D2.2.1

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D2.2.1 – Cross-pilot coordination initial plan

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HBB4ALL
Hybrid Broadcast Broadband for All

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D2.2.1 – Cross-pilot coordination initial plan

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Dissemination Level		
PU	Public	**X**
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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Validation

No.	Action	Beneficiary	Date
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Table of Contents

List of Tables

List of Figures

1. Introduction

This document establishes the basis for the monitoring and control processes for an effective coordination of the 4 pilots of the HBBALL project. It covers meetings, reporting procedures, quality control of deliverables and continuous improvement of project processes. It includes document types and communication processes which bring together the three different partner profiles: broadcaster, SME and academia.

All beneficiaries shall ensure that complete and correct issues of protocols, technical requirements, test instructions, and project reports are available and applicable at the time and place required by the receiving beneficiary. Any changes to the issue of partner documentation will be communicated to the WP Leader who will ensure that a list of the most up to date documentation is supplied to all the beneficiaries.

1.1. Reference documents

Reference documents are either internal or external:

Internal Documents

GA	Grant Agreement
DoW	Grant Agreement, Annex I: "Description of Work". Final version of 2013--20.
CA	Consortium Agreement
MoU	Memorandum of Understanding
PMH	Project Management Handbook

External Documents

GFI	Guide to Financial Issues relating to ICT PSP Grant Agreements
GNPR	Guidance Notes on Project Reporting for ICT PSP projects

1.2. Notation for Process Descriptions

In the following sections the supporting processes are presented in terms of their goals, deliverables, responsibilities (actors) and activities. They are described by diagrams using the notation explained in Figure 1.

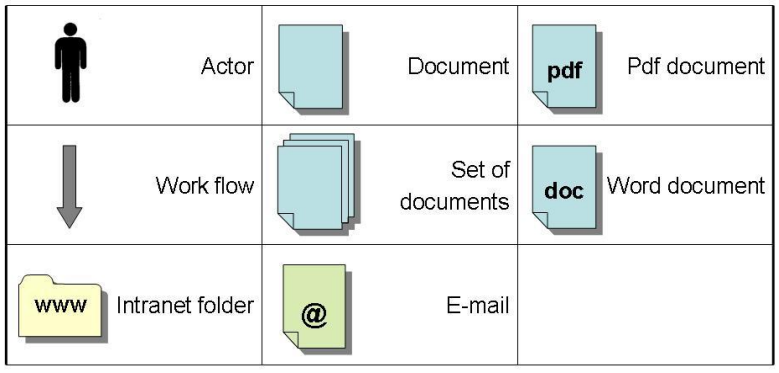

Figure 1. Items used on process diagrams.

1.3. Abbreviations and acronyms

Abbreviations and Acronyms

CO	Confidential	*PU*	Public
D	Deliverable	*PM*	Project Management or Project Manager
DOI	Digital Object Identifier	*ICR*	Internal Control Report
EC	European Commission	*RI*	Risk
GA	General Assembly	*RE*	Restricted
IAR	Internal Activity Report	*RV*	Review
ID	Internal Discussion	*SC*	Steering Committee
MM	Meeting Minutes	*TL*	Task Leader
P	Presentation	*WP*	Work Package
PDF	Portable Data Format	*WPL*	Work Package Leader

2. Pilots structure and workflow

2.1. Common Pilot structure

A common strategy has been defined for each Pilot. Specifically, 4 generic consecutive tasks were defined. These tasks are the underlying skeleton for each specific Pilot workflow:

Task x.1: Pilot Definition and Preparation of Operational Phase.
This Task will run from month 1 to month 20. It is a strategic planning task and relies to a great extent on output from Task x2 but also from Task 2.2 and Task 2.3. Task x1 caters for the strategy task force of each Operational Phase. It decides in close cooperation with Task x2 and Task 2.1. which service components will be implemented and integrated for the Operational Phase and how this will done. In this task it will be decided what is going to be implemented in Task x2 and how this is going to happen, early preparatory integration work is being done. Here the decision will be made which services will be implemented for tests and field trials in the operational phase. In line with the aims of Pilot B the ultimate aim of this task is to make sure that at least one operational pilot service for each work package will be in place at month 20 which will demonstrate significant impact potential and which engages a complete value-chain of stakeholders in the work.

Task x.2: Trials and Technical Implementation
This task will run from month 3 to month 20. It is a technical task which ultimately aims at implementing all the technology and infrastructure which will be needed so that the operational phase can start in time. The task will be dedicated to agile trialling of existing prototype services or parts thereof as well as of completed R&D work taking into consideration recent technological SotA technological and standardisation developments and updates. It will integrate all components necessary in preparing the testbeds for the operational pilots. It will cover technical tests and small scale friendly (internal) user tests in preparing the technical fundament for the operational phase. This task also caters for small scale early user tests with prototypical applications if needed.

