SEVENTH FRAMEWORK PROGRAMME

Networked Media

Specific Targeted Research Project

SMART

(FP7-287583)

Search engine for MultimediA environment generated contenT

D1.1 Risk Identification and Management & Quality plan

Due date of deliverable: 30-04-2012

Actual submission date: 30-04-2012

Start date of project: 01-11-2011 Duration: 36 months

Summary of the document

Code:	**D1.1 Risk Identification and Management & Quality plan**
Last modification: **State:**	16/04/2012 Final
Participant Partner(s): **Author(s):** **Fragment:**	ATOS, AIT Irene Schmidt, Aristodemos Pnevmatikakis, John Soldatos, Zvi Kons, Craig McDonald NO
Audience:	☒ public ☐ restricted ☐ internal
Abstract:	This document contains the first version of the D1.1 Risk Identification and Management & Quality plan that will be used throughout the SMART project for the 1st year of the project. This document will be updated in month 12.
Keywords:	• *Risk* • *Management* • *Control* • *Quality* • *Plan*
References:	SMART DoW

Table of Contents

1 Executive Summary

1.1 Scope

This document covers the quality and risk plans of SMART project, which is funded by the European Commission under the 7th Frame Programme. The document details the project management structure, the communication channels, the key procedures to ensure the quality of the project and the risk plan which include a table of identified risks and contingency plans.

This document is considered a live working document, which will be updated in the months 12, 24, 36 and if the consortium considered that any of the communication channel, tool or procedure should be changed.

In addition, the identified risk list can be updated during the evolution of the project as new original unforeseen risk may rise while other original identify risk could be either reduce (or even disappear) or increase due to new circumstances.

1.2 Audience

The target audience of this deliverable is the SMART consortium, however it is also used as communication tool to communicate the officials and external reviewers of the European Commission the quality and risk plans and procedures of the project.

1.3 Summary

This deliverable includes a set of guidelines and procedures to ensure the quality of the project's outputs of the project and support the project manager and the consortium in the assessment of the quality of the project results. It also helps to identify risks and relevant issues during the project life. Mitigation and contingency plans are provided for all the main risks foreseen for the project. These risks (along with accompanying mitigation plans and remedial actions) will be updated periodically (i.e. as part of the regular/frequent releases of this document).

1.4 Structure

The document follows the general structure of request to all project's deliverable structure with the exception of the managerial reports. The main document is divided into three sections. The *Project management and quality control mechanism* section define the project management structure agreed in the Consortium Agreement and mechanism implemented in the project to ensure the Quality of the project.

The "*Cooperation procedures and tools*" section provide description of the tools used for collaboration in the project, and the procedures defined to ensure the quality of the project's output. The third main section of this document is dedicated to the risk management analysis and procedures of the project.

2 Introduction

The objective of this task is to ensure the quality of the project results. The document describes the general practises and management procedures that are been followed in the project to ensure that project objectives are met. These include such things as the management structure and control, decision making and communication procedures as well as providing useful project information. There is also a section dedicated to the risk management analysis and procedures of the project.

This deliverable includes a set of guidelines and procedures to ensure the quality of the project's outputs of the project and support the project manager and the consortium in the assessment of the quality of the project results. It also helps to identify risks and relevant issues during the project life.

On the one hand, it will be the responsibility of the Project Coordinator and Technical Manager and Quality Manager, to keep these mechanism in mind during the full project and to take necessary actions in case of an unsuitable status, and on the other, it will be the responsibility of the Work package leader to report any deviation on the work plan.

An important element of the management of any project is the analysis and management of risks. The identification of risks, and their associated contingency plans, before they occur can usually help to speed up any reaction if the risk does actually occur and can help mitigate the negative consequences of this occurrence. In the SMART project many of the risks are of a different nature than in the majority of projects and many risks typically associated with IT projects are not present here due to the fundamentally non-technical nature of SMART.

Risks are evaluated in terms of project goals and objectives. The risk management process will be performed according to the following four steps:

1. Identification of risk items using a structured and consistent approach to ensure that all areas are addressed.
2. Quantitative assessment of the risk and ranking of items to establish those of most concern.
3. Definition of alternative paths to reduce or minimize risk and criteria to initiate or terminate these activities.
4. Monitoring and management of risks throughout the project life with milestone review and reassessment.

3 Project management and quality control mechanism

This section describes the project management elements and procedures to ensure a successful completion of the project objectives, by establishing the project management structure. It also provides a set of guide lines to exchange information in a certain format or file codes. Partners' contact information is provided as well.

3.1 Organizations and responsibilities

The Management structure proposed for SMART aims at facilitating the co-operation between partners while maintaining a strict control of gradual achievements of the project objectives. It distinguishes between decision-making structures and organisation of daily operations. This aspect, as well as the mentioned bodies, and specially their composition, are described below in further detail.

3.2 Contacts

3.2.1 Key Consortium Staff

Paul Moore (ATOS) Project coordinator

Irene Schmidt (ATOS) Project manager

John Soldatos (AIT) Technical coordinator

3.2.2 Key European Commission contacts

Georgios Kaiafas

Project Officer

European commission

3.3 Schedule and timetables

The work of the project is described in the DoW, however there are always minor changes in the time schedule correcting the original plans and schedules. However, the consortium plans to maintain the main milestones and deliverable schedule especially in those cases, where the deliverable affects the work of other tasks of the same WP or from another task.

The following tables show the list of deliverables due during the first year, second and third year.

First Year

Del. no. 1[1]	Deliverable name	Delivery date[4] (proj. month)	M1 2011 Nov	M2 2011 Dec	M3 2012 Jan	M4 2012 Feb	M5 2012 Mar	M6 2012 Apr	M7 2012 May	M8 2012 Jun	M9 2012 Jul	M10 2012 Aug	M11 2012 Sep	M12 2012 Oct
D1.1	Risk Identification and Management & Quality plan	M6, M12, M24, M26						x						x
D1.2	The periodic report on the distribution of the Community's contribution	Every 12 months												x
D1.3	Public final activity report	M36												
D1.4	Final PUDiK	M36												
D1.5	Final management report	M36												
D1.6	Final report on the distribution of the Community's contribution	M36												
D2.1	Detailed Report on Stakeholders Requirements	M6						x						
D2.2	SMART Use Cases Specifications	M8								x				
D2.3	Multimedia Search Framework Open Architecture and Technical Specifications	M10										x		
D2.4	Data collection design	M3			x									
D3.1	Sensors and Multimedia Data Knowledge Representation	M11											x	
D3.2a	Video Signal Processing Prototypes	M18												
D3.2b	Video Signal Processing Prototypes	M30												
D3.3a	Audio Signal Processing Prototypes	M18												
D3.3b	Audio Signal Processing Prototypes	M30												
D3.4a	Tools and Techniques for processing non-AV sensor streams	M15												
D3.4b	Tools and Techniques for processing non-AV sensor streams	M27												
D3.5	Audio and video data	M7							x					
D4.1	SMART Distributed Knowledge Base and Open Linked Data Mechanisms	M12, M27												x
D4.2	Social Networks and Sensor Networks Integration	M18												
D4.3	Integrated Edge Server	M15, M30												
D5.1a	"SmartReduce" Engine	M12												x
D5.1b	"SmartReduce" Engine	M28												
D5.2	Report on Query Submission, Processing and Routing	M21												
D5.3a	Query Scoring and Anticipation Subsystem	M20												
D5.3b	Query Scoring and Anticipation Subsystem	M28												
D5.4a	SMART Mashup Libraries and Visualization Techniques	M21												
D5.4b	SMART Mashup Libraries and Visualization Techniques	M30												
D6.1	Integrated Applications of the SMART Multimedia Search Engine	M18, M27, M36												
D6.2	Integrated Open Source Framework	M16, M26, M35												
D6.3	Evaluation of the SMART Search Framework and Applications	M30, M36												
D7.1	Report on Dissemination and Standardization Activities	M6, M18, M30						x						
D7.2	Business Models, Utility Metrics and Participation Incentives	M36												
D7.3	Project's Web Site	M3			x									
D7.4	Open Source Software Portal	M9									x			
D7.5	Exploitation Activities and Plans	M12, M24, M36												x
D7.6	Open Multimedia Search Best Practices, and Guidelines for Policy Development	M34												
D7.7	Data Protection Protocol	M3			x									
D7.8	Ethical Dimensions of SMART Technologies	M3, M15, M27			x									
D7.9	Report on Ethics	Periodic (M12, M24,												x

