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**Link and Evangelize the FI-PPP from Europe to the world
for the benefit of FI research and innovation and to the
European industry business**

D5.1 - Quality Assurance Plan and Risk Analysis

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Abstract	This document describes the Quality Assurance Plan and the Risk Analysis of FI-LINKS. It includes information about management procedures, consortium responsibilities, risks and contingency plans. In addition we detail the communication tools and procedures to assure a good documentation quality.
Keywords	Management. Risks. Communication tools.

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EXECUTIVE SUMMARY

This document is the Deliverable D5.1-“Quality Assurance Plan and Risk Analysis”.

The 1st part of the deliverable defines the project Quality Assurance Plan, which aims to accommodate the formation and effective working of "virtual project teams". The Quality Assurance Plan will be followed to assure that the project documentation and procedures reach the adequate level. Every partner will be required to have access and follow such plan. Moreover, this deliverable describes a concrete Risk Analysis and a Contingency Plan to mitigate the foreseen project risks, especially those concerning the FIWARE programme 3rd phase (FI-PPP) risks, in the new created structure.

The “Quality Assurance Plan and Risk Analysis” reference is intended to be a living document and evolve when required. Document content and contact persons will be confirmed, and will be updated to reflect up-to-date information.

The purpose of the handbook is to be a fast reference document. If there is a conflict with any official document (e.g. Grant Agreement, Consortium Agreement, etc.), this last one will be considered to be the accurate reference and this deliverable will be updated accordingly.

In addition, there is a comprehensive guide of the use of the tools for internal communication and for a correct documentation handling.



TABLE OF CONTENTS

EXECUTIVE SUMMARY	3
TABLE OF CONTENTS	4
1 INTRODUCTION	6
1.1 Purpose	6
2 QUALITY OF PROJECT MANAGEMENT	7
2.1 Management structure and procedures	7
2.1.1 Governance and management structure	7
2.1.2 Meeting Planning	12
2.1.3 Project reporting	12
2.2 Measurement of project progress.....	13
2.2.1 Key Performance Indicators	13
2.2.2 Different measurement methodologies	14
3 RISK MANAGEMENT	16
3.1 Risks associated to WP1	17
3.2 Risks associated to WP2.....	17
3.3 Risks associated to WP3	19
3.4 Risks associated to WP4	21
3.5 Risks associated to WP5	22
4 DELIVERABLE QUALITY ASSEMENT PROCEDURE	25
4.1 Workflow	25
4.2 Review template	26
4.3 Peer review	26
4.4 Quality improvement actions.....	26
5 DOCUMENTS MANAGEMENT AND INTERNAL COMMUNICATION TOOLS ...28	
5.1 Communication Tools.....	28
5.1.1 Meeting organization support	28
5.1.2 Conference calls	28
5.1.3 Collaborative writing minutes	28
5.1.4 Mailing lists	28
5.1.5 Wiki	29
6 RESOURCE MANAGEMENT QUALITY	30
6.1 Quarterly Reports.....	30



6.2	Yearly Reports (Project Periodic Reports)	30
7	CONCLUSIONS	31



1 INTRODUCTION

The first part of the deliverable defines the project Quality Assurance Plan, which aims to accommodate the formation and effective working of "virtual project teams".

The project Quality Assurance Plan will be followed to assure that the project documentation and procedures reach the adequate level. Every partner will be required to have access and follow the Quality Assurance Plan.

Moreover, it describes a concrete Risk Analysis and a contingency plan to mitigate the foreseen project risks, especially those concerning the FIWARE programme 3rd phase (FI-PPP) risks, in the new created structure.

1.1 Purpose

The “Quality Assurance Plan and Risk Analysis” is intended to be a living document and evolve when required. Document content and contact persons will be confirmed, and will be updated whenever required to reflect up-to-date information.

The purpose of the handbook is to be a fast reference document. If there is a conflict with any official document e.g. Grant Agreement, Consortium Agreement etc., the official document will be considered to be the accurate reference and this deliverable will be updated accordingly.

In addition, there is a comprehensive guide of the use of the tools for internal communication and for a correct documentation handling.

2 QUALITY OF PROJECT MANAGEMENT

2.1 Management structure and procedures

2.1.1 Governance and management structure

The project management approach considered for this project is based on previous organisation and on management plans and techniques which were successfully used by the FI-LINKS partners in previous international projects. The primary aim of this management structure is to be capable of responding to the needs of a Coordination and Support Activity without being intrusive or costly. The building-in of flexibility was one essential aspect while defining this structure.

The project FI-LINKS will collaborate with other all projects in the Future Internet Public-Private Partnership, i.e. projects selected under the calls FP7-2011-ICT-FI, FP7-2012-ICT-FI and FP7-2013-ICT-FI, and will contribute to FI-PPP programme-wide initiatives and actions. Notably the project FI-LINKS will participate in phase 3 working groups ensuring a joint and specific governance. The project FI-LINKS has set aside the required resources and will allocate and adapt them on an as-need basis.

FI-LINKS is in contact with the FIWARE press office for the communication purposes (see D4.1) and with other CSAs, with meetings happened with the other selected CSAs to organise the work to be carried out.

The co-ordination and follow-up procedures for monitoring progress and responding to changes is documented in this deliverable. A consortium agreement shall provide rules and terms of reference for any issue of legal nature concerning the co-operation among the parties as well as the intellectual property rights of individual partners and the consortium as a whole.

