



The Collective Experience of Empathic Data Systems

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Project Information Manual and Quality Plan

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Executive Summary

The Collective Experience of Empathic Data Systems (CEEDs) project will develop novel, integrated technologies to support human experience, analysis and understanding of very large datasets.

- **Making use of humans' implicit processing abilities.** CEEDs will develop innovative tools to exploit theories showing that discovery is the identification of patterns in complex data sets by the implicit information processing capabilities of the human brain. Implicit human responses will be identified by the CEEDs system's analysis of its sensing systems, tuned to users' bio-signals and non-verbal behaviours. By associating these implicit responses with different features of massive datasets, the CEEDs system will guide users' discovery of patterns and meaning within the datasets.
- **Immersion in synthetic reality spaces.** To achieve this goal, users will be immersed in synthetic reality spaces (SRS), allowing them to explore complex data whilst following narrative structures of varying spatio-temporal complexity. Unobtrusive multi-modal wearable technologies will be developed in the project for users to wear whilst experiencing the SRS. These will provide an assessment of the behavioural, physiological and mental states of the user.
- **Two brains are better than one – collective experience.** Individuals' pattern detection abilities will be augmented by linking multiple users together, creating a collective discovery system. Components of the CEEDs system will be integrated using generalized architectures from network robotics, creating a genuinely novel approach to massive distributed synthetic reality applications.
- **Making a practical difference.** CEEDs' effectiveness will be validated through studies involving stakeholders from science, history and design. The consortium envisages genuine benefits from the CEEDs system. Think, for example, of a young pupil using CEEDs being able to see complex patterns in an astronomy data set, patterns which without CEEDs would only be perceptible to an experienced professor. By unleashing the power of the subconscious, CEEDs will make fundamental contributions to human experience. When we look back to life before CEEDs, we may liken our experience to living with our eyes closed.
- **Enriching theory across disciplines.** On the theoretical level, CEEDs targets a novel integrated computational and empirical framework, merging the delivery of presence with the study of consciousness, its underlying sub-conscious factors and creativity. To do this, CEEDs will follow a multi-disciplinary approach that will significantly further the state of the art across science, engineering and the humanities. By bringing together a team of leading experts in psychology, computer science, engineering, mathematics, and other key disciplines, CEEDs will build the foundations for key developments in future confluent technologies.

The purpose of the Project Information Manual and Quality Plan is to guide the co-operation among the partners and to provide templates for the preparation of documents. It provides details for all the CEEDs partners, describes the structure adopted for the management of the CEEDs project and lists the members of the Project Committees. This document describes the procedures to ensure global quality of the project and presents the risk management plan/report of the CEEDs project. It also describes the tools adopted for communication and document preparation. In addition it describes the types of documents to be issued during the CEEDs project and provides guidelines on their contents. In order to maintain efficient communication between partners, this document is also accompanied by a number of appendices to be used in the preparation in the management and quality documents.

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1 Introduction

The Project Information Manual and Quality Plan intends to be a guide for the project partners during the CEEDs project. This document contains all the relevant information for securing a common understanding of the ways and means to be applied during project execution and to assure the quality of the work performed within the project.

The work of the project is organised in Tasks and Workpackages and the results of each task are recorded in one or more Deliverables. Each deliverable is assigned to one Deliverable Leader, who is responsible for the preparation of the deliverable. In order to ensure high quality of project results, each deliverable will be reviewed by one or two Internal Reviewer, who can recommend any necessary changes to the Deliverable Leader.

Here is a summary of the Project Information Manual and Quality Plan sections:

- **Section 1 – Introduction:** this section is the introduction of the Project Information Manual and Quality Plan.
- **Section 2 – Project overview:** this section describes in detail the CEEDs project. For completeness, we provide some information that has already been presented in Annex I of the CEEDs Grant Agreement.
- **Section 3 – Consortium description:** the consortium consists of 16 beneficiaries with clearly distinctive roles, functions and expertise areas, strongly complementing and supporting one another.
- **Section 4 – Operation of the project:** this section describes the workplan of CEEDs and its organization into Workpackages and Tasks. The roles of the Workpackage Leader and Task Leader are presented. During the lifecycle of the project, the consortium of partners is furthermore separated into three workgroups and this section describes their structure. Finally, the rules that govern any issue that arises in the context of CEEDs project are listed.
- **Section 5 – Project decision structure and management procedures:** the project management procedures are based on the ones being used successfully for the management of similar types of projects in the European Union 7th Framework Programme.
- **Section 6 – Communication in the context of the project:** covers communication issues both within the project (internal communication) and with the other authorities (external communication). All documents may be communicated by e-mail, by fax, or can be uploaded at the Box.net website, on the understanding that the recipient is able to receive and print the document with the appropriate format.
- **Section 7 – Project meetings:** covers project meetings types, procedures and organization.
- **Section 8 – Submission of the deliverables:** This section describes the procedure for the submission of deliverables, their nature, language, requirements, status and approval procedure. Each Deliverable is assigned to one responsible partner (Deliverable Leader) and this partner takes the responsibility, that the Deliverable is available in high quality and submitted on time. The responsible partner assures that the content of a Deliverable is in accordance with Annex I. Any issues endangering the completion of the Deliverable are reported immediately to the Project Coordinator and discussed with the Project Coordination Committee.
- **Section 9 – Quality Assurance:** All quality aspects required for the project are addressed and documented.
- **Section 10 – Document management:** Describes the types of documents used, document reference and structure.

- **Section 11 –Project monitoring:** Addresses the tasks of reviewing and monitoring the project. In addition, this section describes the kinds of actions required to correct problems. Corrective actions should be taken in a bottom-up approach, and should primarily be adopted within a Task or Workpackage.
- **Section 12 – IPR issues and access rights:** Addresses IPR issues and access rights. IPR issues and access rights are covered by the CEEDs Consortium Agreement.
- **Section 13 – Risks:** Analyses potential risks for the project. In order to ensure the success of the project, the consortium will pay special attention in identifying possible risks and preparing corresponding contingency plans. An initial Risk Management Plan is reported in this section.
- **Section 14 – Dissemination and Plans for Using Knowledge:** In order to achieve the necessary impact, CEEDs will also have a co-ordinated promotion of its vision and dissemination of results. The dissemination and communication activities will accompany the project continuously.
- **Section 15 – Consortium agreement:** mentions the key points covered in the consortium agreement.
- **Appendix 1 - Workpackages Leaders:** lists the leaders of all the Workpackages of the CEEDs project.
- **Appendix 2 - Task allocation to Partners:** contains the leaders of all the tasks of the CEEDs project.
- **Appendix 3 - Deliverables allocation to Partners:** contains the deliverable allocation of the CEEDs project.
- **Appendix 4 - Members of Project Management Board:** contains the members of the Project Management Board Committee.
- **Appendix 5 - Members of Project Coordination Committee:** contains the members of the Project Coordination Committee.
- **Appendix 6 - Template for project Document:** contains a Microsoft Word template for project document.
- **Appendix 7 - Deliverable Template:** contains a Microsoft Word template for project deliverables.
- **Appendix 8 - Various templates for internal reporting:** contains various Microsoft Word templates for internal reporting.
- **Appendix 9 - Various templates for external reporting (reporting to EC):** contains various Microsoft Word and Microsoft Excel templates for external reporting.
- **Appendix 10:** this appendix provides a list of abbreviations used in this document.

Part of the management procedures described in this document have been based on the management procedures (with the necessary adjustments to the CEEDs needs) used in other successful EC projects such as Games@Large (contract no IST-5-038453).

2 Project Overview

This section provides an overview of the CEEDs project.

2.1 Project Objectives

The objectives of CEEDs project are outlined in Annex I areas as follows:

The CEEDs project has one overarching objective which is to develop and deploy a novel confluent synthetic reality technology for the exploration of massive datasets that exploits both unaware/implicit/involuntary and aware/explicit/voluntary factors to optimize discovery, creativity and understanding.

As described in the DoW, in order to achieve this goal CEEDs will pursue a number of specific objectives:

- **Theory of the role of implicit and explicit processing in the generation of the stream of consciousness and discovery.** Generate theoretical and experimental knowledge on explicit and implicit cues and states and their role in creating a unified experience in real and mixed reality environments. Provide the foundation on which the computational model, or the CEEDs Sentient Agent will be based.
- **The development of a novel integrated wearable sensing and actuation system, Body Machine Interface (BMI), which will provide for a multitude of implicit and explicit interfaces to the CEEDs engine.** New integrated wearable technologies for confluence applications. This multi-modal BMI system will provide a high capacity bi-directional multi-modal interface between the CEEDs systems and the users. The functionality of the BMI system will be augmented by real-time physiology and speech interfaces.
- **The development of a model of consciousness and its application to the CEEDs Sentient Agent, a real-world model of consciousness that will guide the user in their exploration of complex data sets.** An integrated model of enactive real-world consciousness that encompasses multiple levels of sensory processing and integration, learning and memory, planning and action execution. Core elements of the models are directly implementing key assumptions of the CEEDs GEPE model. The CSA is thus both an explanatory model of consciousness and a technological innovation
- **Design, develop and test tools and methods for the implicit and explicit interactions with high dimensional data sets.** The deployment of advanced multi-modal (visual, sonic and haptic) composition and rendering systems. New integrated technologies for the delivery of synthetic reality. In particular this objective will render the unique CXIM mixed reality system with its interfaces to CAE and BMI and its portable version. Combined with these systems will be a highly advanced system for data mining, processing and controlled content delivery through composition systems.
- **The deployment of a novel architecture for distributed synthetic reality applications combined.** Building up a well tested framework for distributed robotics, novel architecture for VR and MR will be developed.
- **A low-cost portable version of CXIM A new portable low cost synthetic reality system for a wide-range of confluent applications.** The portable system is a prototype of how CEEDs envisions the future large-scale delivery and dissemination of synthetic reality. The portable CXIM system will support a number of the project partners and members of the interest groups.
- **Develop and test methods for individual and collective confluence experiences in the context of discovery.** The theoretical predictions of the CEEDs paradigm will be tested under varying conditions. CEEDs will develop and validate novel methods for the

design, control, delivery and validation of confluent systems. In particular CEEDs will advance the technology to strengthening collective creative applications

- **Validation of the CEEDs technology in a number of data rich domains including: Astrophysics, Neuroscience, Archaeology, History and Commerce CEEDs will validate its approach with large-scale tests with different user groups.** This will facilitate the identification of the domain specific and invariant aspects of the CEEDs paradigm. These tests will be developed in a user-centred framework starting with use case definitions and subsequent benchmarking and testing.
- **A test battery of quantitative and qualitative approaches and measures for designing for confluence, for its dissemination and for measuring its impact.** Confluence and its specific form in CEEDs is breaking new ground in the shaping of human experience. Hence, this requires the development of dedicated set of tools for assessment and design. CEEDs will develop these tools in dedicated controlled and open ended conditions. In addition, CEEDs will assure that these human experience enhancing methods and technologies will receive a wide dissemination to all potential stake holders.