Second Year

Del. no. 1[1]	Deliverable name	Delivery date[4] (proj. month)	M13 2012 Nov	M14 2012 Dec	M15 2013 Jan	M16 2013 Feb	M17 2013 Mar	M18 2013 Apr	M19 2013 May	M20 2013 Jun	M21 2013 Jul	M22 2013 Aug	M23 2013 Sep	M24 2013 Oct
D1.1	Risk Identification and Management & Quality plan	M6, M12, M24, M26												X
D1.2	The periodic report on the distribution of the Community's contribution	Every 12 months												X
D1.3	Public final activity report	M36												
D1.4	Final PUDiK	M36												
D1.5	Final management report	M36												
D1.6	Final report on the distribution of the Community's contribution	M36												
D2.1	Detailed Report on Stakeholders Requirements	M6												
D2.2	SMART Use Cases Specifications	M8												
D2.3	Multimedia Search Framework Open Architecture and Technical Specifications	M10												
D2.4	Data collection design	M3												
D3.1	Sensors and Multimedia Data Knowledge Representation	M11												
D3.2a	Video Signal Processing Prototypes	M18						X						
D3.2b	Video Signal Processing Prototypes	M30												
D3.3a	Audio Signal Processing Prototypes	M18						X						
D3.3b	Audio Signal Processing Prototypes	M30												
D3.4a	Tools and Techniques for processing non-AV sensor streams	M15			X									
D3.4b	Tools and Techniques for processing non-AV sensor streams	M27												
D3.5	Audio and video data	M7												
D4.1	SMART Distributed Knowledge Base and Open Linked Data Mechanisms	M12, M27												
D4.2	Social Networks and Sensor Networks Integration	M18						X						
D4.3	Integrated Edge Server	M15, M30			X									
D5.1a	"SmartReduce" Engine	M12												
D5.1b	"SmartReduce" Engine	M28												
D5.2	Report on Query Submission, Processing and Routing	M21									X			
D5.3a	Query Scoring and Anticipation Subsystem	M20								X				
D5.3b	Query Scoring and Anticipation Subsystem	M28												
D5.4a	SMART Mashup Libraries and Visualization Techniques	M21									X			
D5.4b	SMART Mashup Libraries and Visualization Techniques	M30												
D6.1	Integrated Applications of the SMART Multimedia Search Engine	M18, M27, M36						X						
D6.2	Integrated Open Source Framework	M16, M26, M35				X								
D6.3	Evaluation of the SMART Search Framework and Applications	M30, M36												
D7.1	Report on Dissemination and Standardization Activities	M6, M18, M30						X						
D7.2	Business Models, Utility Metrics and Participation Incentives	M36												
D7.3	Project's Web Site	M3												
D7.4	Open Source Software Portal	M9												
D7.5	Exploitation Activities and Plans	M12, M24, M36												X
D7.6	Open Multimedia Search Best Practices, and Guidelines for Policy Development	M34												
D7.7	Data Protection Protocol	M3												
D7.8	Ethical Dimensions of SMART Technologies	M3, M15, M27			X									
D7.9	Report on Ethics	Periodic (M12, M24,												X

Third Year

Del. no. 1[1]	Deliverable name	Delivery date[4] (proj. month)	M25 2013 Nov	M26 2013 Dec	M27 2014 Jan	M28 2014 Feb	M29 2014 Mar	M30 2014 Apr	M31 2014 May	M32 2014 Jun	M33 2014 Jul	M34 2014 Aug	M35 2014 Sep	M36 2014 Oct
D1.1	Risk Identification and Management & Quality plan	M6, M12, M24, M26		x										
D1.2	The periodic report on the distribution of the Community's contribution	Every 12 months												x
D1.3	Public final activity report	M36												x
D1.4	Final PUDiK	M36												x
D1.5	Final management report	M36												x
D1.6	Final report on the distribution of the Community's contribution	M36												x
D2.1	Detailed Report on Stakeholders Requirements	M6												
D2.2	SMART Use Cases Specifications	M8												
D2.3	Multimedia Search Framework Open Architecture and Technical Specifications	M10												
D2.4	Data collection design	M3												
D3.1	Sensors and Multimedia Data Knowledge Representation	M11												
D3.2a	Video Signal Processing Prototypes	M18												
D3.2b	Video Signal Processing Prototypes	M30						x						
D3.3a	Audio Signal Processing Prototypes	M18												
D3.3b	Audio Signal Processing Prototypes	M30						x						
D3.4a	Tools and Techniques for processing non-AV sensor streams	M15												
D3.4b	Tools and Techniques for processing non-AV sensor streams	M27			x									
D3.5	Audio and video data	M7												
D4.1	SMART Distributed Knowledge Base and Open Linked Data Mechanisms	M12, M27			x									
D4.2	Social Networks and Sensor Networks Integration	M18												
D4.3	Integrated Edge Server	M15, M30						x						
D5.1a	"SmartReduce" Engine	M12												
D5.1b	"SmartReduce" Engine	M28				x								
D5.2	Report on Query Submission, Processing and Routing	M21												
D5.3a	Query Scoring and Anticipation Subsystem	M20												
D5.3b	Query Scoring and Anticipation Subsystem	M28				x								
D5.4a	SMART Mashup Libraries and Visualization Techniques	M21												
D5.4b	SMART Mashup Libraries and Visualization Techniques	M30						x						
D6.1	Integrated Applications of the SMART Multimedia Search Engine	M18, M27, M36			x									x
D6.2	Integrated Open Source Framework	M16, M26, M35		x									x	
D6.3	Evaluation of the SMART Search Framework and Applications	M30, M36						x						x
D7.1	Report on Dissemination and Standardization Activities	M6, M18, M30						x						
D7.2	Business Models, Utility Metrics and Participation Incentives	M36												x
D7.3	Project's Web Site	M3												
D7.4	Open Source Software Portal	M9												
D7.5	Exploitation Activities and Plans	M12, M24, M36												x
D7.6	Open Multimedia Search Best Practices, and Guidelines for Policy Development	M34										x		
D7.7	Data Protection Protocol	M3												
D7.8	Ethical Dimensions of SMART Technologies	M3, M15, M27			x									
D7.9	Report on Ethics	Periodic (M12, M24,												x

3.4 Management Control model

The following figure shows the scheme of the management control model used in project.

This process includes several activities for the implementation of the review, assessment and feedback mechanism:

- ✓ Definition of the quality standards, elements to measure, etc.
- ✓ Establishing the quality system.
- ✓ Supporting the project team to apply defined procedures by the implementation of project templates.
- ✓ Monitoring of the application of Quality Plan verification of documents, reviews and audits.

