Quality Plan

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Author(s):	Name	Partner
	Antonio Manzalini	TI
	Sara Jahier	TI
	Rosario Alfano	TI
Checked by:	WP Leaders	

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1 Introduction

The present document constitutes the Quality Plan for the CASCADAS project.

1.1 Reference Material

The following documents are used as reference basis for this document:

[1] Annex 1 – Description of Work

[2] Integrated Project CASCADAS - Contract Number 027807

[3] Integrated Project Consortium Agreement – IPCA: Part I

[4] Integrated Project Consortium Agreement – IPCA: Part II

[5] Deliverable D0.1 E-Collaboration Suite

[6] Deliverable D0.5 Project Log

[7] Deliverable D8.1 Public Web Site

1.2 Document history

Version n.	***Date***	***Changes***
1.0	30/3/2006	The document is in its first version. • In the table referring to the Project Structure for WP5 the original WP leader was UU. In the minute of the CASCADAS kickoff meeting a resolution reports that GA approved the change of leadership of WP5 from UU to UNIMORE. • For every WP the corresponding WP leader has been indicated: WP7 and WP9 will start at M19 and for them the WP Leader has yet to be identified.

1.3 Document overview

This document contains information about the quality assurance procedures that will be followed for the CASCADAS project in accordance with its DoW so as to ensure a smooth project running and minimize relevant problems/risks during the execution phases.

The document is structured as follows:

- Section 1 gives a brief introduction of the document itself.
- Section 2 describes the project main goal and its objectives, specifying the project structure, the expected results and the project overall planning.
- Section 3 illustrates how meetings and phone conferences will be managed.
- Section 4 gives an overview on documentation describing the different kind of documents, the template to be used to write documents and their lifecycle.
- Section 5 briefly describes the principles that the project seeks to apply for software development.
- Section 6 lists E-collaboration instruments.
- Section 7 illustrates potential risks that may arise during the life of the project.
- Section 8 is about Consortium Agreement with a brief introduction on IPR issues.

- Section 9 is about Dissemination & Exploitation
- Section 10 and 11 provide an explanation on how cooperation and standardization have to be managed

2 Summary of project main goal and objectives

The overall goal of CASCADAS [1] is identifying, developing, and evaluating architectures and solutions based on a general-purpose component model for autonomic communication services; specifically in such context autonomic service components autonomously achieve self-organization and self-adaptation towards the provision of adaptive and situated communication-intensive services. In other words, the project is driven by the ambition of identifying a fundamental, uniform abstraction for situated and autonomic communication entities, at all levels of granularity. This abstraction is called an ACE (Autonomic Communication Element), and it represents the cornerstone of the component model, in which the four driving scientific project principles (situation awareness, semantic self-organisation, self-similarity, autonomic component-ware) will properly converge.

The study of ACEs is also the basis for achieving a number of other ambitious objectives that will be explicitly tackled by the project. These objectives derives from the need of providing ACEs with the necessary support of algorithms, knowledge, tools and infrastructures (to be realized again as sorts of ACE based middle-services) to make ACEs a practical and trust-worth paradigm. On the other hand, they derives from the willingness to attack and explore some crucial aspects related to the complexity and dynamism challenges that stand in situated and autonomic communication vision. These main research objectives, each conceived in terms of a separated scientific WP and each aimed at delivering specific methodological and software tools, include:

- The development of pervasive supervision functionalities across ensembles of interacting ACEs;
- The development of algorithms and techniques to achieve dynamic adaptation and enforce given service properties through self-organized component aggregation of ACEs;
- The development of trust, security and self-preservation techniques;
- The identification of models and tools for the organization, correlation and composition of knowledge networks, according to which ACEs can exploit all the available information about their situation, however sparse and diverse.

