STREAMING OF THEATRE AND ARTS FOR OLD AGE ENTERTAINMENT

D5.3 PROJECT MANAGEMENT PLAN

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Revision and history chart

Version	Date	Editors	Comment
0.1	22/08/2016	L. Biocca	First draft
0.2	31/08/2016	N. Paraciani	Added chapters, general revision
1.0	01/09/2016	N. Paraciani	Additional revisions and contents
1.1	28/09/2017	C. Ivan, L. Biocca	Addition of Risk Management and additional revisions
1.2	20/10/2017	L. Biocca, P. Nowakowski, C. Ivan, Z. Molnár	Addition of Risk Register per WP by WP Leaders and correct budget figures revisions
1.3	26/10/2017	N. Paraciani	Gantt figures and deliverables' update, general additional revisions
1.4	27/10/2017	L. Biocca, F. Picenni	Final revision

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0. Abbreviations and acronyms

AAL: Active and Assisted Living Programme
CMU: Central Management Unit
CA: Consortium Agreement
DoW: Description of Work
GA: General Assembly
IPR: Intellectual Property Rights
NCP: National Contact Point
PM / PMP: Project Management / Project Management Plan
SC: Steering Committee
WP: Work package

1. Note on post-MTR update

This deliverable was updated to reflect comments and indications found in the Mid-Term Review report. The table below details the updates:

MTR Comment	Addressed in
"The risk analysis of the project is considered deficient. It has not been reviewed and updated periodically. This aspect is critical for fast evolving technologies and it has been ignored."	✓ Section 7, page 17, and its subsections
"The consortium has not considered specific IPR issues, and has just accepted the standard MGA agreement. This is further indication that they are not truly considering the commercialisation of the platform."	✓ Section 5.3, page 10 The management of IPR with reference to exploitation is detailed in D4.4 Section 4, specifically in terms of background and foreground
"The lack of a risk plan has resulted in the consortium reaching the mid term review without a testable platform and no risk mitigation strategy to address this."	✓ Section 7, page 17, and its subsections
"The spent budget is approximately in line with the planned budget, but this does not take into account the fact that the first phase of work has not been completed. If they are to proceed, then they will need to identify where the funds are going to come from to complete the designed activities."	✓ Section 4.2, page 6

2. Executive summary

This document describes the Project Management Plan for the STAGE project.
It outlines the management structure, coordination strategy and work planning over the scheduled timeline.
A detailed overview of the consortium entities and their relationships within the management framework is provided, along with the structure of the management process for scientific and administrative activities.
Procedures for reporting to the AAL CMU, and managing deviations and incidents are included.
A picture of the work plan of the project, and its implementation over the span of activities, is given through the description of the timescale of deliverables.

In particular, the chronological development of activities in relation to deliverables and milestones is presented, as well as their mutual relations through the Gantt chart.
The roles of partners in the results delivery process are also described, along with the management of communications, documents and work plan timelines.
In particular, the two STAGE management tools, available to partners as intranet web applications, are described.

The main sources for this document are the CA and the DoW. Since these are susceptible to changes over time, especially the DoW, this deliverable will be updated accordingly during the project lifecycle.

3. Purpose of the document

This document aims to provide a working reference for both partners in the consortium and the AAL CMU about the coordination framework for scientific and administrative activities.
The main purpose of this PMP is to ensure that project activities are properly carried out and finalised, with as few deviations as possible from the original schedule.

In particular, its objectives are:

- ✓ ensuring the correct execution of the project's work plan including its adaptation to necessities that may occur during the project;
- ✓ assuring the overall coordination of all activities among the project partners;
- ✓ enabling timely reporting to the AAL panel and the administrative and financial project officers.

This is the first version of the PMP, delivered in M6 of the project. It is subject to updates during the project lifecycle.

4. Project basis

4.1. Contractual Documents

The reference documents of the project Consortium members that define the tasks, rights and obligations of partners are listed below:

- ✓ Consortium agreement

The Consortium Agreement is the internal contract of the Consortium partners which has been signed and accepted by all partners. It defines the Consortium internal rules for project management as well as the Consortium organization and decision taking mechanisms.

- ✓ Description of Work [DoW]

4.2. Project effort and budget

STAGE project started on 1st of March 2016 and ends in August 2018, with duration of 30 months.
The budget associated to the partners is presented in the table below:

Partic. No.	Participant short name	Staff costs	Indirect costs	Other costs	Subcontracting	Total cost	Funding requested
1	CNR ITC	204.000,00	51.000,00	16.000,00	0	271.000,00	135.500,00
2	CEDEO	200.000,00	40.000,00	0	100.000,00	340.000,00	133.600,00
3	ANCS	0,00	0,00	10.000,00	58.000,00	68.000,00	13.600,00
4	SIVECO	340.500,00	68.812,00	3.555,00	5.001,00	417.868,00	239.664,00
5	GEO	130.500,00	28.600,00	12.500,00	800	172.400,00	137.920,00
6	ASM	49.127,00	13.069,00	38.000,00	0	100.196,00	60.118,00
7	PBN	125.128,00	13.338,00	8.250,00	47.368,00	194.084,00	194.084,00
8	KARMA	78.000,00	8.100,00	3.000,00	33.628,00	122.728,00	92.046,00
9	MAT	47.000,00	10.760,00	6.800,00	0	64.560,00	51.520,00
	Total	**1.174.255,00**	**233.679,00**	**98.105,00**	**244.797,00**	**1.750.836,00**	**1.058.052,00**

6. HUMAN RESOURCES REPORT

PROJECT PERSON EFFORT DURING THE REPORTING PERIOD			
Partner org. acronym	***Actual* effort in person/ months for the reporting period**	***Planned* effort in person/ months for the reporting period**	**Remarks**
1 CNR	35 PM	38 PM	Delayed trial start due to technology platform adjustment
2 CEDEO	48 PM	48 PM	
3 ANCS	4,5 PM	5 PM	Delayed trial start due to technology platform adjustment
4 SIVECO	70 PM	46,4 PM	We involved experts with a lower rate than estimated at the beginning of the project. Even if the effort is higher than initial estimation, we won't exceed the approved budget and we will implement all activities which are in our responsibility.
5 Georama	18,5 PM	19,5 PM	
6 ASM	15,8 PM	15,8 PM	

7 PBN	16,7 PM	25,8 PM	Some of the initial planning did not start due to the partner replacement process of Infomatix with Karma
8 Karma	0 PM	14,8 PM	Partner change is in progress
9 Materia	13 PM	15 PM	
TOTAL	221,5 PM	228,3 PM	

5. Management framework and measures

The structure of the management framework for the project and the roles of partners and consortium entity are reported here. They were established in both the DoW and the CA, and are therefore agreed by all partners.
Any changes or reviews of such roles will always be discussed with the GA for approval.