2.2 Description of Project

The CEEDs project is divided into 10 Work packages.

- **WP1 “Theory of human unified experience”** comprises the core scientific work, and places the investigation of presence in the context of consciousness research and will construct a theory of human unified experience.
- **WP2 “CEEDs sensing system”** is responsible for the development of the core body machine interface (BMI) which includes the remote sensing platform and instrumented patches, the sensor modules, real-time algorithms and the portable devices to gather parameters correlated to general cognitive user states and activity user conscious status (e.g. speech processing, eye gaze and EEG).
- **WP3 “CEEDs engine: perception, cognition and action”** aims to build and test the CEEDs core engine, which orchestrates the interaction between the users of CEEDs and the data space that will be explored.
- **WP4 “CEEDs effectors systems & environments”** will create a common synthetic reality platform, a continuum of mixed/virtual/augmented reality, that provides the primarily presentation layer (analogue / virtual-reality, synthetic / abstract audiovisual, & social / virtual humans, avatar groups, tribes) of CEEDs to the users.
- **WP5 “Integration”** aims a) to generalize existing distributed architectures to include a layer to deal with the mixed/virtual/augment reality systems; and b) to integrate the different CEEDs processes stemming from work packages 2, 3, and 4.
- **WP6 “Application development”** intends to develop concrete, functional applications in the field of archaeology, astronomy, neuroscience, and product design (fields selected by the project for their complex datasets), based on the components developed in the CEED project.
- **WP7 “Experience assessment and human factors”** contributes to the project by assessing the user’s experience with the interfaces, systems, and applications developed in CEEDs.
- **WP8 “Use cases and scenarios”** will focus on identifying how best to apply CEEDs technologies to enable diverse groups of users to better perform a range of tasks.
- **WP9 “Dissemination, exploitation planning, training and networking”** will take place throughout the lifespan of the project and aims at disseminating information about the progress and results of the project carried out in the core Work Packages 1-8, with the participation and involvement of all project partners.
- **WP10 “Management, Coordination and Ethics”** will run throughout the lifespan of the project and will underpin all the other activities. The main aim for WP10 is to manage the

project to a successful completion and to achieve its tasks and objectives, within the agreed time schedule and budget, and with results that meet the agreed high quality standards.

2.3 Potential Impact

2.3.1 Strategic impact

At the most general level, CEEDs addresses the concern to ensure European leadership in the technologies at the heart of the knowledge economy and to increase innovation and competitiveness in European businesses and industry.

The CEEDs project offers a significant theoretical and technological advance in the development of integrated novel technologies for perception and cognition. CEEDs will advance the theoretical knowledge on how users perceive real, mixed and virtual spaces, including the extent to which the peri-personal space adjusts after manipulating virtual objects.

Specifically, CEEDs will develop and deploy a theoretical and technological framework that, through the enactive merging of physical and virtual sources of stimulation will deliver novel ways of on-line perception of and interaction with massive volumes of data.

We are listing below the expected impact listed in the FP7-ECT workprogramme for Objective ICT-2009.8.4: FET proactive 4: Human-Computer Confluence and explaining how CEEDs will contribute to meet these expected impacts as well as listing the steps needed to bring about these impacts.

- **Expected Impact 1: New methods and tools to act across real and virtual spaces.** CEEDs aims at creating a novel mixed reality system, merging real and virtual, with two peculiarities: unifying implicit and explicit experience according to a narrative, and supporting unusual forms of perceptions and actions. The Consortium prior expertise with mixed reality, pervasive computing solutions and cognitive science is exploited in an effort to provide the user with unprecedented yet intimate experiences and to make sense of them. Differently from purely aesthetic multimedia installations, here the actual psychological experience of the user/visitor is investigated. The result will be a set of tested, effective scenarios where the user can exploit unusual affordances to act, accompanied by a scientific description of the way in which people make sense of these unusual affordances configuration.
- **Expected Impact 2: New means to present the massive amounts of data which future ICT systems will generate and collect to individuals and groups to allow them to explore and more fully understand the causes and consequences of phenomena.** CEEDs explores a novel solution to present massive amount of data, not only by merging physical and virtual sources of stimulation, but also implicit and explicit information. Augmented reality systems already try to make visible information and cues that are consequential but would remain non accessible to one or more of the interactants; here the „invisible“ phenomena are of a special kind, namely implicit information that would be hardly accessible to any interactant, and that the user will be able to extract from the data and use. The nature of this information and the way to present it for an effective exploitation on the user's part will be one result of the project, moving a step forward the current solutions to collect and manage „invisible“ data.
- **Expected Impact 3: Improved ability to truly deliver presence experiences contributing both to progress in Presence research and enhancing the foundations for future applications of societal value.** The study of presence in mediated environments is currently breaking old frontiers by considering not only systems that saturate the users' experience and seclude it from the surrounding, but also other more pervasive cases in which the mediated environment is permeated by other environments or stimuli. As such, a study is able to test presence models and explanations on environments that are closer to the mediated environments that are

actually present in everyday life, regardless of the novelty of the specific interface. CEEDs investigates the presence experience in this spirit, and - besides measuring the presence level - it will put great emphasis on the way in which the specific nature of the environment shape the way in which presence is manifested and enacted.

Another expected important impact is that CEEDs aims to contribute to the better understanding of how sensory information is delivered to, and interpreted by the brain. Discovery depends on the identification by the brain of patterns in complex data sets. These patterns can be derived from our sensation of the physical world we are embedded in or through augmented realities where human sensation is expanded through the use of novel sensing technologies and action augmented through novel effector systems. CEEDs seeks to exploit the implicit information processing capabilities of the human brain. These implicit cues, as measured through novel sensing and effector systems including biosignals and non-verbal behaviour form the core information based on which the CEEDs system will process data and present it to the user(s). Hence, CEEDs places the investigation and delivery of presence in the scientific context of consciousness research and expands its horizons to include implicit and sub- pre-conscious forms of perception, cognition and action.

2.3.2 Transformational impact

As already mentioned, the CEEDs project will develop and deploy new methods to experience and analyze complex high-dimensional data sets by combining advanced mixed reality, pervasive computing, ambient intelligence and interface technologies with a theory driven approach towards shaping human unified implicit and explicit experience through new forms of perception and action.

We are listing below the measures we aim to take to ensure CEEDs results have a transformational effect in the areas of science and technology relate to the project.

- **New methods to evaluate user experience, which are able to deal with the transition from evolution of human-computer interaction to human-computer confluence.** CEEDs will focus on several methods to evaluate the user' s experience, in order to offer a more comprehensive depiction of the way in which its novel interface is received and used. Social, cognitive and psycho-physiological dimensions will be investigated through iterative tests accomplished on real users' scenarios, which will guide both technological and scientific partners. The final aim is not only to guide CEEDs system development, but also to improve the design of HCC technologies in general.
- **Strengthened competitiveness of European businesses through new designing processes, which consider conscious and unconscious (affective and cognitive states, subliminal perception, action tendencies) sources of information and will better fit consumers' expectations and needs.** The presence of an important multinational company in the Consortium (Electrolux) ensures that the project takes into account application possibilities on the European market, while imagining novel and unprecedented interfaces. It will also allow gathering immediate market and end-user feedback, with appealing and exploitable scenarios. A proper dissemination activity, accomplished through public demonstrations of the systems, will attract other European companies, collect their impressions and improve the system.
- **Leading-edge research in Europe through collaborative and multidisciplinary experimentation about space perception and interaction with object in technologically enhanced perceptual spaces.** One of the fundamental components of CEEDs is the provision to users of a mixed reality data exploration environment, which user can interact with and modify through real actions accomplished on the interface. This will allow advancing the theoretical knowledge on how users perceive real, mixed and virtual spaces, including the extent to which the peri-personal space adjusts after manipulating virtual objects.
- **Contribute to the creation of a European network of researchers in the field of Human Computer Confluence beyond CEEDs consortium.** CEEDs expresses faithfully the idea behind the concept of Human-Computer Confluence (HCC) proposing a peculiar approach, based on the merging of explicit and implicit information in augmented, virtual

spaces. The presence of top-level professionals that have worked in areas such as mixed and augmented reality, pervasive ubiquitous computing and presence will bring the necessary starting knowledge and allow fruitful exchanges among consortium members. We have foreseen an intense dissemination activity, and we have created a TASK (t9.4) specifically addressed to create and sustain an open network of experts within the field of HCC. In particular, the first step will be to contact and coordinate with other project-members of ICT-2009.8.4 (Human Computer Confluence), and to organise workshop and summer school to promote confrontation with other researches, merge with their new ideas and theories and to spread those developed within CEEDs.

2.4 Project Time Plan

Figure 1 illustrates the project time plan:



3 Consortium Description

CEEDs project takes advantage of a broad and interdisciplinary perspective, pulling together expertise from diverse disciplines to provide a significant baseline of knowledge, expertise, tools, services and platforms. All participants bring to the consortium experience and skills that are necessary for the successful completion of the project and each has a clear and well-defined contribution to make. The broad range of partners' backgrounds will ensure the suitability of the result for subsequent adaptation and distribution internationally. The Consortium has considerable experience in collaboration and management of international EU funded RTD projects. The majority of the Consortium partners aim to solve (take advantage of the actual situation) the standards problems described so that the solutions can be disseminated among their membership and other organisations in their area of influence. They have familiarity in dissemination and training, thus ensuring a significant impact.

The CEEDs consortium is composed of 16 partners from 8 different European countries, coordinated by GOLD together with UPF, the latter responsible only for the scientific and technical management. The Consortium is composed of 15 well-known research centres and universities (as described in the table below) and 1 world-leader white goods manufacturer. The CEEDs project involves technical and scientific domains in which the members of the consortium have a track record of proven excellence.

As can be seen in Figure 2 **Error! Reference source not found.**, each partner has several roles. All of the RTD activities identified in the CEEDs project are totally covered by the Consortium, and making the most out of the research potential of each of the project partners.