3.4.1 Mechanism for Corrective Actions and Reporting Progress

The mechanism for corrective action is based on the reporting chain from the task responsible to the WP Leader, then to the Technical and/or Quality Manager to the Coordinator and finally Steering Board should be able to solve any issue which have not been possible to solve in lower levels of the structure. All corrective actions are arising from reports and reviews to any of these management roles are completed by the group receiving the report/review or delegated down to an appropriate level for completion. Each corrective action is given a target date when completion will be confirmed to the quality responsible.

Routine day-to-day corrective action within work packages are the responsibility of the work package leader. The day-to-day management, decision-making, and conflict resolution is the responsibility of the Technical Coordinator. Technical conflicts are initially addressed to individual work package leaders. When conflicts cannot be satisfactorily solved at this level, they are reported to the Technical Coordinator who, based on the importance and its ability to give an immediate response, might bring it to the Quality manager, the project

Coordinator or even to Steering Board levels.

At the milestones reviews that are performed by the Steering Board, the progress of the project is critically reviewed and compared to the planning and criteria described in DoW. Depending on the progress and the results achieved, a change in the work plan may be proposed. For the Annual Assessment and Final Assessment, specific review meetings are organised with representatives of the European Commission.

4 Cooperation procedures and tools

The management structure discussed in the previous section ensures communication from a work package level to a higher, more strategic, point of view so that these dependencies can successfully be met and take place in an efficient communication manner.

The Project Coordinator ensure that the consortium and key role players have the necessary tools and procedures to effectively communicate avoiding potential risks of lack of communication and/or over management.

Normal communication will be achieved using Atos's Project's repository, e-mail, fax, phone, instant messaging tools, IP telephone and face to face meetings.

4.1 Communication tools

In order to ensure fluent communication between the partners without incurring in a high travelling expense due to excessive number of meetings, the consortium agreed to schedule meetings, which would allow the participants communicating face to face only when necessary; providing an alternative and maintaining the communication during the whole project lifetime.

The following table provides a list of the communication and cooperation tools that SMART project will utilised during its lifetime.

Tools	Usage
Project Repository[1]	The Project Repository (Alfresco platform) allows the consortium to have a centralised knowledge repository avoiding the need of redundant communication. It will also allow partners to co-operate in administrative and technical work which is not time critical. The Alfresco platform is hosted by Atos.
Email	The consortium use email for the regular request or provision of information, which is not time critical. For this propose, the coordination has created a distribution list ensuring that if needed all project participants are reached. Additional distribution list will be created as needed. Direct emails are also used for bilateral communications. The email address of the project email distribution is SMARTfp7@lists.atosresearch.eu. There is a web interface of the email distribution list http://lists.atosresearch.eu/mailman/admindb/smartfp7 where the partners can review the emails exchanged through the list.
Fax	In specific occasions, the consortium might use fax to exchange urgent documents.
Mail	The consortium will use mail, or package by currier, to exchange important documents, usually signed. These documents would mainly be of a legal or financial matter.
Telephone	Direct telephone calls are used in case of time critical matters.
Instant messaging	The consortium will use an already available instant messaging solution, such as Skype that will help short technical discussions and close collaboration; es-

[1] The knowledge repository is host at Atos in the same server than the public website and sharing the same domain, but on a hide URL:

Tools	Usage
	pecially during the integration of components.
IP Telephone	IP telephone calls and teleconferences will be carried out.
Teleconference	As an alternative to face to face meetings, the consortium will make use of a teleconference platform that will allow regular web interface integrated teleconference facilities with the possibility also share presentations and other files.
Meetings	Face to Face meetings will be held to tackle discussions on important issues that require the participation and opinion of all partners. This is also an opportunity for partners to meet each and solving small questions, doubts and requests not concerning the whole project. Different kinds of meetings exist: o **Kick-off meeting**: The Kick-off meeting will be held in the beginning of the project activities. o **Regular Meetings**: Every 6 months Steering Boards meet. These meetings will be held during the same set of days, to minimise travel expenses, but in clearly separated sessions, to avoid that purely technical issues will be mixed up with managerial ones. The meeting locations will rotate through the Partners' sites. o **Extraordinary Meetings**: Working groups meetings are organised when necessary or upon request made by any of the parties involved. Extraordinary meetings of Steering Board will be held upon request of one Board member and approval of the majority of Board members or upon the Project Manager's request. [2] o **Reviews**: reviews will be held upon EC request. o **Review rehearsal**: Immediately before each review, a General Meeting is held for preparation of topics to be presented in the review.
Source Code Control	The Project Coordinator together with the Technical Manager have decided to deploy the Subversion solution to manage the platform source code. Subversion (SVN) is a version control system. It is used to maintain current and historical versions of files such as source code, web pages, and documentation. Its goal is to be a mostly-compatible successor to the widely used Concurrent Versions System (CVS). The Subversion is hosted by Atos.
Other	During the project, the consortium will evaluate if additional tools will be required such as a software repository.

4.1.1 Project Repository

SMART project Knowledge Repository has been deployed using the open source platform Alfresco (http://www.alfresco.com/). The consortium has established a formal basic structure that allows all participants of the project to collaborate and share information.

Admin	In this workspace the consortium has both the contractual documentation and the financial information, which includes the 6 monthly budget and transfer information. Only those appointed by each partner have access to this folder. There is a folder with the budget information of each partner to which only the coordinator and those appointed by each partner has access.

[2] There is a procedure / manual available at the Project Repository explaining the process on how to proceed in order to use the SVN, the document is under the "*Other*" workspace in the document "*080617-V1.0_Software_repository_ATOS-ALL.doc*"

Deliverables	In this workspace the consortium stores all deliverables in the different stages of the Deliverable live cycle. There is a subspace for the three basic stages; Draft, Pending Approval and Submitted. Since the first subspace is a high demanding working space, the consortium has decided to divide it in the different subspaces one for each WPs.
Dissemination	This workspace provides quick access to the dissemination material and to the dissemination events.
Meetings	This workspace allows the partners to share information regarding each project meeting and to the related documentation such as agenda, presentation, minutes etc… The workspace is organized by having one subspace for each meeting using the date as part of the subspace name.
Other	In this workspace, the consortium share tools or anything beside the formal and structure documentation define in other workspaces.
Papers	This workspace as the Deliverable workspace include a structure related to the workflow of the paper, having a subspace for Drafts, Pending Approval and Submitted or Published.
Quality Assurance	In this workspace, the Quality Manager shares and recollect information with the partners related to quality.
Technical	This Workspace has room for technical discussions, the repository of Software Documentation, information regarding UI.
Work Packages	This workspace has been created to allow the WP teams to have a room to share information. This workspace is divided in subspaces one for each WP.

4.2 Meetings

Each Party will appoint a Partner Representative which will become a member of the Steering Board. Each Representative can designate a deputy. Each Steering Board Member shall be deemed to be duly authorised to deliberate, negotiate and decide on all matters listed in Article 6.2.3. of the Consortium Agreement.

- The Coordinator shall chair all meetings of the Steering Board.
- The Parties agree to abide by all decisions of the Steering Board.

Preparation and organisation of meetings: The Coordinator, as the chairperson, shall convene meetings of the Steering Board:

Ordinary meeting	Extraordinary meeting
At least twice a year	At any time upon written request of 1/3 of the Body members

Notice of a meeting: The chairperson of the Steering Board shall give notice in writing of a meeting to each member of the Steering Board as soon as possible and within the minimum number of days preceding the meeting.

