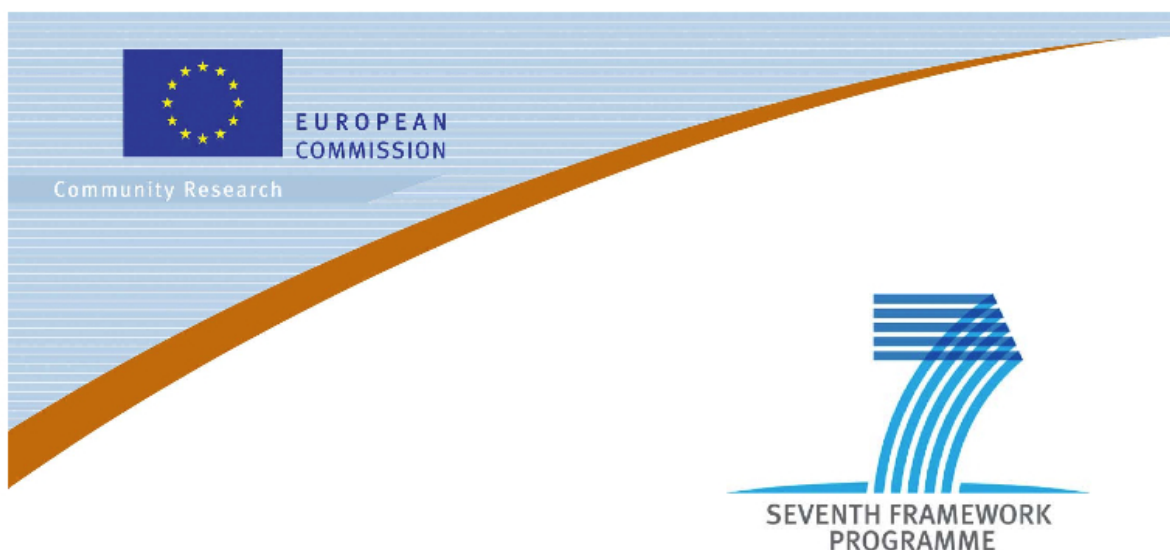


# FI-WARE Report On Collaboration Activities front page

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## Large-scale Integrated Project (IP)



### D.12.3: Report on Collaboration Activities.

**Project acronym:** FI-WARE

**Project full title:** Future Internet Core Platform

**Contract No.:** 285248

**Strategic Objective:** FI.ICT-2011.1.7 Technology foundation: Future Internet Core Platform

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**Author:** FI-WARE Consortium

**Contributors:** FI-WARE Consortium.

**Abstract:** This deliverable provides an account of the Collaboration activities performed by FI-WARE in the course of the first six project months.

**Keyword list:** FI-WARE, PPP, Architecture Board , Steering Board, , INFINITY, FIRE Projects, FInES Cluster, AAL, CELTIC, ETP, EnoLL, EIT ICT, es.Internet, Latin American Platforms

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# Collaboration activities

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FI-WARE is the Technology Foundation of the Future Internet PPP. By nature it can not run in an isolated way, being obvious that its most important success will be the adoption of the technology by the Use Case projects. All of them together give sense to a programme that should help Europe and all the companies involved in the projects to:

a) Increase innovation in the technology itself, helping to shape the future of the so called Future Internet (understanding this concept as a convergent view between different technological pillars that comprise networking aspects, but also Internet-of-Things, Data and context management, Cloud computing, Trust and Security and Internet of Services).

b) Increase the industrial competitiveness of business sectors in Europe whose impact in the economy is relevant enough so that we ensure that they do not lack behind other competitors, and furthermore that they go beyond them. The way the FI PPP will contribute to that is by bringing the technology to its adoption in those sectors.

FI-WARE, as derived from this, is a crucial piece in this puzzle, and the collaboration with all the other projects of the FI PPP in this phase and the next ones is as important as the construction of the technology foundation itself.

But besides FI PPP projects there are many other initiatives FI-WARE can not ignore because they will bring value to the overall programme. Collaboration can be sometimes active actions between two parties and some other times, it can be based on mutual exchange of information to foster coordination among initiatives. This page summarizes main steps brought about by FI-WARE in the first six months.

## Collaboration with projects under the FI PPP umbrella

### Overview

The collaboration with other projects under the FI PPP umbrella happens at two levels: strategic level and operational level.

- The **strategic level** uses the PPP **Steering Board** as collaboration instrument.

The Steering Board counts on two representatives of each of the projects under the PPP umbrella and its organization is supported by the CONCORD project. FI-WARE representatives in that body are Mr. José Jiménez, from Telefónica R&D and Ms. Nuria de Lama, from Atos.

The kind of discussion topics that fall under this category are: joint dissemination efforts including the definition and agreement on strategic communication messages that affect the set of projects as a whole, support to organize and attend relevant events for the PPP, issues related to time synchronization between the projects or analysis of overall performance of the programme (even though this one is at early stage and will be emphasized in the coming months), to name a few.

