

D 1.1 MANAGEMENT PROCESSES

Defining rules and standards for joint work

Project title Collaborative Recommendations and Adaptive Control for

Personalised Energy Saving

Project acronym enCOMPASS

Project call EE-07-2016-2017 Behavioural change toward energy efficiency

through ICT

Work Package WP1

Lead Partner PMI - Politecnico di Milano

Contributing Partner(s) **n.a.**

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EXECUTIVE SUMMARY

D.1.1 Management processes is specified in the enCOMPASS Description of Action as containing:

"project and risk management procedures, QA assessment, compliance to ethics, legal and data privacy, Project Management Manual".

The enCOMPASS management process is designed to facilitate the implementation of the project activities during the whole project duration. This process specifies procedures to perform the internal reporting, to handle the internal communication. It also details the internal project structure, the official reporting phases and all the financial aspects. The enCOMPASS management process is designed to help all partners to correctly comply with contractual obligations as foreseen in the Grant Agreement with the European Commission and, at the same time, to easily manage the day-to-day activities with the final aim of maximize the project results and achievements.

1 PROJECT OVERVIEW AND WORKFLOW

1.1 Project overview

The enCOMPASS project implements and validates an integrated socio-technical approach to behavioural change for energy saving, by developing innovative user-friendly digital tools for making energy data consumption available and understandable for the different users and stakeholders (residents, employees, pupils, building managers, utilities, ICT providers) empowering them to collaborate to achieve energy savings and manage their energy needs in energy efficient, cost-effective and comfort-preserving ways.

It demonstrates how this can be achieved by a novel approach that integrates user-centered visualisation of energy data from smart sensors and user-generated information with context-aware collaborative recommendations for energy saving, intelligent control and adaptive gamified incentives enabling effective and sustained behavioural change.

1.2 PROJECT STRUCTURE

To achieve its objectives, the enCOMPASS project consists of 9 workpackages spanning 36 months and are centered around the large scale pilot testing for energy saving to actively support behavioural changes.

Workpackages can be divided into 4 main blocks:

- Methods and tools gathering together WP2 "Requirements and user-centered design", WP3 "Energy consumption and sensor data collection and analysis", WP4 "Context-aware collaborative recommendations for energy saving and indoor comfort control" and WP5 "Energy visualization and game-based behavior change for energy saving";
- 2) **Platform & Apps** represented by the activities carried out in WP6 "Platform implementation and integration";
- 3) Large Scale Pilots delivered by WP7 "Pilots and behavior change for energy saving";
- 4) **Uptake and Impact** composed by WP8 "Impact, exploitation and continuation" and WP9 "Communication and Dissemination".

WP1 "Management and coordination" oversees the general implementation of project activities and their smooth execution.

WP2 "Requirements and user-centered design" focuses on the specifications of the technical and methodological components of the behavior change platform.

WP3 "Energy consumption and sensor data collection and analysis" addresses the methods, the tools and the interfaces necessary to acquire data about energy consumption and user's comfort.

WP4 "Context-aware collaborative recommendations for energy saving and indoor comfort control" designs methods to process energy data deriving from the users' activities, builds models of users' behaviors and proposes personalized energy saving recommendations.

WP5 "Energy visualization and game-based behavior change for energy saving" is thought to engage communities through user-friendly interfaces and gamification methods to enhance sustainable behaviors both at individual and at group level.

WP6 "Platform implementation and integration" is devoted to the platform integration and implementation to adapt it to enCOMPASS requirements.

WP7 "Pilots and behavior change for energy saving" covers the pilot phase of the project therefore it represents the project core. It involves large groups of individuals and stakeholders towards the sustainability changes and behaviours.

WP8 "Impact, exploitation and continuation" focuses on validating and expanding the project results and make them available for the scientific community and the stakeholders for future adoption.

WP9 "Communication and Dissemination" will deal with all the communication and dissemination strategies to make the project know and the accepted by the largest audience possible.

In Figure 1 WP interactions and dependencies are graphically represented.

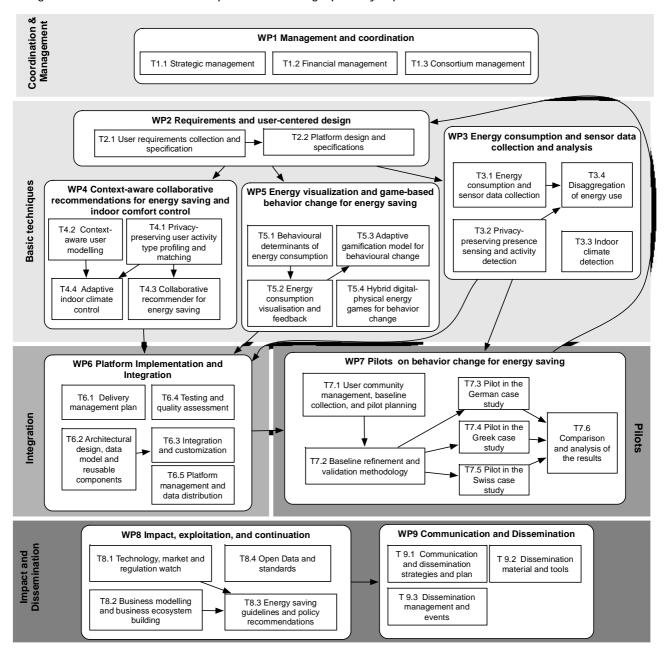


Figure 1; overall structure of the enCOMPASS work plan.

2 PROJECT ORGANIZATION STRUCTURE

2.1 Project Management Structure

Given the complex structure and interrelation and dependencies of the WPs and of the related tasks, the project governance structure has been studied in order to minimize the effort in managing the whole project by providing key figures to lighten the tasks implementation.

The general overview of the project governance is represented in Figure 2.

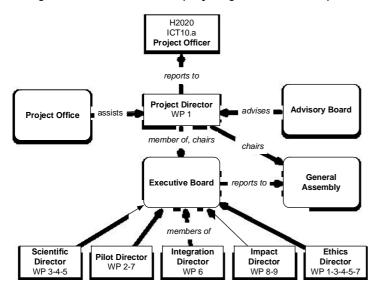


Figure 2: enCOMPASS organization breakdown chart.

Four project bodies are clearly relevant for the project management and for its smooth implementation and each of them has specific roles and competencies.

