



# FInest – Future Internet enabled optimisation of transport and logistics networks



Deliverable D9.2

## Intermediate Report and Revised Plan for FI PPP Alignment

Project Acronym	FInest	
Project Title	Future Internet enabled optimisation of transport and logistics networks	
Project Number	285598	
Workpackage	WP9 (FI PPP Alignment)	
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Dissemination Level	PU
Contractual Delivery Date	31.03.2012
Actual Delivery Date	
Version	1.0

## Abstract

*This report presents the second Deliverable of work package WP9 “FI PPP Alignment”, providing the intermediate report of the various activities concerned with contributions to and the alignment of the Finest Project with the FI PPP program conducted in the period M4-M12, and an outlook on the planned FI PPP alignment activities for the remaining duration of the project. Following the comprehensive strategy presented in the preceding report (see Deliverable D9.1), this provides the progress reports and achievements on tasks T9.1 – T9.4 as defined in the DoW of the Finest project.*

*Finest is the use case project on Transport and Logistics in the Future Internet PPP, as one of the eleven projects that constitute Phase I of the program. To warrant the overall success of the FI PPP as a whole, and – in consequence – of the Finest project, it is necessary to properly align the R&D activities among the projects and foster constructive collaboration. In full awareness of this, and with the goal of pro-actively contributing to the success of FI PPP, the Finest project includes a dedicated work package (WP9) that manages all activities concerned with the alignment of the project with the FI PPP. This shall facilitate achievement of both program-level objectives of the FI PPP as well as the specific objectives of the Finest project.*

*In the present period (M4-M12), the Finest project as conducted the plan for FI PPP alignment as defined in the preceding report (D9.1), without major changes on the responsibilities of consortium members nor the objectives for the distinct alignment activities, which cover both activities obligatory to FI PPP projects and the additional activities undertaken by the Finest consortium to prosperously align and synergize with the other FI PPP projects.*

*A major part of the alignment activities take place with the boards and structures for the program-wide coordination of the FI PPP, also referred to as the ‘FI PPP Governance Model’ that is facilitated by the CONCORD Support Action. This namely encompasses the Advisory Board, the Steering Board, the Architecture Board, and the Working Groups that have been set-up at the beginning of the FI PPP. For this, the designated Finest representatives have regularly participated and contributed pro-actively to the respective bodies. In summary, after the ramp-up phase for defining the specific tasks and working mode, each of the bodies is considered to be fruitful for achieving the program-level objectives of the FI PPP.*

*In addition to the obligatory FI PPP alignment activities, the Finest consortium as decided to also conduct the following specific alignment activities: (1) the close interaction with the FI-WARE project that develops the FI PPP Core Platform by the provision of requests for Generic Enablers that are particularly relevant for the Finest Platform and the direct interaction with the respective Chapter leads from the FI-WARE project, (2) the direct interaction with the INFINITY Support Action with particular attention to the design of suitable experimentation environments for conducting large-scale trials that are planned for the use case projects in Phase 2 of the FI PPP, and (2) direct collaboration with other Use Case Projects that address Future Internet related application domains in order to identify commonalities and cooperate towards complementary R&D activities.*

*This deliverable reports on the each of the mentioned activities for FI PPP alignment with respect to the main results and the relevance for Finest, including risk assessments and mitigation plans where appropriate. Overall – despite the fact that these activities require a substantial part of the project resources and travel budget in particular – the alignment activities are considered to be beneficial for achieving the project goals.*

## Document History

Version	Date	Comments
V0.1	09-02-2012	TOC + Content Outline
V0.2	05-03-2012	Added activity reports
V0.3	09-03-2012	Added activity reports
V0.5	09-03-2012	Revised Structure and Content Plan
V0.6	15-03-2012	Revised activity report
V0.7	21-03-2012	Added Introduction, Conclusion, Abstract
V0.8	23-03-2012	Integrated changes from internal reviews
V0.9	30-03-2012	Revised section on ArchB and FIWARE alignment
V1.0	31-03.2012	Final editing, ready for submission

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## Acronyms

Acronym	Explanation
FI PPP	Future Internet Public Private Partnership (EU-funded research program on the Future Internet) wherein Finest is a UC project
SB	Steering Board of the FI PPP
AB	Architecture Board on the FI PPP
FI-WARE	The FI-WARE project, developing the Future Internet Core Platform within the FI PPP
INFINITY	FI PPP Support Action for capacity and infrastructure building
CONCORD	FI PPP Support Action for program-wide coordination and alignment
UC	Abbreviation used for the Use Case projects in the FI PPP context

## 1. Introduction

As the use case project on Transport and Logistics, Finest is one of the eleven projects that constitute Phase I of the Future Internet PPP. One of the central aspects of the FI PPP is that the involved projects shall closely collaborate in form of a program in order to achieve more substantial impact. In full awareness of and commitment to this in order to ensure and pro-actively contribute to the overall success of the FI PPP, work package WP9 “FI PPP Alignment” of the Finest project is explicitly dedicated to manage all activities concerned with the alignment of the project with the FI PPP in a centralized manner.

This report presents the second deliverable of WP9, providing the intermediate report of the various activities concerned with contributions to and the alignment of the Finest project with the FI PPP program conducted in the period M4-M12, and an outlook on the planned FI PPP alignment activities for the remaining duration of the project. In the present period (M4-M12), the Finest project as conducted the plan for FI PPP alignment as defined in the preceding report (see Deliverable D9.1), without major changes on the responsibilities of consortium members nor the objectives for the distinct alignment activities, which cover both activities that are obligatory to FI PPP projects and the additional activities undertaken by the Finest consortium in order to prosperously align and synergize with the other FI PPP projects.