- The **operational level** uses the PPP **Architecture Board** as collaboration instrument.

The Architecture Board is composed of two representatives of each of the projects under the PPP umbrella and it's chaired by FI-WARE. FI-WARE representatives in that body are Mr. Juan José Hierro, from Telefónica R&D and Mr. Thomas Bonnert, from SAP.

In this framework FI-WARE informs other projects about the technical progress of the project as well as the tools available to support the continuous feedback among them. In the first period, for example, a complete environment to gather requirements from the Use Cases has been set up. This is based on a backlog that allows the tracking of each of the requirements pointed out by each of the Use Case projects. It is then a bilateral channel with a lot of potential to ensure that interests of the use case projects and FI-WARE are well aligned. In the end, this will reflect the potential of FI-WARE to satisfy their needs and make an impact at business level.

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## FI-WARE in the FI-PPP Steering Board (SB)

FI-WARE is participating at the **FI-PPP Steering Board (SB)**. This body shall:

- Act as the highest program-level decision making authority
- Be responsible for decisions regarding Programme level vision and roadmap alignment, priority setting, standardisation requirements, as well Use Case Scenario evaluations and required standardisation, licensing, methodological and other support needs
- No escalate decisions, “must decide”, based on consensus
- shall make recommendations for implementation in respective FI-PPP projects when required. If recommendations require changes of objectives and/or effort and budget allocation, a contract change has to be agreed and implemented together with the Commission

The Steering Board shall not be entitled to act or to make legally binding declarations on behalf of any Party

## FI-PPP SB Meetings and agreements

Following is the list of face to face as well as virtual meetings hold by the FI-PPP SB

- **Initial f2f meeting May 19, 2011 in Budapest** [Meeting minutes <sup>[1]</sup>]  
Summary of main conclusions:
  - Constitution of SB
  - Creation of Dissemination WG
- **Intermediate virtual meetings:**
  - June 22 [Meeting minutes <sup>[2]</sup>]
  - July 21 [Meeting minutes <sup>[3]</sup>]
  - September 15 [Meeting minutes <sup>[4]</sup>]
- **Second f2f meeting October 25, 2011 in Poznan** [Meeting minutes <sup>[5]</sup>]  
Summary of main conclusions:
  - Discussion on Advisory Board composition and functions
  - Future actions

## FI-WARE in the FI-PPP Architecture Board (AB)

The **FI-PPP Architecture Board (AB)** is the principal body for program-level coordination activities of all kinds of technical aspects and in between FI-WARE, Use Case projects, CONCORD, INFINITY, and potentially further external stakeholders and communities covering a wider range of Usage Areas. This board meets on a monthly basis, either physically or virtually, and elaborates on issues related to program-level architectural and technological directions. The board is **chaired by the FI-WARE Chief Architect** and each FI-PPP project is represented by two delegates. The overall mandate from a legal viewpoint is documented in the FI-PPP Program Agreement.

One major and immediate concern of the AB was to establish and maintain coordinated interactions between FI-WARE, the Use Case projects, and other FI-WARE-external stakeholders, including other projects in the same or different Usage Areas. In order to support such interactions in a sustainable and uniform manner two dedicated processes have been defined for:

- FI-WARE General Support
- FI-WARE Theme/Epic/Feature Requests

The first process, "**FI-WARE General Support**", defines a concrete procedure for issuing any sort of technical request and how it will be processed by FI-WARE. The tooling for this process is integrated into the FI-WARE collaboration platform FusionForge and is a combination of Tracker (ticketing support system) and a Task Manager.

In order to issue a "**FI-WARE General Support Ticket**" any external user needs to register a FusionForge account and has to request access to the FI-WARE meta project hosted on FusionForge. Once access is granted the user can proceed to the "FI-WARE General Support" tracker and issue a ticket by filling the provided form with context information along various aspects, like basic issuer information, relation to FI-WARE Chapters, Generic Enablers, and many other features. As soon as the request was issued a ticket is generated and the Chief Architect and his team is requested to perform an initial screening. If the information provided is consistent and complete the Chief Architect will assign the ticket to a respective handler (e.g. a Chapter Leader or Chapter Architect) and in addition, creates an associated task with a start and expected end date which is then assigned to the ticket and the ticket owner. Once the new ticket/task owner is informed about the assignment, she/he will decide about appropriate measures to be taken in order to process the request. This could be, for instance, in the form of setting up a workshop with the ticket issuer in order to discuss the technical details of the ticket. A more straightforward example would be a simple reply with a comprehensive answer with respect to the information requested. The actual handling of each and any ticket may require several interactions and the system (tracker) supports this by different means that allow to document and track the interactions and measures taken. Even after the completion and closure of the final ticket / task the information will stay in the system's database and can be recovered at any later point in time. Obviously, this straightforward and unified approach provides a single point of access to any external stakeholder without heavy and uncoordinated interactions (e.g. by email and document exchanges via various channels). In addition, the system is configured such that a maximal level of transparency is maintained to all system users, that is FI-WARE internal and external, which is considered by FI-WARE as an important element for constructive, effective, and efficient collaboration.