	GOLD	UPF	U OS	CERTH	EKU	UOA	Teeside	UNIPD	MPI	ENS	BME	UPC	UNIP	TAIK	ELUX	LU
Theory of Human Unified Experience		●	⊗		●			▲	●	●						
CEEDs Sensing System	▲				●	●						⊗				
CEEDs engine		⊗		●			●	▲	●			●				
CEEDs Effector System	▲	●				▲					⊗		●			
Integration	▲	●	▲	▲	▲	▲	▲	▲	▲	▲	●	⊗	▲	▲	▲	▲
Application Development	●	⊗				●	●		●		●	▲			●	●
Experience Assessment	●	▲	▲	▲	▲	▲		⊗	●	▲				●	●	
User Cases and Scenarios	⊗	●				●		●			●	●	▲		●	▲

 Workpackage leader
 Heavy / important contribution
 Light contribution

Fig. 2 - CEEDs Partners and Activities Gallery

4 Operation of the Project

The workplan of the project is divided into 10 Workpackages and 55 Tasks. A Workpackage Leader leads each Workpackage. Each Workpackage is divided into one or more Tasks assigned to different partners and each Task is led by a Task Leader. All the partners participating to a Task report to the Task Leader and all Task Leaders report to the Workpackage Leader. Finally, Workpackage Leaders report to the Project Coordinator and the Project Coordination Committee, which is responsible for the overall operation of the project. This approach is reflected in the decision structure of the project.

The Workpackage Leader does not directly coordinate the work, but has to assure cohesion between the single Tasks in order to achieve the overall goal of the Workpackage. The Workpackage Leader is responsible to assess the overall progress of the Workpackage. The Task Leader is responsible for the coordination of the actual work.

Scope of the auditing of processes is to ensure that work in each Task corresponds to the general line of the project, that resources are planned and committed and that a reasonable time-plan is adopted. In order to achieve the above goals the procedures of the next paragraph are implemented.

During the lifecycle of the project and especially for the purposes of WP3, WP4 and WP5 the consortium of partners has been furthermore separated into three workgroups. This was done in order to ensure better collaboration and communication between the partners and in order to base on universal input and output so that the work produced by each workgroup will be able to be integrated with that created by all other workgroups. The workgroups that have been created to serve the scope of the project are a) basic research (leader: UoS), b) technology research (leader: UPF), and c) applied/user research group (leader: GOLD). Table below shows the partners involved in each group.

Tab. 1 - Workgroup involvement

Workgroup	WP	Partner
Basic research	WP1	UPF, UOS, ENS, MPG, EKUT
	WP2	UPF, UDP, UAU, EKUT
Technology research	WP3	UPF, GOLD, CERTH, TEESIDE, UNIPD, MPG, UPC
	WP4	BME, UPF, GOLD, UAU, UDP
	WP5	GOLD, UPF, UOS, EKUT, UAU, TEESIDE, UNIPD, MPG, ENS, BME, UPC, UDP, ELECTROLUX
	WP6	GOLD, UPF, UAU, TEESIDE, MPG, BME, UPC, ELECTROLUX, UL, UH
Applied/user research	WP7	GOLD, UPF, UOS, CERTH, EKUT, UAU, UNIPD, ENS, ELECTROLUX, UH
	WP8	GOLD, UPF, UAU, UNIPD, BME, UPC, UDP, ELECTROLUX, U

4.1 Workpackage Operation

The Workpackage Leader is responsible for the detailed planning, monitoring, quality assurance and coordination of the Workpackage operation. In addition, the Workpackage Leader is responsible for supervising the production of Deliverables and ensuring that all the Task outputs are provided on time. Moreover, the Workpackage Leader is responsible for all

the activities in the Workpackage. This entails ensuring that the outputs and Deliverables and their review are produced on time.

The Workpackage Leader informs the Project Coordinator and the Project Coordination Committee about the progress of the Workpackage operations and about any problems that affect the operation of the Workpackage.

4.2 Dealing with Issues

When an issue arises in the context of CEEDs project the following rules are applied:

- Issues that concern only one Task are dealt with directly by the Task Leader together with the partners contributing to this Task.
- Issues involving more than one task within the same deliverable are referred to the Workpackage Leader and are dealt with by the Workpackage Leader. Short-term corrective actions are taken by the Task Leader in agreement with the Workpackage Leader.
- Issues involving tasks across Workpackages are handled by the Project Coordination Committee. Short-term corrective actions are taken by the Workpackage Leader in accordance with the Project Coordinator.
- Issues, which could affect the success of the project, are reported through the Workpackage Leader to the Project Management Board, which establishes together with the Workpackage Leader and the affected Task Leader a corrective action plan.

In all cases, the Project Coordinator and all partners are informed about the issue and the resolution.

5 Project Decision Structure and Management Procedures

The general purpose of the project management is strategic control of each Workpackage, implying coordination of the different project activities and implementation of quality control mechanisms with appropriate project standards. Project management will cover financial, administrative, scientific and knowledge and innovation aspects. The complex structure and the ambitious objectives of CEEDs require particular attention by the consortium to overall management and coordination issues. Above the technical management of individual Workpackages, an appropriate management framework linking together all project components and maintaining communication with the European Commission will be set up. For daily work, a specially constituted management team with dedicated staff covering a range of skills (e.g. project management, IPR, exploitation) will be set up in the form of a Project Management Office. Project management activities include:

- Coordination of the technical activities of the project at consortium level.
- Overall legal, contractual, ethical, financial and administrative management of the consortium.
- Preparing, updating and managing the consortium agreement between the participants.
- Set-up and maintenance of a Virtual Project Management Tool for structured document repository and project communication, linked to the project website, with restricted access for project partners.
- Coordination of knowledge management and other innovation-related activities at consortium level.
- Supervising the promotion of gender equality in the project.
- Supervising science and society issues related to the research activities conducted within the project.

The basic management and coordination structure of the project shall comprise the following entities:

- The **Project Management Board (PMB)** as the ultimate decision-making body of the Consortium consists of one representative for each partner institution.
- The **Project Coordination Committee (PCC)**, as the supervisory body for the project execution which shall report and be accountable to the Project Management Board under the conditions provided in detail in the Consortium Agreement. The PCC consists of the Project Coordinator (PCO), the WP leaders the Technology Director (TD) and the Scientific Director (SD). To efficiently coordinate scientific and non-scientific activities, a representative from the Project Management Office will have permanent guest status.
- The **Coordinator (CO)** - GOLD - as the intermediary to the European Commission is authorised to execute the project management, shall report and be accountable to the Project Coordination Committee (which shall in turn report and be accountable to the Project Management Board) under the conditions set forth in the consortium agreement.
- The **Project Coordinator (PCO)** is coordinating of the project for the day to day activities of the project. The PCO is Jonathan Freeman (GOLD).
- The **Technology Director (TD)** is the leader of the technology vision of the Project. Decisions made by the TD will be made in view of open standards and reusability of project deliverables, assuring marketability of technology. The Technology Director will be also the Knowledge Manager of the project. The TD is Pedro Omedas (UPF).
- The **Scientific Director (SD)** is the leader and approving authority for all academic research related to the project. Decisions made by the SD will be made in view of

advanced research areas, applicability to commercializing the research and use in the project. The SD is Paul Verschure (UPF).

- **Workpackage Leaders (WPL)** are responsible for the coordination of their WP and accountable to the Project Coordination Committee. The WPL list is in Appendix 1.
- **Task Leaders (TL)** are responsible for the coordination of their Tasks and accountable to the corresponding Workpackage Leader.
- **Project Management Office (PMO)**, provided by GOLD, provides the necessary support for day-to-day project management (including monitoring and controlling activities to the Project Coordination Committee and Project Management Board).

An important factor in the validation, dissemination and subsequent exploitation of the results of CEEDS is the involvement of end users. This has been considered in the preparation of the project and is reflected in the creation of an external **Stakeholder Advisory Group (SAG)**. The SAG will be constructed based on candidates proposed by the Project partners and with membership to be decided by the PCC.

5.1 Project Management Board (PMB)

The Project Management Board will decide high-level management issues, including technical, financial, planning and control matters. The primary goal of the Project Management Board is to verify and control that partners are correctly following the agreed process. The PMB has the power to modify both plans and processes, when demanded by circumstances. The Project Management Board will meet at least once a year, or more often in cases of special issues that will need to be discussed. In addition during these meetings the PMB will address topics of a project policy nature and allow all partners to be informed of the project's technical, organisational and financial status and progress.

Membership of the Project Management Board will comprise of one senior management official from each partner. Decisions of a policy nature may require a voting by the partners. In the PMB each party's vote will be based on its share in the project. Decisions in the Project Management Board shall be taken unanimously or with a double majority, based on the majority of the parties and of the project shares (details on the voting procedures and requirements are laid down in the Consortium Agreement). The voting procedure is only binding if the relevant issue has been properly announced on the agenda of the Project Management Board and is announced at the latest two weeks before the meeting for a physical meeting, and one week for a telephone or videoconference meetings.

5.2 Project Coordination Committee (PCC)

The Project Coordination Committee consists of the Project Coordinator (PCO), one representative of each Workpackage Leader, the Technology Director (TD) and the Scientific Director (SD). The Project Coordination Committee (PCC), as the supervisory body for the project execution which shall report and be accountable to the Project Management Board under the conditions provided in detail in the Consortium Agreement. To efficiently coordinate scientific and non-scientific activities, a representative from the Project Management Office will have permanent guest status.

The Project Coordination Committee is headed by the Project Coordinator and convenes at least once every six months in a Project Coordination Committee meeting or more often in cases of special issues that will need to be discussed.

The Project Coordination Committee essential role is to make the necessary decisions to ensure a strong consistency between the Workpackages. The Project Coordination Committee should qualify the results obtained in the Workpackages. The Technology Director should delegate decisions to the Project Coordination Committee when they are contentious,

and no consensus can be reached or when they involve major changes in the directions of the project. The Project Coordinator is responsible for the reporting of the technological progress to the Project Management Board.

Depending on the subject to be decided, decisions in the PCC shall be taken unanimously or with a simple majority.

5.3 Project Management Office

The coordinator (GOLD) will setup a Project Management Office in the beginning of the project. The Project Management Office will be headed by the Project Coordinator (Jonathan Freeman from GOLD) and shall provide the necessary support for day-to-day project management. The day-to-day activities of the Project Management Office include the following:

- Project management procedure including project monitoring;
- The Project Management Office will collect all the required by this manual reports by the partners;
- The Project Management Office will prepare all the report to the EC (based on the partner input);
- A representative from a Project Management Office will attend the meetings of the Project Coordination Committee and the Project Management Board and will issue the corresponding minutes;
- The Project Management Office will handle the IPR issues relative with the project;
- The Project Management Office will handle exploitation issues relative to the project;
- All the external communication (such as press releases) will be handled by the Project Management Office either directly or indirectly (in the indirectly case the partner which makes the external communication must inform the Project Management Office).