The management structure is given below:

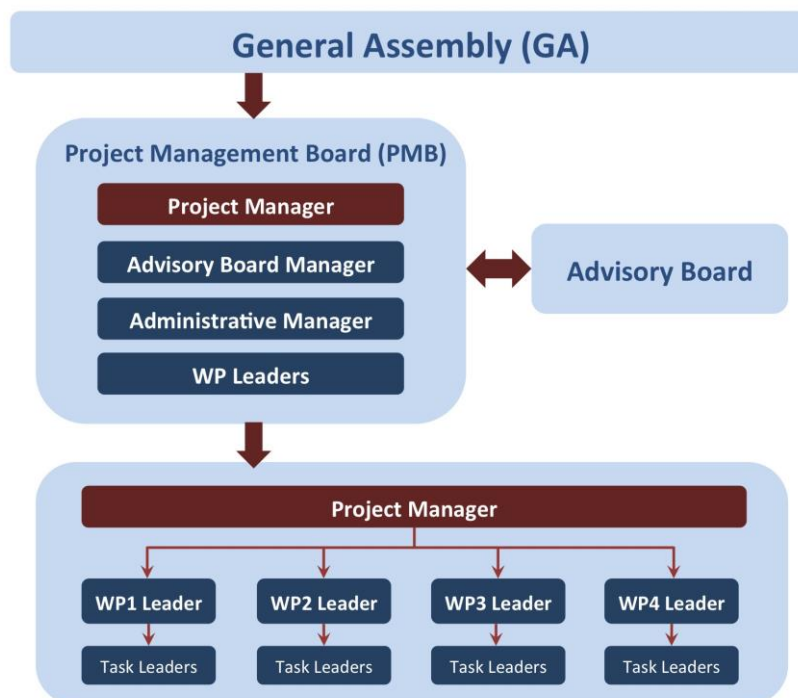


Figure 1: FI-LINKS management structure

As the previous figure depicts, the main entities, described in more details in the next sub-sections, are:

1. The General Assembly that comprises one representative of each partner in the FI-LINKS consortium and is the only body able to take decisions regarding contractual matters, such as resource and budget re-allocations.
2. A Project Management Board (PMB) formed by the Project Coordinator, Federico Alvarez (UPM), the Advisory Board Manager, Pierre-Yves Danet (Orange), the Administrative Manager, Monique Calisti (Martel), and the WP Leaders. The first is responsible for the relationship with EU Commission, the second for chairing the Advisory Board and ensuring close coordination with countries not directly represented in the FI-LINKS consortium and external FI-PPP projects, the third takes care of the administrative matters and the WP Leaders are responsible for their items of work, assisted by Task Leaders.
3. An Advisory Board chaired by the Advisory Board Manager and grouping selected European regions representatives and prominent experts from 3rd countries not in the FI-LINKS consortium (see Section 2.3.2 for the complete list).

- *The General Assembly*

The General Assembly (GA) is conceived as the operational body of the project. Chaired by the Project Coordinator and with the support of the Administrative Manager, it is formed by one representative of each partner. The GA will decide on matters related to the overall work plan. It will discuss and make decisions on the basis of reports from the different Work Packages, and will indicate and guide actions that are deemed necessary for securing the uninterrupted progress of the project as a whole. The overall duties of the GA include: following up the project; releasing project results; managing potential problems and taking all major decisions. In case that a major modification of the overall project will be required, the decision for such a change will be made after consultation with all the participating members.

The GA will meet prior to the start of the project and at least once per year. One month before each GA meeting, the Project Coordinator will contact each partner's representative to ask them to prepare their preliminary report. Additional meetings will be arranged if necessary, for urgent matters or if a majority of partners agree on it. Internal consensus among the project partners on managerial issues is vital to the project success. If a consortium member is not present or represented at a GA without prior excuse, that partner is bound to honour decisions taken and actions placed on him/her in absence. Whenever possible, all the decisions will be adopted by general consensus. Normally the GA will decide with a majority of 2/3 about the required modifications and changes due to unexpected findings or events during the course of the project implementation. In case of conflicts within the project, the Project Coordinator will act as mediator. The Project Coordinator will try to resolve conflicts by achieving consensus among the parties involved. If no consensus can be found, the consortium agrees that in case of equal voting, the coordinator will break the tie; the partners undertake to abide by his decision.

- *Project Management Board*

The Project Management Board (PMB) is the main management and decision-making body of the project. The PMB will meet two times per year during the project, co-located with regular progress meetings, to define the strategy, to follow up the activities carried out in the project and to connect the project to General Assembly and Advisory Board. It will approve the project reports on the work performed and planning for the next period. Also, it will deal with legal, financial and secretarial matters and also establish the agenda of the meetings and workshops.

Project Management Board's responsibilities

- Approve overall project objectives, targets, timescales and general directions.
- Evaluate approaches and progress.
- Establish and control the work plan and set objectives.
- Co-ordinate progress between the participating partners in Work Packages and Tasks.
- If necessary, approve significant project changes to be proposed to the Commission.
- Review contractor's resources.
- Detect, evaluate and handle possible risk items for the progress of the project.
- Approve consensus reports and control Work Package deliverables for the Commission.

• *Project Coordinator*

The Project Coordinator will provide the Commission with managerial information about the project by acting as the focal point for contacts and coordination with the Commission.

Project Coordinator's responsibilities

- Chair the Project Management Board and take decisions in case of conflicts within the Project Management Board.
- Chair the General Assembly meetings.
- Monitor and control the managerial work done by Advisory Board and Administrative managers.
- Supervise the Work Package Leaders work and interaction.
- Manage contacts with the Commission.
- Disseminate information from the Commission to the partners.
- Make the final check of - and submit - the quarterly/annual reports to the Commission in collaboration with the Project Management Board.
- Make the final check of - and submit – the deliverables to the Commission in collaboration with the Project Management Board.

• *Advisory Board Manager*

The Advisory Board Manager coordinates the activities of the Advisory Board, which comprises representatives of targeted European regions and 3rd countries not included in the FI-LINKS consortium (see Section 2.3 for the complete list of members in the Advisory Board and covered countries).

Advisory Board Manager's responsibilities

- Chair the Advisory Board.
- Manage the contacts with the international countries which are not part of the project consortium.
- Coordinate and organise meetings of the Advisory Board
- Form the interface between the FI-LINKS project and projects and initiatives in those countries.
- Engage actively with the stakeholders to agree the workplan for the Advisory Board and monitor progress against the workplan and address any issue which may arise from the work of the Board.
- Coordinate the inputs of the group with the rest of the management structure
- Inform about the possible risks regarding the external participants to the project coordinator
- Manage the engagement of the various representatives so as to ensure effective local and international links to be established and maintained.
- Ensure input from the Advisory Board is used to define the scope of the road mapping and that input from the board is contributed in a timely and relevant manner to the road mapping activities
- Documentation control.

- *Administrative Manager*

The Administrative Manager will support the Coordinator and the Project Management Board in the day-to-day Consortium Management of the project.