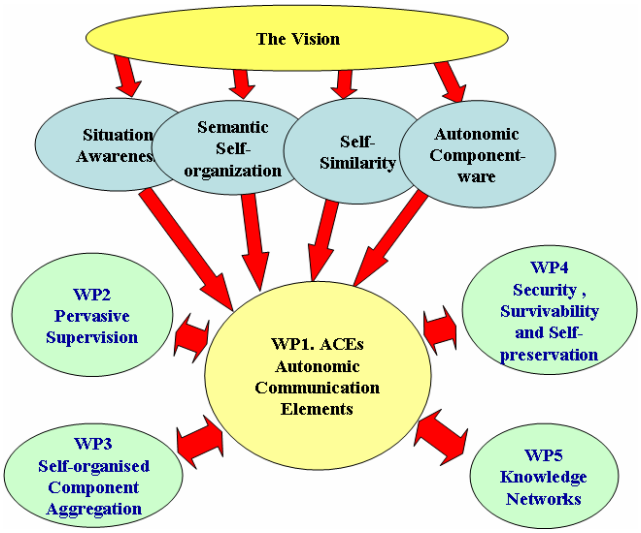
The project is structured into 5 work packages (Figure 1), each dealing with specific research thrusts recognized to be critical elements for the situation-aware and autonomic communication services of the future.

Guiding and Validation Activities are the scope of WP6 which provide the means to drive the technology research thrusts, keep them focused around a common perspective and goal, and, later, experiment and validate the research results. Socio-economic analysis will complement the technical requirements by helping in identifying the best directions for optimal penetration of the

[1] **Partners**: *Telecom Italia S.p.A. (TI - Italy), British Telecommunications plc (BT – United Kingdom), Budapest University of Technology and Economics BUTE - (Hungary), Fraunhofer Institute for Open Communication Systems (FOKUS - Germany), Imperial College London (ICL - United Kingdom), INSTITUT EURECOM (EUR - France), Politecnico di Milano - Dipartimento di Elettronica e Informazione (DEI - Italy),National and Kapodistrian University of Athens (NKUA - Greece), Universität Kassel (UNIK - Germany), Université Libre de Bruxelles (ULB - Belgium), Università di Modena e Reggio Emilia (UNIMORE - Italy) Università degli Studi di Trento (UNITN - Italy), University of Ulster (UU - United Kingdom), School of Management of Milano (MIP - Italy)*

emerging technologies and results of the project within the European Research Area. In the second phase of the project WP6 will develop a demonstrator of a complete application scenario by integrating all the software and contributions from the Investigation Activities.

The Dissemination Activities will implement a comprehensive outreach and dissemination strategy through 3 pillars, each mapped to a WP: training, dissemination & exploitation, demonstration.



2.1 Project Structure

The project activities cover three main classes:

- Investigation Activities;
- Guiding and Validation Activities;
- Dissemination Activities.

The following tables report WP titles, Leaders and participant Partners. A table follows with the breakdown of WP into tasks (with the related Task Leaderships).

Investigation Activities			
WP n.	Title	WP leader/name	Participants
WP1	Autonomic Communication Elements	UNIK / Bjoern Wuest	TI, BUTE, FOKUS, UNIK, UNIMORE
WP2	Pervasive Supervision	FOKUS / Peter Deussen	TI, FOKUS, DEI, UU
WP3	Self-Organized Component Aggregation and Emergent System Properties	BT / Fabrice Saffre	BT, EUR, DEI, ULB
WP4	Security, Survivability and Self-Preservation	UNITN / Roberto Battiti	ICL, EUR, NKUA, UNITN
WP5	Knowledge Networks	UNIMORE / Franco Zambonelli	UNIK, UNIMORE, UU

WP n.	Task n.	Title	Task Leader
WP1	T1.1	ACE Structure and autonomous life cycle management	UNIK
	T1.2	Inter-ACE communication and routing	BUTE
	T1.3	Service modeling languages and tools	FOKUS
WP2	T2.1	Principles for Pervasive Supervisions	FOKUS
	T2.2	Supervision Architecture and Components	DEI
	T2.3	Evolution Strategies	UU
WP3	T3.1	Modeling	ULB
	T3.2	Implementation	BT
WP4	T4.1	Design of a Distributed Security Architecture	UNITN
	T4.2	Game Theory and Economics of Secutiry Models	EUR
	T4.3	Self-Preservation	NKUA
WP5	T5.1	Network Knowledge Ontologies and Cognitive Stigmergy	UNIMORE
	T5.2	Situated Knowledge Network Ensembles and Interfaces	UU

Guiding and Validation Activities			
WP n.	Title	WP leader/name	Participants
WP6	Application and Socio-Economic Analysis & Evaluation	ICL / Erol Gelenbe	TI, BUTE, FOKUS, ICL, NKUA, UNIK, ULB, UNIMORE, UNITN, UU, MIP