Task x.3: Operational Phase
This task will run from month 21 to 32. It cooperates closely with Task 2.1 and follows two basic strands:

1. It has to grant that each pilot domain has at least one large scale pilot service running for at least six months. This large scale pilot will be flanked by other shorter term field trials and smaller scale end user tests in different places under real life conditions and engaging the complete value-chain of stakeholders. So this task has to grant the technical operation and stability of all the pilots running in each thematic pilot domain.
2. It is responsible for validation of the piloted services. Relevant data will be gathered by each partner from dedicated users from the respective target groups. In the framework of Task 2.5 UAB will provide validation guidelines and will accompany each partner with their expertise user experience knowhow. Results of this Task will be fed into.

Especially during the operational phase, we will widely disseminate results – e.g. by showcasing running services at key events like the annual International Broadcasting Convention. From the start of the project we shall start building a webpage similar to (http://www.transparency.org/cpi2011/results) where it is possible to offer information in Europe related to Media Accessiblity. This is jointly coordinated by Task 2.4.

Task x.4: Evaluation and Recommendations.

This task will run from month 33-36. Here the data obtained in Tx3 will be (finally) evaluated and recommendations will be processed. This will happen with evaluation guidelines provided by UAB. This task will provide input for Task 2.3 and 2.4. It will culminate in a final workshop for all important stakeholders.

The concluding period of the project has the main objective to give guidelines and recommendations on how to further achieve sustainability of services. This will be based on interaction with stakeholder from the Consortium, from the Advisory Board but also external institutions. Given the fact that from T2.5 we shall have benchmarking for quality in some of the services, during the final months of the project we'll match quality metrics with guidelines and recommendations of tested solutions. In this way we "close" the circle, by feeding results from T2.5 to each pilot.

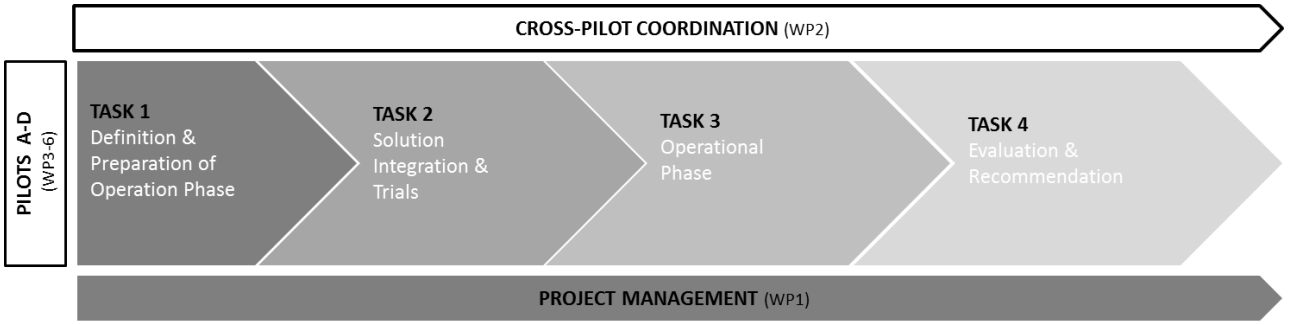

Figure 2. Common Pilot structure.

A detailed description of specific activities within each pilot will be provided in the next update of this cross-pilot coordination plan.

3. Reporting

3.1. Document categories

Deliverable documents to the commission as listed in DoW – as well as all other reports, minutes, or presentations – shall be based on the document templates applicable for all documents to be created within the project. Several different types of documents are in use with the following respective purposes.

Deliverable

Deliverables are official documents, which are enumerated in DoW. They serve as the content-oriented reporting towards the Commission. Deliverables are to be treated in a formal way. Each deliverable will be subject to a peer review by at least one expert: another WP leader – the one which will use the results of the WP being reviewed as input. Before issued to the Commission, final approval of the quality of the deliverable will be made by the Technical Coordinator and the Project Manager. Finally, the deliverables are released by the Project Manager.
The template for deliverables provides the following information on the first page (title page): Document identifier, title, version, date, author, and dissemination status. These data shall not be changed except updating it indirectly via the document properties.

Internal Documents

Informal internal discussion documents can be used for preparing deliverables or to discuss any other relevant aspect of the project. The nature of these documents is informal and unstable in terms of changes over time. Internal discussions shall relate to activity planning, research, etc. for a task. For example, UAB will produce internal reports to be sent to broadcasters about the specific tests and trials which will lead to benchmarking quality.

The structure of internal discussions is determined by the ID templates. However, further items can be omitted:

- Validation paragraph
- History chart
- File property “Version”

Regarding their nature, the dissemination status of internal discussions is strictly CO. Files are managed in a repository with revision control, so the most current version of an internal discussion can always be determined. Internal discussions tend to be transitory and may be included into Internal Control Reports (ICRs) at the time they become mature.