5.4 Internal and External Information Flow

Information flows both vertically and horizontally within the project structure. The vertical flow of information to/from the Project Coordinator comprises mainly the administrative issues, such as:

- **Progress reporting for the Quarterly Management Report** from all partners to the Project Coordinator, and the distribution of the consolidated reports back from the Project Coordinator to all partners.
- **Minutes of the meetings of the Project Management Board** for the contractual and administrative execution and monitoring of the project.
- **Minutes of the meetings of the Project Coordination Committee** for the technical execution and technical monitoring of the project.
- **Financial information for the Financial Statements and Payments.**

The flow of technical information is generally more appropriate to a less formal and horizontal process. Details are exchanged between partners working in the same area through regular e-mail contact and during project meetings. Details are exchanged between partners working in different Workpackages, again by e-mail, but also during the Project Coordination Committee Meetings. In all cases the relevant Task Leader and / or Workpackage Leader is informed of the exchanges.

The communication with the European Commission will be handled through the Project Coordinator. Progress reports regarding work performed are collected by the Project Coordinator and sent to the Project Officer. Deliverables are supplied to the Project Officer also via the Project Coordinator. Public deliverables are also published in the CEEDs web site once approved at annual project reviews.. Any material of a confidential nature supplied to the project remains strictly for the information of project participants and the European Commission. Such information cannot be forwarded to any other parties without explicit authorisation from the information owner. Confidentiality and IPR issues between partners and associate partners are explicitly addressed in the Consortium Agreement and the NDA that has been signed earlier.

Figure 4 graphically displays the management structure and the flow of information.

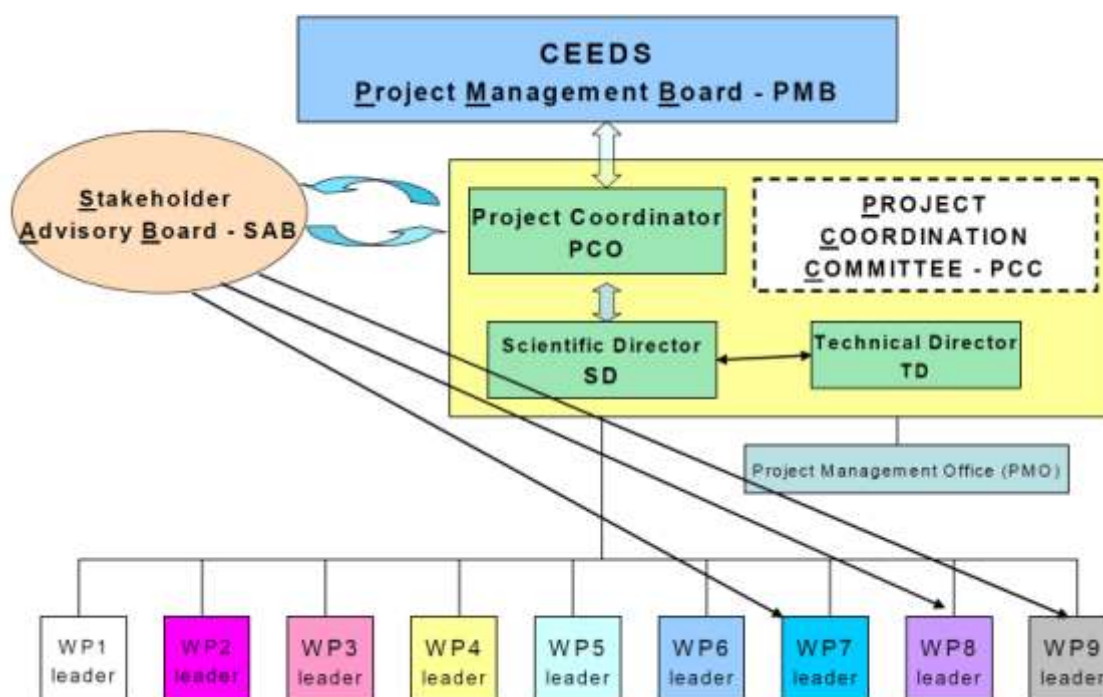


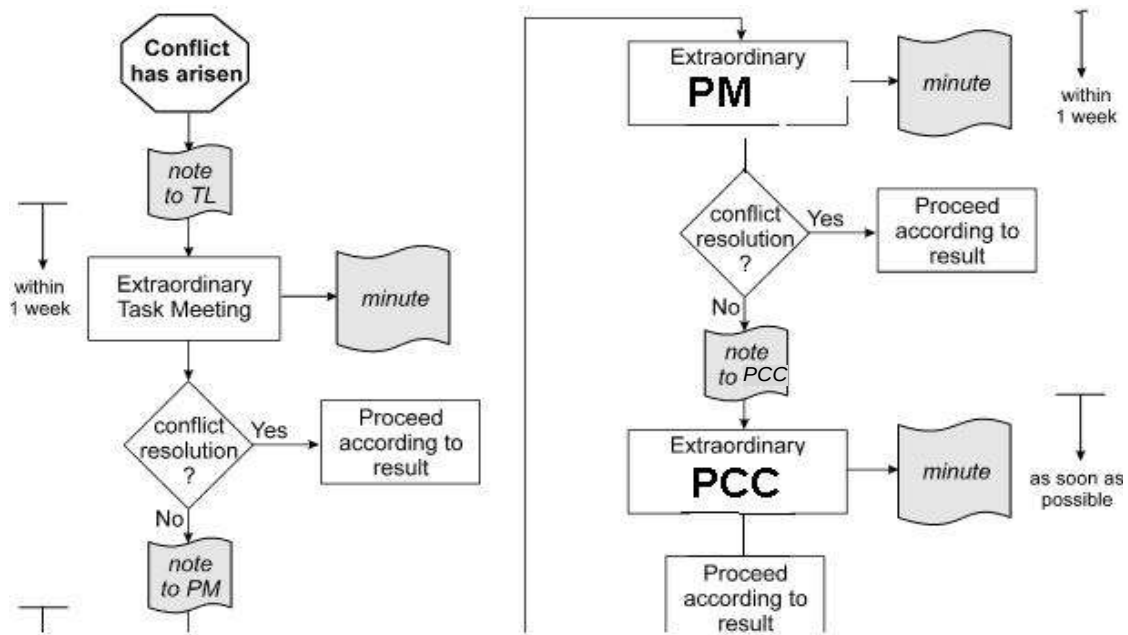
Fig. 3 - Management structure of the CEEDs consortium

5.5 Conflict Resolution

All participating project partners agreed on the following definition of a conflict: a conflict arises if the interests, opinions and the points of view of the single partners vary to such an extent that the contradictions cannot be solved by themselves. In this case it is important to solve the conflict rapidly and technically, as the fast resolution of conflicts and problems is crucial for efficient project progress. Therefore, the procedure for conflict resolution to be used when a conflict arises is described below.

- **Extraordinary Task Meeting:** all persons involved in the task have to take part in the extraordinary task meeting.
- **Extraordinary Project Management Office Meeting:** persons from each partner being responsible for the project progress participate to that meeting. Generally, conflicts should be solved in this project management meeting at the latest.

Figure 5 summarises the conflict resolution process in a graphical way.

**Fig. 4 - Conflict Resolution**

6 Communication and Collaboration in the Context of the Project

6.1 Communication with the Commission

All communications with the European Commission should be carried out through the Project Coordinator. The communication can be confidential or not confidential. When a partner wants to contact the European Commission for a not confidential communication, this communication is made through the Project Coordinator and all other partners are informed. When a partner wants to contact the European Commission for a confidential communication, he must inform the Project Coordinator accordingly and the communication will not be mentioned to the other partners.

6.2 Internal Communication

Depending on the ongoing project needs, the internal communication tools may change in order to cover the project and partners needs in the best way possible. All documents may be communicated by traditional mail, e-mail, by fax, or can be uploaded at the collaboration web space of the CEEDs (which is based on the product Box.net) on the understanding that the recipient is able to receive and print the document with the appropriate format.

6.3 External Communication

Publications based upon work carried out in the context of CEEDs project can be released by the project partners, unless the publication contains confidential information, which is covered by the Consortium Agreement. In that case, the Project Management Board will have to be asked in order to decide on the matter.

In all cases the authors must state in the publication their participation in the CEEDs project and describe the project's source of funding. In addition the partner must inform the Project Management Office for any further external communications (such as press releases).

6.4 E-mail Communication

Each partner is highly recommended to use e-mail for communication as widely as possible. As email is one of the communication tools to be used by the partners, the subject of the messages will always start with CEEDs as a Label.

6.5 Project Website

A CEEDs website was created (second month of the project) for information regarding the CEEDs project. The website is intended for dissemination to the scientific/technological community and to the general public. The project registered its website under the .eu domain (www.ceeds-project.eu has been registered). This will be kept active for a minimum of 2 years after the project end date (August 2014).

6.6 Proposed Documents Formats

In order to facilitate information flow between the consortium members, the following files standards are suggested:

- Document Readers: Microsoft Word 2003/2007 for Windows / Adobe Acrobat 8.0
- Documents Editor: Microsoft Word 2003/2007 for Windows
- Spreadsheet: Microsoft Excel 2003/2007 for Windows
- Compression tool: WinZip for compression
- Figures / Images: GIF / JPEG
- Diagrams: Microsoft Visio 2003/2007 for Windows
- Management Information: Microsoft Project 2003/2007 for Windows

The above file formats may be updated due to technological evolution. Other formats are acceptable based on the ability of the partners to view and edit them.

6.7 Collaboration between the Partners

As the advances of technology emerge year by year the collaboration tools offered to the partners of the projects in general are many. For the scope of CEEDs project what was needed in order to enhance the collaboration between the partners was a shared space with an adequate versioning system, which could be able to support multiple users, multiple levels of users and permission levels. In order to achieve a high collaboration level between the partners we have decided the use of Box.net, a leading content management and collaboration service with over 2 million users.

Box.net's system for sharing business documents works in the cloud, without requiring customers to buy their own servers or install special software such as SharePoint, Microsoft's business collaboration and Web publishing suite.

According to Box.net, the Enterprise package offers the following features:

- **"User management:** manage user settings and permissions easily in a centralized administration console. Add and delete users individually, import users in bulk, set login credentials, allocate storage quotas and designate file and folder permissions.
- **Security and permissions:** keep content secure and maintain effective user controls. Select what folders individuals and user groups can access. Designate access permissions, including editing, viewing, previewing and uploading. Decide what permissions users can grant on shared files and folders. Get 256-bit SSL encryption on file transfer.
- **Password management:** set credentials that fit your security needs. Password-protect files and folders and set expiration dates for shared file and folder access. Perform mass user password resets. Gauge password strength. Require users to reset passwords periodically and on initial login, based on your security policies.
- **Reporting:** access a complete audit trail of what's happening with your company's files on Box. Generate and export file and user activity across everyone in your Box account or get a breakdown by user groups. Run reports on logins, downloads, edits and uploads for a specified date range. Find and sort usage reports based on logins, download and upload frequency and user group.
- **Groups:** manage users and set access permissions by a company department or project team. Create user groups, add/delete users, select what folders they can access and what access permissions they have for each folder.