The deliverable consists of two main parts. As the first part, Section 2 reports on the main results of the distinct FI PPP alignment activities undertaken in the period M4-M12 of the project, pointing out the relevance for the Finest project and – where appropriate – a risk assessment and mitigation plan. This includes:

- The participation in the program-wide coordination activities (Section 2.1), including the Steering Board, the Architecture Board, and the Dissemination Working Group
- The alignment with the FI-WARE project (Section 2.2),
- The alignment with the INIFINTY project (Section 2.3), and
- The alignment with other FI PPP Use Case projects (Section 2.4).

As the second part, Section 3 provides a revised plan and an outlook for the FI PPP alignment activities that are planned for the remaining duration of the project (M13 – M24). In addition, the Appendix provides supplementary material to the report, namely: an overview of the responsibilities for the distinct FI PPP alignment activities, an overview of the Generic Enabler Requests submitted to FI-WARE, and a detailed overview of all activities undertaken for FI PPP alignment by the Finest Project.



## 2. Report on FI PPP Alignment Activities (M4-M12)

This section provides detailed reports on the main FI PPP alignment activities undertaken in M4-M12, summarizing the main activities, results, and the relevance for the Finest project, and providing risk assessments and mitigation plans where appropriate. We commence with reporting on the global coordination activities of the FI PPP, and continue with the specific alignment activities with FI-WARE, INFINITY, and other Use Case Projects.

### 2.1. Global FI PPP Coordination Activities

The global coordination activities are a set of bodies and working groups that are concerned with coordinating the interactions between the projects participating in the FI PPP and the conjoint work towards the program-level objectives. The CONCORD Support Action (see <http://www.fi-ppp.eu/projects/concord/>) is commissioned to facilitate this, while the general structure and responsibilities are defined in the “FI PPP Collaboration Agreement”.

The overall structure of the so-called FI PPP Governance Model has not changed (shown in Figure 1); the main progress is that – after the ramp-up phase for defining the specific tasks and working modes – each of the bodies has commenced work in order to achieve the program-level objectives of the FI PPP. The following reports in detail on the bodies where Finest has been actively involved in.

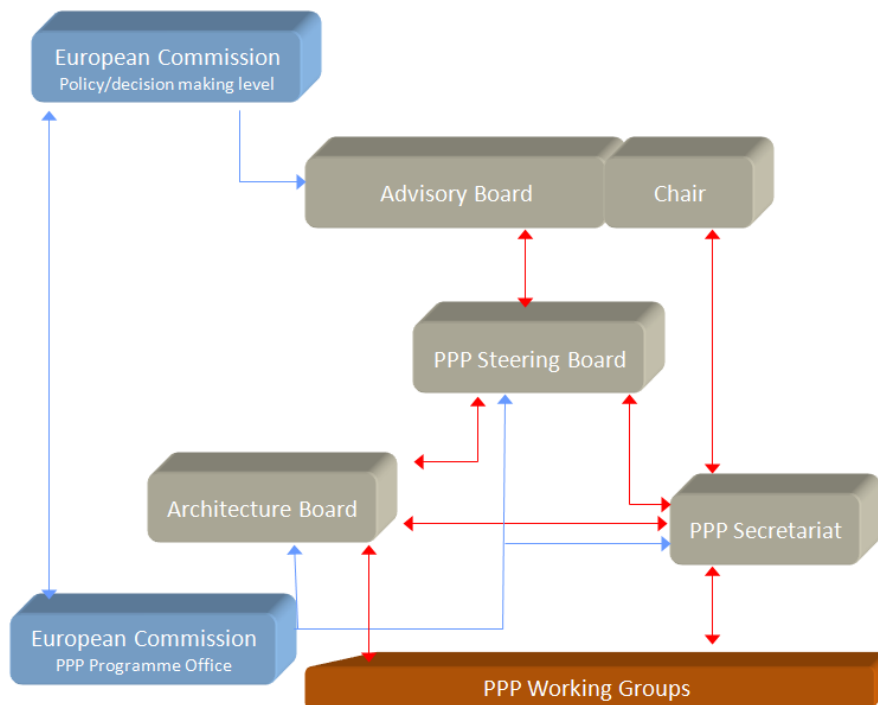


Figure 1: FI PPP Governance Model<sup>1</sup>

<sup>1</sup> Taken from ‘FI PPP Working Groups’ document provided by CONCORD, May 15, 2011.

### 2.1.1. FI PPP Steering Board

The Future Internet Public Private Partnership (FI PPP) is composed not only of individual projects, such as the Finest project, but it is a program in and of itself. As a program, the FI PPP requires the project work being conducted under its auspices to be coordinated. The mechanism selected to perform this coordination, from a managerial (i.e., non-technical) perspective, is the FI PPP Steering Board. The Finest representatives have actively participated in all Steering Board meetings (virtual as well as face-to-face) throughout the FI PPP program. Contributions have been made in the areas of stakeholder involvement in the program, use case information exchange, responses to the Commission's review of the program, selection of the program Advisory Board members, and assistance in developing business model frameworks for exploitation of the results of the UC projects. **Error! Reference source not found.** below provides an overview of the participation of the Finest representatives in the Steering Board meetings.