WP n.	Task n.	Title	Task Leader
WP6	T6.1	Application	UNIMORE
	T6.2	Socio-economic Impacts	MIP
	T6.3	Experiments and Evaluation	ICL

Dissemination Activities			
WP n.	Title	WP leader/name	Participants
WP7	Training	BUTE	BUTE, ICL, EUR, DEI, NKUA, UNIK, ULB, UNITN, MIP
WP8	Dissemination & Exploitation	TI / Antonio Manzalini	TI, BT, BUTE, FOKUS, ICL, EUR, DEI, NKUA, UU
WP9	Demonstration	ULB	BT, ICL, ULB

WP n.	Task n.	Title	Task Leader
WP7	T7.1	Contacting course providers and lecturers and internationally renowned experts and/or research leaders	NKUA
	T7.2	Organization of courses	BUTE
WP8	T8.1	Dissemination	TI
	T8.2	Exploitation	BT
WP9	T9.1	Selection of Demonstrator and Its Adaptation	ULB
	T9.2	Organization of Demonstrations	BT

2.2 Project Management Structure

The management of the project and its structure is compliant with the guidelines proposed in the Consortium Agreement and in the Contract. The WP0 will ensure the overall management of the work undertaken in CASCADAS. All the activities carried out in this WP will be conducted according to the management structure of the Consortium.

Management of the Consortium Activities			
WP n.	Title	WP leader	Participants
WP0	Project Management	TI	TI, BUTE, ICL, DEI, NKUA, UNIK, ULB, UNIMORE, UNITN, UU, MIP

Due to the characteristics of the project, the management structure will be based on the collaboration of the following lines of management:

- Project Management;
- Financial Management;
- Socio-Economic Research Management;
- Scientific Management;
- Dissemination and Exploitation Management.

- The CASCADAS Project Manager is Antonio Manzalini from Telecom Italia (TI). The role of the PM is carried out according to the Contract and the consortium agreement guidelines.
- A *Secretariat* (within TI) will provide secretarial, administrative, financial and legal support to the PM and partly to the Financial Manager.
- The *Financial Manager* (FM) will be closely working with the PM in order to synchronise the contractual and administrative items with the accounting and financial issues. GA appointed Giorgio Micca, from Telecom Italia, as Financial Manager of the Project.
- The *Socio-Economic Research Manager* (SEM) will coordinate activities related to socio-economic research. GA appointed Alberto Savoldelli, from Consorzio per l'innovazione nella gestione delle Imprese e della PA, as Socio-Economic Research Manager of the Project.
- The *Scientific Manager* (SM) with the role of advising PM and GA on issues such as project orientations and road-mapping; project overall progresses; technical risks and red-flags;

proposals of integration of results; annual technical audit preparation; quality assessment and reviewing of scientific project results (deliverable, milestone, publications). Franco Zambonelli (UNIMORE) has been appointed SM by the GA.

- The *Dissemination and Exploitation Manager* (DEM) will be in charge of the managing the dissemination and exploitation of CASCADAS results, as the project comes to its fruition. Antonio Manzalini (TI) has been appointed SM by the GA.
- The *General Assembly* (GA) is composed by representatives from all partners of the consortium. Upon recommendation of PM and SM the GA takes the final decision on the overall-policy of the consortium, on modifications or extensions of the consortium agreement, and on modifications or extensions of the objectives of the project. All partners unanimously approved that, within the entire life-time span of the project, the General Assembly will coincide with the Project Management Board and with the Scientific Steering Committee.

  Each partner identified its official contact point who will also act as GA member: Antonio Manzalini, Fabrice Saffre, Robert Schulcz, Peter Deussen, Erol Gelenbe, Pietro Michiardi, Elisabetta Di Nitto, Ioannis Stavrakakis, Bjoern Wuest, Jose Halloy, Franco Zambonelli, Roberto Battiti, Maurice Mulvenna, Alberto Savoldelli.