The second major topic is related to the technical scope of FI-WARE and individual projects in Usage Areas. **The mission of FI-WARE is to develop a generic platform that is holistic and complete.** It should provide projects in Usage Areas with a basic Future Internet infrastructure and platform on top of which they can develop and operate domain specific applications and services. The FI-WARE architecture should in addition provide support for domain specific extensions of any sort by projects in a given Usage Area. One obvious issue is therefore agreement on what features are "generic", that is what is in the scope of FI-WARE and supported by FI-WARE Generic Enablers, and what features are "domain specific" and thus out of the scope of FI-WARE. Establishing common agreement on such discussions is one of the most central mandates of the AB. In order to support this mission a dedicated process was defined and implemented by respective support tooling. Here the Agile Development approach of FI-WARE was adopted and extended as baseline methodology for the whole FI-PPP as it supports cross-team/-project collaboration along a synchronous roadmap. For this purpose a so-called Unclassified Features Backlog has been created in which projects linked to Usage Areas can insert their Features Requests towards FI-WARE. Entries in this backlog are described in a commonly agreed format, the so-called FI-PPP Backlog Entry Format (see FI-WARE Agile Development Methodology). Once the feature request is completely described and available in the Unclassified Feature Backlog, a similar procedure as for "FI-WARE General Support" takes place. The requesting party submits a ticket by using the "FI-WARE Theme/Epic/Feature Requests" tracker. Once the ticket is submitted, the FI-WARE Chief Architect and his team is notified and requested to verify and validate the ticket. If the ticket is consistent and complete the Chief Architect will assign the ticket to a respective handler (e.g. a Chapter Leader or Chapter Architect) and in addition, may create an associated task with a start and expected end date which is then assigned to the ticket and the ticket owner. Once the new ticket/task owner is informed about the assignment, she/he will decide about appropriate measures to be taken in order to process the request. This could be, for instance, in the form of setting up a workshop with the ticket issuer in order to discuss the technical details of the Feature Request. A more straightforward example would be a simple reply with a comprehensive statement with respect to the nature of the feature requested, e.g. domain specific, generic, already covered by a FI-WARE Generic Enabler, not yet covered by a FI-WARE Generic Enabler but in consideration, or other states. The actual consensus establishment may require several interactions and the system (tracker) supports this by different means that allow to document and track the interactions and measures taken. At the very end there will be a decision about the nature of the requested feature.

For the specific case that the requested feature will become part of the FI-WARE technical roadmap the respective FI-WARE Chapter will be identified and the requested feature will be transferred into the respective FI-WARE Chapter backlog.

Meanwhile **both processes and the respective tooling is operational**. In order to facilitate uptake and to lower entry barrier, a **comprehensive set of tutorials** and other supporting documents were written and are publicly available on the public FI-WARE Wiki (<http://wiki.fi-ware.eu>):

- How to ask questions or providing feedback to the FI-WARE team
- How to upload the full description of requested new Themes/Epics/Features to the Wiki
- How to request for the addition of new Themes/Epics/Features in the FI-WARE Backlog

As mentioned previously, the AB meets on a monthly basis and is hosted on a rotating basis by AB members organizations. Following is the list of meetings celebrated so far:

AB Kick-Off Meeting, Co-located with the Future Internet Assembly, May 19 2011, Budapest, Hungary ( Agenda, Minutes <sup>[6]</sup>)

- Major outcomes:
  - High-level introduction of the persons projects, and organizations involved in the AB
  - FI-WARE Roadmap and Agile Approach introduced in great detail

AB Virtual Meeting, June 19 2011 ( Agenda, Minutes <sup>[7]</sup>)

- Major outcomes:
  - Introduction of the FI-PPP Backlog Template (Agile Approach)
  - Discussion and identification of potential collaboration support tools (e.g. AgileFant, FusionForge, Trac, etc)
  - Discussion on methodologies for requirements engineering (processes, tools)

AB Meeting, July 11-12 2011, Madrid, Spain ( Agenda, Minutes <sup>[8]</sup>)

- Major outcomes:
  - Agreement on the FI-PPP backlog template
  - Rules for on-demand expert invitation to AB
  - Collaborative tools for Agile discussed (AgileFant and FusionForge for Agile Development)

AB Virtual Meeting, August 25 2011 ( Agenda, Minutes <sup>[9]</sup>)

- Major outcomes:
  - Process for "FI-WARE General Support" presented and agreed
  - AgileFant dropped in favor of FusionForge/Tracker/Wiki

AB Meeting, Sept 21-22 2011, Paris, France ( Agenda, [Minutes under review])

- Major outcomes:
  - FI-WARE Product Vision presented and agreed
  - Collaboration space "FI-WARE FusionForge" presented and accepted
  - FI-WARE Tutorials for collaboration introduced

AB Meeting, Co-Located with Future Internet Assembly, Oct 2011, Poznan, Poland ( Agenda, [Minutes under review])

- Major outcomes:
    - Status on INFINITY Capacities DB
    - FI-WARE Apps/Services Framework presented to Usage Areas (follow-up requested)
    - FI-WARE Feature Request Process and Unclassified Backlog introduced and accepted
    - Timeline towards 1st FI-WARE OpenCall agreed
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## **FI-WARE and other WGs under the FI PPP umbrella**

While FI-WARE will increase dissemination and communication activities around its own results in the next period of the project when first components are released, the first 6 months, however, have been a joint effort to provide a coherent message around the overall PPP. CONCORD has facilitated the understanding and agreement among the different parties.