Administrative Manager's responsibilities

- Assisting the Project Coordinator and Project Coordinator with the meetings (General Assembly, plenary, WP Leaders, Project Reviews) by preparing the agendas, writing the minutes, leading the administrative parts, etc.
- Ensuring an open flow of information within the project, for example:
 - informing partners of their responsibilities - and the timescales - for producing Deliverables and reaching Milestones;
 - giving guidance on administrative and contractual issues;
 - maintaining the Consortium Agreement, DoW and preparing any Contract Amendments.
- Supervising the production of the project contractual deliverables; ensuring that partners keep within the timeframes and budgets.
- Collecting and collating the quarterly/annual reports of progress and resource expenditure, and sending these to the coordinator for sending to the EC.
- Adding a level of Quality Assurance to the project in terms of validating the visible

outputs, such as deliverables, presentation material, papers, etc.

- *Work Package leaders*

The WP Leaders will be responsible for developing a detailed WP implementation plan on the basis of the current Work Plan, and for the efficient and effective implementation of it, taking into account the timeliness and quality of the WP deliverables. So, the WP leaders will control and manage the technical progress achieved on a Work Package level.

The WP Leaders participate in the PMB, through which coordination among all the WP activities is achieved.

WP Leader's responsibilities

- Resolving day-to-day administrative, technical and resource problems within his/her Work Package.
- Reporting to the Project Coordinator during the periodical meetings of the WP Leaders (at least one every three months).
- Informing the Project Coordinator about the progress of their work related to the project (on a monthly basis, or more frequently if required). This allows the Project Coordinator to control the project and implement corrections to the plan if needed in coordination with the PMB.
- Provide Work Package contributions to the Project Periodic Reports and to the Technical Audit presentations.
- Assigning tasks to individual members of the WP teams.
- Coordinating the cooperation between partners within the Work Package.
- Monitoring the progress of milestones, deliverables and the expected outcomes of their Work Packages.
- Organising interim meetings if necessary to ensure the proper execution of their Work Package.
- Disseminating information relating to all aspects of their work to the other Work Package leaders for ensuring a smooth coordination of Work Package activities.

- *Advisory Board*

The Advisory Board (AB) groups selected European regions representatives and prominent experts from 3rd countries not included in the partners of FI-LINKS and it is supervised by the Advisory Board Manager. The complete list of members in the AB is given in Section 2.3.

The role of the AB members is to ensure promotion and mutual know-how transfer to/from specific European regions and 3rd countries not directly involved in the FI-LINKS consortium (as detailed in Section 2.3.2) of the FI-PPP initiatives and related Future Internet innovation activities worldwide. Moreover, the AB members will be asked to provide advice and evaluate the progress of the work done in the project.

To be noticed is that the AB members have accepted to support FI-LINKS by financing their own activities and the only budget the consortium allocated for the AB is a well-contained amount to cover travelling of the AB members to selected project meetings and workshops FI-LINK will organize.

Specifically, we expect the following benefits of the AB:

- Advisory role during the road mapping exercise to better identify and characterise the business potential of the Future Internet technologies in Europe and in the identified third countries.
- Provide support for effective engagement of relevant stakeholders in Europe and in the various international areas FI-LINKS will be directly represented.
- Increased visibility through support in the establishment of links and communication channels to help promoting the uptake of technologies developed within the FI-PPP context and beyond.
- Contribute to empower and facilitate the dissemination activities.
- Provide an external view on the project and its orientation to better identify and profile potential issues related to the development and adoption of innovative Future Internet technologies.

2.1.2 Meeting Planning

The project will hold regular meetings for different purposes, both by meeting at a common location and/or via conference calls. The table below shows the scheduled plenary progress meetings of the project.

Year	Type	Date
Year1	Kick-off meeting (KOM)	M1
	First progress meeting (PM1)	M4
	Second progress meeting (PM2)	M7
	First Review Meeting (RM1)	M10
Year 2	Third progress meeting (PM3)	M13
	Forth progress meeting (PM4)	M17
	Fifth progress meeting (PM5)	M21
	Final Review Meeting (FRM)	M24

Table 1. Meeting Planning

The Agenda and Minutes of each one of these meetings will be properly prepared and distributed by the administrative manager before and after each event. In addition, each WP Leader will organise internal meetings (phone or live) to allow a correct progress of the work (discussion about technical and organisational items). Meetings between related Work Packages to define the results to be taken as inputs for one WP and outputs for the other one could be needed and will involve the Project Coordinator who ensures the harmonization of activities among WPs. The need for this kind of inter-WP meetings should be raised during the periodical progress meetings.

2.1.3 Project reporting

The Quarterly Periodic Progress Reports (QPPR) together with the Financial Statements (FS) will

serve as the main Project Management Documentation. This planning ensures proper project monitoring and allows the Commission to have a comprehensive knowledge of the development tasks. To help the Project Manager to compile and issue the necessary web tools will be used to automate these tasks.

2.2 Measurement of project progress

As described above, each Work Package Leader is responsible for the compliance of his/her own Work Package. Further, the consortium will use typical measures such as milestones within the project plan. Each member of the consortium will be responsible for informing the Project Coordinator about any contingencies that might have negative impacts on the success of the project. Standard and commonly available project management software tools will assist project management.

The measurement of the project progress will be done internally with the following yardsticks:

- Timely completion of the Work Packages and Tasks.
- Use of the resources according to the Work Plan.
- Reaction from industry and interest from other international organisations involved.

It will be the responsibility of the Project Coordinator to keep these measurements in mind during the full project and to take necessary actions in case of an unsuitable status.

2.2.1 Key Performance Indicators

In the FI-LINKS context, each outcome will be measured through the definition of success or performance indicators. Outcomes from the various WPs will be measured and when the results are not positive, a backup solution will be taken into consideration and implemented. Actually, one important goal of the project will be the definition and measurement of performance indicators, but already at proposal preparation time we have identified a number of them that are listed hereby, together with a short description characterizing them and the target value (when it applies). As a matter of fact, as discussed in the next sub-section, quantitative measurements are not always applicable to different kinds of planned objectives and outcomes.