- **Custom branding:** make your company brand visible whenever you share content with external partners and customers. Customize the Box interface and login page to reflect your company brand. Add the company logo, select a color scheme and add other basic information, such as a link to the company homepage”.

Very large documents, photos, videos, and music files can be also published on the CEEDs website through a Box.net widget. This widget allows embedding files from the Box.net account page onto any website, blog, or social networking service that supports HTML embed code.

The aforementioned capabilities of the Box.net system led to the selection of it as the medium of communication and collaboration apart from the frequent meetings and the e-mail communication.

7 Project Meetings

There will be various kinds of meetings in the context of CEEDs project, as is outlined below:

- **Regular Workpackage Meetings**
 - **Objective:** To focus the work within a Workpackage.
 - **Participants:** Workpackage Leader, task leaders and additional staff working in this Workpackage can join.
 - **Minutes:** All results of Workpackage meetings have to be taken down by the Workpackage Leader in an appropriate Workpackage Meeting minutes. These minutes have to be distributed to all participants and the Project Coordinator in the range of one week.
 - **Frequency:** On-demand.
 - **Remark:** Can be held as a phone conference or videoconference.
- **Regular Project Coordination Committee**
 - **Objective:** To coordinate the work of different Workpackages as well as the tasks within one Workpackage. Topics will be the progress in the project, outstanding actions, technical coordination aspects and ad hoc issues.
 - **Participants:** Project Coordinator, Technical Manager, Scientific Manager the concerned Workpackage Leaders (of current Workpackages) and additional staff as appropriate.
 - **Minutes:** All results of Project Coordination Committee meetings have to be taken down by the Project Management Office representative in an appropriate Project Coordination Committee minutes. These minutes have to be distributed to all participants using the procedure described in Section 7.2.
 - **Frequency:** At least every 6 months.
 - **Remark:** Can be held as a phone conference or videoconference.
- **Regular Project Management Board meeting**
 - **Objective:** To manage the project according to the objectives fulfilment, costs and deadlines.
 - **Participants:** Project Management Board members, Project Coordinator, Technical Manager and Scientific Manager
 - **Frequency:** At least once a year.
 - **Minutes:** Results of Project Management Board meetings have to be taken down by the Project Management Office representative in an appropriate Project Management Board minutes. These minutes have to be distributed to all participants using the procedure described in Section 7.2.

For the realisation of the management and working tasks and following the Kick-off meeting held in Barcelona on the 4th-5th October, the meetings in **Error! Reference source not found.** are tentatively planned for the first 14 months:

Tab. 2 - Project scheduled physical meetings

PROJECT MONTH	DATE	MEETING	LOCATION
8	6-7April 2011	2 nd Consortium meeting	London, UK
13	12-13 2011	Sep 3 rd Consortium meeting	Barcelona, ES
15	Nov 2011	Rehearsal for 1 st Review and Review	Brussels, BE

Additional to the above scheduled meetings more out-of-schedule meetings can be arranged if necessary according to project needs (for example task meetings). Apart from physical meetings, the consortium members can also communicate through virtual meetings. The virtual meeting can either be based on videoconference sessions, or on telephone conferences. These additional meetings do not require to be followed by meeting minutes. However, it is desirable that minutes are produced in these meetings, also.

Except for the above mentioned regular meetings, extraordinary meetings can take place as described in paragraph 5.5.

7.1 Meeting Preparation

The participant that hosts each meeting is responsible for the organization and preparation of the meeting. This includes the arrangement of a suitable location and necessary equipment for the meeting and also providing information to the rest of the participating partners with regards to preferred accommodation.

The organising chairman has the following responsibilities:

- Preparation and submission of proposed agenda and meeting objectives.
- Keeping the topics of discussion within reasonable time margins.
- Accomplishing with reasonable accuracy the time schedule.
- Dealing with all the main topics included in the agenda.
- Moderating interventions and assuring that every participant has the chance to express his / her opinion, regardless of experience, role and language fluency.
- Proposing breaks (scheduled or improvised) as necessary.

The chairman for all Consortium Meeting is the Project Coordinator.

Meeting agenda will be sent to the concerned participants at least one week before the meeting date.

7.2 Preparation of Meeting Minutes

Draft of Minutes of meetings will be posted on the Box.net for contribution by the participants. At about 30 working days after the meeting the chairperson of the meeting will add his comments/changes and will save a final version on the Box.net. Comments to the final version of the minutes can be provided at most 5 working days since published. In case that no comment is received, it is considered automatically accepted.

8 Submission of Deliverables

Each Deliverable is assigned to one responsible partner (Deliverable Leader) as described in Appendix 3: Deliverables Allocation to Partners. Each Deliverable Leader is responsible that the Deliverable is available in high quality and on time. The Deliverable Leader assures that the content of a Deliverable is in accordance with Annex I of the Grant Agreement. Any issues endangering the completion of the Deliverable are reported immediately to the Project Coordinator and discussed in the Project Coordination Committee.

Each Deliverable is assigned to one or two internal reviewers for both formal review and technical review. The internal reviewer(s) should be a peer within the project. The assignment of the internal reviewer(s) is decided by the Project Coordinator.

Deliverables are submitted in the Deliverable Template (see Appendix 7).

8.1 Preparation and Submission Procedure

Most of CEEDs deliverables are prepared as a collaboration effort of several partners. The Deliverable Leader (DL) is responsible for the collaboration work and for the completion of the deliverable on time. The BOX.NET is the main tool to enable good collaboration between the different partners and the DL. In order to perform this task in an efficient way it is recommended to follow the following suggested steps:

- DL prepares an outline for the deliverable (it may be used later as an Introduction and/or as part of the Executive Summary). Together with the outline a suggested Table of Content (ToC) is prepared (using the Deliverable Template). For each chapter the outline of its content is defined and the assigned partner is negotiated
- The DL sets up a timeline for the process of preparation of the deliverable this timeline may become a sub-project on the CEEDs Master Plan. The major events on the Timeline are:
 - Contribution of all partners
 - First integration into First Draft
 - Comments by all partners to the First Draft (it is recommended that the comments would be done as insertion or modification to the text)
 - Completion of the Final Draft by the DL
 - Final Draft sent for Internal Review

Deliverables must be sent at the latest two weeks prior to the due date to the Internal Reviewer. The deliverable is uploaded to the respective directory of BOX.NET (see Section 6). The Internal Review includes both suggested changes and comments to the text and a written Internal review Report (Formal Review or Technical Review) as detailed in Section 9.1.1. The Internal Review is planned for about 5 working days. If the reviewer has rated his / her review (Formal or Technical Review) as "No conform" or "Verification after correction", the new draft obtained after change execution undergoes a new review by the reviewer, with special attention paid to the points that caused the correction. The responsible partner submits a new version of the deliverable and a Corrective Actions Report which indicates the changes that have been implemented based of the review results. Draft versions of Deliverables, even not yet reviewed or incomplete, may also be sent to project partners expecting results to start their own work.

The consolidated version of the Deliverable is made available to the project partners via the collaboration web space (Box.Net), and informs the partners via email, as mentioned in

Section 6. The Project Coordinator makes public Deliverables available on the CEEDs website for the public.

8.2 Nature of Deliverables

In the CEEDs project, all deliverables will be reported as documents. Those documents include reports on research, implementation or other activities such as Website, Verification and Leaflets.

8.3 Language of Deliverables

Document Deliverables are written in UK English.

8.4 Status of Deliverables

A Deliverable may have one of the following statuses:

- **First Draft:** the deliverable is still evaluated. A draft deliverable remains within the consortium for further improvement and corrections. All draft versions carry a version number, as described in Section 10.
- **Final Draft:** the deliverable is still evaluated. A draft deliverable remains within the consortium for further improvement and corrections. All draft versions carry a version number, as described in Section 10.
- **Final:** the final version of the deliverable. The final deliverable is sent to the European Commission.

8.5 Internal Approval of Deliverables

The Project Coordinator is responsible for the final acceptance (internal) of a Deliverable. The approval is communicated by the Project Coordinator to the Consortium and the final version of the Deliverable is published in the collaboration space of the CEEDs website, with an updated Revision History.

The procedure that leads to the internal approval of the Deliverables is completed through the tools of the Box.net (see Section 6). Each partner will be able to download a deliverable, apply its own changes and then upload the updated file.

The Project Coordinator may approve the Deliverable only if the reviewer has rated his/her reviews (Technical or Formal Review) as "Conform".

Figure 6 summarises the process (from internal submission to internal approval).

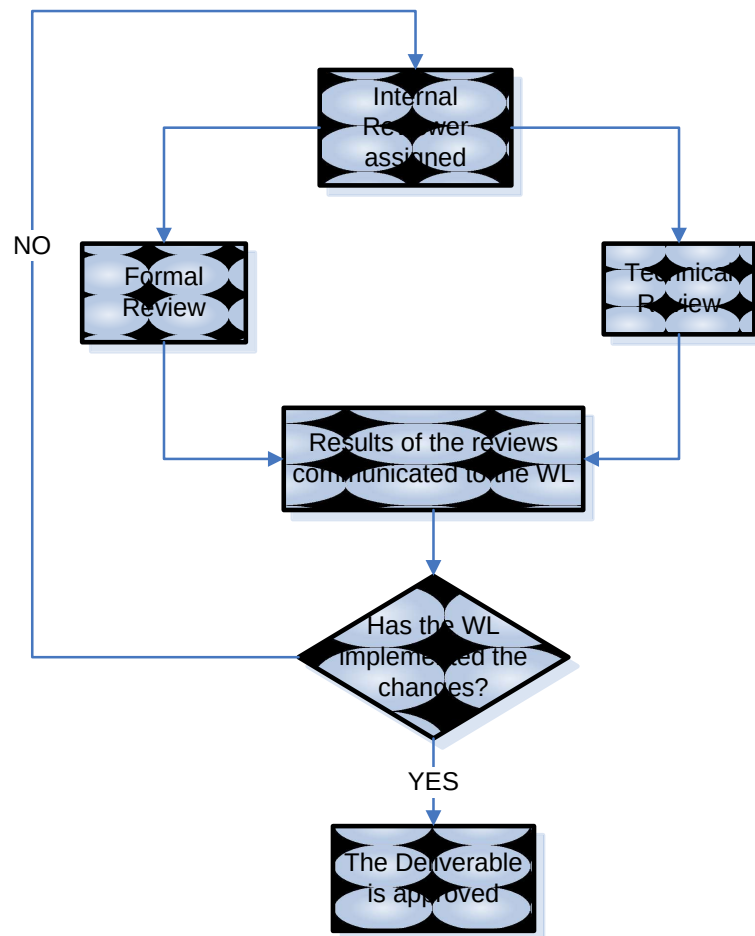


Fig. 5 - Deliverable approval

8.6 Requirements on Deliverables

All Deliverables must meet some basic requirements concerning contents and structure and reviews.