Ordinary meeting	Extraordinary meeting
45 calendar days	15 calendar days

Sending the agenda: The chairperson of the Steering Board shall prepare and send each member of that Steering Board a written (original) agenda within 7 calendar days preceding the meeting.

Adding agenda items: Any agenda item requiring a decision by the members of a Consortium Body must be identified as such on the agenda. Any member of a Consortium Body may add an item to the original agenda by written notification to all of the other members of that Consortium Body within the 2 calendar days preceding the meeting.

During a meeting the members of a Steering Board present or represented can unanimously agree to add a new item to the original agenda.

Any decision may also be taken without a meeting by circulating to all members of the Steering Board a written document, which is then signed by the defined majority (see Article 6.2.3. of the Consortium Agreement) of all members of the Consortium Body. Meetings of each Steering Board can also be held by teleconference or other telecommunication means. Decisions may only be executed once the relevant part of the Minutes is accepted.

4.3 Papers

This section is referred to the technical papers which are written in order to be submitted to a scientific conference or to be published in a scientific medium, which are referred in the Annex I of the Grant Agreement (DoW) as Deliverables *White papers*.

4.3.1 Proposal and development

Any partner can propose to write a paper under the umbrella of the project a paper either to be published or submitted to a conference. The consortium will try to share the development of each paper by more than

one partner in other to improve the quality of the paper and enhance the collaboration among technical personnel of the project.

The paper ideas should be presented to the project's Technical Manager and to the Project Coordinator, who should approve the generation of the paper and provide support if it is needed. Moreover, the Technical Manager and/or the Project Coordinator can suggest to another person from one of the partners of the consortium participates in the creation of the paper.

All papers should be documented in the managerial reports.

4.3.2 Format, style and structure

All paper to be written under the umbrella of the project should include both logos, the project and the FP7 ICT. The paper should use the same fonts and style defined in the project's deliverables.

All papers should be referenced and a bibliography should be provided.

4.3.3 Procedure and storage

All papers produce in under the umbrella of SMART should by stored in the project repository in the "Papers" Work Space. In this Work Space there are three subspaces:

Drafts	This sub-space is used to allow different partners to collaborate in the development of white papers.
Pending Approval	Those finish or almost finish papers which are pending to be reviewed or are actually been review, are temporally store in this sub-space until the document is approved when the document is moved to the next sub-space.
Submitted Or Published	In this sub-space, the consortium stored all finish white papers, which are submitted and/or published. This includes those white papers which have not been approved by a specific conference.

All white papers are been stored using the following name structure:

X [Name of the white paper]

Where:

X	A sequential number for the white paper
[Name of the white paper]	The title of the white paper

Version control:

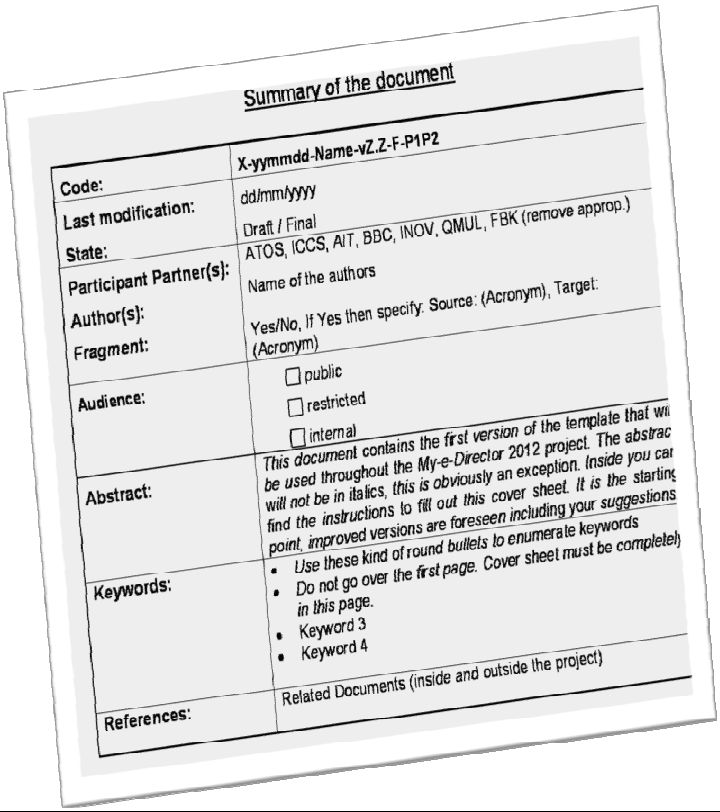
The version control should be maintained in the properties of the MS word document and in the content of the document. The MS word file does not include the version of the document since Alfresco tool has versioning functionality.

4.4 Deliverables

4.4.1 Format, style and structure

All project's deliverables are created using the project available deliverable template, all meta-information

requested in the template should be filled and all basic sections should be use it. The document has three main sections of meta-information: "*Summary of the document*", "*Document Control Page*" and "*Change history*".



Summary of the document

Code:	X-yymmdd-Name-vZ.Z-F-P1P2
Last modification:	dd/mm/yyyy
State:	Draft / Final
Participant Partner(s):	ATOS, ICCS, AIT, BBC, INOV, QMUL, FBK (remove approp.)
Author(s):	Name of the authors
Fragment:	Yes/No, If Yes then specify: Source: (Acronym), Target: (Acronym)
Audience:	☐ public ☐ restricted ☐ internal
Abstract:	*This document contains the first version of the template that wi be used throughout the My-e-Director 2012 project. The abstrac will not be in italics, this is obviously an exception. Inside you car find the instructions to fill out this cover sheet. It is the starting point, improved versions are foreseen including your suggestions*
Keywords:	• *Use these kind of round bullets to enumerate keywords* • *Do not go over the first page. Cover sheet must be completel in this page.* • Keyword 3 • Keyword 4
References:	Related Documents (inside and outside the project)

Each deliverable should contain the following sections:

1 **Executive Summary**
- 1.1 **Scope**
- 1.2 **Audience**
- 1.3 **Summary**
- 1.4 **Structure**

2 **Introduction**

3 Different sections of the deliverable

4 **Conclusions**

5 **BIBLIOGRAPHY AND REFERENCES**

6 **ANNEXES**

4.4.2 Procedure

The deliverables are officially approved by the Technical and Quality Managers. The Technical Manager is responsible of the quality of the technical reports, and should review the deliverables in the draft status in order to generate the necessary correcting actions. The Quality Manager is responsible of the formal presen-

tation of the deliverables, including the format, the sections and the non technical information.

The following figure shows the different roles involve in the process of quality assurance of a deliverable.

Deliverable leader

- Responsible of document
- Request and collect contributions
- Integrate contributions
- Principal editor
- Manage the quality feedback

WP Leader

- Assign the leadership of the report
- Align with the work carried out in the WP
- Technical supervisor

Technical Manager

- Review the report content
- Report to the Quality Manager and to t he Project Coordinator
- Responsible of the technical quality
- Work is align with the project's objectives

Quality Manager

- Responsible of coordinate the quality review of each report
- Responsible that the report follow the structure and the format agree by the consortium

Steering Board

- The ultimate management body of the project
- Can solve any conflict between the parties involved in the report workflow

Each deliverable has a basic formal workflow, requiring three levels of approval;

This workflow is registered in the "*Document Control Page*" and in the "History table" which is included in the template of the deliverables and is removed by the delivery to the EC. Moreover, all deliverables are stored in the project's document repository, which is organised in three different workspaces; "Drafts", and "Pending Approval".