2.3 Liaison Partners

The role of the liaison partners is to help in facilitating information exchange and inter-WP cooperation. Specifically Liaison Partners are in charge of supporting PM, SM and WP Leaders in building/maintaining networking and relationships between WPs

The following table reports the appointed Liaison Partners:

	WP1	WP2	WP3	WP4	WP5	WP6
WP1		DEI	DEI	UNITN	UniK	BUTE
WP2	DEI		DEI	NKUA	UU	TI
WP3	DEI	DEI		EURECOM	UNIMORE	BT
WP4	UNITN	NKUA	EURECOM		UNITN	ICL
WP5	UNIK	UU	UNIMORE	UNITN		UNIMORE
WP6	BUTE	TI	BT	ICL	UNIMORE	

2.4 Expected Results

The following paragraphs summarize main milestones and deliverables.

2.4.1 Milestones

The first 18 months of the project (called the CASCADAS build-up phase) is devoted to the exploration of the state-of-art and the major research themes composing the project roadmap. In this phase the project activities will be carried out through the following milestones:

- M4: State of the art, Application and socio-economic requirements to drive the technical activities
- M12: Analysis & Design, Methods and Algorithms
- M18: Individual Open Source Software Toolkit

The milestone at M18 is the culminating point of the build-up phase of CASCADAS and represents the starting point for the following expansion phase.

- M19: Exploitation, demonstration and training activities start
- M24: Integrated Open Source Software Toolkit
- M36: Demonstration, Summer School, Consolidated OS Toolkit

For further details on the different activities carried out during the phases please refer to the [1] Annex 1 – Description of Work.