FI-WARE has used CONCORD to open many dissemination channels. These channels can be classified mainly into two types:

- **Dissemination media**, such as the website, where a description of FI-WARE together with main contact data are reflected, as well as the newsletter (PPP snack), to name the most important ones. FI-WARE has also provided a general presentation for overall communication purposes that can be used by CONCORD at any time to promote the project and let other communities know about our activities.
- **Presence of FI-WARE in Relevant Events**. Some examples are:
  - Future Internet European Summit (FIS 2011 in Lux)
  - The 3rd European Innovation Summit: official session held at The European Parliament (Brussels) on October 11th ("Future Internet - Smart Cities - Coming your way".)
  - OPEN DAYS 2011: side event to the official programme of the Open Days held at the Committee of the Regions (Brussels) on October 13th
  - etc

*Check the complete list in the Dissemination part of the wiki*

## **FI-WARE and INFINITY**

INFINITY is the project in charge of the Capacity Building. This means that they are identifying all the infrastructures where Use Cases could be deployed in the second phase of the PPP. These experimental infrastructures will be characterized and evaluated for the purpose of maximizing their benefit for the PPP and Europe in general. Even though INFINITY is present in the main governance bodies of the PPP (Architecture Board and Steering Board) some meetings have been organized by the project to discuss about the specific needs of the different projects with respect to these infrastructures. This includes the deployment requirements of FI-WARE. Physical meetings have been held in Brussels (June 2011) and Poznan (October 2011).

## **Collaboration with other ICT projects and Initiatives**

### **Challenge 1 projects and the Future Internet Assembly**

FI-WARE does not start from scratch, but capitalizes on many works done by other projects, funded both internally by partners in the consortium, but also by the European Commission. In this last case, technologies related to FI-WARE are mainly related to Challenge 1 of the ICT work programme. For those that are not familiar with this wording we can say that Challenge 1 integrates research in the domain of Pervasive and Trusted networks and service infrastructures. Basically, this agglutinates the following topics: networks, cloud computing, internet of services and advanced software engineering, internet connected objects, Trustworthy ICT, networked media and Future Internet Research and Experimentation.

In the first 6 months, FI-WARE has mainly focused its attention on those projects that are relevant for the definition and consolidation of Generic Enablers. This involves a list of projects where many partners are working and that feed the technological base of FI-WARE.

Besides those initiatives we have been keeping an eye on projects running in parallel to FI-WARE. The main intention is to identify potential (additional) enablers and technologies that could be considered by FI-WARE but also to coordinate efforts leading to a better result for Europe. For example, some projects are defining roadmapping

exercises that could help FI-WARE in the future Open Calls, or they may be suggesting communication protocols (to give an invented example) where FI-WARE should be involved. Based on the current status of the project we are working in the phase of exploring, understanding and opening communication channels that allow us to collaborate further in the coming months.

One of the roots used for that is the participation in **FIA (Future Internet Assembly)**. Partners in FI-WARE have been active in the editions held so far in Budapest (May, 2011): [10] and Poznan (October, 2011): [11]. Check some of the presentations made by FI-WARE in this context in the corresponding dissemination section.

FI-WARE has also been present in the **Concertation and Collaboration meetings** organized by the projects in some of the relevant research areas of the project. Specific examples are the ones of:

- **Internet of Services 2011 Collaboration Meeting for FP7 projects** (28-29 September, Brussels) [12]
- **Future Networks 8th FP7 Concertation Meeting** (6-7 October 2011, Brussels) [13]

While in some cases the collaboration is really tight reporting FI-WARE results periodically and influencing when possible those projects (that could be the case of the **EFFECTS+** CSA, in the Security Area), in some other cases the collaboration is at its early stage and under analysis so that we can focus our resources on those ones that will really make an impact.

FI-WARE will analyse the possibilities of concrete collaboration with projects represented there besides the ones already identified. For example, we have already started discussions with the CSA Project **SOFI** to make use of their dissemination activities and channels, as well as with the CSA project **HOLA**, both of them from the Software and Service Architectures and Infrastructures area. A different kind of collaboration could be triggered by **SEQUOIA**, which has defined a methodology for impact assessment. We are still at the point of checking if our impact indicators could be aligned with such methodology and, as soon as some of the GE are released, this work will be revisited to evaluate the possible application of SEQUOIA in the framework of FI-WARE.