The Project Coordinator will request to the Quality Manager to review the activity reports, project publications and other deliverables before submitted to the EC or publish. The Quality Manager compiles and produces the final version of the reports. In order to produce this final version, the Quality Manager can request to a partner who has not been involved in the production of the deliverable or to someone in one of the organisations which have not been personally involve in a deliverable to review the document and report directly to the Quality Manager.

4.4.3 Storage

All deliverables should be stored at the project repository under the Deliverables workspace "Deliverables"

In this Work Space there are three subspaces:

Drafts	This subspace is used to allow different partners to collaborate in the development of deliverables. In order to facilitate the day to day operation this subspace has been also divided in WP, to allow each WP team work on their deliverables.
Pending Approval	Those finish or almost finish papers which are pending to be reviewed or are actually been review, are temporally store in this subspace until the document is approved when the document is moved to the next subspace.
Submitted	In this subspace, the consortium stored all finish deliverables, which have been submitted to the EC by official procedures by the Project Coordinator. This includes those deliverables which are re-submitted either because the EC has requested or because the consortium has updated it before a review.

All Deliverables are been stored using the following name structure:

Document code: **DXX_Name_VZZ**

X = code in Annex I: "Description of Work" (DX.X)[1]

yymmdd[1] = date of official delivery according to the Annex-I "Description of work"

Z.Z = number of version

4.5 Software

4.5.1 Software documentation

In order to facilitate the collaboration and integration of the platform it is requested that all software modules are formally documented and those documents are uploaded to the Project's Knowledge Repository under the "Technical" workspace in the "SoftwareModulesDocumentation" subspace.

There should be one document with the following structure for each component of the project's platform:

1 Brief description of the component
2 Specifications (API)
3 Interfaces with other components
4 Installation guidelines

Before the first section of the document, there should be a page with the following table filled, which allow the reader to establish the relation between the software stored at the SVN tool and the document.

Component Name	
Module Name	
Application Name	
Version	
Contact information of the person responsible of the software	
SVN Path	

4.5.2 Storage

In order to facilitate the collaboration and integration of the components, the consortium has deploy a SVN platform, where both the source code of each component and the binaries should be stored, except if there are legal issues that prevent to share the source code and/or the software between the partners. In this case, the coordinator will check the workspace access rights to warranty that only those allow to access to the software has the corresponding access rights in the SVN platform.

The document "update", which is available at "Technical" Workspace of the Project Knowledge Repository, has the procedure to create a new user in the My-e-Director Software Repository and the necessary information to learn how to access to the repository.

The software components are stored in the project's Software Repository in three folders.

Source Code

In the root folder of the SVN: projects and releases. Inside each of those two folders a new one with the name of the module should be created. Subfolders should be created with the version number of the software.

The path to a specific source code should look like

SVN\ComponentName\moduleName\application1\1.0.0

If the module consists of just one application

SVN\ComponentName\moduleName\1.0.0

The version directory has to include all required files to build the project.

If the partner wants to continue working on the code but doesn't want other partners to use that version he should write a –**draft** after the version number:

For example, the last valid version for the partners is 2.4.5 and he is working on the 2.5.0 version. The 2.5.0 should be called 2.5.0-draft. An should be renamed once it is valid.

The folder should contain a subfolder named *instructions_to_build* with information of all the external components that are required to install the software: eclipse, .NET framework, maven, etc. It should also instructions of how to install and configured plugins in those frameworks if required. The instructions should be included in a text file called "*instructions_to_build.txt".* In case, the responsible of the software consider is useful, he/she can upload any library or tool which will help other

Release

The software releases, should be upload it in the "release" folder available in the root of the SVN platform. Each module is upload it following the next pattern:

SVN\releases\moduleName\appplication1_release_1.0.0.zip

Each component and/or application release is integrated into just one ZIP file. Each of this released should be documented as described in "*Software documentation*" section of this document.

Prototype

Another copy from the software releases should be uploaded to the "prototype" folder. The integration team should create the prototype version number directory. Once it is created, each partner, should upload there the required release following the next pattern:

SVN\prototype\1.0.0\module\appplication1_release_1.0.0.zip

Please, make sure that you just upload the release that you want to be used in the prototype, the latest version. It should not be an historical repository from all the versions of the applications that have been involved.

Before any software is uploaded to the SVN, the responsible of the development of the software should ensure that the software does not generate error when it is compiled and can be used by another software developer to work with the code and/or the release.

5 Methodology for Risk Analysis

5.1 Risk Identification

- Brainstorming session by all partners
- Input from Brain Bridges
- WP leaders

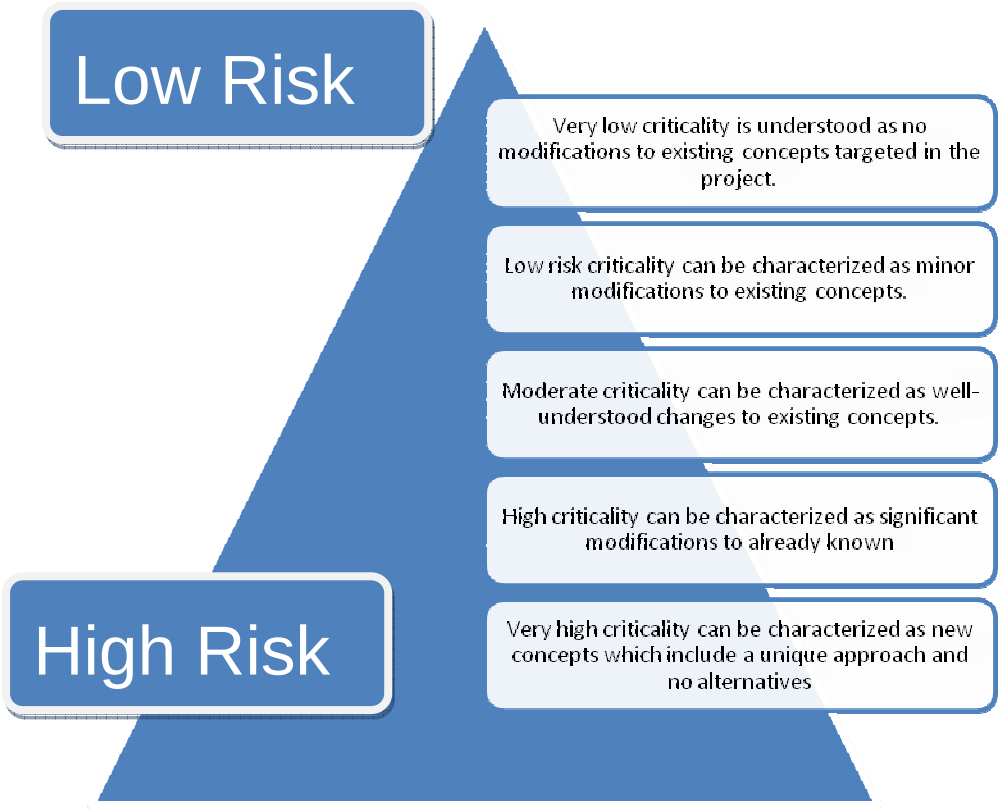
5.2 Risk Assessment

The Risk Assessment for SMART is based on Failure mode and effects analysis (FMEA). Though this method was first developed for systems engineering, it has proven to be sufficiently powerful for risk analysis is all types of projects to examines potential failures in products or processes. It is used to evaluate risk management priorities for mitigating known threat-vulnerabilities.