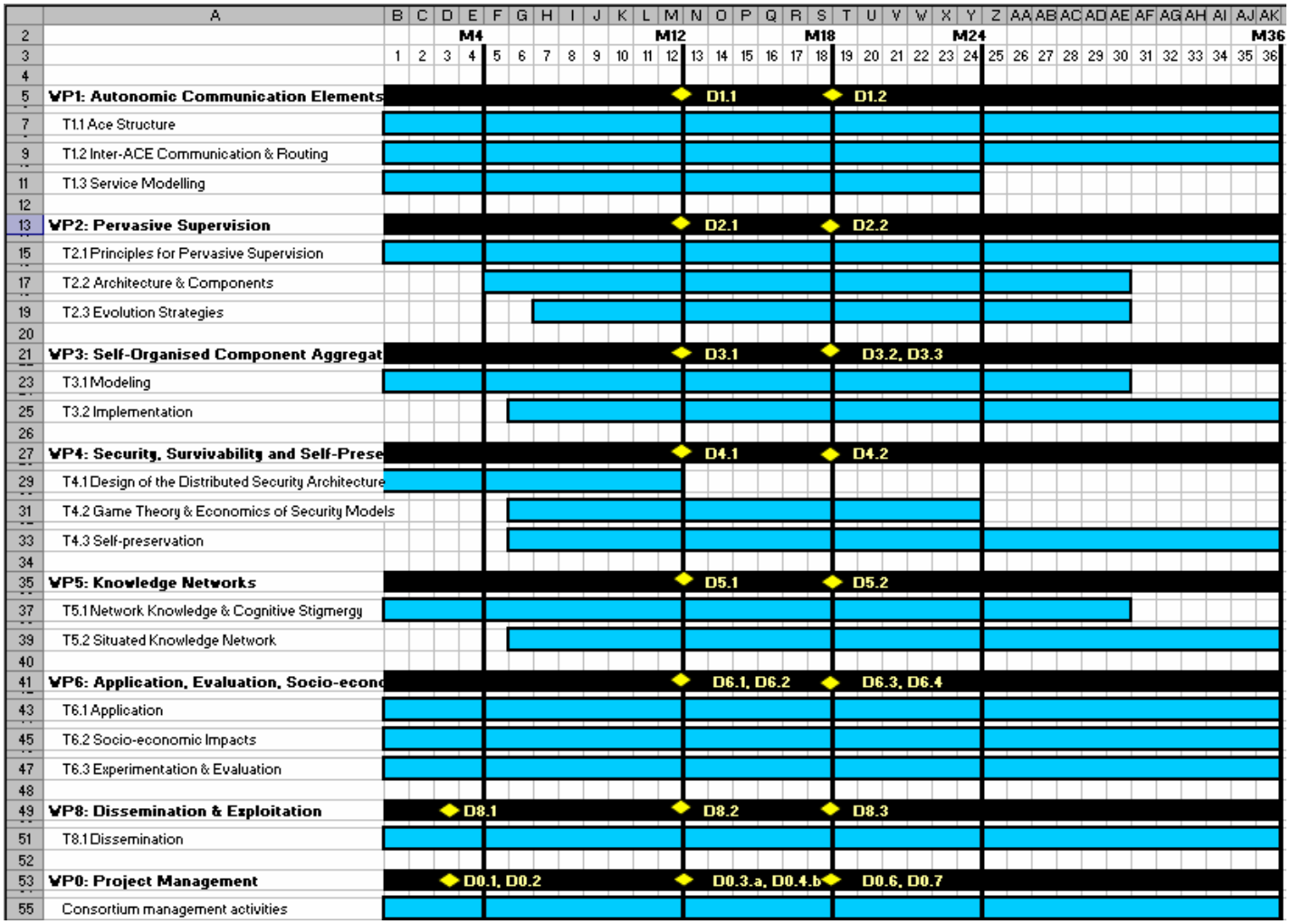
2.4.2 Deliverables

WP	Deliverable	Editor	Delivery date
WP0	D0.5 Project Log	TI	Continuous
	D0.1 E-collaboration suite	TI	3
	D0.2 Quality Plan	TI	3
	D0.3.a Activity Monitoring Report (1st release)	TI	12
	D0.4.a Financial Report (1st release)	TI	6
	D0.4.b Financial Report (2nd release)	TI	12
	D0.4.c Financial Report (3rd release)	TI	18
	D0.6 Updated Management and Work Plan for 2nd 18-month phase	TI	18
	D0.7 Updated Financial Plan for 2nd 18-month phase	TI	18
WP1	D1.1 State of the art, requirements, and ACE component model specification	UNIK	12
	D1.2 Prototype implementation (release 1)	UNIK	18
WP2	D2.1 Basic Supervision Architecture Specification and Basic Algorithms	FOKUS	12
	D2.2 Pervasive Supervision Component Set (1st Prototype)	DEI	18
WP3	D3.1 Report on state of the art and rule-based modules for adaptive aggregation via preferential connection between pre-existing task specialists	ULB	12
	D3.2. Report on rule-based modules for unit differentiation using cross-inhibition and/or resource competition	BT	18
	D3.3 Software implementation of modules for adaptive aggregation and unit differentiation	DEI	18
WP4	D4.1 Requirements, Design, State of the Art for security architecture and economics of security models: game theory and mechanism design reputation and trust management and access control through trust negotiation	UNITN	12
	D4.2 Open Source toolkit (1st version)	EUR	18
WP5	D5.1 Report, Specification and alpha release software for knowledge networks	UNIMORE	12

	D5.2 Extended beta release software for knowledge networks	UU	18
WP6	D6.1 Description of application scenarios and of the services to be provided. Prospective studies on the socio-economical aspects of the Connected Society	UNIMORE	12
	D6.2 Experimental QoS Evaluation in Autonomic Network Environments. Distributed test bed specifications	ICL	12
	D6.3 Proof-of-concept Design of the Application test-bed (1st release)	UNITN	18
	D6.4 Organizational Model for new communication paradigms (1st release)	MIP	18
WP7	D7.1 training materials and lecture, based on project results rel.1, International summer school	To be defined	24
	D7.2 complete training materials and lectures, based on project results rel.2	To be defined	36
WP8	D8.1 Public Web Site	TI	
	D8.2 CASCADAS White Paper (Issue 1)	TI	12
	D8.3 Open-source CASCADAS toolkit (release 1)	TI	18
WP9	D9.1 First demonstrator ready	To be defined	24
	D9.2 Second version of demonstrator ready	To be defined	30
	D9.3 Demonstrator exhibited at relevant events	To be defined	36

2.5 Project Overall Planning

The following figure provides a view of the overall CASCADAS work plan, including only the work packages – and the tasks in those work packages - that are active during the first 18th months of the project.