Project Director: the project coordination is led by PMI and includes the following tasks:

- Consortium management under the administrative point of view, i.e. coordination of contractual
 periodic reporting, coordination of deliverables production, management of the whole consortium
 in terms of project meetings organization, project amendments, achievements and project
 progresses, support to all project beneficiaries for administrative project issue;
- Consortium management under the financial point of view, i.e. administration of the financial contribution and its distribution to all beneficiaries, coordination of the financial reporting, provision of audit certificates when required, monitoring of budget consumption during the project and coordination of potential budget transfers.

The Project Director of enCOMPASS project is Prof. Piero Fraternali of PMI. In all these activities, the Project Director will be supported by a project officer of FPM (PMI's linked third party) for the day-to-day management.

General Assembly: made up of one representative per beneficiary, this body has competences and responsibility in taking decisions about the (main) following aspects:

- approval of new beneficiaries into the project;
- adoption of measures in case of defaulting partners;
- approval of changes in budget and effort allocation proposed by the Executive Board;
- approval of changes in the Description of Action prior to a contract amendment;

approval of Consortium Agreement modification

During the project kick off meeting, held in Como (Italy) on 10th-11th November 2016, the General Assembly members have been appointed as follows:

Partner	Representative
1 – PMI	Piero Fraternali
2 - EIPCM	Jasminko Novak
3 – SHF	Gerhard Meindl
4 – NABU	Sebastian Scholz
5 – WVT	Konstantinos Arvanitis
6 – SES	Marco Bertocchi
7 – CERTH	Stelios Krinidis
8 – NHRF	Maro Androutsopoulou
9 – SUPSI	Andrea Rizzoli
10 – SMOB	Luigi Caldararu
11 – KAL	Spartaco Albertarelli
12 – KTU	Daiva Dumciuviene
13 – GRA	Domonkos Tikk
14 – PDX	Gianni Minetti

Executive Board: it consists of the different directors devoted to monitor the implementation of all the project tasks: Project Director, Scientific Director, Integration Director, Pilot Director, Communication and Impact Director. Their roles are well defined within the WPs as summarized in the table below:

Person	Partner	WPs	Role	Responsibility
P.Fraternali	PMI	WP1	Project Director	Overall project management, interface with EU.
A. Rizzoli	SUPSI	WP3/4/5	Scientific Director	Supervision of scientific development and quality management (QM).
L.Calderaru	SETMOB	WP6	Integration Director	Activities to produce the enCOMPASS platform.
J. Novak	EIPCM	WP2/7	Pilot Director	Supervision of pilot activities and validation activities.
D. loannidis	CERTH	WP1/3/4/5/7	Ethics director	Establishment and monitoring of ethical and privacy procedures. Interaction with EEAB Ethics Director.
K.Arvanitis	WVT	WP8, WP9	Impact Director	Activities on visibility, uptake, and communication.

The Executive Board is chaired by the Project Director and is responsible for the (main) following activities:

- monitoring the WPs implementation including the budget and effort allocation;
- approving and releasing deliverables;
- approving the communication and dissemination contents (i.e. press releases, press articles, joint publications);
- deciding on access rights, IPR and arbitrating on deadlock situations when necessary.

Work Package Leaders: they are responsible for coordinating the activities within each WP. Their activities include:

- WP implementation according to the timelines;
- provision of potential modifications in the WP tasks to better reach the WP aims;
- provision of progress documents on the WP advancement;
- preparation of WP Deliverables;
- identification of financial, technical risks and of any other difficulty arising from the WP implementation.

The list of WP Leaders was provided at proposal stage and confirmed at the beginning of the project:

WP No.	Work package title	Туре	Resp.	Name
WP1	Management and coordination	MGT	PMI	P. Fraternali
WP2	Requirements and user-centered design	RTD	PMI	P.Fraternali
WP3	Energy consumption and sensor data collection and analysis	RTD	CERTH	T. Tryferidis
WP4	Context-aware collaborative recommendations for energy RTD GRA D. Tikk saving and indoor comfort control		D. Tikk	
WP5	Energy visualization and game-based behaviour change for energy saving	RTD	EIPCM	J. Novak
WP6	,		L. Calderaru	
WP7	Pilots on behaviour change for energy saving RTD SUPSI A. Rizzoli		A. Rizzoli	
WP8	Impact, exploitation, and continuation RTD PDX L. Grillo		L. Grillo	
WP9	Communication and dissemination	RTD	WVT	K. Arvanitis
WP10	Ethics requirements	RTD	CERTH	T. Tryferidis

Collateral to the above governing bodies, the enCOMPASS project has also set up an **External Advisory Board** made up of a group of external experts who will provide the consortium with feedbacks and advices on technical and impact aspects. Experts will be asked to give opinions on selected deliverables during the tasks implementations and prior to the submission to the Commission. Experts have been chosen considering their different backgrounds to cover industrial, research and social aspects. A first list of external experts was drafted at proposal stage and reconfirmed:

Expert	Institution
Prof Katherine Isbister	Game Innovation Lab - NYU
Prof Lorenz Hilty	University of Zürich, Switzerland (sustainability)
Dr Fabio Conti	Managing Director of DEIB – Politecnico di Milano
Prof Wofgang Nejdl	University of Hannover (web science)
Dr Eng Corrado Noseda	AGE Chiasso, Switzerland (utilities management)

2.2 Decision making processes and conflict resolutions

As a general rule, decision making processes have been thought to minimize the possible inception of conflicts and in case of any of them they will be solved, first of all, amicably. The project bodies take decisions with a majority of 2/3 and the Project Director has a deciding vote if necessary. Conflicts may arise at different project level and consequently solved.

At Workpackage level, the WP leader will set the dispute internally with a possible Executive Board support, if needed. In case the decision is not shared by all partners, then the discussion can be taken at Executive Board level and the Project Director will also be involved. If also in this case, no decision s taken and shared by the project partner, the Project Director has the authority to take the final decision which has to be accepted by all parties.

3 QUALITY ASSURANCE PROCEDURES

3.1 QUALITY CONTROL PROCEDURES FOR COMMUNICATION TOOLS

A complex international project needs clear and transparent communication between participants. Day-to-day communication and distribution of intermediate results will be carried out mainly by e-mail and file sharing via the project Intranet.