FMEA helps select remedial actions that reduce cumulative impacts of life-cycle consequences (risks) from a systems or process failure (fault).

The basic process was originally to take a description of the parts of a system (a high-level architectural overview), and list the consequences for each part that fails. In projects such as SMART this is adapted to evaluating the different tasks and processes in the project to generate the Risk Priority Number (RPN) via the following parameters:

Criticality:



Importance:

1. Not very important is defined as: the project could satisfactorily deliver even if this risk occurs
2. Important is defined as: the project could deliver even if the risk occurs, however would lose some value
3. Very Important is defined as: the project could deliver even if the risk occurs, however would lose significant value
4. Fundamental is defined as: the project could deliver even if the risk occurs, however would lose much of its value
5. Very Fundamental is defined as: the project could not deliver if this risk occurs

Probability:

1. Low: very unlikely, but not impossible.
2. Low-Medium: unlikely to occur;
3. Medium: Quite possible
4. High: more likely to happen than not
5. Very High: very likely to happen

Impact:

1. WP-Specific: risk relating to a specific WP
2. Project level: risk, which is generated at project level and implicates different WPs of the project (but not the relationship between WP's)
3. Cross-WP: risk raised within a specific WP that may affect the project success or require actions to be taken in another project WP

The RPN is generated with the following formula:

RPN = Criticality X Importance X Probability X Impact

The detected risks are ranked according to their respective RPN (highest to lowest) and then grouped according to this number. In Group 3 are the risks that are considered to be the most serious and therefore require the closest monitoring (RPN > 30). In Group 2 are those that, while less serious than those in the first are deemed to be sufficiently important that constant monitoring is required (15>RPN<=30). Finally there is Group 1 for risks that are of lowest priority (RPN<=15). For risks in Group 3 monitoring shall be done with a certain frequency as defined in the ongoing review and updating of risks as part of the Risk Management section.

5.3 Risk Avoidance or Mitigation

With the list of risks with RPN generated in the previous chapter, the steps and actions to be taken to avoid their occurrence are then defined taking into account the RPN number. The higher the RPN, the more rigorous and ongoing must be the actions to be taken.

5.4 Recommended Actions if Risk Occurs

Just as in the case of Risk Avoidance and Mitigation, for each identified risk, but paying special attention to risks with higher RPN, the recommended actions to be taken if the risk occurs are defined. Again, these actions are defined taking the RPN number into account, but in this case without including the Probability factor

(RSN - Risk Severity Number). This is due to the fact that, if a risk has actually occurred it is irrelevant what the probability of it occurring was. Here Group 3 is RSN>20, Group 2 is 10<RSN<=20 and Group 1 is RSN<=10.

RSN = Criticality X Importance X Impact

5.5 Risk Management

The basic activities of Risk Management are:

- Ongoing review and updating of risks
- Review in each project meeting
- General reporting and quality control mechanisms include Risk Management

The top risk items will be monitored and tracked and reported regularly. Counter-actions for the identified risk items will also be monitored and results will be reported regularly.

Based upon impact level, risk management will be carried out within the WP level, or at project management level. Project level risks impacting on the overall project will be managed at a project management level, whereas risks concerning specific WP issues will be managed at the WP level.

Each WP leader will perform an initial risk assessment at the beginning of his/her WP activities. On top of that risk mitigation techniques will be also identified and recorded. Each risk mitigation plan will reflect the activities to be implemented by a responsible assigned WP leader and monitored by the project coordinator.

5.6 Matrix of Risk

WP(s) Affected	FAULT, ERROR, RISK	EFFECT OF POTENTIAL RISK	CRITICALITY (1-5)	IMPORTANCE (1-5)	PROBABILITY (1-5)	IMPACT (1-3)	RPN (Risk Priority Number)	RSN (Risk Severity Number)	PARTNER RESPONSIBLE	RECOMMENDED ACTION TO AVOID OR MINIMISE RISK	RECOMMENDED ACTION IF OCCURS
All	Changed demands from EC to project	Some work invalidated, work repeated, resources wasted	5	3	2	2	**60**	**30**	Atos, All	Keep in regular contact with EC personnel and ensure good communication within the project so that these changes do not appear suddenly	If the demands are not clearly within the bounds of the Contract and DoW and the demands put an undue burden on the Consortium, the Consortium must try to not assume these changes. If that is not possible then the conditions of the Contract or DoW must try to be renegotiated.
	Lack of interest and/or commitment of stakeholders	Work doesn't reflect the needs of stakeholders	1	1	3	2	**6**	**2**	All	Ensure two-way communication with stakeholders via email, website and at events.	If there has been sufficient communication with stakeholders and they have had sufficient information then the goals and mission of the LTI to be set in motion in the project will need to be reevaluated. If there hasn't been sufficient communication then this risk is actually a case of "Lack of Communication with Stakeholders".

WP(s) Affected	FAULT, ERROR, RISK	EFFECT OF POTENTIAL RISK	CRITICALITY (1-5)	IMPORTANCE (1-5)	PROBABILITY (1-5)	IMPACT (1-3)	RPN (Risk Priority Number)	RSN (Risk Severity Number)	PARTNER RESPONSIBLE	RECOMMENDED ACTION TO AVOID OR MINIMISE RISK	RECOMMENDED ACTION IF OCCURS
All	Disagreement among partners about project objectives	Delays, lack of focus in work	2	3	2	3	**27**	**27**	Atos, All	Regular meetings, weekly conference calls, etc. to ensure adequate communication.	If the disagreements are due to inadequate communication then the communication must be increased. In an extreme case a project meeting could be arranged. If the disagreement is despite good communication, then any irreconcilable disagreement must be resolved by a vote among the Consortium. If the disagreement fundamentally concerns one specific WP, in the case of a tie in the vote, the WP leader will decide. If the disagreement concerns more than one WP (or the whole project), in the case of a tie, the Coordinator will decide taking into account the feedback from the Technical and Quality Managers.
All	Insufficient resources committed to project by partners	Work delayed, poor quality of work	3	3	1	4	**36**	36	Atos, All	Try to ensure that the persons assigned to the project are of an adequate profile and will be able to commit themselves sufficiently to the project.	Partners committing inadequate resources will be reminded by the WP leader or Project Coordinator of the possible consequences (including reduced financing or holding the next pre-financing payment (if it is possible)).

WP(s) Affected	FAULT, ERROR, RISK	EFFECT OF POTENTIAL RISK	CRITICALITY (1-5)	IMPORTANCE (1-5)	PROBABILITY (1-5)	IMPACT (1-3)	RPN (Risk Priority Number)	RSN (Risk Severity Number)	PARTNER RESPONSIBLE	RECOMMENDED ACTION TO AVOID OR MINIMISE RISK	RECOMMENDED ACTION IF OCCURS
All	Overspending due to too high partici-pation in events	Less resources available to-wards the end of the project; therefore lower quality work	1	1	3	1	**3**	**1**	Atos, All	Be selective about the events to attend. Try to not send different partners to the same events. Normally only send 1 person from each partner to most events. Where the event is not of fundamental, then try to only send 1 or 2 part-ners.	In the later phases, attendance to non-fundamental events would need to be eliminated. If that is not pos-sible (due to pressures from the EU) then a budgetary extension could be solicited.