The consortium entities involved in the PM process are the following:

- **Coordinator**: the coordinator is CNR. It is the appointed intermediary between the consortium and the AAL CMU (although funding and budget matters are managed individually by partners with their NCPs). Its duties are mainly related to providing partners with frameworks and plans to manage the production of documents and results, as well as time schedules to be observed. The coordinator also chairs all project meetings and provides the consortium with minutes. The Coordinator is accountable to the General Assembly.
- **General Assembly (GA)**: it is the main decision making body, formed by at least one representative for all partners in the consortium. Partners agreed to abide to the GA's decisions, although they can submit disputes to resolutions.
- **Steering Committee (SC)**: it is formed by the coordinator and the WP Leaders, as appointed by the GA. The SC supervises the implementation of the work plan and monitors compliance with deadlines and project specifications for WP activities. It reports to the GA.
- **WP and Task Leaders**: each WP is led by a partner, who is responsible for its proper development and for coordinating the activities of task leaders, who in turn coordinate single tasks and deliverables within a WP.

In addition to these, the **Ethical Committee (EC)** is also part of the consortium bodies, as the appointed entity to supervise relationships with end users (seniors) and content providers (Cis) rights, especially as regards compliance with privacy and ethical guidelines. The EC ensures that users rights are protected and periodically reports to the GA.

5.1. Scientific and technical management

The management framework, as regards the implementation of scientific and technical activities, is schematised in Figure 1 (green arrows represent a monitoring relation, while blue arrows a reporting relation). It follows a bottom-up approach, starting with task leaders and ending with the General Assembly and the coordinator.
The coordinator is in charge of updating the CMU and reporting any deviations from ordinary planning.

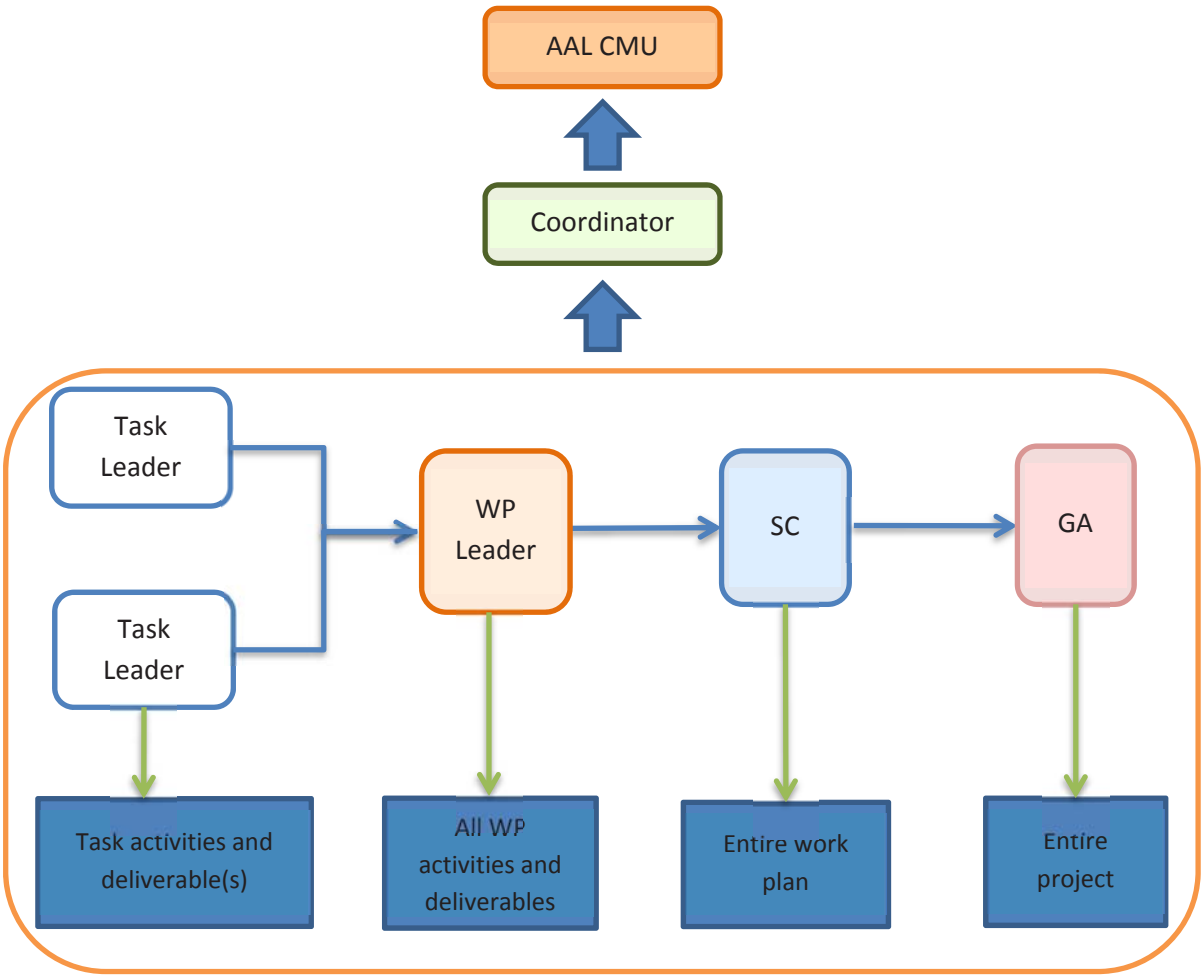

Figure 1. Project activities management framework

5.2. Administrative management

Management of administrative tasks and procedures follows the same bottom-up approach described above, except that the workflow mainly involves the coordinator and the partners as single entities, and of course the AAL CMU.

Communications with NCPs are managed by partners individually, as regards negotiations for national grant agreements. Partners inform the coordinator about the status of their national contracts, as well as of any deviations and/or changes that could affect the normal implementation of project activities.

5.3. IPR management

Properties (methods, information, materials, data, systems, tools, equipment, software) arising from the partners' tasks and development of the project belong to the partner that developed them. Partners signed a Consortium Agreement (updated on December 2016) covering the issues of protection and use: relevant matters within IPRs, such as confidentiality, data analysis and strategic information, new methods, as well as access rights were specified accordingly.
In particular, ICT developers will grant access to background IP to other partners developing the platform, to the extent that such access is required for reaching the final version of the product and for technological reasons.
As regards foreground IP, this will remain the property of the partner(s) that developed it. The other partners will have access to foreground IP at Fair, Reasonable and Non-Discriminatory (FRAND) conditions.
1. Background (BG) information belongs to the partner who owns it, a partner can have access to it for justified project reasons;
2. Foreground (FG) information belongs to the partner who developed it;
3. the platform will be an integration of BG and FG information and will last until the end of the project;
4. after the end of the project, if a partner needs other partners' FG information to implement STAGE, they can get it at FRAND terms.

Deliverable 4.4 Exploitation Plan, Chapter 4, includes the definition of partners' background and foreground for the purpose of the exploitation of project results.