Indicators	Way of Measure	Target value
Impact of the FI-LINKS Roadmap on the global FI Community	<ul style="list-style-type: none"> • Number of participants in the roadmap survey • Number of downloads of the roadmap • References from external sources 	<ul style="list-style-type: none"> • 200 participants • 2000+ downloads • 10+ references
Impact on FI-PPP adoption	<ul style="list-style-type: none"> • Number of new FI-Lab nodes established through FI-LINKS engagement • Number of new entries in FI-PPP marketplaces established through FI-LINKS engagement 	<ul style="list-style-type: none"> • 4 • 100
Balanced and strong representation in the Advisory	Number of countries and regions in Europe which are	At least 6 regions and 4 additional countries

Board of the EU regional and international actors.	represented in the advisory board	
Engagement of international Future Internet actors	Number of FI relevant stakeholders identified at international level in each target country	At least 20 FI organizations identified as relevant in each of the targeted international country
Broad international visibility	Number of international participants in FI-LINKS events and workshops	20 participants from outside Europe for the international roadmap event if held in Europe; 100 if held outside Europe i.e. in one of the target countries
Engagement success regarding SMEs and Web Entrepreneurs in 3 rd countries	Number of non-European SMEs and web entrepreneurs developing applications and products using the FI-PPP technology	20-40 during the lifetime of the project (as FI-LINKS is mostly focusing on a medium to long term perspective)
Engagement success regarding SMEs and Web Entrepreneurs	Number of non-European SMEs and web entrepreneurs who have developed at the end of FI-LINKS applications and products using the FIWARE technology	50
Definition of a shared policies for the adoption in Europe at regional and local level	Number of stakeholders of the regions agreeing on the policies and best practices	Make accepted a common taxonomy of regional policy by at least 15 regions.
Reactivation of the CFA ICT region group with the S3 platform	Number of workshops involving the targeted regions	At least 2 during FI-LINKS lifetime

Table 2. Key Performance Indicators

2.2.2 Different measurement methodologies

In this project, indicators cannot be only measured in quantitative terms. Where cultural and social factors are taken into consideration, qualitative measurements are even more important in order to give indications about the performance of the project. Therefore four types of measurements will be used to monitor the project and have been listed in the next table.

Code	Typology	Description	Example
Qt	Quantitative	This means clear quantitative indicators with a numerical target.	Number of hits
Ql	Qualitative	This refers to an external quality assessment.	The JRC, Journal Research Citations
R	Report	This typology of measurement indicates that the success indicators is for one part	Capacity to influence policies

		quantitative, but also qualitative; to have a better evaluation, a more detailed analysis is needed.	
I	Interviews and user interaction analysis	For all indicators including the user interaction and satisfaction it is impossible to evaluate the success status without an analysis of real user behaviour in managing the system. For this reason this class of indicators will be used where the user's interaction is needed.	User interface satisfaction
D	Documentation	In this case the achievement of the indicator must be evaluated according to the documentation produced for the Project. Please Note. The difference between documentation and Report is that in the first case the analysis will be based on documents produced for the project; instead Report means a document produced "ad hoc" for the indicator measurement.	User manual and SW documentation

Table 3. Measurement Methodologies

3 RISK MANAGEMENT

A crucial task for the management of an international and ambitious project like FI-LINKS is to ensure the proper balance and coordination between the different project activities as well as between partners with different backgrounds. In particular, the management must be able to address and harmonise different aspects emerging from the various planned activities.

To this end, risk management is a high priority as already anticipated in Section 1.3 and will be organized as follows and displayed in the following picture:

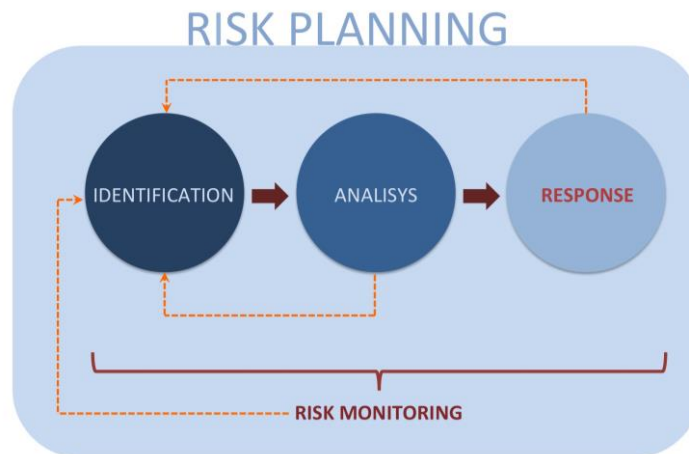


Figure 2: FI-LINKS Risk Management

1. **Risk planning** focuses on the identification of risk management procedures and responsibilities. Risk Management Planning occurs as part of the project and negotiation phase.
2. **Risk identification:** during the initial start-up of the project, a risk assessment will be conducted to identify risks associated with both the business and technical aspect of the research. Risks will be assessed for their impact on the project and the probability of the risk materializing.
3. **Risk analysis:** evaluating the attributes of a risk implies establishing values for probability (the likelihood the risk will occur) and the impact that their occurrence might have on the planned work (in terms of significance for the specific project objectives).
4. **Risk response:** defining actions to be performed if and when a specific risk occurs. The key idea is to identify who owns the risk – who is responsible for this within the consortium or outside – and what can/should be done to minimize its impact.
5. **Risk monitoring:** this ongoing task keep tracks of the risks and evaluates the effectiveness of the response actions. Monitoring may also provide a basis for developing additional response actions and identifying new risks.

The Management Board will supervise this process, and enforce risk mitigation plans as appropriate to reduce the impact and likelihood of the risks occurring (see Task 5.1). This integrated approach to risk management will enable effective control of the business, intellectual property, technology, people, management, environment and other implementation risks that may arise. Unresolved issues or conflicts impacting the project plan will be escalated to the appropriate body, project co-ordinator and then - if necessary - to the GA.