WP(s) Affected	FAULT, ERROR, RISK	EFFECT OF POTENTIAL RISK	CRITICALITY (1-5)	IMPORTANCE (1-5)	PROBABILITY (1-5)	IMPACT (1-3)	RPN (Risk Priority Number)	RSN (Risk Severity Number)	PARTNER RESPONSIBLE	RECOMMENDED ACTION TO AVOID OR MINIMISE RISK	RECOMMENDED ACTION IF OCCURS
All	Lack of commitment of partners	Work delayed, poor quality of work	1	3	1	3	**9**	9	Atos, All	Try to ensure that the persons assigned to the project are of an adequate profile and will be able to commit themselves sufficiently to the project. The coordinator retains the advance payment and provides to the partner the necessary funds to cover the work in periods of 6 months. If the partner does not carry the work or the project internal assessment does not approved the quality of the work, the coordinator will retain funds until the problem is solved	Partners showing inadequate commitment will be reminded by the WP leader or Project Coordinator of the possible consequences (including reduced financing)
All	Important project member leaves suddenly	Work delayed, network of stakeholders weakened	1	2	3	3	**18**	6	All	All on-going work must be kept on the project website and other members of the team must be kept up-to-date.	If the person leaves so suddenly that no transition is possible then no remedial actions are possible. Otherwise try to assure that the person leaving is able to take part in a smooth transition process. For this transition process all partners must be able and willing to participate.

WP(s) Affected	FAULT, ERROR, RISK	EFFECT OF POTENTIAL RISK	CRITICALITY (1-5)	IMPORTANCE (1-5)	PROBABILITY (1-5)	IMPACT (1-3)	RPN (Risk Priority Number)	RSN (Risk Severity Number)	PARTNER RESPONSIBLE	RECOMMENDED ACTION TO AVOID OR MINIMISE RISK	RECOMMENDED ACTION IF OCCURS
All	Lack of quality of partner contributions	Poor quality work	1	3	3	2	**18**	6	Atos, All	Draft versions of all documents must be shared from as early as possible. A strong review process must be kept up.	In the short run, other partners will need to cover for this partner Partners who consistently provide contributions will be reminded of this fact and that ultimately it could affect their financing.
5	Discrepancies between partners about priorities	Work delayed	2	3	3	1	**18**	6	Atos, All	Try to reflect (where possible) the different views of partners	If it is not possible to reflect all different views (especially because some views may be incompatible) then the Consortium must decide by vote) which priorities to include. In the case of a tie the WP leader decides.
All	Lack of communication between partners	Overlapping work, work delayed	1	3	2	3	**18**	9	Atos, All	Regular meetings, weekly conference calls, project repository, etc.	If partners do not attend meetings, conference calls, etc. and do not respond to email messages then the Coordinator will have to remind them that these are fundamental tasks of the project and that failure to take part can have consequences (including financial).

WP(s) Affected	FAULT, ERROR, RISK	EFFECT OF POTENTIAL RISK	CRITICALITY (1-5)	IMPORTANCE (1-5)	PROBABILITY (1-5)	IMPACT (1-3)	RPN (Risk Priority Number)	RSN (Risk Severity Number)	PARTNER RESPONSIBLE	RECOMMENDED ACTION TO AVOID OR MINIMISE RISK	RECOMMENDED ACTION IF OCCURS
1	"Micromanagement"	Increased administrative costs, less flexibility for consortium. Lower motivation for Consortium members. Lower quality work as shareholders concerns may be overlooked	1	2	4	2	**16**	4	Atos, All	No actions possible	Though good relations with the EU are fundamental, it must be kept clear that the Contract and DoW are what defines the project.
ALL	Discrepancies between partners about priorities	Work delayed	2	2	3	1	12	4	Atos, All	Try to reflect (where possible) the different views of partners and early discuss critical issues at the project meetings to arrive to a compromise solution.	If it is not possible to reflect all different views (especially because some views may be incompatible) then the Consortium must decide by vote) which priorities to include. In the case of a tie the WP leader decides.
All	Partner leaves project	Work delayed, poor quality of work	1	2	1	3	6	6	All	Ensure other partners are up to date on the work of each partner. Maintain all ongoing work in a repository accessible to all partners.	Try to ensure a smooth transition in all uncompleted tasks.

WP(s) Affected	FAULT, ERROR, RISK	EFFECT OF POTENTIAL RISK	CRITICALITY (1-5)	IMPORTANCE (1-5)	PROBABILITY (1-5)	IMPACT (1-3)	RPN (Risk Priority Number)	RSN (Risk Severity Number)	PARTNER RESPONSIBLE	RECOMMENDED ACTION TO AVOID OR MINIMISE RISK	RECOMMENDED ACTION IF OCCURS
3	Extraction of low-level (WP3) features is not fast enough	Real-time news and security info is not available	2	3	2	1			IBM, AIT	Close collaboration at use case planning phase to ensure they require feasible technology	Parallelise processing, simplify algorithms as long as performance is mildly affected, decimate input streams as long as spatiotemporal correlation is not lost
3	Extraction of low-level (WP3) features is not robust enough	Faults in the news and false alarms/misses in security alerts	3	2	2	1			IBM, AIT	Close collaboration at use case planning phase to ensure they require feasible technology	Improve integration with other information sources. Tune the use cases to yield meaningful services with less complicated algorithmic needs.
3	High infrastructure costs	Not enough budget allocated to purchase equipment	2	2	3	1			All	Careful selection of hardware to procure and of sites to install it Reuse existing hardware, like traffic cameras	Reduce number of installations

WP(s) Affected	FAULT, ERROR, RISK	EFFECT OF POTENTIAL RISK	CRITICALITY (1-5)	IMPORTANCE (1-5)	PROBABILITY (1-5)	IMPACT (1-3)	RPN (Risk Priority Number)	RSN (Risk Severity Number)	PARTNER RESPONSIBLE	RECOMMENDED ACTION TO AVOID OR MINIMISE RISK	RECOMMENDED ACTION IF OCCURS
	Results of the different WP are not compatible (functional) and therefore cannot be integrated easily.	Integration delay	4	4	3	2			ATOS	Development of a common software architecture. As prototypes become available, they should be integrated into the My-e-Director development environment. Every 12 months an updated version will be releases. Constant integration activity will deliver early feedback on possible integration problems. The project's workplan is based on an iterative evolutionary approach which emphasizes on continuous integration. The 6-monthly workshop will be a forum to discuss progress with integration and identify solutions for possible occurring problems.	Redesign from the interfaces from the components where the incompatibility is happening. Investigation of possibilities for including alternative components. Simulation of a component in case it cannot become timely available.

WP(s) Affected	FAULT, ERROR, RISK	EFFECT OF POTENTIAL RISK	CRITICALITY (1-5)	IMPORTANCE (1-5)	PROBABILITY (1-5)	IMPACT (1-3)	RPN (Risk Priority Number)	RSN (Risk Severity Number)	PARTNER RESPONSIBLE	RECOMMENDED ACTION TO AVOID OR MINIMISE RISK	RECOMMENDED ACTION IF OCCURS
	Technological in-compatibilities in the integration.	Integration de-lay.								.A list of allowed technologies will be provided as deliverable from the integration task to avoid this problem. Loose coupled technologies will be used. Standards should be used.	Possible reimplementation with new technologies that allows compatibility
WP3	Data collection plans and/or system specification conflict with Spain privacy laws	Collection of audio & video data is delayed or cancelled.	4	4	4	3			ATOS, AIT, IBM, ADR	Contact the Spanish DPA for guidance. Prepare alternative data collection plans.	Change data collection plans. Change focus of A/V research to match the available data. Use other available data sources for a proof of concept. Change system specification and requirements.
WP3	The quality or amount of collected data isn't sufficient for A/V processing.	Can't extract information from the collected data.	2	2	3	2				Monitor closely the data collection process. Review data before the process completes.	Use only the part of the data with sufficient quality. Repeat collection process until there is sufficient amount of good quality data.

