produced.	☐	☐	☐	
2.3. The content of the deliverable clearly addresses the needs of the dependent task where applicable (e.g., requirements are sufficiently specific for design task)	☐	☐	☐	
2.4. The objectives of the deliverable are clear and the intended recipients (task dependents) are identified	☐	☐	☐	

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2.5. The deliverable has been produced in a constructive spirit that doesn't simply satisfy minimum requirements but delivers to the project meaningful and usable data, results, and/or conclusions[1]	☐	☐	☐	

3. Ethics **While deliverables are subject to a separate ethics review, this is intended to allow for double checking in case quality review occurs at a different time than ethical review. Consider all the following items and check the corresponding column and escalate to the ethics or data protection manager if and when applicable.**				
Check Item	*True*	*False*	*N/A*	*Comments*
3.1. The deliverable does not contain personal, private, or ethically sensitive data.	☐	☐	☐	
3.2. Individual participants **are not** identifiable in any part of the deliverable, including annexes and appendices.	☐	☐	☐	
3.3. The dissemination level assigned to this deliverable agrees with the level defined in the Grant Agreement (Public or CO)	☐	☐	☐	
3.4. The deliverable contains the Ethical Requirements Check as a stand-alone section.	☐	☐	☐	

[1] This may seem like a highly subjective assessment but it is intended to ensure that the deliverable does not simply tick the boxes to satisfy minimal submission requirements but responds to the needs of the project which may change and vary with respect to the DoA and in response to developing project contingencies and need for flexibility.

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4. Review Conclusions and Recommendations Check the corresponding the corresponding box	
Deliverable can proceed towards submission as is.	☐
Document accepted but minor changes required – resolvable by the authors alone within the deliverable due date.	☐
Document requires some restructuring or significant revision – considered resolvable by authors alone or with input from other contributors and resolvable by the due date	☐
Significant problems with the deliverable, requiring escalation, contributions from other partners, and not resolvable by the due date	☐

Concluding comments
Enter any concluding summary remarks and recommendations here

3.2. Software and Hardware Quality

As much of SHAPES activities involves the development and piloting of the SHAPES platform from WP4 as well as the digital solutions in WP5, the monitoring of the quality of technological outputs of SHAPES will be monitored by ICOM as the partner responsible for the technical management theme. However, apart from the internal quality of the code corresponding to industry standards it is necessary to also assess the suitability of the technology with respect to requirements emerging from within the project from WP2, WP3, and also WP8. Accessibility, ethics, data protection, privacy and conformity to requirements of end-users and the broader social ecosystem, will be areas of focus during the pilots.

In SHAPES, the focus of the quality review processes is placed primarily on software and hardware integration and the production of the final deliverables which are mainly in report form will be done in the normal deliverable review manner described above.

SHAPES will deliver software with different TRLs, ranging from platform and app prototypes to actual operational systems as deployed in the pilots. However, resulting

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from the open calls, much of the technology to be piloted will be off-the-shelf where the key criterion will be suitability within the human-centred activity.

Different types of software and hardware, much of which has yet to be defined and identified, will require different standards for quality management. This will be therefore left open for the corresponding WPs (4&5) to determine the appropriate standards corresponding to the particular tools. These potentially include:

- Source code peer review
- Automated unit tests
- Automated integration tests
- Software validated in a representative environment
- Licensing and IPR checks

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4 Conclusion

This deliverable has outlined the processes, plans and criteria for reviewing the quality of SHAPES project activities and outputs, particularly deliverables. It has discussed the relative timeline from initiation of tasks to the production of various drafts, the process of peer review and the final submission of the deliverable to the EU Commission.

Emphasis is placed on the role of collaboration and goodwill in ensuring that the objectives of SHAPES, towards achieving our internal as well as our external goals, are achieved. Risk mitigation in terms of quality is to be achieved by constant monitoring of progress not only by the coordinator and quality manager but by WP task leaders, WP leaders, as well as all deliverable contributors.

For this reason, the methodology described here relies on the work being produced from an iterative collaborative process along for challenges and barriers to be identified early, risks mitigated and problems solved in advance of the submission of the work.

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