3.1.1 Public Website

Public information about **enCOMPASS**, supporting <u>external communication and dissemination</u> purposes and targeted to the public at large, is available at the following URL: http://www.encompass-project.eu
This site will be kept updated and improved along the project lifetime, adding new content and functionality, under the responsibility of WP9 Communication and Dissemination.

3.1.2 Intranet

The Intranet for internal use is hosted at https://sites.google.com/view/encompass-intranet. It contains all the technical information about the project, designed to support online cooperation. Partners should use the Intranet to share information, upload intermediate versions of deliverables, and explain the work being carried out.

It is powered by Google Sites, Google Calendar and Google Groups, and it is integrated with Google Drive for file sharing. Access is controlled by login and password, which are assigned and validated by the administrator, charged by the Project Director (currently the administrator coincides with the Project Director).

The Intranet also contains a structured repository of officially released documents, together with all contractual information, templates and so on.

3.1.3 Content of the project intranet

The Project intranet contains the following information that can be accessed and downloaded:

Home	Calendar of the upcoming events and deadlines.
Upcoming deadlines	Agenda of the deadlines and events in the short term
Progress by WP	Project deliverables and internal documents, organized by WP. Periodic reporting forms.
Deliv. status & due dates	List of deliverables sorted by time and with due dates.
Meetings	Minutes of virtual and in presence meetings.
Official docs	DoW and contractual documents.
Technical docs	Internal technical documents of general, cross-WP relevance.
Contacts	Contact details of project participants.
Events and Papers	List of attended events, with all the presentations and relevant materials. Copies of all the published papers. Ordered by time.
Visual Identity	Logos, images, flyers, document and presentation templates.

Miscellanea Useful information for the project: cost statement forms, etc.

A snapshot of the **enCOMPASS** Intranet Home Page is shown in Figure 3.

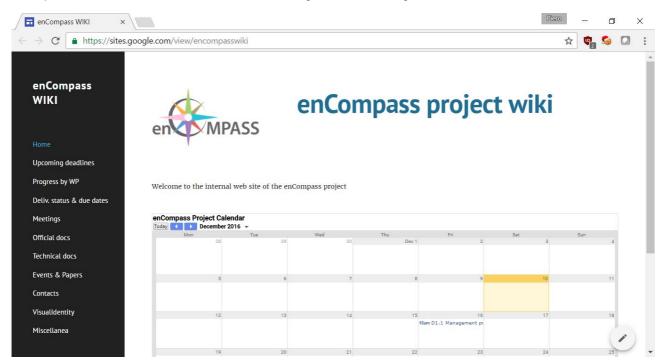


Figure 3: Home page of the enCOMPASS intranet

3.1.4 Electronic Mail

Electronic Mail will be one of the major means used in the **enCOMPASS** project to exchange information, while the main exchange of documents in electronic form over the Internet will be accomplished using the intranet.

An **enCOMPASS** specific mailing list has been setup to advise the partners of the availability of new information, circulate agendas of meetings and events relative to the project, and control access to the private sections of the public web site and to the intranet of the project. Usage of mailing lists is strongly recommended, and, as self-discipline, the usage of person-to-person private emailing should be limited, so as to privilege visibility within the project to all people working in the project.

It is strongly recommended not to send e-mails with attached documents to mailing lists. It is more effective to post them on the Intranet and allow each participant to download them including a document link in the email.

3.1.5 Skype

It is recommended that each participant use the Skype service for voice communications. This will allow the other project participants to "see" when a colleague is on-line and a quick check can be made to determine whether he/she is available for discussions, document exchange etc. The Skype client can be downloaded from www.skype.com. Skype allows to talk free over the Internet, and if a webcam is available, to also do a free videoconference. Multi-conference audio calls can also easily be made.

3.1.6 Phone Conference Calls

Telephone conference calls are a powerful tool for organising short meetings. They can be set up with short notice, participants only need a plain telephone set to participate and do not need to spend time travelling.

The following principles should be respected for a successful teleconference meeting:

- the meeting should not exceed 10 to 12 participants,
- in the same way as for a physical meeting, the date, time, expected duration, agenda and name of participants should be communicated in advance, together with all required documents,
- the meeting agenda will be distributed prior to the meeting with a clear indication of the topics to be covered during the conference call and the partners responsible for them
- all participants must make sure that they will not be disturbed during the teleconference meeting and that they join the meeting (i.e. dial the phone number) on time,
- participants should start a spoken contribution by telling their name, the other participants cannot see the others and could have a doubt about who is speaking. As with all other meetings, minutes must be produced by the meeting chairperson, and circulated to the other participants.

3.2 QUALITY CONTROL PROCEDURES FOR MEETINGS

Whether virtual or physical, a meeting is convened by the chairperson, who also determines the location in consultation with the foreseen attendees. For major meetings, PMI will provide support and keep track of the action items. If PMI is not present, it is the responsibility of the chairperson to prepare and distribute the action items.

Meetings should be convened with at least fifteen (15) calendar days (45 days for the project General Assembly meeting) prior notice and be accompanied by an agenda proposed by the meeting convenor. The agenda will be considered to be accepted unless one of the partners notifies the project Director and the other partners in writing of additional points to the agenda, at the latest two working days before the date of the meeting (14 days for the General Assembly meetings). Partners may also participate to physical meetings by teleconference, if the facilities are available.

Please note that it is good practice to publish action items or minutes of every meeting, this can help support any audit checks the Commission may carry out concerning claimed travel expenses.

3.2.1 Project General Assembly Meetings

The project **kick-off meeting** was the first plenary meeting and marked the effective launch of the project. It reinforced the sense of common purpose of all partners, and identified the responsibility of each in the endeavour. Unresolved technical issues were identified and debated; co-operation between work packages was initiated. The project management team exposed what is expected of each in terms of results, performance and reporting. The detailed course for the whole duration of the project was confirmed and fine-tuned.

Other **project plenary meetings** will take place approximately every 6 months (or earlier if required), usually timed with project milestones or the preparation of the annual reports and rolling updates of the implementation plan. They will involve all the participants. They will be complemented and prepared by Executive Board meetings to be held in the same time frame. Additional Executive Board meetings will be convened as required. Topical working meetings will be organised by the work package leaders as needed for the progress of their tasks.

In addition to the planned plenary meetings, "Virtual Meetings" may be held by e-mail or teleconference if necessary. All General Assembly meetings, whether virtual or physical, are convened by the chairperson, who also determines the location in consultation with the Executive Board.