- Their names must be as described in Section 10.
- Their structure must be as described in Section 10.
- Their quality must be as described in Section 9.

9 Quality Assurance

The Quality Assurance activities intend to ensure the global quality of the CEEDs project.

These quality assurance activities are planned throughout the project to guarantee the following specific objectives:

- All quality aspects required for the project are addressed and documented.
- Creation of a technically feasible product specification.

The Quality Assurance Manager is GOLD.

9.1 Quality Assurance Activities

9.1.1 Review of Deliverables

The Review of Deliverables is the control process that consists of verifying that a deliverable satisfies the quality goals defined for it.

Depending on the aim of the review and the review criteria, two different types of reviews are considered:

- **Formal review:** this kind of review ensures that the document is presented in a structured, understandable and consistent way.
- **Technical review:** this review guarantees that the document meets (technical and scientific) criteria, defined by the Workpackage Leader and Task Leader, focusing in the correctness and completeness of the deliverable

9.1.1.1 Formal review

This kind of review tries to cover the following aspects:

- **Form and presentation**

Requirements evaluated are: format, legibility, traceability, consistency and accuracy.

- Format:
 - The document must be wholly identified, having title, code, completion date and revision date.
 - Its format corresponds to the standardised format.
 - Paging, in order to see if the document is complete or some page is missing.
 - Table of contents corresponds with the contents.
- Legibility:
 - It is necessary to differentiate between the contents quality (checking that the exposition is clear and that is possible to read the text) and the physical quality (checking that figures, tables and diagrams are wholly replicated).
- Traceability:
 - The document is checked on whether it is structured and tidy, in such a way that the linkage of references can be easily located and followed.

- Consistency:
 - Objects or concepts must not be described with two or more terms.
 - There are no conflicts between objects or concepts.
 - There are no contradictory actions, processes or tasks.
 - There are no early references. Any mentioned element should have been explained in previous sections or at least it must have a reference to the section in which it is fully described.
- Accuracy
 - Document has a unique interpretation without ambiguity.

- **Process followed**

Requirements evaluated are: compliance with normative and procedures, compliance with specific standards. Each requirement is rated as it follows:

- 1 = the requirement is not met or is met in a DEFICIENT way.
- 2 = the requirement can BE IMPROVED much more.
- 3 = the requirement is considered ACCEPTABLE but it can be improved.
- 4 = the requirement is reached CORRECTLY.

Taking into account the rating of each requirement, the review can be evaluated as:

- Conform
- Non conform
- Verification after correction

It is recommended that:

1. If one of the requirements is rated as 1, the review should be evaluated at least as "Verification after correction".
2. The review should not be evaluated as "Conform" if all aspects are not at least rated as 3.

The result of the formal review process is presented in the Review Report (a template is available in Appendix 8).

9.1.1.2 Technical review

This type of review tries to evaluate the fulfilment degree of the (technical and scientific) acceptance criteria defined for the Deliverable.

Because of the different technical subject of each deliverable the specific (technical and scientific) acceptance criteria for each Deliverable are defined by the Workpackage Leader and the Task Leader.

Each item of the acceptance criteria is rated as follows:

- 1 = the criterion is not met or it is met in a DEFICIENT way.
- 2 = the criterion can BE IMPROVED much more.
- 3 = the criterion is considered ACCEPTABLE but it can be improved.
- 4 = the criterion is reached CORRECTLY.

Taking into account the rating of each criterion, the review can be evaluated as:

- Conform
- Non conform
- Verification after correction

It is recommended that:

1. If one of the requirements is rated as 1, the review should be evaluated at least as "Verification after correction".
2. The review should not be evaluated as "Conform" if all aspects are not at least rated as 3.

The result of the technical review process is presented in the Review Report (a template is available in Appendix 8).

9.1.1.3 Corrective actions

In case of "No conform" or "Verification after correction" on the Internal Review Report, the Deliverable Leader based on his/her on judgment will perform the required changes based on comments and suggestion made on the Internal Review Report.

The second Internal Review will be done by the same reviewer unless decided differently by the QAM.

10 Document Management

10.1 Type of Documents

Within the CEEDs project, a document may be:

- Minutes of a meetings
- Deliverable
- Task Work Plan
- Software Quality Assurance
- Review Report
- Corrective Actions Report
- Quarterly Management Report
- Periodic Activity Report
- Periodic Management Report
- Financial Statement

10.2 Document Reference

The document reference has the following syntax:

CEEDs <type><Date/Number> <Version> <Partner>

A proposed syntax for clear and universal reference to the document is:

CEEDs <type> <Version> <abbreviation_of_person><Date/Number>

Where:

- **CEEDs**: it refers to the project.
- **Type**: a capital letter or two capital letters denoting the type of the document as in the following list:
 - Minutes: M<date>
 - Deliverable: Dx.x <name>
 - Task Work Plan: TW
 - Review Report: RR
 - Corrective Actions Report: CA
 - Quarterly Management Report: QP
 - Financial Statement: FS
- **Abbreviation of the person who is responsible for the deliverable**: The abbreviation is a result of the combination of the first letter of the partner's name, the first letter of the first name of the person who is responsible and the first letter of the last name of the person who is responsible for the deliverable (e.g., for Jonathan Freeman from GOLD it will be: GJF)
- **Date/Number**: when applying to a Deliverable, Review Report or Corrective Actions Report it identifies the Deliverable as given in the project program (Annex 1) e.g. D10.1 (e.g.: Project Information Manual and Quality Plan). When applying to a Task Work Plan

it identifies the appropriate Task. When applying to another document, it records the Date. The Date will be formatted as YYYYMMDD.

- **Version:** the version of the document. The version should start with the letter 'd' for drafts or the letter 'f' for final editions, followed by the major version number, dot ('.') and the minor version number.
- **Partner:** the sort name of the partner, which is leader in the Deliverable editing or is writing the document or for other document an abbreviation of the Partner and the Name of the writer (for abbreviations see CEEDs Researcher List in the CEEDs collaboration space).

If possible, the document reference and the file name of the document must be the same. For example the file name of this document may be: CEEDs_D10.1_f1.0_GOLD.doc

10.3 Internal Correspondence – Response by Partners

On the different stages of generating a new report (Deliverable) the document is sent for comments among the different partners. Each partner comments on the original document using "Track Changes". The response document carries the original name with a Suffix indicating the abbreviation of the writer and the date. After each turn of responses the originator of the document issues a new version where all "Changes" are incorporated. The originator keeps all responses with "Track Changes" for reference till the final version is released.

10.4 Document Structure

In addition various Microsoft Word templates for project documents are available as appendixes in this document.

10.4.1 Ownership

A document should mention the CEEDs project and ICT-258749 (CEEDs Grant Agreement number) at each page.

10.4.2 Cover Sheet

For all documents the cover sheet should mention apart from the CEEDs label, the following:

- The title of the document
- Type
- Status (draft or final and version number);
- Actual Date of Delivery
- Classification
- Project Coordinator
- Document Reference - Document filename

10.4.3 Revision History

The second page of the document should recall its history. The history is presented as a table where each entry contains: the version, the date, author and the description of modifications.

When submitting deliverables to EC, and/or publishing public deliverables, the revision history page may be removed.

10.4.4 Responsibility

The third page of a document contains information regarding who is responsible for the document, what contribution the document contains and what contribution is missing. This field is optional except for Deliverables.

11 Project Monitoring

11.1 Progress Reporting

The reporting procedure is used in order to ensure that the project partners, European Commission and the Project Coordinator are continuously informed about the current status of the project and any problems or difficulties that arise.

The reporting to the European Commission is based on the following reports:

- Every three months, a quarterly management report containing an overview of the activities carried out by the consortium during that period, a description of progress toward the objectives of the project, a description of progress towards the milestones and deliverables foreseen the identification of the problems encountered and corrective actions taken. In addition information regarding an updated plan for using and disseminating the knowledge shall be included. Additionally the quarterly management reports include work consumed by each partner including the PMs consumed during the three last periods and the WP that the PMs were consumed on compared to the original budget. ***This report is used a back-up/ fail-safe tool for the Coordination Office to track progress on the project.***
- Every year, a periodic management report on that period including:
 - An overview of the activities carried out by the consortium during that period, a description of progress toward the objectives of the project, a description of progress towards the milestones and deliverables foreseen, the identification of the problems encountered and corrective actions taken. Also updated plan for using and disseminating the knowledge shall be included as a separate part of this report;
 - The Online (NEF) Form C Financial statement, provided by each beneficiary for that period.
- At the end of the project, a final report which includes:
 - A final activity report covering all the work, objectives, results and conclusions, and the final plan for using and disseminating the knowledge, including a summary of all these aspects;
 - A final management report covering the full duration of the project including a summary financial report consolidating the claimed costs of all the beneficiaries in an aggregate form covering the entire duration of the project, based on the information provided in Form C by each beneficiary;
 - A report on the distribution between beneficiaries made after the end of the project of the Community financial contribution, which shall be submitted 60 days after receipt of the final tranche of the Community financial contribution to the consortium.

In addition, the consortium shall submit a **certificate on the financial statements** (audit certificates) provided by each beneficiary in conformity with Article II.4 of the Grant Agreement for each period for which the accumulated EC financial contribution requested by this beneficiary exceeds € 375,000.

The deadline for submitting the above report is 60 days after the end of the corresponding period.

11.1.1 Financial Statement

Following the completion of Form C online (NEF) and after being approved by the Commission each beneficiary will get its Form C for signature. The Form C will be signed in two copies and send to Coordinator.

11.2 Corrective Actions

Each Workpackage Leader is responsible for monitoring the progress of the assigned Workpackage. The Project Coordinator is responsible for monitoring the overall progress of the project, and together with the partners working on the Workpackage; he is responsible of achieving the goals defined in the Work plan. Corrective Actions should be taken in a bottom-up approach, and should primarily be adopted within a Task or Workpackage. Only problems that affect the interdependence of the Workpackages, or could affect the overall success of the project, should be dealt with on a project management basis.

The main concern of corrective actions on a project management basis is the quality and timeliness of milestones and project Deliverables.