Internal Activity Reports (IAR)

IAR are informal documents that are not to be delivered to the Commission. In particular, IARs serve to control the progress accomplished by every beneficiary in each of the tasks they are involved during a given period. These IARs contain technical information and should be delivered every 3 months. Some of the information included in the IARs may also be integrated into the Internal Control Reports and the deliverables of a WP. IARs will be used to control the correct development of the deliverables. They have issued versions, but they do not need to be reviewed in a formal process. However, the WPL will control the progress achieved for each of the deliverables included in their respective WP. IARs are the responsibility of the respective author, under the

discretion of the work package leader (WPL). Please note, IARs are created by using IAR templates and that their dissemination status should be strictly CO.

Internal Control Reports (ICR)
ICR serve as "semi-official" documents that are not to be delivered to the Commission. In particular, ICRs will contain a summary of work progress and achievements for every Work Package and the related statement on the use of resources, including the person-months expended and an explanation of personnel costs, subcontracting and any major direct costs incurred by each beneficiary for the period. Any deviation between actual and planned person-months or costs must be highlighted and explained. ICRs will be prepared every 6 months. Each beneficiary will send the ICR corresponding to their organisation. These ICRs will be reviewed and validated by the coordinator, and they will be assembled into a single document. Please note, ICR templates are based on EC periodic reports templates and their use is mandatory. Their dissemination status should be strictly CO.

Official documents
According to the GNPR two different types of reports will be delivered to the Commission. All beneficiaries will contribute to the preparation of this report under the supervision of the Coordinator.

Periodic Reports (PR) will be submitted to the Commission within 60 days of the end of each reporting period (including the last reporting period). The reporting periods are defined in Article 4 of the GA:

- P1: from month 1 to month 12
- P2: from month 13 to month 24
- P3: from month 25 to the last month of the project

A Final Report (FR) will be submitted within 60 days after the end of the project. The detailed contents and formatting guidelines of these reports are defined in the FP7 reporting guidelines.

Meeting Minutes
Meeting Minutes (MM) are used to disseminate minutes from project meetings. They contain the agenda, a summary of the topics covered during the meeting and, most importantly, the actions agreed by the members of the PMC. They also serve as important addendum to the travel cost justification.

Review documents
Reviews (RV) are used during a review of a given document. They are used to provide a list of requested changes or faults in a given document. There is a common template for the reviews of all kinds of documents that follows the same structure.

Presentations
Presentations (P) not only serve as meeting documentation, but are an important building block for dissemination (e.g. slides from conference presentations, conference posters...). The template for presentations including the main information about the project and the consortium may be used.

3.2. Control documents: preparation and validation

To control the development of each deliverable several *gates* will be defined. The gate can only be considered passed, when the deliverable has been reviewed successfully. Careful planning of the required time schedule for these review iterations is an integral task for the deliverable leaders. Table 2 depicts the **generic deliverable maturity process** and describes the phases required to create a particular deliverable. In order to ease the control of the overall project progress, this process is *mandatory*. Also, the schedule for the gates of each phase will be synchronized and mandatory.

Table 1. Deliverable development: stages and gates.

Stage	Gate	Description
PREP	Start date – Delivery date (0-90%)	Description of the **work accomplished** for the deliverable and estimation of the **percentage of progress** achieved included in the **IARs**
REV	Delivery Date - 4 weeks (90-99%)	Complete, structured and condensed document (including related IAR revised parts), prepared in **first draft version** by the respective editor, to be **reviewed** by the reviewers and the PM.
VAL	Delivery Date - 1 weeks (99%)	Reviewed and updated complete document in second draft version, to be **validated** by the PM.
REL	Delivery Date (100%)	Complete document in final version, to be **released** by the project manager and submitted to the EC.

Preparation

During the preparation stage (PREP), the IARs will be used to evaluate the development of the deliverables. The IARs contain a detailed description of the work accomplished for each deliverable and are updated by each beneficiary every 3 months. The document structure will be mainly derived from the tasks described in the DoW, but may be enhanced if necessary. The tasks will be detailed into actual (research) **activities** with responsible and contributing team members. These activities will comprise all the preparatory work (literature research, reading, presentations and discussions, research team meetings) necessary to gain the insights and results required for the deliverable.

The WPLs will control the progress achieved for each of the deliverables included in their respective WP. Based upon the Project Work Plan and the respective WP plans, the WPL will guarantee that each deliverable accomplishes its preliminarily objectives and reach the scope it should cover. If necessary, the WPL will transmit the deliverable author any relevant comments and suggestions.

During the PREP stage, the deliverable author/editor may provide a *tentative document structure*, *contents overview* and a *preliminary abstract* for co-ordination between the beneficiaries working on that document. If the editor is not the WPL, the first complete draft version of the deliverable should be accepted by the WPL prior to its submission to the reviewers (REV stage).