Any decision requiring a vote at a General Assembly meeting must be identified as such on the pre-meeting agenda, unless there is a unanimous agreement to vote on a decision at that meeting. In the case of "virtual" meetings, decisions may be taken by e-mail using suitable tools for authentication of sender, such as certified e-mail.

The General Assembly shall not deliberate and decide validly unless a majority of two-thirds (2/3) of its voting members are present or represented ("quorum"), including those participating by teleconference. Where decisions are to be taken unanimously, all members must be present or represented at the meeting.

For decisions affecting the Consortium Agreement, or any decision to end the project, 100% of the partners must agree. All other decisions by the General Assembly require a majority of 2/3 of the partners present or represented. Full details can be found in the Consortium Agreement.

3.2.2 Executive Board meetings

3.2.2.1 General

Executive Board meetings or video/audio conferences can be held as necessary. The Executive Board chairperson can convene meetings of the Executive Board whenever required, giving members at least seven (7) calendar days notice and providing an agenda.

3.2.2.2 Decisions

Day-to-day decisions can be taken by a majority of 2/3 of the partners present or represented in the meeting. For major decisions, the Executive Board chairperson must inform the General Assembly for final approval.

3.2.3 Workpackage meetings

3.2.3.1 General

Technical meetings or video/audio conferences can be held as necessary. A Workpackage Chairperson can convene meetings of the Workpackage whenever required, giving members at least seven (7) calendar days notice and providing an agenda.

3.2.3.2 Decisions

For major decisions, the Workpackage Chairperson should consult with the Executive Board Director for final approval.

3.3 QUALITY CONTROL PROCEDURES FOR PROJECT REVIEWS

3.3.1 General

The European Commission controls the progress of the project by essentially three means:

- Periodic Reports;
- Deliverables;
- Project Reviews.

Project Reviews are normally one or two-day meetings held in a specific period of time defined by the European Commission where the participants illustrate the status to the Project Officer and a number of independent Project Reviewers nominated by the Commission.

These meetings are the most important events in the project's life, for the following reasons:

- The Project Officer and the Project Reviewers usually do not have much time to dedicate to the project. For them, Project Reviews are the main events to evaluate the project.
- Project Reviews are the only occasion to present to the Project Officer and Reviewers results of the project and to discuss its progress.
- Project Reviews are real opportunities to demonstrate the cohesion of the consortium and the commitment of the partners to achieve project objectives.

As a consequence, Project Reviews should be paid special attention by all the partners.

3.3.2 Preparation

The following procedure is recommended for the preparation of Project Reviews:

- Approximately one to two months before the Review, the Project Director in consultation with the General Assembly will define the main objectives to be accomplished during the Review, and consequently assign roles to the partners, prepare a detailed agenda and ask partners to prepare their contributions.
- Once agreed, the agenda will be sent to the Project Officer and agreed with him or her.
- Approximately two weeks before the Review, all project deliverables for the time period concerned
 must be made available to the Reviewers. This will be done by granting access to them to the
 encompass Administrative Intranet site.
- Also two weeks before the Review, all presentation material must be ready internally, so that
 everybody can check its consistency and the quality of the presentations, and choose the best
 approach. The Project Director and the Quality Manager will ensure the necessary quality checks are
 carried out.
- The day before the Review, a final rehearsal will be held for fine-tuning. Rules among the attending partners will be agreed (e.g. order of presentations, signals to warn that time is almost finished, etc.).

3.3.3 Logistics

In case that the review meeting is not held on EC premises, a detailed description of travel details (not just the address – but details of train, metro, taxi, schematic map of the meeting location, telephone number of someone in contact with the meeting coordinator) must be made available to the reviewers at least two weeks before the Review. This is to ensure that the Reviewers are not late or subject to any nervous irritation prior to the Review.

The location should be easy to access – DO NOT have Reviews in places that imply long and complicated travel arrangements. Too much time is lost and the Project Officer and the Project Reviewers will not appreciate it.

Ensure that the meeting has internet access, printing services and photocopy equipment available at the Review location.

The Project Director must liaise with the Project Officer for logistics information, checking that all the necessary information has been supplied.

3.3.4 Agenda of Review

The objective of a Project Review is to:

- demonstrate project progress to the Project Officer and the Project Reviewers;
- demonstrate achievements through presentations, demonstrations, etc.;
 explain modifications to initial project objectives or planning to the Project Officer and the Project Reviewers.

The agenda should be organised accordingly, and have the following contents:

- Welcome,
- Introduction (by Project Director):
 - Presentation of the partners,
 - Presentation of project objectives,
 - Presentation of project organisation.
- Management summary:
 - Activities performed since previous Review,
 - Dissemination and exploitation efforts
- Technical summary:
 - Major results achieved since last Review,
 - Modifications to the Workplan.
- Answer to questions, comments made by the Project Officer or Project Reviewers since last Review (when appropriate);
- Technical presentation of major results (presentation documents, demos, visit of laboratories, etc.);
- Conclusions and plans for the next period.

4 DOCUMENTS TEMPLATES

4.1 DOCUMENTS FEATURES

Most documents in a collaborative project are written with contributions from several partners. In order to minimise the effort for handling such documents, it is important for all participants to follow agreed standards for formats and tools to be used in document editing and exchange.

This chapter specifically deals with the procedures for the release of official documents.

4.1.1 Standards

Tool:	Name :	<u>Publisher</u> :	Reference:	
Word Processing	MS WORD	Microsoft	Office 2007 or newer	
Spreadsheet	MS EXCEL	Microsoft	Office 2007 or newer	
Overhead slides	MS PowerPoint	Microsoft	Office 2007 or newer	
Web publication	Acrobat	Adobe	Acrobat pdf V11.0 or DC	
File compression	Winzip	Nico Mak	7zip 16.0 or newer	
Documents for the Intranet	· ·	y released deli	net whatever their format, verables and contractual	
Intranet Cloud Cloud folders holders Folders Google Drive cloud		0	ontent will be stored in the	

4.1.2 Document codes

All document codes are assigned and maintained by the Quality Manager. Each document will be filed with a unique code, as follows:

enCOMPASS_Tnm_AAA_WPx_Vz.k_(short_title)

where:

T	Type of document (D=Deliverable; I=Internal document; P=Presentation; M=Minutes);
nm	Sequential number (for Deliverables, the official deliverable code from the DoW, which is n=WP, m=deliverable sequence number)
AAA	Author (issuing company/entity), please use the abbreviations in the contract.
WPn	The Workpackage associated with the document;
Vz.k	The version number + sub-number (e.g. 1.0, 1.1, 3.0); draft versions of public documents will be 0.x versions

For example, the code enCOMPASS_D1.1_PMI_WP1_V1.0_(mgmt_processes) indicates:

Deliverable D1.1, version 1.0, issued by partner PMI in relation to the Workpackage 1.