All Partners are prepared to provide their pre-existing know-how in order to contribute to the success of the STAGE project. The Partners will respect each other intellectual property rights on all pre-existing items that are owned by one of the Partners and that are used in the context of the project. If a Partner is the holder of patents, copyright protected material or other intellectual property items that are needed for the execution of the STAGE project, it will provide those items to other Partners at fair licensing conditions. Partners will only use the products, information, source code or other protected items owned by another Partner in the context of the STAGE project, when the licensing conditions for exploitation of these items in the context of the project have been clearly communicated by the Partner that is the right holder of these items.
As far as the intellectual property rights on the STAGE project results are concerned, the Partners have agreed on the principle that for every result in the form of know-how, report, computer programs or any other form eligible for intellectual property protection, the right holder or right holders will be accurately identified.
The Partners also have agreed on the principle that they will respect each other rights on the exploitation of the STAGE project results.

Content rights
The content to be uploaded on the platform and accessible online via streaming is subject to SIAE rights. SIAE is the national Italian agency in charge of protecting editors and authors copyrights.
In the context of STAGE, thus, a copyright licence through a moderate annual fee is requested for research purpose. During the STAGE trial, the broadcast content through the standard devices still belongs to the

authors, but the user can access and see the events on a free basis, being the copyright licence approved and covered purposely for that specific use.

When STAGE enters the marketplace, the new implemented STAGE streaming services will enable cultural associations to offer on demand, live and scheduled (TV-like) services in a variety of modalities (free, ad-supported, pay per view, subscription etc.) to the STAGE users. Prior to that phase, the copyrights shall be traded at suitable market price depending on the offer by cultural institutions and according to the planned value proposition in the business plan.

5.4. Meetings

The arrangements for timing and scheduling of project meetings, including specific consortium bodies meetings and production of minutes, are detailed in section 4.4 of the CA.
Meetings are planned using the Doodle online service (http://www.doodle.com) in order that as many partners as possible are able to participate. Meetings can be face-to-face or Telcos. Skype has been successfully used so far. Whenever possible, meetings are collocated to minimize expenses and travel time.

5.5. Consortium Meetings and Review meetings

Consortium meetings are scheduled to take place twice a year. The following consortium meetings are planned during project duration:

No	Scope	Period	Partner that will host the meeting, location
1	Kick of Meeting	March 2016	Rome, Italy
2	Consortium meeting	May 2017	Warsaw, Poland
3	Consortium Meeting and Review Meeting	June 2017	Brussels, Belgium
4	Consortium Meeting and Review Meeting	November 2017	Brussels, Belgium
5	Consortium Meeting	April 2018	to be discussed
6	Consortium Meeting& End of the project	September 2018	to be discussed

5.6. Reporting to the AAL CMU

The AAL Programme requires periodic reporting of project progress to the CMU according to a fixed time schedule. For STAGE, two annual reports (calendar year reports) will be delivered, at months 12 and 24, as deliverables D5.4.1 and D5.4.2. In addition to these, a midterm review report and a final report will also be produced, at months 15 and 30 respectively, as D5.5 and D5.6.

5.7. Managing deviations and incidents

When a deviation from the planned schedule or an incident preventing normal progress is found by a consortium entity, they will report it immediately to the proper consortium body and to the coordinator.

This latter will then call for an emergency meeting of the General Assembly, where representatives will decide and agree on the best remedy actions to be taken.
Any such impediments causing major changes to the project work plan will be timely reported to the AAL CMU by the coordinator.

6. Work plan and deliverables

The STAGE work plan is structured into five work packages, each in turn formed by several tasks, originally distributed over 30 months. A revised time scale of activities and deliverables is proposed for a planned duration of 35 months as well.
There are a total of 27 deliverables to be produced during the project. Figure 2 shows the GANTT chart for STAGE for the 35 months scenario.

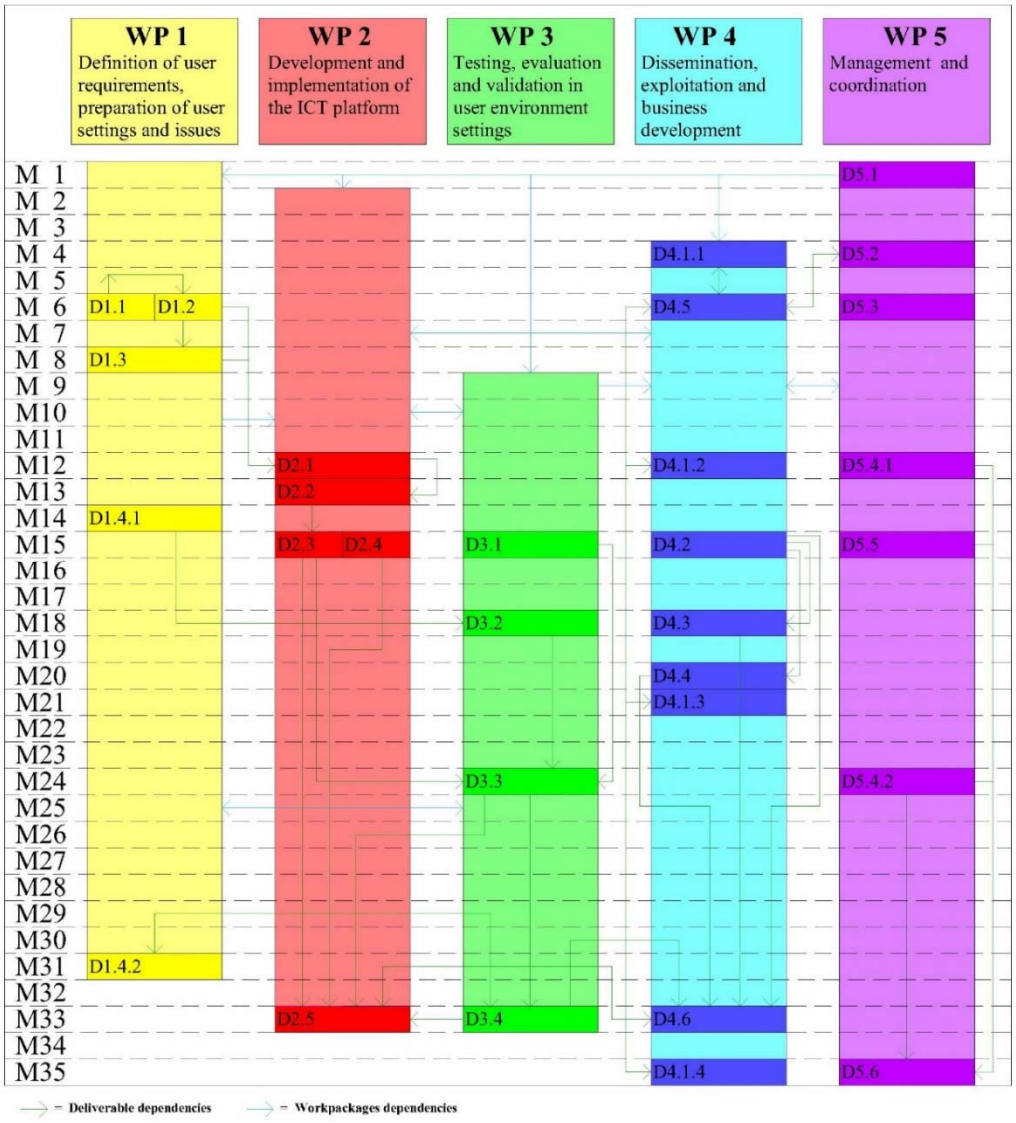

Figure 2. GANTT chart of the STAGE project - 35 months

As mentioned in chapter 3, both WP leaders and task leaders were appointed to monitor the implementation of the activities. They are reported in Table 1 below.
Leading partners were chosen on the basis of both their expertise and their degree of involvement within WPs and tasks assigned to them.