Even though we have not proceeded with the deployment and testing phase, this will be crucial in future milestones of FI-WARE and then we will intensify our relationship with the FIRE Community. Check below connections already made as first attempt to collaborate with this community.

For those interested in more concrete collaborations at technical level with some of the projects that are part of our baseline or detected as future source for collaboration you can visit the specific sections of the wiki created for each technical chapter of FI-WARE or read some of the notes that we have compiled below for you:

***Do you want to know about related Research projects? Go on reading...***

- **Interface to the Network:** here we provide some additional initiatives to those that underlie FI-WARE assets
  - webinos – Task 7.1 Connected Device Interfacing - <http://webinos.org>
  - ETICS – Task 7.4 Service Capability, Connectivity and Control - <https://www.ict-etics.eu/>
  - OFELIA - Task 7.3 Network Information and Control - <http://www.fp7-ofelia.eu/>
- In the case of the **Service marketplace**, we focus our attention on those projects that have been taken as starting point for the FI-WARE assets.
  - *Asset: USDL*
    - The TEXO project within the THESEUS program initiated by the German Federal Ministry of Economics and Technology (BMW)
    - German Federal Ministry of Education and Research projects (BMBF) Premium Services
    - EU European Commission, DG INFSO projects FAST, RESERVOIR, MASTER, SERVFACE, SHAPE, SLO@SOI, and SOA4ALL
    - The Australian Smart Services GRC.
  - *Asset: USDL Marketplace OS:* The marketplace was used and further developed in the projects
    - TEXO, Premium Services.

- Internet of Services Marketplace
- Premium Services Homepage
- *Asset: Premium-Services Pricing Strategies Simulator*
  - PREMIUM Services homepage
- *Asset: Revenue Sharing System*
  - 4CAAST
  - BlueVia
- *Asset: Wirecloud Masup Platform*: The Wirecloud Mashup Platform has been used and further developed in the following projects:
  - The EzWeb and Nuba projects within the Avanza I+D program initiated by the Spanish Ministry of Industry, Tourism and Trade.
  - The EC FP7 FAST, RESERVOIR, and 4CaaSt projects.
- *Asset: LighSemantic-enabled Design Time Semi-automatic Service composition*
  - Oryx Editor
  - SOA4All Advanced Prototype For Service Composition and Adaptation Environment

### **FIRE Projects**

FIRE is the community associated to the topic 1.6 of the work programme, and stands for Future Internet Research and Experimentation ([14]). The main idea of the FIRE projects is to enable early experimentation and testing in large scale environments.

As you know, FI-WARE will set up a testing infrastructure in the project that will be available for third parties to test our components. The test bed will contain an instance of all the GE implemented by the project. But FI-WARE will go beyond that by setting up what we have called the **Open Innovation Lab**. This one will be composed by the **FI-WARE Testbed** plus the **FI-WARE development Environment**. Besides that, Open Innovation methodologies and tools will facilitate that third parties (including SMEs) that are not so technically-skilled can make use of the FI-WARE technology and build applications and services on top of the results of the project. This Open Innovation Lab will be available after the second year of the project, and, as you can realize, it will be a joint effort between different Work Packages of the project, involving people working in the development environment, developers community, Open Innovation and exploitation or the testing infrastructure, to name the main teams.

This long term work will take advantage of the efforts of the FIRE community, where some partners of FI-WARE are active members.

Some concrete steps have already been taken and are briefly illustrated below:

- **Liason with existing IoT-related FIRE experimental testbeds**

FI-WARE believes that it would be very relevant for the FI-WARE testbed to connect to different IoT-related experimental testbeds, so that applications hosted on the FI-WARE testbed can connect and gather data on sensors or act upon actuators that are deployed by these IoT-related experimental testbeds. For this to happen, discussions have already been initiated with **OpenLab**: [15]. Some of the OpenLab testbeds already under analysis are: [16] and [17]

- **Service experimentation**

Even though not explored yet, there are direct roots from FI-WARE to the two main projects representing service experimentation and thus covering the different layers of IaaS and PaaS. These projects are **TEFIS**: [18] and **BONFIRE**: [19], coordinated by Thales and Atos respectively, both of them partners of the FI-WARE consortium.

- **Other FIRE projects**

Other projects that may serve for the purpose of testing and experimentation that will be analysed as part of the collaboration roadmap of the project are **Experimedia**: [20], focused on experiments in live social and networked media experiences and **SmartSantander**: [21], which provides a relevant experimentation platform where IoT



supports the concept of smart cities, in this case deployed in the Spanish city of Santander. Once again this bilateral channel should be easy to manage thanks to the presence and active participation of some common partners, such as Atos and Telefónica respectively. While in the case of OpenLab, TEFIS, BONFIRE there is a clear relationship with the experimentation of the technology of FI-WARE, experimentation platforms like SmartSantander or Experimedia may be used for testing through Use Cases projects that fall under the relevant domains they represent (that could be the case of OutSmart and FI-Content). This is not clear yet to us and therefore this is an ongoing analysis that will be pursued later in the project.