**Table 1: Overview Steering Board Meetings**

Date	Venue	Finest Participants
15 September 2011	Brussels, Belgium	Rod Franklin
25 October 2011	Poznan, Poland	Michael Stollberg Rod Franklin
17 November 2011	Virtual	Rod Franklin
15 December 2011	Virtual	Rod Franklin
25-26 January 2012 Combined Use Case discussion and Steering Board meeting	Brussels, Belgium	Rod Franklin
22 February 2012	Virtual	Rod Franklin
26-27 March 2012 Combined Use Case discussion and Steering Board Meeting	Brussels, Belgium	Michael Stollberg Rod Franklin

The main achievements of the Steering Board, briefly mentioned in the introductory paragraph of this section, deserve some further discussion. The Steering Board has addressed a broad array of topics that have a potential impact on the FI PPP program. Primary amongst these topics has been:

- The selection of an Advisory Board for the FI PPP program. Advisory Board selection was a necessarily lengthy process due both to find suitable candidates who could represent the FI PPP program and because of the initially vague role that this Board would serve for the program. Through extensive discussions on the role of the

Advisory Board a final understanding was developed on the Steering Board as to the types of individuals that would best serve in carrying out the responsibilities of the Advisory Board. A list of influential senior advisors who remain active in Internet related discussions was developed, and these individuals were approached to determine their interest in, and their willingness to commit time to, the FI PPP program. After this initial vetting process, the names of the individuals were submitted to the Steering Board for discussion and selection. The final outcome of this long process has been the selection of an Advisory Board that should be a very positive contributor in developing external support for the efforts of the FI PPP program.

- Use Case project information sharing and preparation for Phase II development and testing. The initial phase of the FI PPP program was bid in a manner similar to prior independent EU R&D efforts; that is, each project consortium bid as if its project was a standalone project without regard for the other projects in the program. While this approach has been successful for independent efforts, the European Commission has recognized that this is not the most useful model for ensuring the success of a tightly coupled program like the FI PPP program. With this recognition in mind, the Steering Board has worked to overcome inter-project barriers to communications through workshops focused on identifying where projects overlap and where synergies between projects exist. These efforts have significantly increased inter-project discussions and collaboration activities and should bear positive fruit in integrating findings from Phase I efforts so that advancement of novel concepts can occur during Phase II development and testing.
- Working group creation: The creation of working groups under the oversight of the Steering Board to address ad hoc or special topics of on-going interest has always been a recognized component of the Steering Board's charter. However, given the start-up requirements for the use case projects, the time of year in which the projects and programs began and the need to understand that the FI PPP program is really a program and not a set of independent projects required the Steering Board to delay the implementation of a number of working groups until these issues could be sorted out. With the advent of the new year, the Steering Board has begun to address working group creation and, besides the original working group focused on dissemination, working groups for standards, exploitation and business models, policy and regulations, and security and privacy have been created. It is expected that these working groups will become productive additions to the program as they establish themselves and begin to produce the work product that has been assigned to them.
- EU review of the program: The EU took a pro-active role in reviewing the FI PPP program management approach during the first year of the program. The outcome of this role was a set of recommendations by an independent group of reviewers on how some mid-course corrections could benefit the overall program. The Steering Board reviewed these recommendations and has developed actions plans to address those recommendations that were not already being addressed. Additional program reviews are being planned by the Commission and the Steering Board fully expects to adapt the positive recommendations that come from these reviews.

As has been indicated, there has been significant work done for, and accomplishments made by the members of the Steering Board on behalf of the FI PPP program. The Finest team supports these efforts and will remain active in future Steering Board related initiatives as it believes that effective overall program coordination is critical to the success of the FI PPP program and, ultimately, to the Finest project.

## 2.1.2. FI PPP Architecture Board

The Architecture Board (ArchB) brings together the technical leads of the UC projects with chief architects from FI-WARE and INFINITY to foster the alignment of the FI PPP projects on a technical level.

The ArchB meets monthly, where each 2<sup>nd</sup> meeting is a 2 day face-2-face meeting. The table below reports on the meetings and the Finest participants.

**Table 2: Overview Architecture Board Meetings**

Date	Venue	Finest Participants
21 – 22 September 2011	Paris, France	Michael Stollberg
25 October 2011	Poznan, Poland	Andreas Metzger Michael Stollberg
15 December 2011	Virtual	Andreas Metzger
21 December 2011 22 December 2011	Virtual (topic: FI-WARE Open Calls)	Andreas Metzger
18 – 19 January 2012	Sophia Antipolis, France	Andreas Metzger
16 February 2012	Virtual	Andreas Metzger
28 – 29 March 2012	Zurich, Switzerland	Andreas Metzger

The main contributions of Finest members to the ArchB in the reporting period were (also see Section 2.2 and Appendix B):

- Finest is chairing the Task Force on “Data Uncertainty”. The aim of the task force is to better understand the UC projects’ needs for GEs to specify, measure and reason on uncertain information and to identify potential open call topics to strengthen FI-WARE GEs.
- Finest participated and contributed to the intense work in identifying topics for the first open call of FI-WARE (see the meetings during December). Together with members from other UC projects many joint needs and feature requests have been scrutinized, leading to 2 initial topics for the open call. Further topics are being discussed for the subsequent calls.
- Finest has established strong interactions with the technical leads of SmartAgriFood and Instant Mobility to understand how to join forces for what concerns the definition of GEs, as well as future, Phase II activities (also see Section **Error! Reference source not found.**). Specifically, it has been realized that there is enough commonality between the UC projects (on the technical level) as to proceed and intensify technical alignment.

- The feature requests that have been contributed to the FI-WARE backlogs have been analysed and discussed during the ArchB meetings to better understand the needs from UC projects. In addition, the progress of the requests has been tracked (also through the online tracker system; for details see Section 2.2).

The ArchB now works together for almost one year. Initial problems in organizing and choosing adequate means for interaction have been resolved and each technical member of the ArchB contributes in a very open, collaborative and constructive way. Creating awareness of the significant progress the ArchB made could be improved – it appears that to a large degree the work of the ArchB goes unnoticed.

### 2.1.3. FI PPP Dissemination Working Group

The Finest project has participated in the below listed FI PPP Dissemination Work Group activities in this period. All activities are mainly coordinated by Finest Dissemination and Exploitation WP leader Haluk Gökmen who is also the member of FI PPP DWG. The Finest feedbacks and suggestions were mainly provided through teleconferences and e-mails. There was also a face to face meeting in Poznan to discuss the DWG and SEWG issues.