WP number and leader	Task name	Task leader
WP 1 CNR	T1.1 User involvement and analysis of preferences	CNR
	T1.2 Identification of user specific requirements	CNR
	T1.3 Identification of use cases and settings	PBN
	T1.4 Ethics, privacy and other confidential issues	PBN
WP 2 SIVECO	T2.1 Technical requirements definition	SIVECO
	T2.2 Architecture and Interoperability	SIVECO
	T2.3 Platform development	CEDEO
	T2.4 Integration of end user requirements and functionalities	SIVECO
	T2.5 Mobile and Smart TV app design and development	CEDEO
	T2.6 System testing and technical validation	CEDEO
WP 3 PBN	T3.1 User recruitment and involvement of cultural organisations	CNR
	T3.2 Evaluation Framework	MATERIA
	T3.3 Training sessions, testing, pilot applications, validation and evaluation of STAGE.	PBN
	T3.4 Final field evaluation and end user response	CNR
WP4 ASM	T4.1 Dissemination	ASM
	T4.2 Market analysis	ASM
	T4.3 Exploitation: business model(s) and business plan development	ASM
	T4.4 Website development	ASM
WP 5 CNR-ITC	T5.1 Technical management	CNR

Table 1. Work package and task leaders

A list of all deliverables with related lead partners is reported in table 2 below. Tables from 3 to 5 show the timeline of deliverables for each of the three calendar years of project activity.

Number	Title	WP	Type	Dissem. level	Delivery	Lead partner
D1.1	Report on users involvement and preferences	1	R	RE	6	CNR
D1.2	User requirements definition and analysis	1	R	RE	6	CNR
D1.3	Definition of technical specifications to meet user requirements	1	D	CO	8	PBN
D1.4.1	Ethics and privacy guidelines	1	D	CO	14	PBN
D1.4.2	Report on ethics and privacy issues	1	R	RE	31	PBN
D2.1	System architecture, technical requirements and specifications	2	D	RE	12	SIVECO
D2.2	Integration plan	2	R	RE	13	SIVECO
D2.3	Release of first STAGE prototype	2	SW	RE	15	CEDEO, SIVECO, GEO
D2.4	Testing plan	2	D	RE	15	SIVECO
D2.5	Final STAGE prototype	2	SW	CO	34	CEDEO, SIVECO, GEO
D3.1	Report on cultural organisations involvement	3	R	CO	15	CNR
D3.2	Evaluation report	3	R	RE	18	MAT
D3.3	Training and applications	3	D	RE	24	PBN
D3.4	Final field evaluation report	3	R	CO	33	CNR
D4.1	Dissemination Plan (and updates)	4	D	CO	4, 12, 21, 35	ASM
D4.2	Market analysis report	4	R	CO	15	ASM
D4.3	Draft Business plan/business model	4	D	RE	18	ASM
D4.4	Exploitation plan	4	D	RE	20	ASM
D4.5	Public project website	4	SW	PU	6	ASM
D4.6	Final business plan/business model	4	D	CO	33	ASM
D5.1	Kick off meeting report	5	R	RE	1	CNR
D5.2	Intranet website	5	SW	RE	4	CNR
D5.3	Project management plan	5	D	RE	6	CNR
D5.4.1	First calendar year report	5	R	RE	12	CNR
D5.4.2	Second calendar year report	5	R	RE	24	CNR
D5.5	Midterm review questionnaire	5	D	RE	15	CNR
D5.6	Final report	5	R	RE	35	CNR

***Types**:* R = Report; D = Deliverable; SW = Software ***Dissemination levels**:* RE = Restricted; CO = Confidential; PU = Public

Table 2. List of deliverables and related lead partners

Deliverables Timeline 2016 (Year 1)					
		March	June	August	October
WP1	Definition of user requirements, preparation of user settings and ethical issues			D1.1/D1.2 – M6	D1.3 – M8
WP2	Development and implementation of the ICT platform				
WP3	Testing, evaluation and validation in user environment settings				
WP4	Dissemination, exploitation and business development		D4.1 – M4	D4.5 – M6	
WP5	Management and coordination	D5.1 – M1	D5.2 – M4	D5.3 – M6	

Table 3. Deliverables timescale for 2016

Deliverables Timeline 2017 (Year 2)									
		Feb.	Mar.	Apr.	May	Aug.	Sep.	Oct.	Nov.
WP1	Definition of user requirements, preparation of user settings and ethical issues			D1.4.1 – M14					
WP2	Development and implementation of the ICT platform	D2.1 – M12	D2.2 – M13		D2.3/ D2.4 – M15				
WP3	Testing, evaluation and validation in user environment settings				D3.1 – M15	D3.2 – M18			
WP4	Dissemination, exploitation and business development	D4.1 – M12			D4.2 – M15	D4.3 – M18		D4.4 – M20	D4.1 – M21
WP5	Management and coordination	D5.4.1 – M12			D5.5 – M15				

Table 4. Deliverables timescale for 2017

Deliverables Timeline 2018 (Year 3)								
		Feb.	Apr.	July	Aug.	Sep.	Nov.	Dec.
WP1	Definition of user requirements, preparation of user settings and ethical issues					D1.4.2 – M31		
WP2	Development and implementation of the ICT platform							D2.5 – M34
WP3	Testing, evaluation and validation in user environment settings	D3.3 – M24					D3.4 – M33	
WP4	Dissemination, exploitation and business development				D4.1 – M30		D4.6 – M33	
WP5	Management and coordination	D5.4.2 – M24						

Table 5. Deliverables timescale for 2018

Deliverables Timeline 2019 (Year 4)		
WP4	Dissemination, exploitation and business development	D4.1 – M35
WP5	Management and coordination	D5.6 – M35

Table 6. Deliverables timescale for 2019 – 35 months

7. Risk Management Plan

7.1. Purpose

The purpose of this chapter is to present risks identified during the remaining implementation period of the STAGE project, as well as an estimation of the risk impact and the corrective action plan.

The main purpose of the Risk Management Plan is to establish an approach to monitoring, evaluating, and managing risks throughout the entire duration of the project implementation period. Risk management helps in taking actions to avoid any adverse events; it implements plans to minimize the impact of any concerns materialized as threats to the success of the project.

A risk is defined as an event or condition that has a certain probability of occurring, and could have a negative impact on a project. For the purpose of this deliverable, risk is defined as *an event or condition that has negative effect on at least one of the Project objectives*.