The Quality Manager will keep an up-to-date list of the documents produced.

The aim of these codes is to give clear access to the project documentation, both for internal purposes but also for external references.

4.1.3 Document versions

When a document is issued for the first time, it should be defined as a draft (version 0.x). Usually, the approval process requires that a document is circulated for comments among the interested partners. Upon receiving the comments by the specified deadline, the author will make the proper modifications, therefore changing the version sub-number, without affecting the main number.

Normally, the first official release of a document will be called V1.0 and this number will be assigned by the Quality Manager when he/she has approved the document. The main version number (the first figure before the ".") is increased by one unit only if a different version of the document is delivered to the Commission, or if major modifications have significantly altered the contents of the document. The editor must not forget to update the version number in all its occurrences in the document (File Properties and cover pages). Clearly, every care should be taken to avoid distributing different documents with the same version number.

Every time that modifications are made to a document, the new version must contain a clear indication of what has been added, modified or removed.

4.1.4 Assigning Document Codes

4.1.4.1 Deliverables

For deliverables, this is fairly straightforward. For example, this document is D1.1, prepared by PMI in workpackage 1, and it is a draft version. Its code is thus: enCOMPASS.D1.1.PMI.WP1.V0.1

4.1.4.2 Minutes

For minutes of meetings, please request a code from the Quality Manager. The standard adopted will be to increase the "M number" by one, irrespective of the workpackage involved. Thus the minutes will be enCOMPASS.M1.xxx.WP2, enCOMPASS.M2.yyy.WP3, enCOMPASS.M3.zzz.WP4 etc.

4.2 EDITING GUIDELINES

4.2.1 Logo

The logo of the **enCOMPASS** project is shown on the first page of this document and is available for downloading from the intranet of the project, under "Useful Information", and is also included in all document templates (also available under "Useful Information").

4.2.2 Page formats

The following rules should be followed in the production of all official **enCOMPASS** documents (Deliverables, Reports, etc.), and have also been used in the present document:

Document size and orientation	A4, portrait	
Margins	Top: 2,5 Bottom: 2,5 Lef Header 1,25: Footer: 1,25	ft: 2 Right: 2

Normal Font (for text)	Calibri 11 pts (but titles use larger characters, as shown in
	this document)

4.2.3 Templates

Basic models for the production of official project documentation are available on the web site. They are Microsoft Word 2000 Templates:

enCOMPASS.dot All enCOMPASS deliverables must use this standard template. This will

ensure that the "look and feel" of all deliverables follows the **enCOMPASS** model. To create a new document, use right mouse and select "new",

then "save as" "name.doc"

enCOMPASS.6mr.dot For Six Monthly Management Reports

enCOMPASS.minutes.dot For short minutes of meetings.

When using "enCOMPASS.dot", first select "File" "Properties" and compile the following information:

Title	Name of document (e.g. "Quality Plan")
Subject	Tnnn Version z.k (e.g. D11 Version 0.1)
Author	Name of author
Company	Name of organisation

The "Title" information will be included on the left hand side at the bottom of every page of the document, while the "Subject" will be shown on the right hand side at the bottom.

This same information should also be copied into the appropriate places on the First and Second pages of the document (see this Quality Plan by way of example).

4.2.4 Styles

A few basic styles have been defined in the editing of the present document. The different versions of Word in the different languages should automatically translate the basic styles (such as Normal, Heading 1 ..., etc.). Extra styles include styles for use in figure captions, table text and table titles, bullet lists and a few others. The styles for the Table of Contents are assigned automatically during the creation of the Table (command: Insert / Table of Contents). Specific styles are used in the cover sheet. In order to keep consistency across documents, the number of newly defined styles should be minimised.

Every time that part of a document is pasted into a second one, all the styles defined in the first document are automatically transferred into the second one. To avoid this (which results in an exponential growth of styles) this kind of operation should be carried out with great care. In particular:

- 1) Create new documents using the "enCOMPASS.dot" template rather than modifying an existing document:
- 2) When possible, use the command Edit-Paste Special to paste text from an another file as non-

formatted text;

3) Do not modify styles in a document.

The titles have been defined as they appear in this document. When using Word, chapter and paragraph titles should use the Heading styles, following the hierarchical structure, so that all the functions for automatic titling and numbering and for the creation of the table of contents can be easily applied.

4.2.5 PowerPoint presentations

A template for overhead transparencies has been defined in enCOMPASS.presentation.template.pot

As a very general rule, presentations should not be long, each page should contain only a few items (avoiding verbose descriptions that can be made by the speaker). The fonts used in both text and graphics should be large enough for the audience to read, cryptic abbreviations should be avoided, the use of colour can improve readability.

5 PROJECT MANAGEMENT MANUAL

5.1 Project monitoring

The Gantt chart of Figure 4 summarizes the project activities and their expected start and end dates, with indication of responsible WPLs. The project progress will be monitored by the Project Director and by the Project Office through regular WPs, Tasks and Deliverable reporting prior to every Executive Board meeting on a fixed basis.

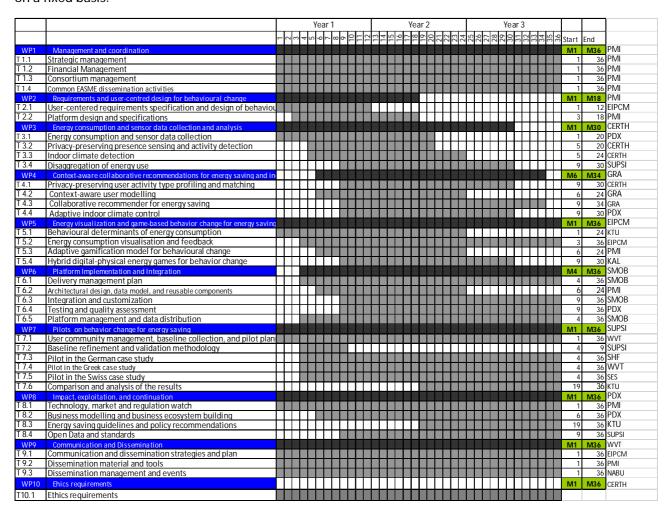


Figure 4. The Project Gantt chart.