M4
M12
M18
M24
M36
VP1: Autonomic Communication Elements
D1.1
D1.2
T1.1 Ace Structure
T1.2 Inter-ACE Communication & Routing
T1.3 Service Modelling
VP2: Pervasive Supervision
D2.1
D2.2
T2.1 Principles for Pervasive Supervision
T2.2 Architecture & Components
T2.3 Evolution Strategies
VP3: Self-Organised Component Aggregat
D3.1
D3.2, D3.3
T3.1 Modeling
T3.2 Implementation
VP4: Security, Survivability and Self-Prese
D4.1
D4.2
T4.1 Design of the Distributed Security Architecture
T4.2 Game Theory & Economics of Security Models
T4.3 Self-preservation
VP5: Knowledge Networks
D5.1
D5.2
T5.1 Network Knowledge & Cognitive Stigmergy
T5.2 Situated Knowledge Network
VP6: Application, Evaluation, Socio-econ
D6.1, D6.2
D6.3, D6.4
T6.1 Application
T6.2 Socio-economic Impacts
T6.3 Experimentation & Evaluation
VP8: Dissemination & Exploitation
D8.1
D8.2
D8.3
T8.1 Dissemination
VP0: Project Management
D0.1, D0.2
D0.3.a, D0.4.b
D0.6, D0.7
Consortium management activities

3 Meetings and Phone Conferences

Not only face-to-face meetings but also e-mailing list activities and phone conferences are used as essential tools for team working. The following section describes some general guidelines how meeting will be organised and managed.

3.1 Meetings/Plenary meetings

- All formal meetings will be notified, using phone calls and e-mails, at least 2 weeks in advance (normally a couple of months), according to the rules included in the CA.
- Agenda (prepared by PM, SM and WP leaders) and any supporting documentation will be available to all attendees (GA) at least 1 week before the meeting.
- Issuing of all documents will be via the PM who is responsible for compiling all submissions from partners.
- All meeting will be formally closed with minutes. The minutes will be issued within 2 working days after the completion of the meeting.

The minute will be available, like a word file, in the project repository with the following template:

Minute of the CASCADAS project meeting

Author Name of the Author

Date Date

Version Version number

Participants

List of participants

Agenda

Agenda of the Meeting

Minute

The minute could include Resolutions, Working Assumptions, Action Points, List of documents presented during the meeting and other relevant notes.

3.2 Phone Conferences

- Every phone call has to be decided, using e-mail, at least 1 week in advance.
- Every Phone Call will be formally closed with minutes. The minutes will be issued usually within 2 working days of the completion of the phone call.

The minute will be available, like a word file, in the project repository with the following template:

Phone Conference Minutes

PhC between WP Leaders /WPX Partners

Date

Participants

List of participants

Objective/Agenda

Objective of the Phone Call

Discussions

Point of discussion

4 Project documentation

The documents of the project are:

- Milestone/Deliverable
- Minutes and Actions Lists
- Other internal documentation as made available to progress activities or disseminate results (white documents, presentation, papers, e-mails exchanged …etc)
- Documentation from/to EC (including e-mails exchanged)

The form and quality if these deliverables will comply with the procedures described in the following sections.

4.1 Templates, forms and naming

Milestone/Deliverable template (word) has been produced and saved in the repository.

4.2 Preparation, review and approval

Every type of document has its own lifecycle.

4.2.1 Milestone/Deliverable

- For each milestone/deliverable document an Editor (a physical person of the appointed Partner) has been identified
- The elaboration of milestone/deliverable documents starts by the definition of a Table of Contents and a distribution of work to involved Partners.
- The Editor is responsible of collecting and integrating the different contributions

- Every Deliverable is saved in the repository in the corresponding folder

Milestone/deliverable document will be written in Word according to a standard template available on the project repository.

4.2.1.1 Project Log

A document, named D0.5 Project Log, has to be prepared during the whole project in order to track meetings, phone calls, press release, resolutions…and every kind of useful information.

The document has been written following the same template already illustrated and must be kept up-to-date from the beginning of CASCADAS project to the end.

The document is kept up-to-date by TI and is saved in the repository

4.2.2 Quarterly Progress Report

A template has been prepared (saved in the repository) and distributed to the Partners.

The document should report the technical achievements reached (during the reporting period of three months) by the Partners WP per WP. Furthermore the document should collect also potential alerts (i.e. red-flags), the attended meeting and the released Deliverables. Regarding the reporting period, it was decided that an internal report will be carried out every three months; whilst a formal one, to be delivered to EC, will be prepared every six months).