Finest has participated in the Stakeholder Engagement Work Group (SEWG) forming activities whose proposal has been prepared to be presented to the Steering Board for approval. The aim of the WG is to reach out to various external stakeholders through existing networks and communities, associated events and initiatives in order to support the FI-PPP projects in their individual external stakeholder engagement efforts.

The DWG has provided suggestions about FI PPP portal including the FI PPP logo, portal image, and the content of the web site as available links, use case project information, their web site links, etc.; the pilot sites for Finest project is also provided INFINITY (see Section 2.3).

Finest project presentation slides and project logo were provided to CONCORD to be included in the FI PPP web site with other use case projects. The upcoming events, FI-PPP newsletter, preparations for Poznan (i.e. DWG meeting, FI-PPP map, demo night), calendar of events, FI-PPP Dissemination Strategy and plan, Stakeholder Engagement work stream and some other issues are discussed during the DWG teleconferences. In addition to these, Finest has provided information on its activities that have been included in the FI PPP newsletters.

Finest team members Haluk Gökmen and Bülent Erbaş have participated in DWG Meeting in Poznan which is held during FIA week.

There were discussions in the DWG basically looking for ways of creating dramatic impact and visibility of the programme (e.g. big advertisement at the Brussels airport). In addition to this, another issue was how to better use of all dissemination channels (e.g. publication in prestige magazines, etc.). The projects wanted to make sure that Marketing and promotion material is easily accessed by all partners of all projects so FI-PPP promotion material can be taken to as many places as possible. One final remark was to increase the FI PPP internal communication, since it also plays an important role in this exercise as many companies and institutions are part of the FI-PPP and each of the partners can help to generate this impact (within their organizations, and through their organizations).

Finest has participated in preparation of "Smart city applications and services" FI PPP Session at Aalborg FIA Week. It is organised by Ana Garcia (ENoLL), Gianluca Ripa (CEFRIEL), Andreas Metzger (Finest Dissemination Manager). DWG is also trying to generate a bigger impact in the Future Internet Week in Aalborg in May since the FI-PPP SB has decided to delay the FI-PPP large event (to either 2H2012 or beginning of 2013). This session will address how to build Future Internet based applications and services in the smart city context from different perspectives which are addressed by FI PPP use case projects. All DWG members disseminated information about the FI-WARE's Open Call for Participation and upcoming 2nd FI-PPP Open Call. The DWG has discussed the support actions for the Steering Board decision for a large FI-PPP event in 2012 summer/fall season. DWG has suggested a few related and important events to collocate the planned large event.

Finest has actively participated and contributed to Dissemination Work Group activities from M4-M12 to increase the programme level impact of FI PPP. DWG activities are becoming more effective with common sessions in related events. Thus, it is necessary to organize common sessions with participation of more use case projects in related events to increase the impact of DWG activities in the upcoming period as it is planned in FIA week at Aalborg.

## 2.2. Alignment with FI-WARE

This section reports on the specific alignment activities with the FIWARE project that develops the Future Internet Core Platform and shall provide Generic Enablers for Future Internet technologies. This is particularly relevant for the overall technical design of the Finest Platform (WP3) and its Core Modules (WP5 – WP8), with respect to the availability and suitability of the FIWARE results and Generic Enabler implementations.

The interaction with the FI-WARE project is conducted via three channels: (1) by issuing feature requests to an online ticketing system using FusionForge (see: <https://forge.fi-ware.eu/>), by direct interaction with FI-WARE Chapters and Generic Enabler owners, (3) and the FI PPP Architecture that is presided by the FI-WARE Chief Architect. We here report on channels (1) and (2), while channel (3) is covered above in Section 2.1.2.

- (1) The below table shows the current status of the Finest feature requests that have been submitted to FI-WARE (see Appendix B for a complete list of identified features).

Each feature requests has been issued by the respective technical person (WP lead or contributor) such as to ensure short interaction cycles and expert opinions. Due to the fact that we chose this direct means of interacting with FI-WARE, we unfortunately faced some delays due to administrative problems with FI-WARE setting up the required user accounts. As a consequence not all features that have been identified (see Appendix B) have been submitted to the ticketing system. Those missing features will thus be issued after month 12 of Finest.

On the other hand, having submitted our feature requests at end of 2011 already, many of those are still under evaluation by FI-WARE or not “touched” at all (blue ones in the table). This issue has been discussed in the recent ArchB meeting, and UC projects and FI-WARE have agreed to speed up processes.

**Table 3: Finest Feature Requests in the FIWARE Ticketing System**

Finest.Epic.IoS.WorkflowExecutionEngine	Apps - Composition Execution	Under Evaluation by FI-WARE
Finest.Epic.Data.BigDataAnalysisAtRuntime	Data - Big Data Analysis	Already Covered by Baseline Asset
Finest.Epic.Data.QueryBroker	Data - Query Broker	Under Evaluation by FI-WARE
Finest.Epic.Cloud.TrustedObjectStorage	Cloud - Object Storage	Under Evaluation by FI-WARE
Finest.Epic.IoS.WidgetPlatformInfrastructure	Apps - Composition Execution	Under Evaluation by FI-WARE
Finest.Epic.I2ND.I2ND4FutureInternetApplications	None	Needs Revision by Issuer
Finest.Epic.Cloud.SLAContractStorageRetrieval	Cloud - Object Storage	Covered by FI-WARE Backlog Entries
FinancialClearingServices	Apps - Revenue Settlement & Sharing System	Under Evaluation by FI-WARE
TransactionNonRepudiation	None	Open
Finest.Epic.IoS.ServiceOrchestration	Apps - Composition Editor	Already Covered by Baseline Asset
Finest.Epic.IoS.ServiceCoordination	Apps - SLA Management, Apps - Composition Execution	Open
Finest.Epic.IoS.ServiceAssembly	Apps - USDL Service Description, Apps - Repository	Open

- (2) In addition to this structure and formal form of interaction, personal interactions have been established between FI-WARE and Finest, as IBM, SAP, UDE are members of both projects. As an example, SAP has started to investigate further the IoS chapter (led by SAP) and we have indications that we can employ their solutions for the middleware solutions we require for setting up the Finest platform. As another example, the Data chapter (led by IBM) will provide important capabilities for the event-processing module of the Finest platform.