## The FInES Cluster

FInES ([22]) stands for **Future Internet Enterprise Systems**. This cluster was generated in the framework of RFID and Interoperability projects that were originally funded by the current topic 1.3 of the WP. Since recently it has been moved to the environment of Factories of the Future (FoF) projects (and specifically topic 7.3 of the WP). Wherever its position is in the set of projects funded by the European Commission the important issue is that it aims at enabling enterprises, including SMEs, by means of ICT, to exploit the full potential of the Future Internet. That falls directly under the main goal of FI-WARE. Based on that, collaboration with them is for us mandatory.

From a technological viewpoint, FInES has a strong focus on cross-domain co-operation (web semantics, web content technologies, grids, collaborative environments, service oriented architectures, eGovernment, etc.), and it maintains natural links with standardisation bodies (CEN's eBIF, ICT Standardisation Study, ETSI, etc). Some partners have already made presentations of FI-WARE in subsequent meetings (SAP, Atos...) even if contacts are managed through Engineering, which is an active member of the Community. This ended up in a fruitful participation of FI-WARE in the **Samos 2011 Summit**: "Future Internet: The power to change society".

At this moment in the project, the main motivation behind the collaboration with FInES can be summarized as follows:

- Contribute to the **FInES Research Roadmap** by reflecting some of the technological challenges identified by FI-WARE that will not be solved by the project in its current definition (it may be done through the Open Calls though)
- Maximize the use of the great **channel of FInES towards SMEs**. It is the intention of FI-WARE to involve SMEs already in the Open Calls (25% of the budget expected to be assigned to this type of organizations, even if it is only an estimation). Besides that, SMEs will play a crucial role in the testing phase of the project regarding the validation and acceptance of the technology. Furthermore, the Open Innovation Lab has been conceived as a tool to promote Open Innovation on top of the APIs released by FI-WARE, and here SMEs should be an integral part of this Open Innovation ecosystem.
- Finally, the impact of the FInES work in several audiences, such as the European Commission, makes this cluster a suitable vehicle for **policy contributions**

All these activities will be further explored in the coming months and will be extended according to their feasibility and potential impact. It is undoubtful that FI-WARE will also keep an eye on the works and publications not only of the integrating projects, but also of the FInES clusters (the complete list can be found in [23]).

## The AAL (Ambient Assisted Living) Community

It is not a secret that Ambient Assisted Living (AAL) is an interesting application domain that could greatly benefit FI-WARE with respect to the process of gathering requirements. It impacts the Internet of Services field, but also comprises many aspects related to Trust and Security and undoubtedly it is the perfect showcase for technologies of the so called IoT (Internet of Things).

AAL is not part of the initial set of projects retained by the 1st Call for Proposals of the FI PPP programme as it not eHealth either. Both of them are considered by FI-WARE a main source of requirements but also good deployment environments that could really make an impact in terms of FI-WARE adoption.

From a technical point of view both of them have very strong requirements in terms of integration, IoT and security. This is complemented by the political and business relevance. While other sectors are fighting to remain competitive to their customers or "invent" new ones, AAL and eHealth do not have to find customers. The *Old Europe* is providing them for free, and growing continuously. That is the reason why the EC decided to set up **Active and Healthy Ageing** as the first pilot of the **EIP (European Innovation Partnership)** instrument.

FI-WARE has looked for collaboration with both communities. With respect to AAL many discussions have taken place with the AAL Forum since FIA Budapest. Besides exchange of e-mails and phone calls more active collaboration has taken place, including physical meetings (October 2011) and joint participation in events with the goal of reaching a common understanding about the developments of both communities.

- The starting point was the presence of FI-WARE and AAL in the **Third Usage Area Workshop organized by the CONCORD and EX-FI projects (June 2011, Brussels)**. There FI-WARE made two presentations (see dissemination section; speeches by Thierry Nagellen, Orange-FT and Nuria de Lama, FI-WARE) and AAL contributed to the discussion trying to check the way both platforms -FI-WARE and the one pushed by the AAL community- could be made interoperable.
- This interaction has a follow up these days in Amsterdam, thanks to the participation of FI-WARE in the **"Workshop on Integration of AMI and AAL Platforms in the Future Internet Initiative"** (November 16, Amsterdam). This invitation by AAL brings FI-WARE to the forefront of the discussions and one of the FI-WARE representatives (Thierry Nagellen, from Orange-FT will present FI-WARE GEs to the audience and will participate in the two panels: one of them focused on technical aspects while the other one will be more generic by addressing wider opportunities of collaboration between AAL and FI.

Check further information about this in the dissemination section of the wiki, where you can find links to the presentation and panels and in [24]

## The CELTIC Cluster

FI-WARE has established an special collaboration agreement with [CELTIC projects <sup>[25]</sup>]. This collaboration is assured by the presence of several representatives at the PCC of FI-WARE and at the CELTIC Steering Board.