Review

Peer review will be the main mechanism for providing quality assurance. For each deliverable, the document editor distributes a complete draft version for **review** via the *repository*. This already includes reviews and comments issued from the IARs and, if the editor is not the WPL, it includes

the acceptance of the WPL. Additionally, the editor shall send a *notification via email* that this draft is ready for download to the PM and all other parties that may be involved.
The reviewers of each deliverable have been assigned before the beginning of the project and are described in the DoW; other partners are welcome to provide a review as well. The editor (usually the deliverable leader) informs the responsible reviewers and the PM about the material to be reviewed. Each reviewer provides his review of this material after **one week**. The reviews shall be content-oriented, qualitative, and not too extensive. They should serve as a basis for information exchange. The editor may also point out particular questions to the reviewers to actively solicit specific feedback on certain issues. Also, the deliverable may be reviewed at this stage by both the PM and the TM. The TM will check the contents development, while the PM will check the formal requirements, including PDF convertibility (graphics formats), and will review the document with respect to the management plan for supporting processes.
The editor in turn provides feedback to the reviewers (editor's comments on the review). A discussion may then be needed to settle open issues (by phone, email, personal meetings). **Two weeks** after the review, the editor should provide a new version of the deliverable with the agreed changes. All the parties providing review comments shall fill out the review comments form (RV) and submit it to the editor. The document editor shall only enter responses into the review comment form if the comment is rejected or if further clarification to this issue is required.
The PM, the WP/deliverable-leader/editor, and the reviewers will jointly maintain the due dates and check the contents if it meets the overall objectives and covers the scope.

Validation and Release
The last gates (VAL and REL) describe the final review process of the whole deliverable and the necessary authorisation steps.
In order to reach the **VAL gate**, the editor incorporates the last corrections and provides the final version of the deliverable to the PM for approval. The PM now checks if the deliverable meets the *formal requirements* regarding the file format, naming and versioning schemes. The PM will provide *immediate feedback* to the issuing party regarding any deviation from the guidelines. In parallel, the coordinator checks the deliverables and informs the PM *via* email about the acceptance (release authorisation).
The PM finally prepares the release version, adopts the title page and performs the PDF conversion for final release. The coordinator then forwards the documents to the European Commission, thereby reaching the final **REL gate**.