- **Quality:** As a result of a review, a Deliverable can be classified as “no conform”. Non-conformity is a non fulfilment of the requirements defined in the project. If only one Workpackage is affected by the non-conformity, the Workpackage Leader identifies all the items affected and the changes to be performed. The Workpackage Leader also updates the workplan according to new activities needed for committing the changes required. If the non-conformity is beyond the scope of a unique Workpackage, non-conformity management (items & changes identification, plan update) is the Project Coordination Committee’s responsibility.
- **Timeliness:** Deviations from plan of formal project output are documented by the Project Coordinator. Based on each monitoring report the Project Coordinator decides whether an issue can be settled within a Workpackage or whether interdependencies with other Workpackages are concerned. If only one Workpackage is concerned, the Workpackage Leader supplies an updated workplan for the Workpackage, which substitutes the original plan. If the work of other Workpackages or the success of the whole project is endangered because of late or poor performance of a Workpackage, the Project Coordinator immediately informs the Project Management Board Committee. The Project Management Board elaborates an updated project-plan. Only in severe occasions the decision is transferred to the Project Management Board. This is the case if changes are contentious, when no consensus can be reached or when they involve major changes in the directions of the project.

12 IPR Issues and Access Rights

IPR issues and access rights are covered by chapter 4 of CEEDs Consortium Agreement ("Intellectual Property Rights").

13 Risk Management Plan

The process of assessing the risks for the duration of the CEEDs project is invoked to attempt to eliminate potential problems before they occur, and therefore increase the likelihood of success of the project. Risk refers to a potential future problem that has not yet occurred and that may exist outside of the control of the project team, but which may have an adverse impact on the project if they occur. Unlike problem management, which deals with risks that have been already occurred, risk management is a 'proactive' process which consists of identifying possible risks, and preparing corresponding contingency plans.

As for any projects that involve long time periods and a great number of partners, CEEDs is facing managerial, technical, and business related risks. In this chapter, the list of risks faced by the CEEDs project, and the approach use to manage these risks, will be presented.

The CEEDs risk management plan (and report) will be updated according to the project needs and the possible risks that the CEEDs consortium will identify during the project lifetime. For this reason, any updates to the following plan will be reported in the next version of D9.1 "Dissemination and Exploitation Report".

13.1 Risk Management Procedure

The CEEDs project use a traditional approach for risk management and established procedures. A similar risk management procedure has been successfully used in previous projects, such as the Games@Large project (IST-038453-IP), and currently by the CNG project (ICT-248175). In writing the risk management procedure, the authors also referred to Harris's (2007)¹ guide to collaborative research and development projects. We will here consider three of the four basic steps involved in planning and reporting an effective risk analysis described by Harris:

1. **"Identification of the sources of risks within the project"**: All CEEDs partners are required to provide information and feedback, internal and external to the project relative to the risk activities, current risks and emerging risks. These include technical, commercial, managerial, and environmental risks. When one of these risks is detected, it should be reported to the Workpackage Leader, Project Coordinator, Technology Director (TD) or Scientific Director (SD) who will then discuss how to manage it.
2. **"Determination of the impact and likelihood of the risks occurring"**: After the risks are identified, they are assessed in terms of their likelihood, which is the subjective probability that the risk will occur, and the risks impact, which refers to the consequences of the risk to the project. Each risk is classified to a risk level based on the risks likelihood and impact (with risks with higher likelihood and/or higher impact being on a higher level). For each risk level the CEEDs partners will take a number of appropriate actions. The scores for each risk will be readdressed at every reporting period and the top 5 discussed during PCC meeting.
3. **"Developing strategies for mitigating the affects of the risks should they occur"**: there are three types of risk mitigation strategy: avoidance, deflection, and

¹ Harris, T. (2007) Collaborative research and Development Projects, a Practical Guide, New York: Springer.

contingency. The latter is the most appropriate strategy for R&D projects such as CEEDs, which involved the use of unknown processes and treat the resultant risks are acceptable. Mitigation strategies can be considered both as prevention type activities strategies, which have as a target to eliminate a possible risk before a risk occurs, and as correction type activities, which have as a target to reduce the negative results of a risk to the project after this risk occurs.

13.2 Risk Assessment Table

The potential risks involved in undertaking the CEEDs project are presented in the table in the next page. The risks list presented is/will be updated according to the project needs, and the possible risks that the CEEDs consortium identified/will identify during the whole CEEDs project lifetime. When the CEEDs consortium identifies a new risk, the corresponding risk information table will be added in this document and a new version of the risk management plan will be released. *New versions will be included in WP9 deliverable.*

NB: *The impact of a risk is calculated by multiplying together a score for the likelihood occurring and the consequence of the risk of the project. The likelihood and impact are both scored out of 5 resulting in risk scores between 1 and 25. For simplicity, the score for likelihood and impact is reported in terms of very low to very high (Very Low, Low, Medium, High, Very High).*

Tab. 3 - List of risks and contingency plans

Risk	Likelihood	Impact	Total Risk Score	Risk Management Approach/Mitigating Actions	Affected WP
<i>[risk description]</i>	<i>[Very Low to Very High]</i>	<i>[Very Low to Very High]</i>	<i>[likelihood X impact = 1 to 25]</i>	<i>[Description of the preventive and corrective measures to mitigate the risk]</i>	<i>[WPs affected by risk]</i>
Managerial and Market Risks					
Lack of internal resources	Low	Medium	6	Project Coordinator and WP leaders will control resources planned vs used resources four times a year. In any problems arise, resource redistribution will be implemented in order to maximize the effort in those areas which are more likely to succeed. External resources will be added if necessary.	WP1 to WP10
Development delay	Medium	Medium	9	Project Coordinator and WP leader Project will monitor and plan project activities periodically during the whole project lifetime.	WP1 to WP10
Unexpected development difficulties	Medium	Medium	9	All the research and development activities will be fully documented to allow the allocation of additional external resources.	WP1 to WP10
Implementation difficulties	Medium	High	12	Professional development teams with expertise in the field will be contacted and engaged to CEEDS as external specialists.	WP1 to WP10
Opt-out of a consortium member	Medium	Medium	9	Continuous meetings to check the progress of partners research with the aim to corroborate the engagement work continuity. Fluent communication system between partners and a very clear conflict resolution procedure.	WP1 to WP10
Technical Risks					
Delay in delivering the integrated monitoring system	Medium	Medium	9	Use of similar available commercial systems	WP2
Low quality of the signals affects	Medium	High	12	Improvement of the sensing devices and proper	WP2

signal processing				management of noisy signals	
Integration of heterogeneous software components into a coherent, functional product	Low	High	8	Clear definition of interfaces early on in the development, and plug-in based architecture	WP3
Delay or non delivery of the components to be integrated	Low	High	8	The WP leader will follow up closely the development of the different tasks to ensure integration can take place as planned. He will inform Technical Director	WP4
Integration of modules	Low	High	8	Several meetings have to be dedicated to follow the integration processes. If some differences are detected then the WP leader will inform the Technical Director to decide how to correct the problem (Medium Impact / Medium Likelihood).	WP5
Evaluation criteria and guidelines are not receipt by partners	Low	High	8	A proper circulation of ideas will be ,accomplished through the vertical action of Task 10.4 (Interfacing WPs), supported by meetings, reports, workshops	WP7
The experimental results do not generalize to particular user groups	Low	High	8	The exchange of ideas with users (SAG) and their participation in use case definitions in the project (WP8) will assure experimental work focus on CEEDS system potential Applications	WP7
Horizontal Risks					
Poor interest and participation	Low	High	8	Use interactive strategy in particular to raise attention and involvement	WP9
Specificity of user requirements for different types of user result in too diverse a set of application requirements (e.g., high customisation needed of CEEDS for each application)	Medium	High	12	The use cases and scenarios work will conduct user research mixing disciplines – not treating each user group as a solo. Part of the activity in T8.1 is dedicated to understanding, across the five application areas, the commonalities in the datasets of these respective application domains.	WP6, WP8
No databases can be obtained for the project	Very Low	Very High	5	Several letters of support have been provided from several research and industry domains. In addition, two users – ELECTROLUX and LU – are providing their datasets are part of the consortium	WP3, WP4, WP6, WP8

14 Dissemination and Plans for Using Knowledge

In order to achieve the necessary impact, CEEDs will have a co-ordinated promotion of its vision and dissemination of results. The dissemination and communication activities will accompany the project continuously.

At the end of the project CEEDs will make the results available in a special dedicated deliverable which will be an executive summary of the project. The PCC will present these results to the different players in the field.

CEEDs results will be disseminated primarily through presentations at relevant scientific conferences and meetings, the publication of papers in the leading peer-reviewed journals, through a dedicated public web site and via the workshops and exhibitions to be organized by CEEDS for external interested research specialist and/or industry sector potential interested users.

The project results will also be disseminated through the project website (www.ceeds-project.eu).

CEEDS will make its publications available via relevant Open Access initiatives where appropriate. In addition to Article II.30.4, beneficiaries shall deposit an electronic copy of the published version or the final manuscript accepted for publication of a scientific publication relating to foreground published before or after the final report in an institutional or subject-based repository at the moment of publication. Beneficiaries are required to make their best efforts to ensure that this electronic copy becomes freely and electronically available to anyone through this repository: a) immediately if the scientific publication is published "open access", i.e. if an electronic version is also available free of charge via the publisher, or b) within 6 months of publication.

Each partner will of course introduce the knowledge and know-how accumulated by the project results into the different standardization bodies. Each partner will contribute to a special deliverable summarizing the different efforts in the standardization bodies done by the CEEDS partners.

For information on Dissemination and Exploitation objectives and plans, please see D9.1.

15 Consortium Agreement

The purpose of the Consortium Agreement is to facilitate the fulfilment of the research work and related services and activities allocated to the Parties under the CEEDs Grant Agreement (and as described in detail in Grant Agreement Annex I) by setting forth the terms and conditions pursuant to which the parties agreed to function and cooperate in the performance of their respective tasks under the Grant Agreement. The CEEDs consortium has signed a Consortium Agreement before the beginning of the project. The Consortium Agreement includes the following aspects:

- Technical provisions (technical resources made available, maximum efforts, modification procedures).
- IPR and rules for dissemination and use (confidentiality, ownership of results, protection of results, pre-existing knowledge of partners).
- Organisational provisions (creation of committees, responsibilities, coordination aspects, revisions, decision-making structures).
- Financial provisions (budget plan, modification procedures).
- Legal provisions (legal cooperation status, penalties for non-compliance with obligations, applicable law).
- Over and above these basic provisions, the Project Management Guide will define in depth the following aspects:
 - quality management (quantitative and qualitative assessment of deliverables and milestones);
 - definition of project standards (templates, guidelines);
 - rules for communication & interaction within the consortium;
 - specification of rules for publications and conflict management.