This collaboration allows CELTIC projects to contribute effectively to the process of Materializing the FI-WARE Vision due to direct access to the FI-WARE log-book (process still under definition).

At present, the collaboration with the PISCES project is the first example, but it is expected new projects in the coming CELTIC call will extend the use of the FI-WARE platform.

- **The PISCES Project: seed for CELTIC collaboration**

PISCES is a collaborative project aiming to Promote future Internet Solutions in health Environments. It complements then other use cases funded by the PPP by bringing some requirements that are specific of this sector. It also adds to the collaboration already in place with the AAL community. The project has partners that represent different countries, such as Turkey, Spain, Germany, Slovenia and Hungary. Its main objectives can be summarized as follows:

- A comprehensive set of detailed technical functional and non functional specifications

- The identification of enablers and architectural requirements to deliver FI applications in the health domain
- Development of conceptual prototypes
- Drafting of a strategy towards contributing to standardization in the respective application fields defined by the project

As it can be seen, its results are expected to be relevant for the PPP in general and FI-WARE in particular. The project was defined taking into consideration the collaboration process of FI-WARE, the same milestones and the same kind of interactions. Collaboration should be eased by this, but it has not been effective till now because the consortium is still waiting for a response by the Turkish Administration. Meanwhile, FI-WARE has provided some general information to them to keep PISCES in the loop.

## ETP (European Technology Platforms)

Several actions have been taken so far with respect to European Technology Platforms having two goals in mind:

- Collaboration in terms of technical development, it is to say, it is especially important that FI-WARE uses the channel of the ETPs to synchronize research roadmaps and to get information about developments that could be interesting for FI-WARE coming from the different initiatives. The other direction is also valid, since FI-WARE results have to be promoted in those environments to:
  - Motivate the use of the APIs created by the project (for business and validation)
  - Get the interest of the development community to FI-WARE (engaging new stakeholders and increasing the community around the project)
    - The last point is related to the motivation of third parties to participate in the Open Calls

ETPs have big communities behind them, and as such, they are powerful tools for dissemination and policy actions (for example, most of them have opportunities to talk in the Parliament and even to explain their ideas to the Commissioner for the Digital Agenda Mrs. Neelie Kroes).

FI-WARE has specifically worked with **NESSI (European technology Platform on Software and Services)**, **Net!Works (European Technology Platform for communications networks and services**, formerly called eMobility) and **ISI (the Integral SatCom Initiative)**.

While channels with the networking and services aspects are clear in FI-WARE it is more difficult to establish the collaboration with the satellite community. So far it has been based on sending information and informing organizations about what FI-WARE is about, its progress and the coming Open Call. Their main motivation is to get involved in Future Internet and we will analyse in the future if satellite communications are needed in this environment. At this very moment that is not envisaged and we believe different use cases should enter the game to make that sensible (such as disaster management, earth observation or applications such as ehealth or education in remote areas, where satellites could provide a more reliable infrastructure that could act as back up for mobile networks. An illustrative example of situation where this could be useful is the disaster happened in Fukushima, where communication infrastructures were seriously damaged because of the tsunami and the nuclear disaster).

See related presentations in the dissemination section of the wiki.

- **Net!Works General Assembly** (5 October, Brussels): presentation of FI-WARE and its relation to the Usage Areas ([26])
- **4th ISI SatCom Day** (18-19 October, Brussels): presentation of FI-WARE in the First Panel titled "ISI & Future Internet: Is there a role for Satellite in Future Internet?"

You can also stay tuned about FI-WARE in the newsletters published by some of these initiatives: See for example last newsletter published by NESSI: [27]

## EnoLL (European Network of Living Labs)

The collaboration with EnoLL is expected to happen mainly when first technical results of FI-WARE are available (at least first release of the GE). EnoLL is once again, as described in some of the previous initiatives a good channel for several purposes:

- Increasing the audience and interest about FI-WARE (therefore good for dissemination and wider adoption of the results)
- Involve and engage SMEs
- And finally, applying some of the experiences acquired by EnoLL regarding user involvement in the Innovation process.

Some discussions have already taken place in the context of the methodologies that could be applied in FI-WARE to involve final users early enough in the process and therefore ensure the right validation of the technology and its adoption afterwards, which will clearly be based on the acceptance by the user. This knowledge will be applied to the definition and setting up of the **Open Innovation Lab**. FI-WARE relies on CONCORD to define the collaboration agreement that makes possible *in an easy way* a further exchange of information with external communities. Even though most results are public, still a collaboration agreement regulates the responsibility and nature of the collaboration between companies, projects and initiatives. EnoLL is very experienced in this and we are confident that it will be a very valuable source of information for the coming project phase.