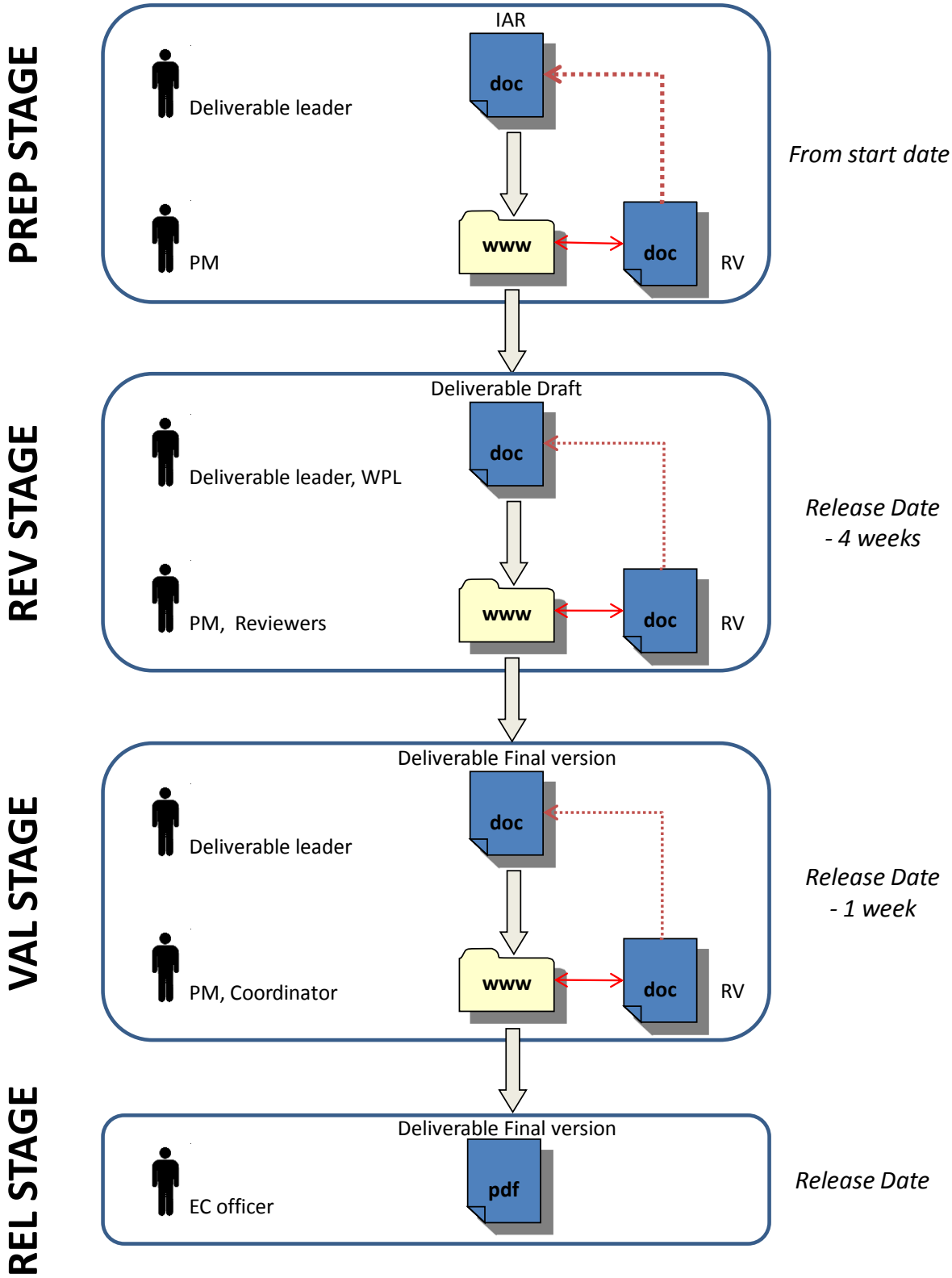

Figure 3. Deliverables Development, Control Procedures.

Change management and comments for documents other than deliverables

Some documents can undergo several draft and release cycles throughout the whole project. After release, the guidelines of **version control** apply for these documents similar to deliverables. Only version control ensures the precise identification of a specific version and supports the later retrieval of any of the former versions. For this reason, the required information has to be entered into the *history chart*. Every change or update of a document requires detailed information about the change and its reason. Therefore, the reason for change has to be stated as detailed as possible and the location, where the detailed description can be found, has to be referred to precisely, e.g. the document with the review comments or any other source.

3.3. Collaborative workspace

The HBB4ALL project uses an online project management application, GroupCamp, for exchanging documents and other files. It will be accessible only for registered users at: https://pruab.c2.groupcamp.com.

A general repository gathers all sorts of documents generated during the project lifetime. To organize the documents within the repository, a tagging system has been defined. This system allows identifying and classifying documents in different categories. A common "HBB4ALL" tag will always be included for all files. The other tags used to identify the documents will belong to the following categories:

- **Type of document:** Template, Progress Report, Presentation, Deliverable, Milestone, Meeting Agenda, Meeting Minutes, Risk Information, …
- **Type of activity:** Management, Testing, Dissemination,…
- **Work package:** WP1, WP2, WP3, WP4, WP5, WP6

All internal and external reports, regardless of which issue or document type, shall always be distributed by using GroupCamp. The direct dissemination of documents or source code *via* email is discouraged. HBB4ALL documents will be uploaded to the general repository and concerned partners will be informed by email.

The release date of each deliverable is defined in the HBB4ALL DoW. The derived schedule including the deadline for the preparation, review, validation and release gates are included in the project calendar, available also at the common workspace.

3.4. Responsibilities

The role of the general consortium decision-making bodies is already described in the CA. This chapter will focus on the tasks of the key figures in pilots coordination: the Technical Coordinator (TC), the Project Manager (PM), the Work Package Leaders (WPL) and the Task Leaders (TL).

The TC will be in charge of *Task 2.2 – Cross-pilot coordination*. She will ensure that all Pilots are planned and executed in an effective and timely manner.

The Project Manager (PM) supporting process focuses on managing the quality of the project's deliverables and improving the quality of the project processes. The PM shall ensure that all change documentation is monitored and that any effects of the changes on other areas of the project have

been taken into account. The PM will be responsible together with the TC and each WPL for maintaining the quality control procedures. He will act as a focal point for quality issues and will liaise with the partner representatives to ensure that an appropriate level of quality is maintained for each element of the project. The PM will support the TC on the following tasks:

- Producing, maintaining and reviewing the *Quality Control Procedures* by obtaining agreement on and ensuring effective implementation of Quality Control Process.
- Ensuring that coordinating activities and reports are completed to an adequate quality and in a timely manner (*control of the Project Manager* with respect to adhering to the supporting processes).
- Reviewing of contractual deliverables before shipment.
- Ensuring each partner has a quality representative, with whom the Project Manager will liaise in order to maintain the project's quality control procedures and to ensure that the level of quality for each project element is maintained.
- Acting as the interface for partners on all quality assurance-related activities and providing clarification and consultation quality issues.
- Monitoring and auditing of the project activities for conformance with the project plans, in particular performing milestone reviews of contractual deliverables.
- Ensuring good communication between the partners.

The *WPL* will assist the TC and the PM and shall therefore ensure:

- To adhere the quality assurance procedures adequately, and to
- Inform the Project Manager of any quality assurance-related problems immediately.