3.1 Risks associated to WP1

Risk ID	1.1
Risk description	Insufficient information is found in other European roadmaps for producing the FI-LINKS roadmap
Root cause	There are several sources of information that can be used but the quality of other roadmaps is not usable for our purposes
Potential impact	The roadmap plans get delayed and results are less comparable to other roadmaps in the area
Probability level	Medium
Impact level	Medium
Contingency Plan	The available sources have been extended to any developed country where roadmaps have been found as relevant. Our roadmap will be compared globally.
Applicable to the project WPs or tasks	WP1 T1.2, T1.2
Risk ID	1.2
Risk description	There is a lack of collaboration from other CSAs in the input to the FI-LINKS roadmap
Root cause	There are at least other CSA with the objective of developing a roadmap and will contribute: I3H
Potential impact	The roadmap gets delayed and covers less ambitious aims.
Probability level	Medium
Impact level	Medium-High
Contingency Plan	Interaction between FI-LINKS and other CSA via telcos and physical coordination meetings are happening. A follow-up every 6 weeks on I3H activities have been agreed.
Applicable to the project WPs or tasks	WP1 T1.1

Table 4. WP1 Risks

3.2 Risks associated to WP2

Risk ID	2.1
Risk description	Other FI-PPP projects targeting similar stakeholders in the various 'target' countries

Root cause	There are several FI-PPP projects working towards similar objectives, and it may happen that the same stakeholders are contacted and/or engaged by more than one project
Potential impact	The target stakeholders get confused due to more than one FIWARE / FI-PPP contact point, and FI-LINKS and the FI-PPP programme in general is not achieving the objectives of the evangelisation and engagement at international level
Probability level	Medium
Impact level	Medium-High
Contingency Plan	Interaction between FI-LINKS and the various FI-PPP projects shall happen in advance to prevent such parallel activities to happen in an uncoordinated manner.
Applicable to the project WPs or tasks	WP2 T2.1, T2.2
Risk ID	2.2
Risk description	Strategic change of the target country
Root cause	Due to political, business or other reason the FI-LINKS project must change the country focus and stop already started engagement activities/co-operation in the country in question
Potential impact	The engagement work already done in the country is lost and potentially the engagement activities must start from the beginning in a replacement country
Probability level	Low
Impact level	Medium-High
Contingency Plan	The target countries need to be selected based on the long-term strategy of FIWARE and based on the experience in previous projects e.g. INFINITY and XIFI. In case there is a risk to have such a kind of country, the practical activities needs to be delayed within reasonable limits until the risk is solved.
Applicable to the project WPs or tasks	WP2 T2.1, T2.2
Risk ID	2.3
Risk description	Lack of interest in the third countries in the FI-PPP adoption
Root cause	There are other initiatives and they do not see the advantage of FIWARE, and in addition there is no political interest
Potential impact	FI-LINKS and the programme in general is not achieving the objectives of the evangelisation and engagement at international level
Probability level	Medium

Risk ID	2.1
Risk description	Other FI-PPP projects targeting similar stakeholders in the various ‘target’ countries
Root cause	There are several FI-PPP projects working towards similar objectives, and it may happen that the same stakeholders are contacted and/or engaged by more than one project
Potential impact	The target stakeholders get confused due to more than one FIWARE / FI-PPP contact point, and FI-LINKS and the FI-PPP programme in general is not achieving the objectives of the evangelisation and engagement at international level
Probability level	Medium
Impact level	Medium-High
Contingency Plan	Interaction between FI-LINKS and the various FI-PPP projects shall happen in advance to prevent such parallel activities to happen in an uncoordinated manner.
Applicable to the project WPs or tasks	WP2 T2.1, T2.2
Impact level	Medium-High
Contingency Plan	Experience in INFINITY and XIFI engagement with other actors in a similar fields will assist in defining and exploiting appropriate communication and promotion channels and instruments to reach non-FI-PPP participants in the most effective way
Applicable to the project WPs or tasks	WP2 T2.2

Table 5. WP2 Risks

3.3 Risks associated to WP3

Risk ID	3.1
Risk description	Lack of interest of the European Regions and non-FI-PPP participants in the FI-PPP engagement
Root cause	Effort is required, there are other initiatives and they do not see the advantage of FIWARE
Potential impact	FI-LINKS not achieving the objectives of the Regional evangelisation and engagement
Probability level	Medium
Impact level	Medium-High

Contingency Plan	<p>Experience in INFINITY and XIFI engagement with other actors in a similar fields will assist in defining and exploiting appropriate communication and promotion channels and instruments to reach non-FI-PPP participants in the most effective way</p> <p>CFA ICT Regio has shown interest for a set a European regions for such an initiative</p>
Applicable to the project WPs or tasks	WP3 T3.1
Risk ID	3.2
Risk description	Insufficient availability or support or training for the FI-PPP technology, leading to difficulties in promoting its usage
Root cause	If the amount of regions and international actors is high, it will be difficult to provide effective training.
Potential impact	FI-LINKS not achieving the objectives of the engagement
Probability level	Medium
Impact level	Medium-High
Contingency Plan	The creation of national hubs from ICT Labs will help the process, and FI-LINKS will support the process as much as possible. A methodology will be set up and experiment with a set of active regions and then sued for all the others.
Applicable to the project WPs or tasks	WP3 T3.2
Risk ID	3.3
Risk description	Difficulties to identify relevant policy/regulatory topics that should have an impact on the FI-PPP countries involvement
Root cause	If no European regulation exists or if national regulation is too far from the European regulation.
Potential impact	FI-LINKS not achieving the objectives of the engagement
Probability level	Medium
Impact level	Medium-High
Contingency Plan	The CONCORD Regulation WG has already worked out on some of the topics. There is still actions to do but a good base is available.
Applicable to the project WPs or tasks	WP3 T3.3

Table 6. WP3 Risks

3.4 Risks associated to WP4

Risk ID	4.1
Risk description	The number of workshops planned to be organized by FI-LINKS is not achieved.
Root cause	The objectives are ambitious; FIWARE objectives and target stakeholders are not yet stable and may still evolve during the course of the FI-LINKS project.
Potential impact	Failure in the project results.
Probability level	Medium
Impact level	Medium
Contingency Plan	FI-LINKS will plan the workshops in advance; FI-LINKS will coordinate and will communicate its plans for organizing workshops at FI-PPP level.
Applicable to the project WPs or tasks	WP4 T4.2
Risk ID	4.2
Risk description	There is a new change in the FIWARE programme orientation.
Root cause	FIWARE programme objectives may change during the lifetime due to the evolving environment, as it has happened in the initial phases.
Potential impact	Failure in the project results.
Probability level	Medium
Impact level	Medium
Contingency Plan	FI-LINKS will communicate closely to the FIWARE press office and align the plans in WP4; in the event of a change of direction we will change and accommodate the FI-LINKS DoW if necessary or simply the plans.
Applicable to the project WPs or tasks	WP4 T4.2
Risk ID	4.3
Risk description	There is a unification of websites and FI-LINKS is obliged to close the website or to reduce to the minimal to maintain only the FIWARE.org website for the whole programme.
Root cause	The European Commission only wants a single access point to the FIWARE programme
Potential impact	Failure in the project results.