Overall, despite the mentioned delays in setting up the online system for feature requests and the request processing process, the targeted FI-WARE results and the planned Generic Enablers are considered to be valuable and necessary for the technical design of the Finest Platform and its Core Modules, in particularly for the implementation that is planned in phase II of the FI PPP. Essentially, the vast majority of Generic Enablers planned by FI-WARE appears to be useful for realizing the Finest Platform; for those that appear to be of primary importance, the Finest technical team has submitted detailed feature requests as explained above.

The latest results of the FI-WARE project<sup>2</sup> provide a detailed description of the planned features and Generic Enablers (see FI-WARE Architecture overviews<sup>3</sup>) along with a roadmap that schedules the first major release for Q3 / 2012 (see FI-WARE Technical Roadmap<sup>4</sup>). An initial examination shows that this shall encompass a comprehensive set of initial GE implementations which have been identified as potential base technologies for the Finest Platform and its Core Modules. As this is highly relevant for the technical design and particularly for the concrete phase II implementation plans, the Finest technical team will carefully inspect the planned features and Generic Enablers by continuing and enforcing the alignment via the 3 channels mentioned above. Under consideration of the timeline of the FIWARE project, the Finest project plans to complete a refined analysis of the suitability of the FIWARE results for the Finest Use Case project by M18 and a detailed plan for using FIWARE results within the phase II implementation plans in M24; this is compliant with the work plan defined in the DoW.

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<sup>2</sup> Provided via access-controlled Wiki: <https://forge.fi-ware.eu/plugins/mediawiki/wiki/fiware/index.php>

<sup>3</sup> [https://forge.fi-ware.eu/plugins/mediawiki/wiki/fiware/index.php/FI-WARE\\_Architecture](https://forge.fi-ware.eu/plugins/mediawiki/wiki/fiware/index.php/FI-WARE_Architecture)

<sup>4</sup> [https://forge.fi-ware.eu/plugins/mediawiki/wiki/fiware/index.php/FI-WARE\\_Technical\\_Roadmap](https://forge.fi-ware.eu/plugins/mediawiki/wiki/fiware/index.php/FI-WARE_Technical_Roadmap)



### 2.3. Alignment with INFINITY

This section reports on the specific alignment activities with the INFINITY Support Action, which is investigating possible environments for conducting large-scale experiments that are planned for the use case projects in Phase II of the FI PPP. This has a direct relation to WP4 of Finest, where an experimentation environment for the Finest Platform and Use Cases is designed (see Deliverable 4.2 as the latest report on this).

Until the submission of this delivery, Finest has had the following meetings and interactions with INFINITY:

1. A preliminary workshop between all the FI PPP projects (Concord, Use Case projects and FIWARE) with INFINITY was held in Brussels end of June 2011. The purpose was for INFINITY to collect requirements from the other projects, requirements to INFINITY based on what the other projects considered INFINITY was to provide to them during all the phases of the program. Finest requirements included discovery and access to organizations in the Transport and Logistics domain for possible test sites and test data.
2. End of October Finest participated in the first workshop of the INFINITY Concertation Board in Poznan. This was a one-on-one meeting with INFINITY and not with the rest of the projects as Finest was undergoing its M6 review with the Commission during the same time as the workshop was taking place. Finest provided to INFINITY a high-level overview of its plan for the experimentation environment that will allow the evaluation and validation of Finest results in phase II. This included expectations from INFINITY and how to make use of INFINITY results as Finest understands them. During this meeting, Finest learned that INFINITY concentrates on discovering and providing access to ICT infrastructures in general that could support the large scale trials and less focused on domain specific physical infrastructures and domain specific data as Finest understood. This led to an update of the high-level description of the experimentation environment depicted in. On the one hand results from INFINITY may provide ability to access physical or at least ICT infrastructures in the T&L domain as well as data, and on the other, more likely, the results may provide ability to access infrastructure on which to run Finest during the next phases.
3. In February, Finest provided input and feedback to the first INFINITY survey with an extensive list of organizations that are to be considered to be surveyed. Following this feedback both projects held a conference call to discuss once more the expectations from each other which evolved mainly around the general ICT infrastructure survey versus domain specific infrastructures. The main take away during this conversation was to strengthen the next version of the INFINITY survey to collect information on available historical data that Use Case projects may use in the next phases.
4. The second workshop of the INFINITY Concertation Board took place in Zurich in the end of March. The main agenda was on the Security and Privacy challenges, mainly on user data, that the projects in the FI-PPP are facing. Summary and results from this workshop will be discussed in the next deliverable as this meeting to place a few days before the submission of this deliverable.

As an overall assessment, we consider the collaboration with INFINITY is in general very open and constructive. Both projects are learning what their goals are and their expectations from each other during the workshops and conference calls.

Finest expectations from INFINITY are mainly to provide information and access to physical and ICT infrastructures as well as operational data that can serve in large scale trials to evaluate and validate the proposed solution on top of FIWARE. Finest is less concerned on finding potential environments in which to host the solution, rather the concern is to integrate and leverage existing infrastructures to enable a Future Internet collaboration based environment for the various players in the Transport and Logistics domain with minimal on boarding development and costs.

INFINITY on the other hand is more focused on identifying organizations with capabilities and needs to host or run a FIWARE based solution. There also seems to be more focus on potential candidates that have a C2B type of interaction specifically in the Smart Cities arena between city\government and its citizens.