The project effort (planned person-month per participant) reported into the WP tables refer to the first 18 months of the project.

Demonstration and Training Activities will be carried out from month 19 (and as such they will not be reported into this document).

The Quarterly Progress Reports will be prepared with the following lifecycle.

- Every contribution is sent by the partners to TI by the end of 3-month periods
- TI assembles the inputs of all partners forming the final version of the document which has to be saved in the repository

4.2.3 EC Progress Report

The document should report the technical achievements reached (during the reporting period of six months) by the Partners WP per WP. Furthermore the document should collect also potential alerts (i.e. red-flags), the attended meeting and the released Deliverables..

The project effort (planned person-month per participant) reported into the WP tables refer to the first 18 months of the project.

Demonstration and Training Activities will be carried out from month 19 (and as such they will not be reported into this document).

The Quarterly Progress Reports will be prepared with the following lifecycle.

- Every contribution is sent by the partners to TI by the end of 6-month periods
- TI assembles the inputs of all partners forming the final version of the document which has to be saved in the repository.
- The PM will send it to the EC Officer

4.2.4 Actions

A living list of actions (agreed during the meeting and the phone conferences) is reported (for sake of simplicity) into one single document (available on the repository). The Project Manager is the Editor of the document being also in charge of tracking actions progresses.

5 Open Source Code

5.1 Introduction

This section briefly describes the principles that the project seeks to apply in all its areas of software development to ensure sufficient quality in these developments. The objectives of software quality assurance in CASCADAS are to minimize the integration risks, reduce low quality software, support easier defect diagnosis.

In order to keep meet objectives *Frequent* Build and Smoke Tests ["IEEE Sofware best practice - Daily Build and Smoke Test", IEEE Software, Vol. 13, No. 4, July 1996] are adopted in the development process.

5.2 Development Process

5.2.1 Frequent Integration Build

Build frequently ensures synchronization of the project. Any build ensures that the developed code are allowed to be out of synchronization only during the period of time between two builds, but at the end of each build the code come into alignment. Automatic build tools like Apache Ant [http://ant.apache.org/] may be used to support and trace this process.

The main test carried out by this process is to ensure that the build properly runs. If the software doesn't work, the main priority becomes to fix it.

The steps each developer has to run in order to properly implement this process are:

1. *Merge code changes*: The developer compares his or her private copy of the source files with the master source files, checking for conflicts and inconsistencies between recent changes made by other developers and the new or revised code to be added. The developer then merges his or her code changes with the master source files. Merging is usually supported by automated source code control tools (e.g. Subversion), which warns the developer of any inconsistencies.
2. *Build and test a private build*: The developer builds and tests a private release to be sure that the newly implemented feature still works as expected. In order to run this step the developer must:
    - Compile all files, libraries and components;
    - Link all files, libraries and components;
    - Ensure that the product doesn't contain any bugs which prevent the software to be launched;
3. *Execute the smoke test*. The developer runs the current smoke test against the private build to be sure the new code won't break the build.
4. *Check in*. The developer checks his or her private copies of the source code into the master source files. Some projects establish times during which new code can and can't be added to build; for example, new code must be added no later than 5:00 p.m. and no earlier than 7:00 am.

5. *Generate the build*. The build team (or build person) generates a complete build of the software from the master sources.
6. *Run the smoke test*: The build team runs the smoke test to evaluate whether the build is stable enough to be tested.
7. *Fix any problems immediately:* If the build team discovers any errors that prevent the build from being tested (that break the build), it notifies the developer who checked in the code that broke the build, and that developer fixes the problem *as soon as possible.* Fixing the build is the project's top priority.

The process, due to the dimension of the CASCADAS team, requires one or (better) more people responsible for the frequent build.

5.2.2 Smoke Test

One key step in the Build Frequently process it to run the Smoke Test. Smoke test should exercise the system end-to-end, being capable to show the major problems.

Properly running smoke test allow to address to main issues:

- Avoid deteriorating product quality;
- Avoid integration problems.

Smoke test should evolve as the system evolve, starting to test basic functionalities and adding more complex test as the product become more complex. Testing framework tools, like JUnit [http://www.junit.org/index.htm], may be used to support this phase.