Finally, the Task Leaders (TL) will report to WPL and will ensure that each task is executed according to each pilot requirements.

The following figure summarizes the relationship among these crucial actors involved in the the HBB4ALL pilots coordination.

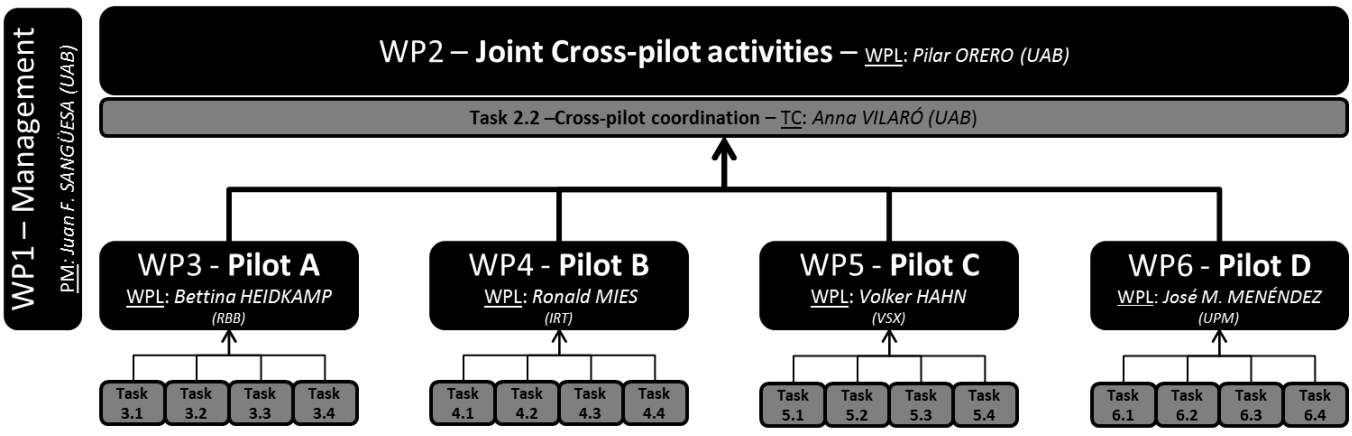

Figure 4. Main pilot coordination figures and their relations.

4. Meetings

During the project, several meeting will be carried out. In the following section, a description of meeting categories and the initial meeting schedule is presented.

4.1. Meeting categories

At least, the following meetings are expected during HBB4ALL project with the following focus areas:

- Cross-pilot coordination meetings (teleconference and/or presential meetings)
- General Assembly & Steering Committee (GA/SC) meetings (+/- Advisory Board)
- Review meetings (with EC officer and external evaluators)

Also, internal pilot follow-up/coordination meetings will be organized by each Work Package leader bi-weekly.

4.2. Meeting schedule

The following table includes only scheduled presential meetings. Cross-pilot coordination teleconferences will be held monthly and will be reported in subsequent D2.2.x deliverables.

Table 2. Meeting schedule.

2013	2014											
december	january	february	march	april	may	june	july	august	september	october	november	december
M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13
	kick-off meeting (UAB)			WP2 and Solution and integration trials + Steering committee/ General Assembly (RBB)			Specific Pilots follow-up (different locations) 1 st Advisory Board meeting (Paris)					Steering committee/ General Assembly (RBB)

2015											
january	february	march	april	may	june	july	august	september	october	november	december
M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25
							Operational phases kick-off + SC/GA				Third Advisory Board Meeting with EU Commission invited SC/GA + EU 2nd review (BE)
Specific Pilots follow-up (different locations)											

2016											2017
january	february	march	april	may	june	july	august	september	october	november	december
M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37
					Preparation of Evaluation and recommendations tasks + SC/GA (IRT)						GA + EU Final review (BE)
Specific Pilots follow-up (different locations)											

5. Risk Management

Risk management is a project management tool to assess and mitigate events that might adversely impact the project, in order to increase the likelihood of success. This section presents the process for implementing proactive risk management. Risk management deploys methods for identifying, analysing, prioritising, and tracking risk drivers.

5.1. Definitions

Risk

Risk is a measure of the inability to achieve overall project objectives within defined cost, schedule, and technical (performance and quality) constraints and has two components:

- Probability of failing to achieve a particular outcome
- Consequences of failing to achieve that outcome

For processes, risk is a measure of the difference between actual performance of a process and the known best practice for performing that process.

Risk Event

Risk events are those events that, if they go wrong, could result in problems in the development of the expected research results, production and assessment of the prototypes, and dissemination of the results. Risk events should be defined to a level such that the risk and causes are understandable and can be accurately assessed in terms of likelihood/probability and consequence to establish the level of risk.

Type of Risk

A **Technical Risk** is the risk associated with the evolution of the research results and the prototype development affecting the level of performance necessary to meet the requirements of the [DoW].