At this stage, Finest assessment from the collaboration with INFINITY is that Finest may be able to get access to valuable data for the next phases and this is what Finest is trying to bring through into INFINITY's next version of their survey. A major point to deal with is the security and privacy aspects of this data and therefore the 2<sup>nd</sup> Concertation Board workshop held end of March was important.

Regarding a risk and mitigation plan, Finest sees the following risks in its dependency on INFINITY's results:

- The targeted organizations to be surveyed by INFINITY will not yield relevant information on infrastructure and data that Finest can make use of. Fortunately, the Finest consortium includes domain partners with various and varying roles in the Transport and Logistics plan. We believe we can make use of their existing infrastructure and operational data to effectively evaluate and validate Finest in later stages of the program,
- Finest will not have sufficient access to organizations and data for the large scale trials. As part of the validation and dissemination plan of Finest, we are building a user community and are reaching out to them to validate and improve the solution. We believe we will find possible collaborators and potentially additional partners that we can work with in the next phases of the program.

## 2.4. Alignment with Use Case Projects

The eight use case projects being funded under the FI PPP program, of which the Finest project is the one focusing on the domain of transport and logistics, are key elements in the demonstration of how Future Internet technologies will benefit the European Community. These use case projects were competitively bid during the proposal phase of the FI PPP program and, as such, came into the program without defined internal views of how their work might overlap with the work of the other use case projects. While this project focused viewpoint was to be expected given the competitive bidding process utilized in awarding European Union funding for projects, it has been recognized from the beginning of the FI PPP program that there might be significant opportunities for projects to leverage/combine overlapping demonstration areas where synergies exist.

The Finest project, as a demonstration use case project for the general domain of transport and logistics operations, recognized early in its efforts that its general domain focus could provide it with positive overlap relationships with several of the other, more targeted, use case projects. In particular, the SmartAgriFoods and Instant Mobility projects both had elements within their use case models that could be enabled and further enhanced through the general domain services being specified in the Finest project. With respect to SmartAgriFoods, its focus on bringing perishable agricultural products from the field to the market in a timely and efficient manner requires a transport and logistics infrastructure identical to that which the Finest project is seeking to demonstrate. Similarly, Instant Mobility's city logistics focus is a logical extension of the Finest project's international logistics focus, extended the Finest logistics model to "last mile" deliveries.

Recognizing these overlapping and potentially synergistic areas, the Finest team has initiated several meetings with both the SmartAgriFoods and Instant Mobility projects to open a dialog as to how the three use cases, working together, might create greater value for each project as well as the European Community through the leverage of each project's work (see the Appendix for the details on the undertaken alignment activities). These dialogs have continued and have led to a set of identified supporting and demonstration activities that could, if developed in an open and collaborative manner during the next phase of the FI PPP program, lead to demonstrations of capabilities within the Future Internet that each project operating in a vacuum would not be able to show.

The work that the Finest team, in collaboration with the Instant Mobility and SmartAgriFoods teams, has led to the structuring of a business model approach that has been used by the FI PPP Steering Board to begin aligning and identifying synergies that might exist between other projects. During the January use case meeting between all FI PPP use case partners, the first steps were initiated between all use case projects to identify potential overlaps and synergies using business model, rather than technology model, approach. This business model approach was derived from the work that the Finest team, in collaboration with Instant Mobility and SmartAgriFoods and the CONCORD teams, developed during its dialogs with these teams.

This initial effort at identifying overlaps and synergies led to a second, more detailed discussion between use case teams at the March Steering Board meeting in which Phase II collaboration activities between the use case teams was discussed. These discussions centered around how the various teams could structure their proposals for Phase II such that the areas of synergy between the use cases could be exploited, either through adherence to standards so that, should a use case proposal receive funding, integrated demonstrations could be conducted, or through cross project direct collaboration where elements of overlap could be exploited through a coordinated development process in which one project's developments could be directly used by

another project to demonstrate that particular project's domain overlapping service. This last concept has particular appeal as it leverages the money already spent by the Commission on the ideas being developed through the use case projects and increases the coverage of future funding by breaking down barriers between independent projects so that the services developed in one project can be directly employed by other concurrently running projects to demonstrate their particular domain implementations. The idea also recognizes that while there may be overlaps between projects that can be exploited through "shared" service development, there are also significant differences based on the particular domain that require domain focused development efforts.

In the process of working together to identify synergies between the various use cases further knowledge about the needs for services from the FI WARE PaaS element of the FI PPP has been developed. It is clear that the use case projects are focusing on the SaaS layer of the triple layer cloud model (IaaS, PaaS and SaaS). Services from the FI WARE effort are critical to the success of all use case projects. The "generic enablers" being developed by FI WARE and requested by the use case teams form the foundation for any success in the second phase of the FI PPP program. Without such services it will be difficult for the use case teams to show true advances in ICT enabled capabilities since the teams will either have to develop these services themselves (which will inhibit their ability to develop their detailed domain services demonstrators) or rely on existing Internet capabilities, which are poorly structured to support the planned capabilities. As all use case projects are relying on the FI WARE project to deliver a useful PaaS layer, it is critical that this layer be developed as envisioned.

### 3. Revised Plan and Outlook

The detailed reports on the various FI PPP alignment activities have shown that the Finest project is actively involved in essentially all program-level activities, and, in addition to this, is driving direct alignment with FI-WARE, INFINITY, and other related Use Case projects. In summary, we can conclude that – after a longer ramp-up phase where the various boards, working groups, and the individual projects have clarified the tasks, objectives, and the operational mode – the program-level coordination activities have taken up constructive work on working towards the program-level objectives in a cooperative manner.