5.3 Readability

Readability refers to the ease at which another programmer or appropriate experience colleague or manager can read and understand the programme code and its associated comments. Readability is obviously enhanced by comprehensive documentation however a person who understands the basic

language syntax should be able to read a programme and understand what the programmer has done based on the code and its embedded comments alone.

Some guideline to code comments are:

- Keep it simple. The key is to keep it simple and comment the important decisions you made that affected the code and the "gotchas" a maintenance programmer should be aware of.
- Maintain comments.
- Don't comment the obvious.

5.4 Traceability

This is the ability to know who has been responsible for the development of a particular segment of code and that modifications in response to bug reports or evaluation results are logged.

Account of process of consideration of reviewers' comments *(e.g. discussion between 4 members of technical board, project board):*

Actions or decisions taken in the light of all comments and recommendations made by reviewers (to include reasons why any recommendations have not been followed).

Subversion provides the suitable support for traceability, saying what files have changed when, how, and by whom; moreover there are a variety of mechanisms for looking through the history.

6 E-collaboration instruments

The instruments made available to Partners in order to support project technical activities are:

- Code and document repository: the project repository is available at the address https://cascadas-project.org:444/repositories/cascadas. Deliverable D0.1 "E-collaboration Suite" describes the structure of the repository and how to manage code, documents and other material.
- Wiki page: the wiki tool has been made available to project Partners at the address http://cascadas-project.org/dokuwiki/doku.php.
- Web Site: the CASCADAS project web site is accessible at the URL: http://www.cascadas-project.org. Deliverable D8.1 "Public Web Site" describes map and features of the web site.
- Mailing lists: 8 e-mailing lists have been activated. For further details on how subscribe/unsubscribe the list refers to Deliverable D0.1 "E-collaboration Suite".

7 Risk Management

The potential following risks may arise during the life of the project:

- To reach the project objectives it is necessary to assure with continuity the planned resource with the expected technical expertise;
- As far as the technical area of autonomic computing and communication services, the potential risks are those typical of RTD activities concerning highly innovative solutions still requiring a few years if development activities before the engineering of commercial solutions. For this reason during the first four months of the project, the Consortium will put a strong effort in learning the state-of-art. This will be followed by a roadmap highlighting the technical aspect over which focus the developments and demonstrations;
- The typical risks about knowledge management and IPR issues (handled according to the contract and the consortium agreement).

A continuous control will be exercised by the project management in order to detect any potential risky situations. Whenever, due to some of the above risks, a new planning of the activities might be required by the project management, this should be done assigning newly agreed (with the GA and EC) priorities.

8 Consortium Agreement

In order to finalize the Contract for the project, the consortium members have signed a formal Consortium Agreement in which roles, responsibilities and mutual obligations have been stated.

The final release of this document has been saved in the document repository.

For further details on how to access the repository, please refer to [5] Deliverable D0.1 E-Collaboration Suite.

8.1 IPR issues

The appropriate handling of IPR is critical to the success of the Project. IPR will be managed according to the contract, Appendix II, part C and the Consortium Agreement. Any issue that cannot be resolved by applying these rules will be brought immediately to the attention of the GA. The GA makes a decision and communicates to all Parties concerned for immediate implementation.

9 Dissemination and Exploitation

Dissemination will be carried out according to the Consortium Agreement (e.g. cap. IV.6 Publications, Press Releases and Reports to the Commission) and Contract rules (specifically section II.33 - Protection of Knowledge).

10 Cooperations

The project will activate International cooperation with other projects (not only IST) in the area of Autonomic Communications.

The first step in activating cooperation will be an action for the project coordinator to contact the other project coordinator to elaborate on potential areas of common interest of the two projects. Then it will be immediately set-up a group of technical experts in charge of handling the cooperation and reporting expected plans (collecting feed-backs) and results to the G.A.

11 Standardization

CASCADAS will focus on the development of radically new theoretical and methodological aspects of autonomic communication service environments and components. The ambitious goal of CASCADAS thus explicitly does not focus on current standards.. However, requirements derived from the various work packages are likely to provide useful input for standardisation activities of upcoming methodologies and technologies with underlying autonomic communication aspects.

CASCADAS has the opportunity not to contribute to new standards, but to *start the definition* of new standards.