5.2 Project reporting

5.2.1 Deliverables

5.2.1.1 Overview

Each deliverable has to be submitted to the EC, and preliminary approval obtained from the Project Officer. Final acceptance of deliverables can only happen in a review. If deliverables are not accepted, then payment of Financial Statements could be delayed. It is thus in the interests of all concerned that deliverables be produced to a high quality and in the required format.

The **enCOMPASS** Deliverables are strictly tied to the breakdown into Work Packages that constitutes the structure of the project. Deliverables are generally technical documents and have an essential importance

for the Commission's appraisal of how the project is evolving, since they are written reports in which results produced during the project are collected and analysed.

5.2.1.2 Deliverable production

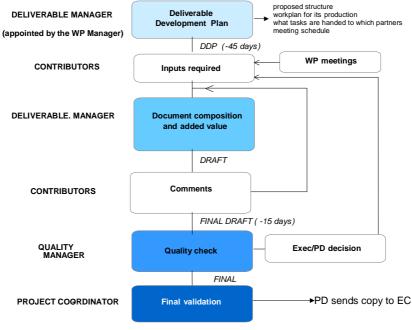
Each deliverable tackles a specific subject, and must have a "Deliverable Manager" who will coordinate the production of the document, interacting as necessary with the other partners involved. Unless agreed otherwise among the partners involved, the Deliverable Manager is normally a person working for the consortium partner that is responsible for the deliverable according to the DoA.

The Deliverable Manager will define the document structure and the contributions expected from each partner in a preliminary document named **DDP** (**Deliverable Development Plan**) and will propose the calendar for the meetings he/she may consider necessary for the development of the deliverable. The contents of the DDP must be agreed with the Quality Manager and finalised at least 45 days before the contractual date of the deliverable.

Then the deliverable will be produced. The Deliverable Manager will merge all contributions into a single document following as much as possible the structure defined in the DDP. This first draft will then be circulated and asked for comments. Each partner will check its consistency with the plans and give their feedback and approval.

This iterative procedure will be repeated as necessary, until all involved partners give approval. The Deliverable Manager will then prepare a final draft, which will be sent to the Quality Manager at least 15 days before the contractual date. The Quality Manager will normally not enter into the technical merits of the deliverable, but will essentially ensure that it is of sufficient quality to be sent to the Commission. He/she will also format it correctly and make sure all the naming conventions have been followed. The Coordinator will finally send the requested number of copies to the Commission.

The diagram in Errore. L'origine riferimento non è stata trovata. summarizes the procedure to be followed



for the preparation of deliverables.

Figure 5. The deliverable preparation process.

5.2.1.3 Deliverable Development Plan (DDP)

The DDP is issued by the Deliverable Manager in order to clarify the main objectives of the Deliverable and to assign the different contributors with specific tasks in the report. It should be agreed with the Quality Manager at least 45 days before the due contractual date of the deliverable. The DDP must sketch the structure of the future Deliverable, and therefore contain a clear indication of:

- person responsible for the deliverable (Deliverable Manager);
- table of contents;
- persons in charge of each chapter/section;
- a timetable for the deliverable development, setting deadlines at least for:
 - 1. submission of contributions;
 - 2. production of the first draft (version 0.1);
 - internal review (partners' comments);
 - 4. production of further versions of the draft (versions 0.x);
 - 5. delivery to the Quality Manager.

All reports (scientific and financial) have to be submitted via the Participant Portal: http://ec.europa.eu/research/participants/portal/.

The Project office keeps tracks of the deliverable advancements by filling in a table which summarizes the most important information about the deliverable and specifically its level of development. The screenshot below shows how this table is summarized and gives evidence of the information needed (by the Deliverable leader):

Deliverable (number)	Deliverable Name	WP number	Lead	Туре	Dissemi nation Level	Month of delivery	Delivery Date	Status	Internal reviewer
D1.1	Management processes - Project and risk management procedures, QA assessment, compliance to ethics, legal and data privacy, Project Management Manual.	1	PMI	R	PU	M2	31st Dec.2016	Writing ongoing	J.Novak - EIPCM S. Krinidis - CERTH
D3.1	Datasets with context data and energy consumption data - Open data set, with documentation, that contains the energy consumption data gathered in the pilot, correlated with context variables and estimations of indoor climate and comfort conditions	3	PDX	R	PU	M4	28th Feb.2017	Writing ongoing	
D7.1	Pilot baselines and action plan - Defines the baselines of the pilots and the action plan for community engagement, technical deployment, feedback gathering and and KPI validation.	7	SUPSI	R	PU	M5	31st Mar. 2017	Not started	
D8.3	Data Management Plan - Adheres to the H2020 Data Management Guidelines. Survey of smart energy standards and adoption recommendations. Survey of the Open Data initiatives in the area of energy usage data; deployment plan for publication of data set. Completed early to provide necessary information to WP7, but will be updated, if new information arises, in D8.6 Final exploitation plan.	8	SUPSI	ORDP	PU	М5	31st Mar.2017	Not started	
D6.1	Delivery management plan and testing specification - Description of the software development process; code management tools; documentation to set up the development and testing environments.	6	SMOB	R	PU	M6	30th Apr. 2017	Not started	
D8.1	Early exploitation and IPR plan - Partner description of initial plans to exploit the results and the foreground assets produced in the project; identification of the project exploitable assets and	8	WVT	R	PU	М6	30th Apr. 2017	Not started	

5.2.2 Periodic reports

The enCOMPASS project is organized in 2 **Reporting Periods**:

Reporting Period 1	From M1 to M18		
Reporting Period 2	From M19 to M36		

Contractual obligations imply that within 45 days of the end of each reporting period (including the last reporting period) a **periodic report** should be submitted to the Commission, organised by sections as follows:

• An **overview**, including a publishable summary of the progress of work towards the objectives of the enCOMPASS D1.1 Management processes

project, including achievements and attainment of any milestones and deliverables identified in Annex I. This technical report should include the differences between work expected to be carried out in accordance with Annex I and that actually carried out.