WP(s) Affected	FAULT, ERROR, RISK	EFFECT OF POTENTIAL RISK	CRITICALITY (1-5)	IMPORTANCE (1-5)	PROBABILITY (1-5)	IMPACT (1-3)	RPN (Risk Priority Number)	RSN (Risk Severity Number)	PARTNER RESPONSIBLE	RECOMMENDED ACTION TO AVOID OR MINIMISE RISK	RECOMMENDED ACTION IF OCCURS
WP5	The amount of data collected does not allow interesting events to be identified from lower-level signals.	Cannot identify events for use cases	4	4	2	3			GLA	Monitor closely the data collection process. Review data before the process completes.	Extrapolate background data with expected cyclic behaviour from data collected.
WP5	Insufficient information in signals to ascertain relevance of an event.	Cannot identify events for use cases by searching	4	3	2	2			GLA	Monitor closely the specification of low-level A/V processing algorithms. Early integration of signals into prototype search engine.	Target particular types of queries where data can support desired outcomes.
WP5	Lack of training data for learning relevance signals	Cannot identify events for use cases by searching	4	4	2	3			GLA	Use high-level assessments/annotations of relevant events for test queries.	Consider crowdsourcing or logging user behaviour data from early releases to provide additional training data

WP(s) Affected	FAULT, ERROR, RISK	EFFECT OF POTENTIAL RISK	CRITICALITY (1-5)	IMPORTANCE (1-5)	PROBABILITY (1-5)	IMPACT (1-3)	RPN (Risk Priority Number)	RSN (Risk Severity Number)	PARTNER RESPONSIBLE	RECOMMENDED ACTION TO AVOID OR MINIMISE RISK	RECOMMENDED ACTION IF OCCURS
WP5	Real-time indexing solution cannot cope with volume of data	The search engine can only identify outdated events for use cases	3	2	1	2			GLA	Evaluate efficiency and latency of proposed real-time indexing solution early on.	Investigate the horizontal scaling behaviour of the real-time indexing solution.
WP5	The open-source platform that the real-time indexing solution is based (e.g. S4) releases a major release	Real-time indexing solution based on outdated platform.	1	2	4	1			GLA	Monitor mailing lists of deployed platform for releases	Investigate if major version upgrade is necessary for SMART, considering benefits of new features vs. stability of new release.

WP(s) Affected	FAULT, ERROR, RISK	EFFECT OF POTENTIAL RISK	CRITICALITY (1-5)	IMPORTANCE (1-5)	PROBABILITY (1-5)	IMPACT (1-3)	RPN (Risk Priority Number)	RSN (Risk Severity Number)	PARTNER RESPONSIBLE	RECOMMENDED ACTION TO AVOID OR MINIMISE RISK	RECOMMENDED ACTION IF OCCURS
WP6/WP7	The project fails to get ethical approvals for one or more of its real-life validation scenarios	Significant changes to the scope of the SMART validation scenarios	4	3	3	3			ATOS, PRISA, SDR, S3LOG	Early contact and interaction with the Spanish DPA; Consultation with the Ethics Expert; Preparation of alternative validation scenarios The project has also contacted the Greek DPA and discussed possible implications in order to: (a) Get additional advices and (b) Investigate the possibility of conducting (part of) the validation in Greece as well (e.g., outside the premises of partners).	The project has developed a disciplined set of remedial plans, which include the following contingency and risk mitigation actions: 1. **In the case of changes suggested by the DPA in association to the project's scenarios**: Based on the feedback of the (Spanish and Greek) DPAs the project will identify scenarios that could be problematic in terms of their ethical implications. The project will resubmit its application taking into account the necessary changes that have to be realized on the problematic scenarios. Early feedback from the DPA has shown that the positioning of the outdoor cameras can be critical for the approval of certain scenarios, since they can have an impact on whether information from the visual streams renders people identifiable. 2. **As a back-up plan in the case of problems/delays approving information about the data collection:** The project will pursue alternative validation scenarios, in controlled environments (e.g., in-door scenarios or controlled outdoor environments, where informed consent by participating actors can be obtained. In case everything else fails: Consideration of scenarios that involved human actors, who gives consent.

WP(s) Affected	FAULT, ERROR, RISK	EFFECT OF POTENTIAL RISK	CRITICALITY (1-5)	IMPORTANCE (1-5)	PROBABILITY (1-5)	IMPACT (1-3)	RPN (Risk Priority Number)	RSN (Risk Severity Number)	PARTNER RESPONSIBLE	RECOMMENDED ACTION TO AVOID OR MINIMISE RISK	RECOMMENDED ACTION IF OCCURS
WP6, WP7	Problems Developing an Open Source Community around the project's results	It could lower SMART's impact; It could hinder impact creation on the basis of the SMART results	2	3	3	3				Early establishment of an open source project on the basis of the SMART results; Stimulating developers/users interest on the basis of relevant measures (such as «one-click-demonstrations)	Intensified dissemination efforts targeting the open source community; Advertisement of the project within existing communities where the project partners are involved (e.g., Terrier.org);
WP4/WP5/WP6	The scale of the SMART validation is small and not convincing since only few edge servers in City of Santander will be integrated	Lack of large scale validation for the SMART Engine	2	3	3	3				Simulate some of the SMART components; Use simulated or generated file collections for testing the SMART engine	Generation of a larget number of files; Possible interfacing and involvement of sensors from other internet-of-things eco-systems (such as Pachube.com)

6 Conclusions

This deliverable has dealt with two very important aspects of the project management work associated with the SMART project, namely quality management and risk management.

In particular, it has elaborated on the project's quality management and risk management methodologies i.e. the methodologies for dealing with two key elements of the project's success. Quality management procedures have been provided in relation to the main deliverables of the project including both software and paper based deliverables. These procedures must be faithfully followed in order to ensure the quality of the project's results, while also boosting the project's continuous improvement strategy. As part of this strategy, this deliverable will be release in an iterative fashion, where future iterations will report on additional or revised quality management and risk management issues and plans.

In the area of risk management the project has introduced its risk management methodology, along with the main risks foreseen at the time of writing this deliverable. The risks can be classified as general management risks (applicable to most international collaborative projects like SMART), but also as more specific technical risks that relate to the technical work carried out in SMART.

For both types of risk the deliverable illustrates mitigation strategies (aiming at minimizing the potential impact of these risks), as well as contingency plans (to be activated in order to recover the impacts of the specified risk). In the case of SMART specific (technical) risks, this deliverable has provided detailed mitigation/contingency plans associated with limitations stemming from: (a) ethical implications and the legal environment of the SMART project and more specifically of the SMART validating scenarios and (b) complexities surrounding the SMART technical developments, including issues associated with the robustness of signal processing systems and complexities associated with the SMART architecture and integration efforts. For all these risks, SMART has provided insights on how they could be confronted, based on knowledge available at the time when this deliverable is released. We expect these insights to be extended/updated in future versions of this deliverable, as those risks will arise and will be confronted during the project. In such future releases the project could also provide a level of risk clearance for all main risks.

As the project reaches/surpasses important milestones of its work plan, we expect that several of the anticipated risks will be cleared.

7 BIBLIOGRAPHY AND REFERENCES

N/A