A **Cost Risk** is associated with the ability of the project to achieve its cost objectives as determined in the [DoW].

- Risk that the cost estimates and objectives are not accurate and reasonable
- Project execution will not meet the cost objectives as a result of a failure to mitigate technical risks

Schedule Risks are those associated with the adequacy of the time estimated and allocated for the development, production, and fielding of the system. Two risk areas bearing on schedule risk are:

- Schedule estimates and objectives are not realistic and reasonable
- Program execution will fall short of the schedule objectives as a result of failure to mitigate technical risks

Risk Ratings

This is the value that is given to a risk event (or the overall project) based on the analysis of the likelihood/probability and consequences of the event. Risk ratings of *Low*, *Moderate*, or *High* shall be assigned based on the following criteria:

- **Low Risk**: Has little or no potential for increase in cost, disruption of schedule, or degradation of performance. Actions within the scope of the planned project and normal management attention should result in controlling acceptable risk.
- **Moderate Risk**: May cause some increase in cost, disruption of schedule, or degradation of performance and/or quality. Special action and management attention may be required to control acceptable risk.
- **High Risk**: Likely to cause significant increase in cost, disruption of schedule, or degradation of performance and/or quality. Significant additional action and high priority management attention will be required to control acceptable risk. This type of risk may be subject to a report to the Commission.

5.2. Risk Management and Responsibilities

Each partner has the responsibility to report immediately to their respective Workpackage leader and the coordinator any risk situations that may conflict with the project objectives or their successful completion. Changes in time schedule of deliverables or in the allocated budget must be reported to the corresponding Workpackage leader and to the coordinator. In case of problems or delays, the Project Management Committee will be consulted and it can install task forces to implement the necessary corrective actions. It will establish risk mitigation plans to reduce the impact of the risk occurring.

Conflicts will be solved at the lowest level possible, and preferably amicably. If an agreement cannot be reached at a task or WP level, then the Project coordinator will mediate. If that is not satisfactory, then the Project Management Committee (PMC) will take a decision, and if necessary will ask for the authorisation of the EC.

In the Consortium Agreement (CA), signed by all the beneficiaries before the start of the project, are formalised the rights, obligations, relationships and procedures within the consortium, as well as any other relevant issue. The procedures concerning the settlement of unsolved disputes are described in the article 11.8.

5.3. Risk Management Process

Figure 4 shows, in general terms, the overall risk management process that will be followed. Each of the risk management functions shown in Figure 4 is discussed in the following paragraphs, along with specific procedures for executing them.

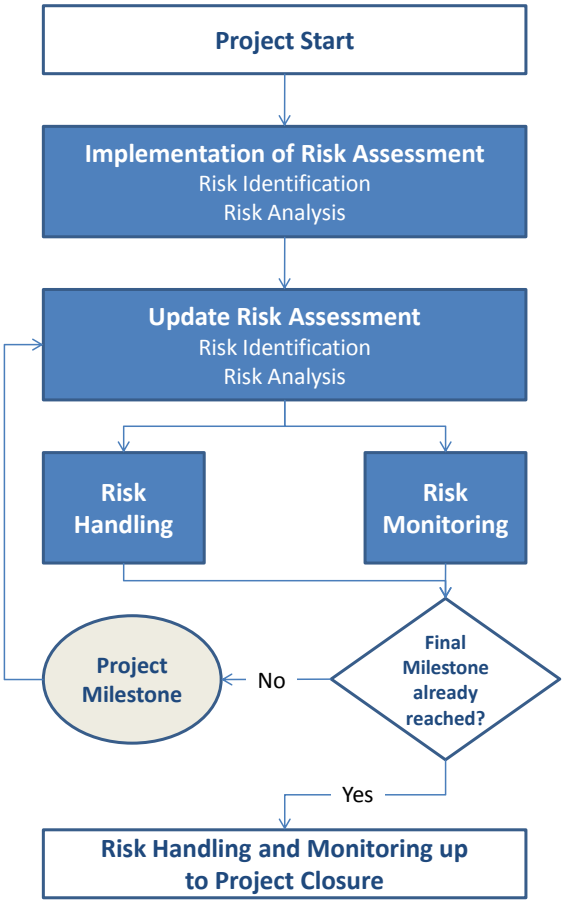

Figure 5. Risk Management Process

5.3.1. Risk Assessment

Risk assessment includes the identification of critical risk events/processes, which could have an adverse impact on the project, and the analysis of these events/processes to determine the likelihood of occurrence/process variance and consequences. Risk assessment is an iterative process. Each risk assessment is a combination of risks identified/analysed in the previous phase and the identification/analysis of risks on current milestones according to the [DoW].

5.3.2. Risk Identification

Risk identification is the first step in the assessment process. The basic process involves searching through the entire project plan to determine those critical events that would prevent the project from achieving its objectives. Risks will be identified by all individuals in the project, particularly by the **Work Package Leaders**.