Appendix 1: Workpackage Leaders

Error! Reference source not found. shows the leaders of all the Workpackages of the CEEDs project.

Tab. 4 - Workpackage Leaders Allocation

WP	DESCRIPTION	WP LEADER	RESPONSIBLE PARTNER
1	Theory of human unified experience	Anil Seth	UOS
2	CEEDs sensing system	Danillo De Rossi	UDP
3	CEEDs engine: perception, cognition and action	Pedro Omedas	UPF
4	CEEDs effectors systems & environments	Barnabas Takas	BME
5	Integration	Alberto Sanfeliu	UPC
6	Application development	Pedro Omedas	UPF
7	Experience assessment and human factors	Luciano Gamberini	UNIPD
8	Use cases and scenarios	Jonathan Freeman	GOLD
9	Dissemination, exploitation planning, training and networking	Jonathan Freeman	GOLD
10	Management, Coordination and Ethics	Jonathan Freeman	GOLD

Appendix 2: Task Allocation to Partners

Error! Reference source not found. shows the leaders of all the tasks of the CEEDs project (**this list doesn't replace the list on Annex I and is given only as additional information**).

Tab. 5 - Task Leaders Allocation

Task	DESCRIPTION	RESPONSIBLE PARTNER
T1.1	Theoretical and computational modelling	UPF
T1.2	Testing transparency and presence in dataworlds	UOS
T1.3	VR technology for creating "virtual synaesthesia"	UPF
T1.4	Autonomic responses underlying emotional salience	UPF
T1.5	Decoding of neural activity predicting intention and discovery	ENS Paris
T1.6	Subliminal stimulation	ENS Paris
T1.7	Functional brain mapping during mixed reality experience	EKUT
T1.8	fMRI-BCI to navigate in CXIM space	EKUT
T1.9	Interfacing of WP1 to CEEDS system	UPF
T2.1	Unobtrusive Physiological signal wearable acquisition system	UDP
T2.2	Movement and gesture wearable acquisition system	UDP
T2.3	Integration, pre-processing and transmission of physiological and movement parameters	UDP
T2.4	Eye gaze acquisition system (HATCAM)	UDP
T2.5	Speech acquisition system and processing	UAU
T2.6	Brain signals recording and analysis	EKUT
T2.7	Higher level processing of user responses and interfacing to CEEDS engine	UAU
T3.1	Architecture of the CEEDS engine	UPF
T3.2	Composition engine	UPF
T3.3	Data Discovery	MPG
T3.4	Narrative Generator	TEESSIDE
T3.5	CEEDS Sentient Agent (CSA)	UPF
T3.6	Interfacing of WP3 to CEEDS system	UPF
T4.1	Upgrade of eXperience Induction Machine - CXIM 2.0	BME
T4.2	Portable version of the eXperience Induction Machine	BME
T4.3	Visualization technologies	BME
T4.4	Sonification technologies	UPF

T4.5	Real-time 3D reconstruction and representation of objects including haptics	GOLD
T4.6	Wearable Haptic Displays	UDP
T4.7	Specification and implementation of the interfaces to the CEEDS system	BME
T5.1	System technical specification	UPC
T5.2	Viewpoints, views and models	UPC
T5.3	Integration of CEEDS system architecture and software backbones	UPC
T5.4	Technical components testing	UPC
T6.1	Conceptualization and Design of CEEDS system architecture for Applications	UPF
T6.2	Applications Development	UPF
T6.3	CEEDS Interface Design	UH
T6.4	Installations, Performances and Exhibitions	UPF
T6.5	Interfaces of WP6 to CEEDS System	UPF
T7.1	Cognition and Psychophysiology of user experience	UNIPD
T7.2	Spatial cognition and actions in technologically enhanced spaces	UNIPD
T7.3	Credibility and user acceptance of confluent systems	UNIPD
T7.4	Social and communication ergonomics	UNIPD
T7.5	Relevant feedback	ITI
T7.6	Confluent Application in real Scenario: CEEDS trial	UH
T8.1	Scenario development and use cases	GOLD
T8.2	Specifications and use case updates	GOLD
T8.3	Benchmarking and future outlook	GOLD
T9.1	Dissemination Planning and Monitoring	GOLD
T9.2	Dissemination through Workshops, Installations, Performances and Exhibitions	GOLD
T9.3	Networking with scientific communities and other EU projects Exploitation and Experience	GOLD
T9.4	Joint Collaborative Task with similar FET projects	GOLD
T9.5	Education and training	GOLD
T10.1	Consortium Management	GOLD
T10.2	Financial Management	GOLD
T10.3	Activity Planning and reporting to the Commission	GOLD
T10.4	Scientific Co-ordination and WP Interfacing	UPF
T10.5	Ethical considerations in confluent systems	UNIPD

Appendix 3: Deliverables Allocation to Partners

Error! Reference source not found. shows the deliverables allocation of the CEEDs project (this list doesn't replace the list on Annex I and is given only as additional information).

Tab. 6 - Deliverables Allocation

DNo	DELIVERABLE NAME	DL	SEC	M
D1.1	Theory of human unified experience, Year 1 Report	UPF	PU	12
D1.2	Theory of human unified experience, Year 2 Report	UOS	PU	24
D1.3	Theory of human unified experience, Year 3 Report	UPF	PU	36
D1.4	Theory of human unified experience, Final Report	EKUT	PU	48
D2.1	Sensing systems: requirements	UDP	CO	12
D2.2	Acquisition system prototypes	UAU	PU	24
D2.3	Report on final acquisition component prototypes	EKUT	PU	36
D2.4	Report on performance and effects of acquisition systems integrated to CEEDs engine	UDP	PU	48
D3.1	CEEDs engine: definitions, architecture, narratives and data discovery	UPF	PU	12
D3.2	Composition engine: year 2 prototype	UPF	PU	24
D3.3	Composition engine: year 3 prototype	UPF	PU	36
D3.4	Final report on CEEDs engine	UPF	PU	48
D4.1	CXIM 2.0 Environment	BME	PU	12
D4.2	Portable XIM, with visualisation module	UPF	PU	24
D4.3	3D real-time reconstructions, sonification, and haptics	UDP	PU	36
D4.4	Use cases and application scenarios	UPC	PU	48
D5.1	Specifications and architecture	UPC	PU	12
D5.2	Report on the outcomes of the individual tests	UPC	PU	24
D5.3	Integration, Year 3 progress report	UPC	PU	36
D5.4	Report on the outcomes of the experiments in Task T5.4	UPC	PU	40
D6.1	Conceptualization and Design of CEEDs system architecture for Applications	UPF	PU	12
D6.2	Report and prototype of integrated CEEDs system	UPF	PU	24
D6.3	Implementation, testing, and refinement of Applications	UPF	PU	36
D6.4	Final report and prototype of integrated CEEDs system	UPF	PU	48
D7.1	CEEDs user-experience research plan and year 1 report	UNIPD	PU	12
D7.2	First report on user-experience and acceptance of CEEDs	UNIPD	CO	24

	systems			
D7.3	User experience and human factors of CEEDs (cognition, action, feedback, acceptance)	UNIPD	PU	36
D7.4	CEEDS Trial 2	UH	PU	40
D8.1	CEEDS uses: use cases for different types of user and their needs	GOLD	PU	12
D8.2	Specifications and use case updates	GOLD	PU	24
D8.3	Update 2 of use cases	GOLD	PU	36
D8.4	CEEDS opportunities: usage benefits and future outlook	GOLD	PU	47
D9.1	Dissemination, Collaboration and Training Report Yr1	GOLD	PU	12
D9.2	Dissemination, Collaboration and Training Report Yr2	GOLD	PU	24
D9.3	Dissemination, Collaboration and Training Report Yr3	GOLD	PU	36
D9.4	Final Dissemination, Collaboration and Training Report	GOLD	PU	48
D10.1	Project information manual and quality plan	GOLD	PU	2
D10.2	Project ethical guidelines 10 1 6.00 R PU 6	GOLD	PU	6
D10.3	Year 1 Progress Report and Implementation plan	GOLD	PU	12
D10.4	Year 2 Progress Report and Implementation plan	GOLD	PU	24
D10.5	Year 3 Progress Report and Implementation plan	GOLD	PU	36
D10.6	Year 4 Report: final status and CEEDs 'united vision'	GOLD	PU	48

Appendix 4: Members of Project Management Board

Error! Reference source not found. shows the members of the Project Management Board Committee based on the approval given by each partner.

Tab. 7 - *Members of the Project Management Board (PMB).*

PARTNER INSTITUTION	PMB MEMBER
GOLD	Jonathan Freeman
UPF	Paul Verschure
UOS	Anil Seth
ITI	Michael Gerassimos Strintzis or Petros Daras
EKUT	Niels Birbaumer
UAU	Elisabeth Andre
TEESSIDE	Marc Cavazza
UNIPD	Luciano Gamberini
MPG	Jürgen Jost
ENS Paris	Sid Kouider
BME	Barnabas Takas
UPC	Alberto Sanfeliu
UDP	Danillo de Rossi
ELECTROLUX	Claudio Cenedese
UL	John Bintliff
UH	Giulio Jacucci

Appendix 5: Members of Project Coordination Committee

Error! Reference source not found. shows the members of the Project Coordination Committee.

Tab. 8 - *Members of the Project Coordination Committee (PCC).*

PARTNER INSTITUTION	PCC MEMBER
GOLD	Jonathan Freeman
UPF	Paul Verschure (Scientific Director)/ Pedro Omedas
UDP	Danillo d Rossi
BME	Barnabas Takas
UPC	Alberto Sanfeliu
UNIPD	Luciano Gamberini
UOS	Anil Seth

Appendix 6: Deliverable Template

Accompanying document: **CEEDs _Deliverable_Template.doc**

Appendix 7: Various Templates for Internal Reporting

Accompanying documents:

- **CEEDs _QMR_Template.doc**
- **CEEDs _PMR_Template.xls**

Appendix 8: Abbreviations

CO – Co-ordinator

PMB – Project Management Board

IGIT – In-game Graphical Insertion Technology

IPR – Intellectual Property Rights

PCC – Project Coordination Committee

PCO – Project Co-ordinator

PMO – Project Management Office

PR – Public Relation

QAM – Quality Assurance Manager

RTD – Research and Technology Development

SAG - Stakeholder Advisory Group

SD – Scientific Director

SME – Small-Medium Enterprise

SoA – State of the Art

TD – Technical Director

TL – Task Leader

WP – Workpackage

WPL – Workpackage Leader