Risk assessment and management is a continuous process that runs throughout the life of the STAGE Project to ensure that risks are acknowledged and controlled. It includes processes for risk identification, assessment, analysis, planning and monitoring.

7.2. Scope

The end result of the risk management planning is the Risk Register. The Risk Register documents the various risks with their classification, mitigation, handling strategies, and impact and action items.

Risk management includes:

- ✓ ***Risk assessment for:***
  - Risk identification, in terms of a list of potential risks.
  - Risk analysis, in terms of impact evaluation of each of the identified risks.
  - Risk classification and prioritization, based on the probability of occurrence and severity of impact.
- ✓ ***Risk control for:***
  - Identification of actions for risk prevention or reduction.
  - Planning and implementation of risk prevention/reduction actions.
  - Risk monitoring with reporting and risk re-assessment.

7.3. Risk Management Approach

Risk management in the STAGE Project will be conducted at three levels:

- *at strategic level:* concentrating on the relation between the Project and the Consortium with its environment. Risk management at this level is the responsibility of the whole Project Consortium.
- *at tactical level:* this concentrates on the WPs' contribution to the Project's objective and scopes. Risk management at this level is the responsibility of the Steering Committee.
- *at operational level*: this concentrates on the activities within the five Work Packages. Risk management at the operational level is the responsibility of each WP Leader under the supervision of the Project Coordinator.

The process of the Risk Management contains the actions defined in the following sections.

7.4. Risk Identification

The first step in performing risk management will be to identify as many potential risks associated with the project as possible. As each potential risk is identified, a brief description of the risk is created and recorded.

The risk identification activity is conducted on a recurrent basis through the use of different methods and techniques such as planned or ad hoc face to face meetings between partners, discussions and brainstorming sessions via email, Skype or telephone, etc. Also, risks identification falls within the daily activities of each member involved in the project.

Each time a new risk emerges it has to be documented into the Risk Register.

All hints/suggestions relating to risks shall be communicated to the STAGE Project Coordinator, the WP leaders, and the Deliverable leaders, where applicable, who will collaborate to reach consensus regarding the existence of the risk in order to initiate the risk management process.

Initial Risk Register:

- A specific Risk Register is created by the Project Coordinator, in collaboration with all Consortium members.
- The document is communicated and analyzed with the Consortium partners.

- Risk management will be managed using the risk management plan that also includes the risk register.

7.5. Risk Assessment

After Risk Identification, the Risk Assessment will be defined.

Each risk will be attributed two grades:

- one related to the likelihood of a risk to materialize;
- one related to the impact on the project if the given risk materializes.

The **likelihood** and the **impact** of the risk event will be assessed on a scale of 1 to 3, where 1 and 3 represent the minimum and maximum possible likelihood and impact of a risk **occurrence**, with respect to the appropriate continuation of project activities.

The grades will be between 1 (one) and 3 (three) as follows:

- 1 = low probability or impact
- 2 = medium probability or impact
- 3 = high probability or impact.

Multiplying the two grades will yield the final score. A risk matrix is provided below:

PROBABILITY	IMPACT		
	LOW=1	MEDIUM=2	HIGH=3
LOW=1	1	2	3
MEDIUM=2	2	4	**6**
HIGH=3	3	**6**	**9**

7.6. Risk Response planning

When the risks have been identified, analyzed and prioritized, the next step is to determine how to respond to each risk. Amongst the risk response strategies there are four approaches:

- **Risk reduction -** Action: The level of risk should be reduced through the selection of controls so that the residual risk can be reassessed as being acceptable.

- **Risk retention -** Action: The decision on retaining the risk without further action should be taken depending on risk evaluation.
- **Risk avoidance -** Action: The activity or condition that gives rise to the particular risk should be avoided.
- **Risk transfer -** Action: The risk should be transferred to another party that can most effectively manage the particular risk depending on risk evaluation.

7.7. Risk Tracking

For each identified risk, the person(s) being in the best position to monitor it and manage it will be assigned the risk ownership. This person will respond to the occurrence of the events or circumstances under which a risk might occur, notifying the Project Coordinator, WP Leader
and / or Deliverable Leader and related members that the risk is developing, and initiate the related measures.
All identified risks will be continuously tracked to ensure that effective risk management is performed throughout the entire lifecycle of the project. The methods used will be the Risk Assessment and Risk Register. During the periodical meetings, the Consortium Partners will review the Risk Management Plan and the Risk Register.

7.8. Risk Register

As the Work Packages' activities interrelate to each other, it is very crucial to be able to deal with any deviations that might occur, as they will affect the quality of the future work and the time-schedule of the deliverables.

The project will take safety measures for confronting impending obstacles, at least in the most frequent areas where such problems occur. The categorization of risks is according to two levels: the first level refers ***to the general potential risks*** of the project and the second level ***to risks per work-package***.

STAGE is a research project with partners from several countries and different expertise; hence, the partners have to clearly identify a number of ***management risks***.

It is the responsibility of the WP Leaders to conduct a risk assessment, ensuring that due consideration has been given to ***all risks associated with the WP,*** which is to be commenced.

The procedure and the action of risk mitigation will be communicated by each work-package leader in close collaboration with all partners involved in the specific work-package at the beginning of the reporting year and will be part of the reporting of project management to the CMU. Accordingly, an unforeseen threat that is considered at any time of the STAGE project implementation will use the same procedure.

NOTE: as regards risks associated with ethical and privacy issues in WP1, the provisions established in D1.4.1 apply. Furthermore, risk management for WP3 is complemented by the risk mitigation plan found in the Trials Plan.

Type	Risk description	Probability	Impact	Mitigation plan
General	Unanticipated workload and personnel availability	High (3)	High (3)	There is a range of experts already participating in STAGE. The staff will work together to share knowledge so that no person is critical to the project's success. The work will be documented as it proceeds, thus minimizing the time to bring a new person up to speed.
General	Internal consortium difficulties resulting to low productivity	Medium (2)	High (3)	Redistribution of resources among the team members in a fast and efficient way. More precisely, as project partners have multidisciplinary skills and competencies could collaborate effectively even if a partner for a specific task has not (as a result of an unfortunate event) the capacity to fulfill its obligations.
Management	Failure of one or more partners to complete tasks or withdrawal from the project	High (3)	High (3)	Project management oversight will be continuous. Failure of individual participants will lead to immediate assessment of current partner capabilities and reassignment of tasks. Consortium partners have an adequate range of capabilities and can take over other tasks if necessary. The take-up of tasks by other partners or new partners with the required expertise should be decided, if it will be the case.