Probability level	High
Impact level	Medium
Contingency Plan	FI-LINKS will publish the news and relevant information instead of the own website in the FIWARE.org website. Own website will be kept with the minimal information and for internal tools (wiki, repository...)
Applicable to the project WPs or tasks	WP4 T4.2

Table 7. WP4 Risks

3.5 Risks associated to WP5

Risk ID	5.1
Risk description	The project is not achieving the KPI and/or objectives defined.
Root cause	The objectives are ambitious.
Potential impact	Failure in the project results.
Probability level	Medium
Impact level	High
Contingency Plan	<p>FI-LINKS partners will be monitored by the Co-ordinator following the quality guidelines described in this document to ensure the fulfilment of the project objectives. Each objective will be monitored by each WP leader and reported to the Co-ordinator.</p> <p>In case of major issues corrective actions are indicated in the Consortium Agreement and in the DoW, in the management section (section 2.1)</p>
Applicable to the project WPs or tasks	All
Risk ID	5.2
Risk description	FIWARE Programme co-ordination timing and management issues
Root cause	Tight timing and complexity of the interaction within the programme from the other FI-PPP projects, especially those CSAs contributing to the Roadmap and to the regional engagement.
Potential impact	Expectations from FI-LINKS not fulfilled
Probability level	Medium

Impact level	High
Contingency Plan	<p>FI-LINKS will actively contribute from the beginning of the project and will make sure that the priorities are addressed so as to coordinate in the most efficient manner the activities that need to be coordinated.</p> <p>The fact that all European partners involved in FI-LINKS have been working together within the FI-PPP context already several years will be an add-on to leverage on various other FI-PPP activities by optimizing resource consumption within FI-LINKS.</p>
Applicable to the project WPs or tasks	WP1 - T1.1 and T1.3

Risk ID	5.3
Risk description	Loss of critical competencies or of key people in the project
Root cause	Changes in the partners representatives
Potential impact	Lack of knowledge
Probability level	Medium
Impact level	High
Contingency Plan	<p>Seek to get early indication of possible withdrawal of key people.</p> <p>Make sure that in most cases can replace the key competence internally within the consortium and shift budget to the partner that provides the necessary competences.</p> <p>Maintain a tight link with the community working on related issues so that, in the case such competences are not available within the project, a competent external partner can be identified in a short time.</p>
Applicable to the project WPs or tasks	All

Risk ID	5.4
Risk description	Non-performance of partners
Root cause	Partner is underperforming due to other commitments
Potential impact	FI-LINKS not achieving the objectives in time
Probability level	Medium
Impact level	High
Contingency Plan	Convince partner to focus or replace non-performing person(s). In case of severe underperforming, take the necessary actions, from

	shift of budget/responsibilities to replacement of partner.
Applicable to the project WPs or tasks	All
Risk ID	5.5
Risk description	Lack of participation in the Advisory Board
Root cause	Effort is required and it is time consuming for the external participants
Potential impact	FI-LINKS not achieving the objectives of the Advisory Board
Probability level	Medium
Impact level	High
Contingency Plan	FI-LINKS reserved budget for the external participants. Since the number of external participants is not so high, considering the variety of people, we may find replacements, although not of the same quality perhaps, in relative short period of time.
Applicable to the project WPs or tasks	WP1 T1.1

Table 8. WP5 Risks

4 DELIVERABLE QUALITY ASSEMENT PROCEDURE

To ensure the quality of reports, FI-LINKS will adopt a quality assessment procedure. The procedure is based on a workflow that helps the monitoring of the progress of the deliverable and defines point in time for quality checks. The procedure is supported via project management tools and templates in support of deliverable reviews.

The Project Coordinator will be responsible for quality control of both the technical work and the deliverables to the Commission. Consequently, the Project Coordinator could request remedial action and additional reports, should any doubt regarding progress, timescales or quality of work make this necessary.

Every contractual deliverable, prior to its submission to the Commission, will be the subject of a peer review by persons not directly involved in either the subject matter or the creation of that deliverable.

The Project Coordinator will make a final check of the deliverable for consistency and readability. Where necessary the Project Coordinator could request further work of the partners on a deliverable, to ensure that it complies with the project’s contractual requirements.

The Quality Assurance will define the general requirements to be fulfilled by the deliverables and will ensure that any document is clearly versioned.

4.1 Workflow

The following figure describes the main work process, timing and responsibilities for the production of project deliverables.