The basic procedure of identifying risks consists of the following steps:

1. Understand the requirements and the overall project quality and performance goals. Examine the operational (functional and environmental) conditions under which the values must be achieved by referring or relating to the [DoW].

2. Identify the processes and activities (tasks) that are needed to produce the results.

3. Evaluate each activity/task against sources/areas of risk.

5.3.3. Risk Indicators

Following indicators are helpful for identifying risks (non-exhaustive list):

- Lack of stability, clarity, or understanding of requirements: Requirements drive the research and the design of the prototypes. Changing or poorly stated requirements guarantees the introduction of performance, cost, and schedule problems.
- Insufficient or inadequate resources: People, funds, schedule, and tools are necessary ingredients for successfully implementing a process. If any are inadequate, to include the qualifications of the people, there is risk.
- **Communication** is a critical success factor for HBB4ALL. Failure to provide (push) available information actively as well as to demand (pull) required information actively will both introduce considerable risk.

5.3.4. Risk Handling

After the project's risks have been identified and assessed, the approach to handle each significant risk must be developed. There are essentially four techniques or options for handling risks:

- Avoidance (application of tasks in order to avoid the risk event)
- Control (watch the environmental conditions for influences to an already assessed risk)
- Transfer (application of tasks to set a risk to a lower level)
- Acceptance (the consequences of the risk event are accepted)

Results of the evaluation process and how to handle shall include:

- What must be done
- Level of effort required and estimated costs
- Proposed schedule showing the proposed start date
- Time phasing of significant risk reduction activities, including completion date
- Their relationship to significant Project activities/milestones
- The person responsible for implementing and tracking risk handling measurements (usually the responsible work package leader)

5.3.5. Risk Monitoring

Risk monitoring systematically tracks and evaluates the performance of risk-handling actions. It is part of the Project Manager's and the Work Package Leaders' function and responsibility and will not become a separate discipline. Essentially, it compares predicted results of planned actions with the results actually achieved to determine the status and the need for any change in risk-handling actions.

5.4 Potential Risks and Contingency Plans

Several potential risks of the Hbb4all project have been identified and evaluated before the start of the project. A detailed description is provided in the DoW, section B.1.3.8. The proposed contingency plans are summarised in table 3.

Table 3. Global risks and corresponding contingency plans for the Hbb4all project.

Potential Risk	**Probability** L/M/H	**Impact** L/M/H	**Contingency Plan**
Risks relating to the implementation of the Project			
Delay in the deliveries	M	M	Strong management (including period reports), early reactions to delays.
Delay in the execution of the work	M	M	Experienced participants, strong management, early reaction.
Partner disagreement in setting up pilots	M	M	Solid consortium with previous experience in other similar projects
TXT loses interest to remain as full partners due to 0€ EU contribution	L	L	TXT has reserved the required budget and resources for the project and TXT's activity within HBB4ALL project is part of their strategic plan for next year commitments.
Risks relating to participating parties and their employees			
Participant leaves the consortium	L	M	Overlapping skills that allow the other parties to take over.
Conflicts between the parties	L	M	Conflict handling according to management structure.
Project coordinator changes	L	M	Consortium has wide and strong experience on EU projects and several resources for coordination.
Risks relating to the use and exploitation of the results			
Pilots execution identifies improvement of proprietary IPs	M	L	Good understanding of pre-existing know-how and foreground knowledge Definition of IP rights within the Consortium.

Dissemination disclose IP from partners	M	L	Dissemination activities are approved by the Project Management Group before they can be distributed.
Copyright or confidential results	M	L	Memorandum of Understanding
Risks relating to the technical maturity and feasibility			
HbbTV 2.0 is delayed and does not fit with pilots schedule	M	L	The project also addresses HbbTV 1.x for which millions of devices are already in the market; HBB4ALL will build backwards-compatible solutions.
Speech technologies performance	M	L	Keep tests within "news" field, other fields will not perform as good.
HbbTV 2.0 devices do not support required features	M	L	HbbTV 2.0 will be based on DVB plus Web technologies (HTML 5, CSS, JavaScript) – if certain functionalities are not covered by a 2.0 device, these will be implemented through web services. Demos will be organized to simulate workflow and interoperability. Keep tests within "news" field, other fields will not perform as good.
Risks relating to tests			
Insufficient Number of users for tests	M	L	Contact user associations
Difficulty setting up tests	M	L	Team of experienced psychologists
Difficulty setting up experiments	M	L	Perform pilot tests before rolling full tests
Benchmarking quality	M	L	Go for a wider approach

Translation of test contents required	M	L	Team of experienced translators.
Setting up workflow has not yet channel available	M	L	UAB has an internal broadcasting channel, which can be used to simulate
Risks related to dissemination			
Accessible webpage	M	L	Design from start a WAI compliant web
Accessible webpage	M	L	Design functions with accessible solutions