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Type	Risk description	Probability	Impact	Mitigation plan
Management	Possible deliverable or milestone delays during the project	High (3)	High (3)	Quarterly progress reports will be used as a data point for estimating the appropriate resources and the suitability of the project scheduling; If necessary, timeline schedule changes and dynamic task reassignments, within the resources availability of the project will be decided.
Management (WP5)	Critical Path Awareness. Within the critical path a delay of a deliverable would result also in a delay of the following development, prototypes, tasks and work packages.	High (3)	High (3)	Monitoring the effort spent and regularly comparing actual and planned achievements, the management team will identify any slippage and ensure that any underestimations of effort are dealt with as early as possible. In the event of delays or underestimated effort remaining unnoticed and non manageable for longer periods, the management team, in consultation with the NCP services, will appropriately adjust the work plan and/or reallocate effort.
Management (WP5)	Loss of key personnel and delays due to rehiring	Low (1)	Medium (2)	Each partner is responsible for making sure that the case of personnel turnover can be handled adequately.
Management (WP5)	Beneficiary goes out of business or relevant unit of a beneficiary is shut down during the duration of the project	Low (1)	Medium (2)	If possible, we will aim at finding a suitable replacement partner and rearrange the tasks within the project in agreement with the PO. If this is not possible, a contract amendment will be aimed for.

Type	Risk description	Probability	Impact	Mitigation plan
Management (WP5)	Late availability of personnel causing delays	Medium (2)	Medium (2)	In the event of delays in the availability of key personnel, the available personnel will temporarily assume more responsibilities and allocate more effort than originally planned, until the new personnel is available. There is sufficient overlap in expertise both inside and across the consortium members to ensure that this can be achieved.
Management (WP5)	STAGE fails to secure external data due to IPR or privacy issues	Low (1)	Low (1)	A considerable volume of relevant data is currently freely available, and more is becoming available every day. Even in the extremely unlikely event that this trend is reversed to the point where there is no relevant public data whatsoever, the data that consortium members have direct access to and/or ownership over is adequate to satisfy the project's development and pilot needs.
WP1	A considerable number of users quitting the project trial due to personal problems, lack of interest or other reasons	Medium (2)	High (3)	Additional users to be recruited by end user organisations, considering in advance what is the approximate number of (potential) prospective users in their networks. Preliminary dissemination of the project and its objectives to be extended in order to facilitate recruitment if needed.
WP1	Partial attendance of periodic meeting sessions with users due to unavailability of some	Medium (2)	Medium (2)	Additional meetings with users who could not attend to be scheduled quickly; alternative locations should be identified in

Type	Risk description	Probability	Impact	Mitigation plan
	users and/or to changes in the location of the meeting			advance considering proximity to users' residential areas and accessibility in terms of transport.
WP1	The co-design process proves to be less effective than expected, due to users not being engaged enough in feedback provision	Medium (2)	High (3)	End user partners will seek to improve the relationship with users, clarifying the centrality of their role and the benefits they could get from a platform designed for them. The feedback questionnaires should be revised if they prove to be the cause, or one of the causes, for reduced engagement.
WP1	Identified user requirements, use cases and scenarios do not reflect the current situation of the pilot trials	Low (1)	Medium (2)	Information from periodic feedback analysis in WP3 will be used in order to update user requirements and use cases, so that they fit the actual and current status of trials.
WP2	Delays in the integration of the components of the platform that led to postponing the pilot trials	High (3)	High (3)	Increase the number of team members allocated on the project, have periodical conference calls on the development status with the involved technical partners.
WP2	STAGE platform is off-spec relative to the initial design of the prototype or fails performance and functionality testing	Medium (2)	Low (1)	Development will have a constant oversight and quality controls. The technical partners will carry out constant tests during both development phase and end user feedback implementation to ensure an optimum functionality for all services and components.

Type	Risk description	Probability	Impact	Mitigation plan
WP2	STAGE platform functionalities are too complex for end-users	Low (1)	Low (1)	The project consortium includes partners who are targeted end-users. Their advice and feedback ensured that the technology is steered in the direction that matches the interests of end users. Engagement of intended end-users in the software development lifecycle, baked into the value case, scoping, requirements, design and testing of solution will keep this risk to a minimum.
WP2	Application server constraints: As the level of usage for STAGE platform is very high, the open-source community is not able to provide good performance software for databases.	Low (1)	Low (1)	The consortium will approach commercial systems as Percona server for MySQL or MySQL Enterprise versions. This can be handled and tested when the platform reaches a commercial version and becomes self-sustainable.
WP2	The STAGE product is composed by two major components, the STAGE Portal and the Content management, trading and delivery platform, both are absolutely required for the product to run. If one of the partners limits the access to their component the product will not be viable any more.	Low (1)	Low (1)	An agreement should be signed between SIVECO (STAGE Portal) and CEDEO (Content management, trading and delivery platform) to enroll and keep the components engaged.

Type	Risk description	Probability	Impact	Mitigation plan
WP3	Lack of Cultural institutions (CIs) who want to join and provide video content from events.	High (3)	High (3)	Dissemination about the project and its offer will be extended using communication channels specifically addressing CIs. Partners will emphasize the possibility for CIs to be part of a network with high expansion potential and related profit prospects.
WP3	Some of the involved CIs no longer providing content due to changes in resource management and/or declining interest in the project.	Medium (2)	High (3)	The process or recruiting CIs will be continuous and an increasing number of them will have to be involved. The number of additional involved CIs should be such that their content can compensate any loss or reduction of content from other CIs.
WP3	Lack of interesting and good-quality videos.	Medium (2)	High (3)	In terms of cultural events, user preferences will be reassessed and more suitable content will be sought, where possible. In order to improve video quality, contracts could be made with professionals to record videos, wherever the partners' budget allows them to do so.
WP3	End users do not watch live events, because language is a barrier to a sufficient number of views and related feedback.	High (3)	Medium (2)	Live events where language is not a barrier (e.g. concerts, festivals, art/museum exhibits etc.) could be preferred, or there a sufficient number of live events per country should be sought so that users can be fully involved (language not being an issue).
WP3	Translation issues.	Low (1)	Medium (2)	Technical and end user partners will harmonize more efficiently in order to provide updated and suitable translations.

Type	Risk description	Probability	Impact	Mitigation plan
WP3	End users no longer find pleasure in using the platform, thus reducing their participation in the final phase of the trials.	Medium (2)	High (3)	End user partners will encourage users to continue, explaining/reminding that lower prices for them will be available when the platform is on the market and a larger number of quality content will be available. End user partners will quickly coordinate with technical partners where the suitability of platform features is found to be the cause.
WP4	Lack of a conclusive agreement on exploitation or dissemination of the project outputs	Low (1)	High (3)	Discussing the exploitation strategy and IPR issues at the GA meetings in order to agree on the scope of each entity's IPR and to mutually accept individual exploitation and dissemination plans. In case of differences, starting a mediation process, led by the project coordinator and the WP leader.
WP4	Lack of sufficient legal/business knowledge resulting in impasse in deciding on exploitation/dissemination of the STAGE Platform and/or other project results	Low (1)	High (3)	Collective discussions on STAGE business approach, market analyses and exploitation plan in order to clarify doubts. If needed, further research would be conducted in order to clarify the doubts.
WP4	Hacking attack on the project website	Low (1)	Low (1)	Launching a standard procedure applied in such situations (starting from contacting with a server owner). Until regaining control, intensified usage of different STAGE channels.