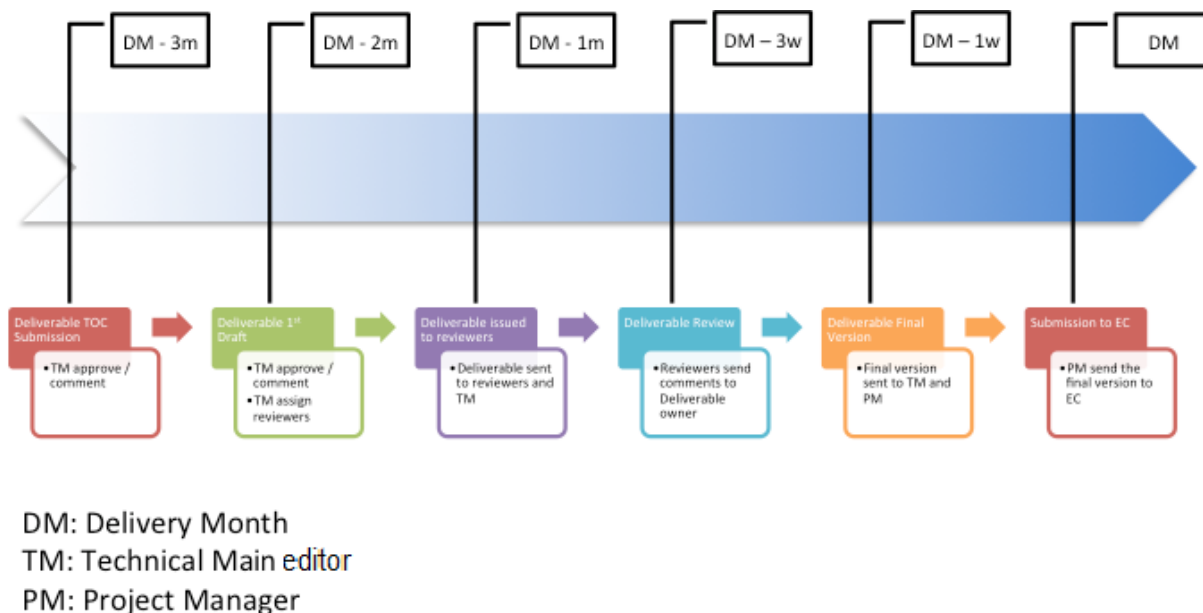


Figure 3: Quality Assessment Procedure

The procedure is further detailed in the following table.

Time	Content / version	Activity	Responsibility
DM ¹ – 3 months	ToC	1. Table of Contents 2. Assign/discuss contribution from partners. 3. Upload on FI-LINKS intranet. 4. Approval / Comment by TM	Deliverable Owner
DM – 15 days	Working version	1. Deliverable ready for review 2. Upload on FI-LINKS intranet. 3. Deliverable sent to reviewers by TM	Deliverable Owner + contributing partners
DM – 10 days	Working version including comments with track changes.	1. Peer review (1-2) 2. Upload review on FI-LINKS intranet.	Partner assigned for peer review (1-2 reviewer / document)
DM – 1 week	Final version	1. Consider comments. Implement changes and additions 2. Upload document and reply to reviewers on FI-LINKS intranet 3. Send final version to PM and TM	Deliverable Owner + contributing partners
DM	Final version	Submission to EC	Coordinator

Table 9. Workflow Description

4.2 Review template

A template for the review is available in the template section in the intranet. The usage of the template is mandatory to assess the review process. In support of the review, reviewers can also use MS Word notes and track changes functionality.

4.3 Peer review

All the deliverables will be sent to peer review to at least 2 partners.

4.4 Quality improvement actions

In case a deliverable is found to be of insufficient quality by the internal peer reviewer the process for recovery is planned as follows.

- Inform the Task leader + contributing partners of needed improvement in writing through the comments with MS Word track changes and commenting feature.
- The responsible partners will consider the requests and rework and improve the deliverable. This work must be done on first priority in order to avoid delays.

¹DM = deliverables due date, e.g. Deliverable due at M6 → DM – 3 months = 1.07.2011

- In conflicting situation the partners will contact the Work Package Leader (WPL) for consultation and advice
- If not solved then the Work Package Leader (WPL) will take the issue to the WPL Forum.
- The WPL Forum will analyse the situation and issue recommendation for improvements and other actions.

5 DOCUMENTS MANAGEMENT AND INTERNAL COMMUNICATION TOOLS

In order to support the management of the project and to improve the internal communication among partners, a number of tools have been set-up and selected. As a proactive team, we are ready to define and set up new communications tools in the future in case of need during the life time of the project.

A description of the different communication tools is given in the following lines:

5.1 Communication Tools

5.1.1 Meeting organization support

A free version of Doodle (<http://www.doodle.com/>) is used to facilitate the organisation and timing of our internal meetings and phone calls.

5.1.2 Conference calls

For our regularly coordination conference calls, Martel proposed to use its GotoMeeting Pro license. It brings the opportunity to create unlimited sessions up to 25 participants. For the purpose of the FI-LINKS internal conference calls it is largely enough. This license gives access to interesting features such as screen-sharing, phone & VoIP audio, record sessions and dial-in conferencing.

5.1.3 Collaborative writing minutes

In order to facilitate the minutes of our internal coordination conference calls, a cloud based Google Drive document was set up. For each meeting, we create a specific header with date and participants. All the consortium has access and rights to read and edit the document so each WP leader write down the points to be discuss for his WP.

After each conference call, a back-up of the document is downloaded in order to have a local file of the minutes of each conference call.

5.1.4 Mailing lists

From the beginning of the project, and taking into account the size of the consortium, two mailing lists were created to facilitate the internal communication by e-mail. Both mailing list are hosted in the same server as the website and the wiki of the project. The software used for the mailing list is GNU Mailman, a computer software application from the GNU Project. Mailman is free software, subject to the requirement of the GNU General Public License.

The FI-LINKS mailing lists are:

- **ALL list:** For any internal communication about the project.
- **ADMIN list:** For any administrative issue. Only people involved in the administration and management of the project are invited to join this list.

In case of need of any other mailing list or any subscription, partners should contact Miguel Alarcón (miguel.alarcon@martel-consulting.ch).