- An explanation of the use of the resources.
- A **Financial Statement** from each beneficiary and each linked third party, if applicable, together with a summary financial report consolidating the claimed European contribution of all the beneficiaries (and third parties) in an aggregate form, based on the information provided in Form C by each beneficiary.
- Financial statements should be accompanied by **certificates**, when this is appropriate (see Article II.4.4 of the Grant Agreement).

The financial reports will be submitted via the Participant Portal but paper versions signed by the authorised person have still to be sent by regular mail.

5.2.2.1 Technical Report

At the end of every reporting period, PMI will prepare the project Periodic Report. It will contain the following summary information:

- Major achievements during the reporting period.
- Major problems identified.
- Deviations from the project plan.
- Resources used during the period.

PMI will be in charge of preparing this report with the support of all partners for additional contributions. This report will summarise the major achievements to date, any critical issues, the expected organisation for the remaining months of the project. It will include also a critical self-evaluation.

5.2.2.2 Financial Report

At the end of every reporting period, PMI will prepare a consolidated overview of the budgetary situation of the project, on the basis of the cost statements he has received from the partners. This report will be submitted to the Commission. The payments that have been made will also be reported. The budgetary situation will be compared with the original annual budget plan.

5.2.3 Internal management report

To support the efficiency and quality of this Periodic reporting process, an internal reporting procedure is set up in enCOMPASS on a fixed calendar basis as follows:

- Month 6
- Month 10 (official reporting foreseen in the GA)
- Month 14
- Month 18 (first official reporting)
- Month 24
- Month 30
- Month 36 (second official reporting)

Prerequisites for this process are:

- All participants to keep timesheet records of who is involved in the **enCOMPASS** project. These can follow the normal practice of each partner, but must track, month for month, who worked on what part of the project. The information stored should be at workpackage level for every person concerned.
- For travel costs, again the normal practices of the organisation concerned can be used. Thus, if itemised
 travel costs are normally kept, then the total cost of the travel for each person involved should be
 reported in the management reports. If, on the other hand, a default daily reimbursement is used

(irrespective of the real costs involved), then these default values can be reported again for every person involved. Please note that all travel costs must be specified per partner for every person who travelled. Please do not group travel costs together – they must be specific costs per person. Also, receipts must be kept, as the EC may want to see them.

5.3 FINANCIAL MANAGEMENT

5.3.1 Coordinator Responsibility

Overall financial management of the project is under the responsibility of the Coordinator, whose responsibilities are to:

- receive the entire financial contribution from the Commission, and allocate it to the Contractors pursuant to the Workplan and the decisions taken by the General Assembly;
- prepare annual accounts to keep track of the distribution of funds among the Contractors;
- provide overall administrative and financial management of the coordination;
- keep track of budgets.

5.3.2 Management of funding contribution from the Commission

Pre-financing payments are received by the project coordinator and distributed to the partners considering their share of the project budget.

The interim payment and the balance payment will be received by the project coordinator according to the rules set in the Grant Agreement with the Commission upon submission of the interim and final reports.

5.3.3 Audit Certificates

In line with the rules set by the European Commission, an audit certificate is required when the actual costs (personnel costs, other direct costs and subcontracting) are above 325.000 euros. The audit certificate will be requested once only during the project life time at the end of the action.

6 RISK MANAGEMENT

6.1 RISK CLASSIFICATION

As defined in the Description of the Action, the Consortium has conducted analysis of the managerial and technological risks that may compromise the achievement of the project's objectives. Corrective actions have been defined on the basis of the Work Plan, with the aim of mitigating or eliminating the most probable risks, and risks with the largest negative potential impact on the project's success. Risks that could not be completely eliminated have been studied in detail in order to prepare a reasonable backup plan in case they occur (see Table 1).

Table 1. Risk management table.

Risk descr.	Probab.	Impact	Mitigation plan and WP
Management/Communication/Collaboration risks			
Failure of involved Stakeholders to commit with project objectives.	L	Н	Highly visible NGOs with strong communication reach and large activists' base will activate their existing communities in the pilot activities (WP6)
Difficulty to find and motivate the appropriate people for group work and feedback gathering.	M	M	Communication channels of NGOs (WP8). Public workshops, involve people early in the planning stages (WP7 & WP8) Leverage influential users from social networks as "amplifiers" (WP3).
Difficulty to retain the motivation of users over the entire period of a longitudinal study.	M	M	Design of a mix of hybrid engagement stimuli (WP4, WP5) deployable over time in a phased manner, and with alternative communication strategies (personalized recommendations, peer pressure, collaboration-competition) and channels (web portal, game, mobile app)
Lack of interest by policy makers	M	M	Already obtained endorsement letters (see Pilot description). Involvement in focus groups and events. (WP8)
Relevant events overlap with important phases of the project, hindering partners to attend.	L	M	Make a first draft of the communication and dissemination strategy early in the project (M3) and program so each representative can promote properly. (WP8)
Withdrawal of a partner	L	M	Reliance on overlapping expertise of other partners in order to ensure that there is no essential impact on the quality of the work until a proper replacement for the partner is found. (WP1 – all WPs)
Loss of critical competencies or of key persons in the project	L	M	The consortium consists of established organizations able to replace personnel leaving the project with staff possessing equivalent skills. (WP1 – all WPs)
Inadequate collection / poor definition of requirements	L	M	Intensive collaboration of all WPs with WP2 and frequent updates and consulting of the requirements and technical design. Sustainability will be encouraged through an overall methodology that will come out of enCOMPASS and will cover multiple aspects of the project (WP2 and WP6).
Technical Risks			
Unforeseen problems related to technical or integration issues that may be discovered during the pilot trials and may jeopardize the individual targets of the project	M	M	An iterative development process where the validation activities of the project are planned early in the work plan, so that technical and integration problems are detected at the early stages of the project and are confronted adequately. This will allow time for alternative

			technology developments and relevant remedial actions. (WP5)
Technology change/ Environment change	L	L	Continuous technology watch and multi-platform approach will mitigate these problems. (WP5 and WP7)
Faulty behavior of one or more smart meters or sensors appears during data collection	M	L	Arbitrary data collection failures or noise will be addressed by using confidence parameters, and explicitly modelling abnormal sensor behavior. (WP3)
Failure of game / gamification scenarios to drive sustainability behavioral change	L	Н	The design-evaluation loop will proceed in various rounds. Initial tests will provide user feedback to effectively drive engaging game design; the use of flexible gaming frameworks will make integration of new or adapted concepts feasible until quite late in the project (WP2, WP6)
Exploitation risks			
Solutions are too advanced for the readiness status of the market	M	M	Early engagement of the business ecosystem players in order to fine tune the features of the platform and apps, so to make deployment for exploitation scalable based on the readiness status of the market and the level of maturity of the adopters (WP8)

The risk management of the project assumes the coexistence of two elements which classify the risks: the probability of the risks and the impact of the risks on project's results. Probability is classified according to the chance of the risk to come true and the impact is calculated on the how much it effects project's results.