Type	Risk description	Probability	Impact	Mitigation plan
WP4	Need for substantial changes in communication materials due to the unexpected changes in the project (new logotypes, new partners, updated value proposition or business model)	Medium (2)	Medium (2)	Some substitute resources should be assured in order to cover such a risk. Intensification of the communication activities in order to make clear the new features of the project and its image recognizable again.
WP4	Lack of engagement of the partners in communication and dissemination activities (particularly in their countries)	High (3)	High (3)	To monitor partners' communication and dissemination activities; to gather information on individual dissemination plans and performed actions.
WP4	Launching of a similar platform by the competitors	Medium (2)	Medium (2)/High (3) (depending on the market addressed by a competitor; e.g. a similar Platform offered in French or Dutch would not create a high impact)	Developing better unique selling propositions and providing more attractive services in terms of the content, accessibility, terms of use, pricing, etc.
WP4	A need for substantial changes in the STAGE business model	Low (1)	Low (1)	The STAGE business model is conceived of as a dynamic tool that will be tested and improved during the rest of the project. It is flexible and open for updating.

8. Internal communication and document exchange

Internal communication among project partners is managed by the coordinator mainly via emails and Skype calls. Important communications from the coordinator involving all partners are sent via email. To this purpose, a specific email reflector address has been setup and is maintained within CNR ITABC (new affiliation of the former staff of CNR ITC Rome Unit) as aal_stage@itabc.cnr.it .
The reflector works as a mailing list address, which receives and forwards emails to a list of addresses belonging to project partners. The list is updated by the coordinator' staff.
Communications are kept by CNR-ITC (on a local computer drive) to keep track of the workflow and for archiving purposes.
Skype calls are also used for communications that cannot be managed only via email, but require a discussion among partners.
These calls are usually moderated by the coordinator, who is also in charge of drafting and sharing their minutes with all partners.
CNR-ITC also manages the exchange of project documents within the consortium, by means of an online intranet document management system (DMS). This is an instance of the Alfresco Community software[1], an open source DMS. The software was installed and deployed by CNR-ITC on a dedicated server, and is available at https://stage-docs.itc.cnr.it. Partners can log into the application via personal user names and passwords, that are originally assigned by the coordinator, under a secure connection (HTTPS). Once they have logged in, they are both able to download and upload documents, and to manage their account preferences.
The web application works as a website where the homepage is constituted by the dashboard (Fig. 3), while the actual repository is available in the document library (Fig. 4).

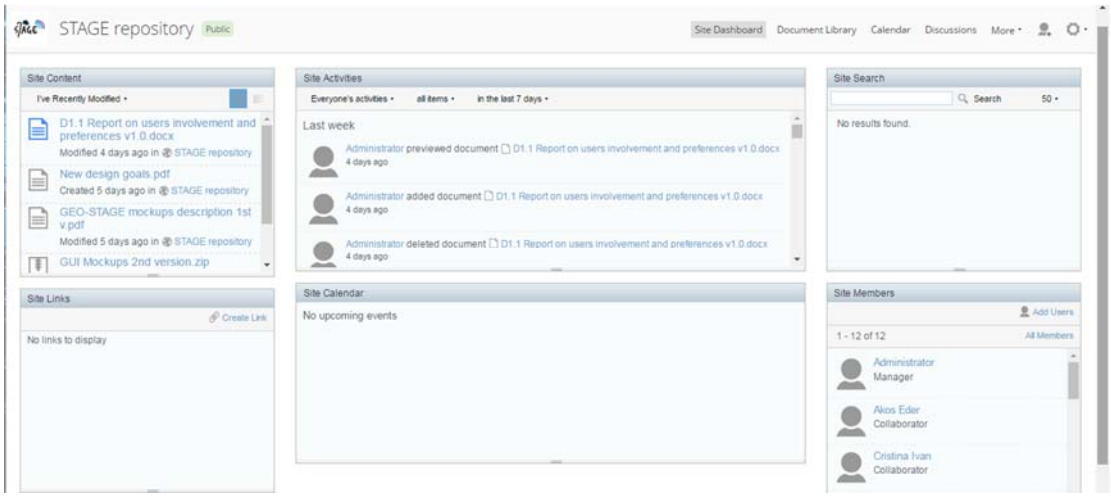

Figure 3. The STAGE repository dashboard

[1] https://www.alfresco.com/products/enterprise-content-management/community

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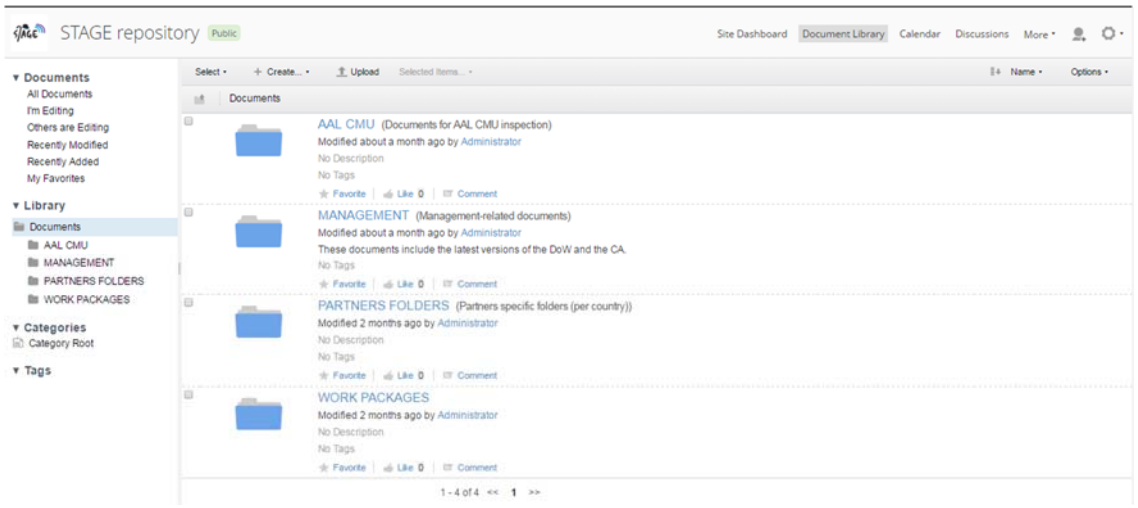

Figure 4. The STAGE repository document library

The folder structure of the document library was conceived in order to ensure a good level of organisation and intelligibility. It is currently structured as follows (only the most relevant nodes are listed here):

- AAL CMU
  - Deliverables
- MANAGEMENT
- PARTNERS FOLDERS
  - ASM
  - CYPRUS
  - HUNGARY
  - ITALY
  - SIVECO
- WORK PACKAGES
  - WP1
  - WP2
  - WP3
  - WP4
  - WP5

The "AAL CMU" folder contains documents and deliverables to be made available to the AAL CMU upon request and for annual reporting and mid-term and final evaluations (see also Section 8).