As an overall assessment, substantial progress has been made on various aspects, ranging from business models over technical design and architecture decisions and dependencies between the projects and cooperation activities. On the other hand, several challenges have arisen, particular in the expectations from the UC-projects towards FI-WARE, on the program-level coordination activities facilitated by CONCORD, the suitability of the services provided by INFINITY, and the alignment and synergies among the use case projects with particular attention to the preparation for the follow-up projects in Phase II of the FI PPP. However, we consider this as the normal process of establishing fruitful collaboration within the FI PPP, taking the novelty and general structure as a EU-funded program consisting of various projects into account.

For the Finest project, the FI PPP alignment activities are, in general, considered to be fruitful and beneficial in order to achieve the project objectives. Apart from the various upcoming issues arising within the program – mostly importantly the formation of additional FI PPP working groups, and the provisioning and suitability of results from FI-WARE as well as from INFINITY, for which we have depicted the risk and mitigation plans above – an aspect that will influence the capacities of the Finest consortium to continue on the FI PPP alignment activities is the remarkable effort that this requires, in terms of resources and especially with respect to travel budgets. The main partners involved in the FI PPP alignment activities (KN, SAP, UDE, IBM, and ARC) have already invested more resources than planned; in consequence, the participation in project and FI PPP activities – in particular those requiring travelling – need to be optimized to the most relevant events.

For the upcoming milestones of the project, the Finest consortium plans to continue the FI PPP alignment activities. For this, the overall strategy as already defined in Deliverable D9.2 will remain unchanged; we will merely refine this with respect to upcoming changes within the FI PPP. The main focus for the upcoming milestones will be on the alignment with the other Use Case projects in preparation for Phase II of the FI-PPP, and the further alignment with the FI-WARE and INFINITY projects, as this will determine the planning for follow-up projects in Phase II to a very substantial extend. We also will carefully consider the changes that are currently considered on the coordination activities facilitated by CONCORD, particularly the formation of additional working groups, taking the relevance for Finest as well as the resource commitment into consideration.

## Appendix

### (A) FI PPP Alignment Responsibilities

The following enlists the responsibilities for the distinct FI PPP alignment activities. There have not been any changes on this from the initial plan that has been presented in Deliverable D9.1.

#### Overall FI PPP Alignment Coordination:

- Dr. Michael Stollberg (SAP), FI PPP Alignment Coordinator

#### Finest Representatives in FI PPP Global Coordination Activities

##### 1) FI PPP Steering Board

- Dr. J. Rod Franklin (KN), Project Coordinator
- Dr. Michael Stollberg (SAP), FI PPP Alignment Coordinator

##### 2) FI PPP Architecture Board

- Dr. Andreas Metzger (UDE), Technical Coordinator
- Dr. Michael Stollberg (SAP), FI PPP Alignment Coordinator (deputy)

##### 3) Dissemination Working Group: Haluk Gökmen (ARC), WP 10 Lead

#### Finest Leads for Additional FI PPP Alignment Activities

- 1) **FI-WARE Alignment:** Dr. Andreas Metzger (UDE), Technical Coordinator
- 2) **INFINITY Alignment:** Guy Sharon (IBM)
- 3) **FI PPP Use Case Project Alignment**
  - Dr. J. Rod Franklin (KN), Project Coordinator
  - Dr. Michael Stollberg (SAP), FI PPP Alignment Coordinator

## (B) Overview Generic Enabler Requests from Finest Project

The following table enlists the requests for Generic Enablers that have been submitted to FI-WARE by the Finest Project.

Note: We strive to issues requests for all **MUST** features. However, we unfortunately faced some delays due to administrative problems with FI-WARE setting up the required user accounts. As a consequence not all those features requests have been issued (they are marked in boldface).

**Table 4: Overview of Request on Generic Enablers from Finest**

No.	Label / Feature	Importance	Ticket Issued
1	Finest.Epic.IoS.WorkflowExecutionEngine	MUST	YES
2	Finest.Epic.IoS.WidgetPlatformInfrastructure	Should	YES
3	Finest.Epic.IoS.ApplicationCompositionConnectivity	MUST	<b>NO</b>
4	Finest.Epic.IoS.GUIWorkflow	Should	NO
5	Finest.Epic.IoS.ServiceOrchestration	MUST	YES
6	Finest.Epic.IoS.ServiceCoordination	MUST	YES
7	Finest.Epic.IoS.ServiceChoreography	Should	NO
8	Finest.Epic.IoS.ServiceAssembly	MUST	YES
9	Finest.Epic.IoS.FinancialClearingServices	MUST	YES
10	Finest.Epic.IoT.EventSubscription	Should	NO
11	Finest.Epic.Data.BigDataAnalysisAtRuntime	Should	YES
12	Finest.Epic.Data.QueryBroker	MUST	YES
13	Finest.Epic.Data.EventProcessingPrediction	MUST	<b>NO</b>
14	Finest.Epic.Data.CaptureCollectEvents	MUST	<b>NO</b>
15	Finest.Epic.Data.DisseminateDerivedEvents	Should	NO
16	Finest.Epic.Data.OptimizationModelsAndExecution	Should	NO
17	Finest.Epic.Cloud.TrustedObjectStorage	MUST	YES

18	Finest.Epic.Cloud.DynamicScale	MUST	NO
19	Finest.Epic.Cloud.InfrastructureInteroperability	MUST	NO
20	Finest.Epic.Cloud.ApplicationDevelopmentManagement	Should	NO
21	Finest.Epic.Cloud.SLAContractStorageRetrieval	MUST	YES
22	Finest.Epic.I2ND.I2ND4FutureInternetApplications	MUST	YES
23	Finest.Epic.Security.VPN	MUST	NO
24	Finest.Epic.Security.IdentityManagement	MUST	NO
25	Finest.Epic.Security.AccessControl	MUST	NO
26	Finest.Epic.Security.SecureStorageService	MUST	NO
27	Finest.Epic.Security.SecurityMonitoringEventManager	MUST	NO
28	Finest.Epic.Security.NextGenerationFirewall	Should	NO
29	Finest.Epic.Security.AntiVirusMalwareDetection	Should	NO
30	Finest.Epic.Security.IPS	Should	NO
31	Finest.Epic.Security.DatabaseWebApplicationFirewall	Should	NO



### (C) Excerpt FI PPP Alignment Tracker

The table below provides a detailed overview on all activities that have been undertaken for FI PPP alignment by members of the Finest project. This table – called the ‘FI PPP Alignment Tracker’ – is maintained within eRoom (Finest online communication facility).