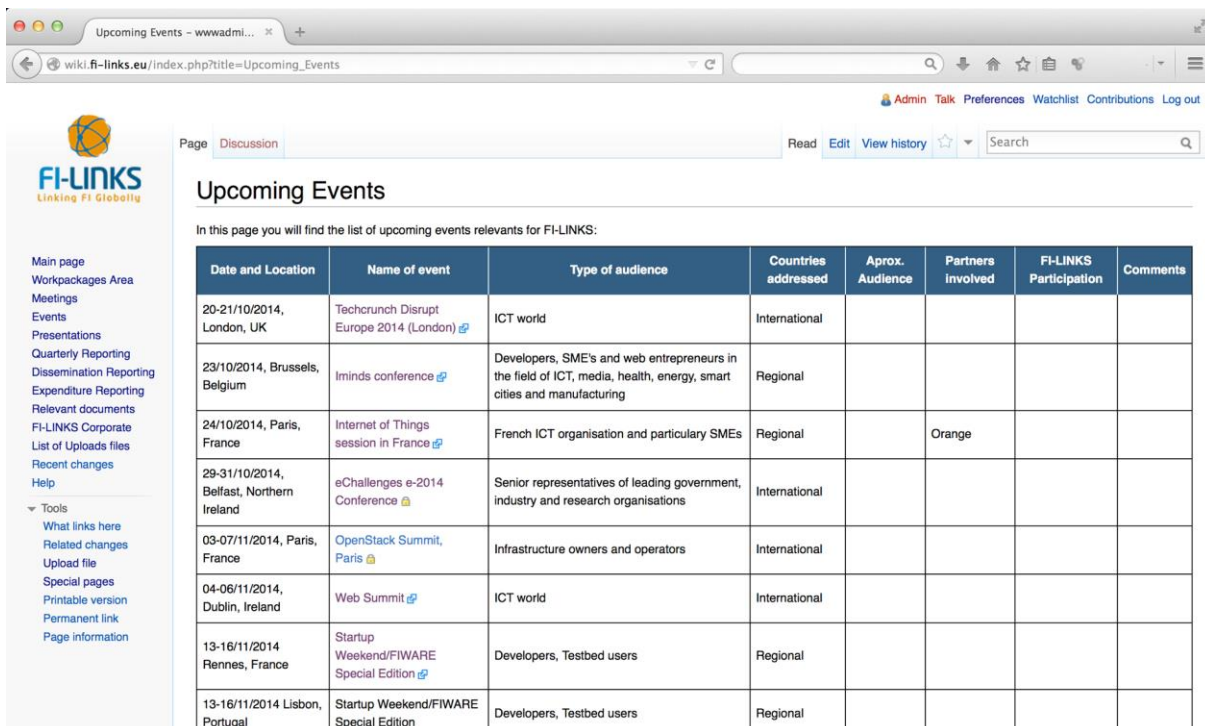


5.1.5 Wiki

A wiki was set up at the beginning of the project as the main on-line private space for FI-LINKS. It is based on Mediawiki that is a free and open-source wiki app, used to power wiki websites such as Wikipedia, Wiktionary and Commons, developed by the Wikimedia Foundation and others. It also runs thousands of other websites.

The main purposes of the wiki are:

- Repository for all relevant documents. Presentations, external documents related to the project objectives, etc.
- Repository for face-to-face internal meetings. All information about the meetings organisation and minutes.
- Private area for management reporting. This area is dedicated to the quarterly, dissemination and expenditure report that each partner should fulfil for the reports.
- Private area for each Work Package. Each WP has a specific area for whatever concerns the work and the objectives of it.
- Updated list of events and reports. A table of Past events and another one for Upcoming events has been set to follow-up on the events related to the project.



The screenshot shows a web browser window displaying the 'Upcoming Events' page on the FI-LINKS wiki. The page features a table with columns for Date and Location, Name of event, Type of audience, Countries addressed, Aprox. Audience, Partners involved, FI-LINKS Participation, and Comments. The table lists several events from 2014, including Techcrunch Disrupt Europe 2014, Iminds conference, Internet of Things session in France, eChallenges e-2014 Conference, OpenStack Summit, Web Summit, and Startup Weekend/FIWARE Special Edition in both France and Portugal.

Date and Location	Name of event	Type of audience	Countries addressed	Aprox. Audience	Partners involved	FI-LINKS Participation	Comments
20-21/10/2014, London, UK	Techcrunch Disrupt Europe 2014 (London)	ICT world	International				
23/10/2014, Brussels, Belgium	Iminds conference	Developers, SME's and web entrepreneurs in the field of ICT, media, health, energy, smart cities and manufacturing	Regional				
24/10/2014, Paris, France	Internet of Things session in France	French ICT organisation and particulary SMEs	Regional		Orange		
29-31/10/2014, Belfast, Northern Ireland	eChallenges e-2014 Conference	Senior representatives of leading government, industry and research organisations	International				
03-07/11/2014, Paris, France	OpenStack Summit, Paris	Infrastructure owners and operators	International				
04-06/11/2014, Dublin, Ireland	Web Summit	ICT world	International				
13-16/11/2014, Rennes, France	Startup Weekend/FIWARE Special Edition	Developers, Testbed users	Regional				
13-16/11/2014, Lisbon, Portugal	Startup Weekend/FIWARE Special Edition	Developers, Testbed users	Regional				

Figure 4: wiki page dedicated to events

The wiki is hosted in the same server of the website as a subdomain (<http://wiki.fi-links.eu>) and the access is private under request.

6 RESOURCE MANAGEMENT QUALITY

For appropriate resource management, resources will be monitored every three months, during quarterly reports. The reports will be internal, but will give a good approximation of the overall resource spending. Once per year, a signed full cost statement will be delivered to the Co-ordinator.

6.1 Quarterly Reports

The Quarterly Reports should be submitted by the partners via the web-based tool 10 working days after the end of the reporting period. The Quarterly Reports will include at least the following issues:

- Major Achievements per partner
- Planned Resources per activity per Work Package
- Actual Resources per activity per Work Package
- Cumulative Resources per activity per Work Package
- Project meetings/teleconferences attended
- Conferences/Standardization meetings attended

6.2 Yearly Reports (Project Periodic Reports)

The Project Periodic Report should be sent to the Co-ordinator and the Work Package leaders 10 working days after the end of the reporting period for the technical issues, and 2 weeks for the financial part. The Co-ordinator will provide appropriate template. The Project Periodic Reports will include at least the following issues:

- Major Achievements per partner
- Major Difficulties
- Planned Resources per activity per Work Package
- Actual Resources per activity per Work Package
- Cumulative Resources per activity per Work Package
- Project Meetings/Teleconferences attended
- Conferences/Standardization Meetings Attended
- Consumables
- Hardware/Software expenses
- Audit Reports (if appropriate)

The WPL should compile the Achievements and Difficulties and provide to the Co-ordinator a section explaining the technical progress in the Work Package of his/her responsibility.



7 CONCLUSIONS

In this document we described the procedures to assure the quality of the co-ordination, management, documentation, procedures and every action regarding the carrying out of the FI-LINKS project.

In addition, risks and contingency plans are explained to allow smooth project working.

This document can evolve if necessary to reflect the changes in the work to be performed as it has been planned as a living document.