In the “MANAGEMENT” folder, administrative and management documents are stored, such as the most recent versions of the CA and the DoW.
The “PARTNERS FOLDERS” directory includes a set of folders both for partner countries and individual partners, where they can store internal documents used in the project, for example while drafting deliverables.
Finally, the “WORK PACKAGES” directory includes a folder for each of the five work packages in the project. Each of these folders contains deliverables, both drafts and final versions, and other documents related to them or to the WP workflow.
The software allows for sharing documents via external links, that can be created and deleted by partners (in a way similar to cloud storage tools).
Other features of this web application include: a calendar to mark events and deadlines, a discussion page (similar to an online forum), and the possibility to create an internal wiki.

In addition to the *Alfresco* instance, a specific project management tool has also been deployed by CNR-ITC.
It is based on an implementation of the open source software *Openproject*[2] and is available at https://stage-management.itc.cnr.it.
This web application allows to perform specific project management tasks, including timeline report, scheduling deliverables, assigning work packages to members, keeping track of projects, publishing news, and setting up meetings. Figure 5 shows a view of the work plan timeline, while Figure 6 shows the calendar of events for August 2016.

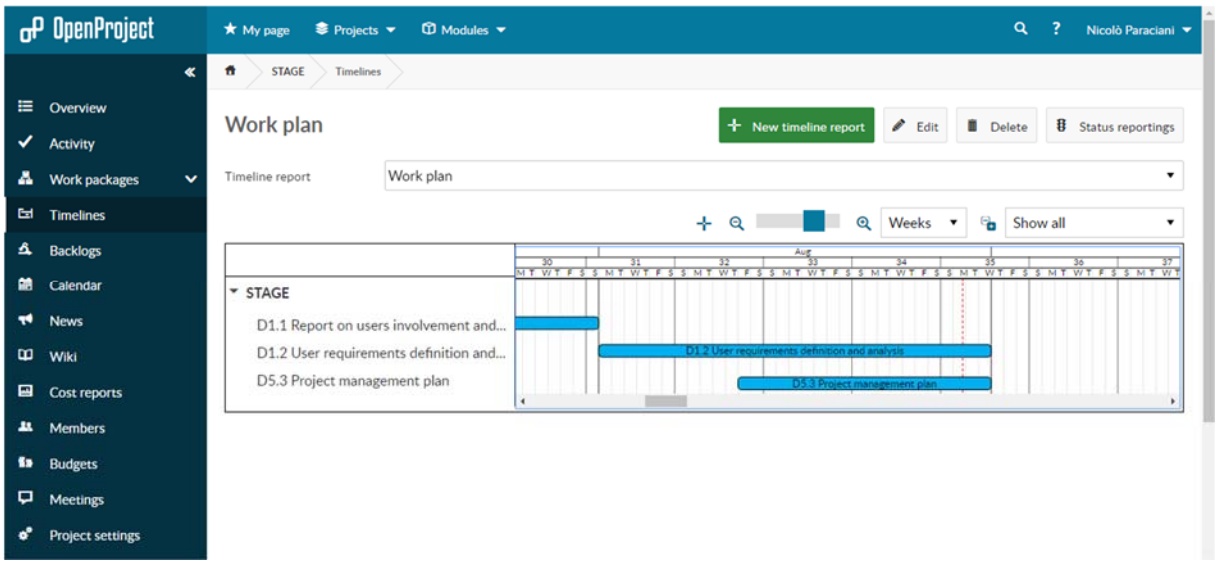

Figure 5. A view of the work plan timeline

[2] https://www.openproject.org/

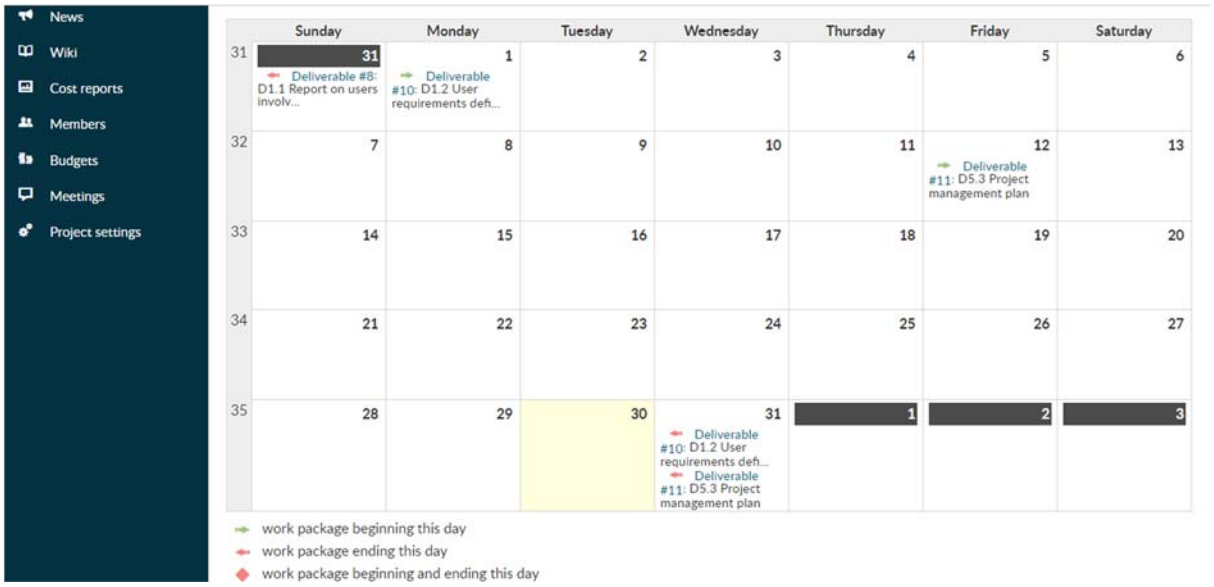

Figure 6. The calendar of events for August 2016

When a new item or event is added to the system (a new deliverable, event, news etc.), a notification is sent via email to all project members, by the dedicated address stegeopenpro@gmail.com (outbound only). Notification preferences can be set in the account page.

Originally, only one project management tool was planned for release as an intranet website for STAGE. However, following discussions among partners, it was agreed to use *Openproject* mainly as a management application, and *Alfresco* as a related document repository.
The reason for this is due to the fact that the *Openproject* document management system is not as structured and flexible as the one provided by *Alfresco*, which is deemed more suitable.

These two applications form therefore the intranet software for the project, released in M4 as deliverable D5.2.

9. Visual identity and templates

The project visual identity is represented by its logo, developed by GEORAMA and approved by the General Assembly (Figure 7.)
Templates for deliverables, agendas, meeting minutes and presentations were prepared by ASM and described in the first version of D4.1 "Dissemination Plan", sections 6.6 and 6.7. They are available in the STAGE repository, in the folder *WORKPACKAGES -> WP4 -> Project document templates*.

Figure 7. Official STAGE project logo

10. References

STAGE Project, Consortium Agreement, March 2015.

STAGE Project, Description of Work, July 2016.

STAGE Project, D4.1 Dissemination plan, June 2016.

AAL Resources for Project Coordinators, available at: http://www.aal-europe.eu/documents-resources/resources-for-project-coordinators/ [access date: 31-08-2016]