## EIT ICT Labs

EIT ICT Labs KIC ([28]) was designated as a Knowledge and Innovation Community by the EIT's Governing Board on 16 December 2009 in Budapest. The priority area which the ICT Labs KIC addresses is future information and communication society. The initiative focuses from an operational point of view on education, promotion of innovation, coordination of research and development actions and business. In FI-WARE we are convinced that collaboration between EIT ICT Labs and the PPP in general and FI-WARE in particular should take place, but we think it is still too early to come up with very specific action points, since their activities are also defined in a vague way. From a research point of view, some of the potential lines already identified are:

- Computing in the Cloud
- Internet Technologies and Architectures

We will analyse the feasibility of interacting with the different activities going on in EIT ICT Labs for those partners outside that framework (some of these activities are thematic workshops, testbeds and simulation tools and Experience & Living Labs). Fortunately, many partners of FI-WARE are fully involved in this initiative and we can find among core partners of EIT ICT Labs Deutsche Telekom, SAP, Siemens, Alcatel-Lucent, France Telecom, Ericsson (initially the main interface for collaboration towards EIT ICT Labs), INRIA and Fraunhofer.

In the coming period we will provide more information on the prospects of FI-WARE for this specific collaboration.

## Joint efforts between Future Internet Initiatives at National and International Level

### es.Internet

FI-WARE has established a collaboration with the Spanish Platform es.internet<sup>[29]</sup> whose objectives are

- Ensuring coherence of action and avoid fragmentation of efforts economies of scale to have a sound competitive position
- Promoting the collaboration between industry and academia ensuring better planning, with special focus on SMEs, who could benefit of the traction effect
- Guaranteeing continued funding from the public administration allow a long-term investment in R+D+i reducing the associated risks.
- Raising awareness of the importance of the development of Internet showing the applicability of the net in many social services which might greatly enhance their quality of life.
- Improving the regulatory framework, Ensuring interoperability of systems, terminals and networks facilitating the standardization work.
- Promoting internationalization of Spanish industry participation in international R&D programmes.

Particular attention is given to the promotion of PPP activities within Spain and try to assure the maximum impact of the results into the Spanish industrial landscape. A list of Spanish projects and actions related to the PPP has been produced[30]

This industrial platform was formed several months ago and already counts with a very important participation of Spanish Industry with more than 400 members.

The platform has recently held the IV General Assembly in a very significant event with presence of the highest representatives of the Spanish administration [31]. A central element of the event was the three presentations made by FI-WARE [32], [33] [34] where the main objectives and current activities were summarized

### Latin American Platforms and Future Internet

The last edition of FIA (Poznan) was quite useful for FI-WARE to initiate further cooperations that were not initially considered in the project. That has happened for example around Future Internet Initiatives in Latin American countries. The EU-funded project FIRST ([35]) promotes the cooperation between Europe and Latin America in the field of Future Internet and ICT components. Poznan gave us the opportunity to express our views in the second session of the FIRST meeting (Session 2: The European Perspective on the International Cooperation with Latin America; check further information in [36]).

This opens the following potential channels for FI-WARE (even if they have to be explored to check the alignment with the FI-WARE strategy):

- PLATA: The Argentine Future Internet Technology Platform ([37])
- MACHI: The Chilean Technology Platform of Future Internet ([38])
- RECIIF: The Colombian Future Internet Technology Platform ([39])
- BRA-FIP: The Brazilian Future Internet Technology Platform ([40])
- the Mexican Future Internet Technology Platform (still under definition)

## Other

As it can be seen in the Dissemination section some presentations have been made at International level. FI-WARE has not yet defined an strategy for International cooperation, has it has been mentioned in this document, but all the opportunities that are appearing make us believe that there could be a good business case there. So far we have accepted invitations to disseminate and promote the projects and its results so that we can keep the interest and the attention of the research community that could be -later on- contacted for the purpose of evaluation and validation of the FI-WARE GE and APIs.

Brazil seems specially interesting for this (so far, besides the connection through the Latin American platforms our collaboration has been triggered by research in *Trust and Security*: see presentation made at the BIC Workshop in the IWT 2011). [41]

In the remaining part of 2011 there are plans to present our activities in the coming BIC workshops that will be held in South Africa ([42]) and India ([43]).

Other interesting topic that FI-WARE has followed in the last months is the one of **Smart Cities**. We think that the technology and the platform provided by FI-WARE will be a very relevant asset for the development of Smart Cities applications. Furthermore, some of the technology pillars of FI-WARE are the ones that people usually associate to this Smart City concept (ex. IoT). In the last months there have been events around a possible EIP on Smart Cities. This initiative as such is mainly run by DG Energy and DG TRANSPORT, even if DG INFSO is the third "leg" of the "animal". FI-WARE will try to work at political level to make an impact on the current development of that concept and make it become a more generic one, where applications on energy efficiency and transport are complemented by e-government services to citizens and public servants, services on education, tourism, safety and many other fields that take place in the context of cities and their citizens. Integration, interoperability and Interaction are words starting with "I" that make clear that another word starting with "I", ICT, should be the basis for all these developments. FI-WARE will go on pushing these ideas in the future.

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