Therefore, probability is classified as follows:

- Low: Very unlikely/low probability to occur
- Medium: May occur
- High: Very likely to occur / expected to occur

while impact classification follows these criteria:

- Low: No effect or very limited effect on the project, without changing the its achievements.
- Medium: Moderate impact but important project outcomes and main goals are met
- High: Severe consequences on project achievements and, in the worst case, project fail.

6.2 RISK PROCESS MANAGEMENT

For technical problems related to a specific workpackage, the procedure to be adopted is to highlight the problem to the WP Leader. Depending on the seriousness of the situation, the WP leader may also decide to involve the appropriate Director (Scientific, Integration, etc.) and should the situation be particularly critical also the rest of the Executive Board, who could as necessary raise the matter at the General Assembly meeting.

The General Assembly has the ultimate authority to solve the problem.

6.3 Specific management risks

6.3.1 Problems concerning partners' performance

Partners might not perform technical tasks satisfactorily. This will most likely first be raised by the Workpackage Leader involved, and reported to the Executive Board who may raise the issue with the General Assembly.

The first actions to be taken will be direct discussions with the partner concerned to correct the inadequacies. If these do not lead to a satisfactory conclusion, the General Assembly will meet to decide on action. Possible sanctions are:

- Lift of the payments from the Commission, be it part of a previous advance that had been partially paid, or the next phase advance payment.
- Allocation of part of the outstanding work from the partner concerned to another partner in the same WP, with a subsequent transfer of budget.
- Partner withdrawal from the consortium.

Similar actions could also result if the reporting provided by the partner is considered unsatisfactory. A short time to correct the reporting will be allowed, before more severe sanctions are considered by the General Assembly.

6.3.2 Problems concerning the financial stability of a partner

The consortium has joint technical and financial liability concerning the project. If serious concerns regarding the financial soundness of a partner exist, or a partner is increasingly going into debt, or if the financial situation of the partner changes in a substantially negative way, there is an obligation on the partner to report this to the Project Director.

The Project Director will liaise with the Executive Board to prepare an assessment of the risk to the project, which will then be discussed with the full General Assembly. First, a complete assessment of the work satisfactorily completed by the partner will be carried out, and, based on the progress reports to date and the advance payments received by the partner, a calculation will be made of the credit or debit of the partner to the EC. Then a direct discussion with the partner concerned will determine the capacity of the partner to carry out the contractual work in the next period.

This will allow the General Assembly to evaluate the risk to the project, both financial and technical. Concerning the financial risk, an evaluation will be made of the risk of providing the next advance payment to the partner. In any case, at this stage an audit certificate for the work done to the date will most likely be requested of the partner.

In moderately serious cases, the next advance payment will be suspended until the next six months' work is completed. Then the partner will be requested to provide an audit certificate for the period involved, and the General Assembly will decide whether to pay the costs sustained by the partner. This is again a risk assessment activity, as the General Assembly will be assessing whether the EC will accept the partner's declared costs in the next Cost Statement.

6.3.3 Change Management

Any modifications that may be required in the work plan must be promptly reported to the Project Management. Requests for modification could come from a particular WP: in this case the WP Leader should report the situation to the Project Director, who will discuss the issue with the General Assembly.

Other instances of change could occur based on general project assessments, carried out as part of the normal management. If the work plan needs to be changed, the Project Director will need to discuss this with the EC. If a Review is imminent, it may be more practical to present the revised situation to the Reviewers, who can then recommend the change as an outcome of the Review.

7 ETHICS, LEGAL AND DATA PRIVACY

7.1 ETHICAL ISSUES

Even though enCOMPASS does not introduce any critical ethical issues or problems, it does involve the collection of data (gathered in WP3) from a set of different pilot sites in Germany, Greece and Switzerland, to assess the technology and effectiveness of the proposed unique engagement toolsets.

An Ethics Director (member of the Executive Board) has been identified and is Dr. D. Ioannidis from CERTH. His role is to ensure the ethical compliance, privacy protection and fair interaction with end users.

An ethics manual will also be delivered that will identify the ethical and legal issues relevant to the project, providing guidelines and recommendations, and specifying which data can be used for conducting the research, along with what countermeasures (e.g. data encryption) shall be taken into account.

Deliverable 10.1 will be devoted to cover the ethics aspects of the project and will include copies of opinion or confirmation by the competent Institutional Data Protection Officer and/or authorization or notification by the National Data Protection Authority (whichever applies according to the Data Protection Directive (EC Directive 95/46, currently under revision), and the national law.

For deeper and specific information on this matter and for a whole dissertation on this topic, the consortium will make reference to D10.1 "NEC - Requirement No. 1" due at month 6.

7.2 LEGAL AND DATA PRIVACY

The enCOMPASS consortium is fully aware of the privacy and data protection issues that may be raised by the activities to be performed in the scope of the project during the pilots, and has the necessary experience to address them. All the foreseen algorithms to be used for the occupancy extraction and towards detection of activity patterns in indoor environments will mainly rely upon privacy-preserving sensors (motion detectors, mobile phone signals etc.) in an anonymised manner, while storage and processing of human-related data will be done in full compliance of European and National legislation and Directives relevant to the country where the data collection takes place. enCOMPASS' context-aware gamified applications will assure users of their compliance to applicable laws and respect of end-user's privacy. Users will be fully informed and will be able to decide which of their information will be accessible by the system and which will be shared with other users. The enCOMPASS integrated platform will consist of mobile/web cloud platforms with scalable content acquisition processing, secure storage and strong privacy filters, so the user's sensitive data remains always stored at the user's premises and can be shared and compared only upon the user's approval.

For deeper and specific information on this matter and for a whole dissertation on this topic, the consortium will make reference to the D8.3 "Data Management Plan" due at month 5.