**Table 5: Detailed Overview on FI PPP Alignment Activities**

DATE	ACTIVITY	INVOLVED PEOPLE	VENUE	COMMENTS
cont.	FI PPP Steering Board monthly concalls	Rod Franklin, Michael Stollberg	virtual	taking place regularly on a monthly basis, starting in May 2011
cont.	FI PPP AB monthly concalls	Andreas Metzger, Michael Stollberg (deputy)	virtual	regular, schedule for 2012 defined in Poznan Meetings (10/2011)
19.05.2011	Sterring Board f2f meeting	Michael Stollberg (SAP)	Budapest	
19.05.2011	Archctecture Board Meeting	Andreas Metzger (UDE), Michael Stollberg (SAP)	Budapest	
22.09.2011	Architecture Board Meeting	Michael Stollberg (SAP)	Paris, FR	
15.09.2011	Steering Board Meeting	Rod Franklin (KN)	Brussels	
19.05.2011	FI PPP Dissemination Working Group Meeting	Haluk Gökmen	Budapest	
25.10.2011	Steering Board Meeting	Rod Franklin (KN), Michael Stollberg (SAP)	Poznan, PL	
25.10.2011	Architecture Board Meeting	Andreas Metzger (UDE), Michael Stollberg (SAP)	Poznan, PL	
25.07.2011	Provisioning of 'Finest Generic Presentation' to FI PPP Dissemination Working Group	Haluk Gökmen (ARC), Andreas Metzger (UDE), Rod Franklin (KN), Michael Stollberg (SAP),		on request of CONCORD for program-level dissemination
20.06.2011	Establishment of CONCORD Liaison Partner for Finest (Jani Kaarlejärvi)	Michael Stollberg (SAP)		following the request from CONCORD to established direct links

04.07.2011	Provisioning of Finest Plan for FI PPP to CONCORD liaison partner	Michael Stollberg (SAP)		
29.06.2011	FI-PPP projects / INFINITY Meeting	Fabiana Fournier and Guy Sharon	Brussels - IBM joined by phone	Agenda - Requirements Gathering from the FI-PPP projects
07.09.2011	f2f meeting of technical WPs for identifying initial GEs and preparation of Requests	Technical WP Leads + contributors	Istanbul	
20.09.2011	online document with M& GE Requests	all technical WP leads + contributors	virtual	online document on Finest website: <a href="http://www.finest-ppp.eu/index.php/project-results/generic-enablers">http://www.finest-ppp.eu/index.php/project-results/generic-enablers</a>
21.09.2011	FI PPP AB Meeting	Michael Stollberg	Paris	presentation of Finest HLA + initial GE Requests
27.10.2011	First Concertation Board workshop with INFINITY and the UC projects	Guy Sharon - IBM	Poznan, Poland	[additional remarks or comments, if any]
11.10.2011	Added Finest GE Requests to FI-WARE Wiki	All 'owners' of GE Requests		
24.10.2011	1. Tri-lateral Use Case Project Meeting (Finest, SmartAgriFood, Instant Mobility)	Krijn Poppe (SmartAgriFood)		
25.10.2011	FI PPP AB meeting	A. Metzger, M. Stollberg	Poznan, PL	
25.10.2011	FI PPP DWG Meeting	Haluk Gökmen, Bülent Erbas	Poznan, PL	
20.09.2011	FI-PPP Dissemination Work Group monthly Concalls	Haluk Gökmen (ARCelik)	Virtual	Taking place regularly on a monthly basis starting in September 2011

25.01.2012	meeting	Rod Franklin	Brussels, Belgium	FI PPP Use Case Workshop
26.01.2012	meeting	Rod Franklin	Brussels, Belgium	FI PPP Use Case Workshop
26.01.2012	meeting	Rod Franklin	Brussels, Belgium	Steering Board Meeting
23.01.2012	INFINITY Pilot Survey	Guy Sharon	Brussels, Belgium	Feedback on questionnaire
22.02.2012	concall with INFINITY	INFINITY (Chris Folley), Guy and Fabiana	virtual	Discussed responsibilities of INFINITY, understanding what it could provide to Finest and how Finest can direct INFINITY (through the surveys)
27.02.2012	FI-PPP Dissemination Work Group monthly Concalls	Haluk Gökmen (ARCelik)	Virtual	Taking place regularly on a monthly basis starting in September 2011
23.01.2012	Smart city applications and services workshop setup (FI PPP Session at Aalborg FIA Week)	Andreas METZGER (UDE) and Haluk GOKMEN(ARCelik )	Virtual	Telcos and e-mails
02.03.2012	Finest Planned Dissemination Events to DWG	Haluk GOKMEN (ARCelik)	e-mail / phone call	DWG Collects all use-case planned events
03.02.2012	Feedback for CONOCD's Dissemination Plan	Haluk GOKMEN(ARCelik )	e-mail / phone call	DWG Activity
18.01.2012	Architecture Board f2f	Andreas Metzger	Sophia Antipolis, France	2 days (18.-19.01.)
26.03.2012	Use Case Meeting	Rod Franklin, Michael Stollberg	Brussels, Belgium	
27.03.2012	Steering Board F2F	Rod Franklin, Michael Stollberg	Brussels, Belgium	
28.03.2012	Architecture Board f2f	Andreas Metzger	Zurich, CH	2 days (28.-29.03.)