

FI-ADOPT



Deliverable D4.1

Technical Training and support on FI-PPP Assets

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Abstract:

This document is compiled in the context of the project programme of work in work package 4: technical training and support mechanism and materials (including both FI-PPP related staff and guidelines for aligning software development) and time schedule as well as the technical training platform functionality.

The document has been delayed in order to be synchronized with developments in FIWARE and the FI Use case projects.

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2	INTRASOFT International SA	ISOFT-LU	Contractor	Luxemburg
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4	ATOS SPAIN SA	ATOS	Contractor	Spain
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Document Revision History

Date	Issue	Author/Editor/Contributor	Summary of main changes
30/11/2014	V1.0	David Jiménez	First Draft
7/01/2015	V2.0	David Jiménez/Rastislav Petras	Platform and webinars for the project has been integrated
16/02/2015	Final	David Jiménez/ Rastislav Petras/ Ilknur Chalida	Technical training information added

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1. Executive Summary

FI-ADOPT promotes the upmarket implementation of FI PPP results such as the EU FP7 FI-PPP Core Platform, the FI-WARE technologies and assets to deliver a large number of applications based on innovative technologies and concepts, including networked media, social networking, mobile apps and gamification, in three main application sectors: FI-enabled learning and training; FI-enabled healthy behaviour shaping and FI-enabled social integration.

To this end FI-ADOPT is creating a technological and business ecosystem, supporting SMEs and web entrepreneurs to develop highly innovative applications in the area of corporate and citizen's learning/training, healthy behaviour shaping and social integration purposes, employing rich media, social networking, and/or mobile apps and gaming principles.

The FI-ADOPT project consortium represents a group of organizations and individuals who are well experienced in the management of large European technology projects, have very large involvement in FI PPP and ensure high level technical training on the FI GEs and DSEs, have strong links with Venture Capitals and Business Angels and have successfully run CSA project and evaluated EC coordinated and open calls.

This document is the Deliverable D4.1 – FI-ADOPT Technical Training. It is compiled in the context of the project programme of work in work package 4: Technical & Business support to use case expansion projects.

It has been decided to delay the submission of this deliverable as the call 1 projects have just started and currently they are more focused on the Sustainability Plan Deliverable and not yet to the actual solution development and on the other hand this has given FI-ADOPT WP4 partners to synchronize this deliverable with developments in FIWARE, XiFi and FI-PPP Use case projects' developments.

2. The FI-ADOPT technical training means

FI-ADOPT will provide a complete training offer for entrepreneurs and project developers that will use several means as training documents, audiovisual courses, access to mentors and FIWARE experts, webinars, help desk,... accessible via the set of platforms hosting the FI-ADOPT project. Regarding training, FI-ADOPT will benefit from FIWARE coaches to support the accelerator projects on FIWARE training to the SMEs awarded.

- **Webinars.** FI-ADOPT will provide with different seminars dealing with topics related with technical development and business issues. This way FI-ADOPT ensures to be cost-effective, because on-demand webinars are a fraction of the cost of face-to-face training; customized, as FI-ADOPT webinars can be put together quickly, on any topic and at any depth; and collaborative, as webinar data is immediately shared with improving attendance, participation, and feedback. FIWARE, fundraising, acceleration or incubation will be some of the topics that will take part of FI-ADOPT webinars.

Webinars will develop technical training and business mentoring in a scheduled plan along projects lifetime.

Webinars will include FIWARE overview, intended to capture the attention of developers and software architects by providing a very short and concise summary of what FIWARE brings. The idea is to bring useful information that will help developers to learn how they can use FIWARE in order to incorporate certain functions in their applications; some FIWARE chapters as media streaming, context analysis and internet of things, both in a basic and advanced level; and specific FIWARE technical training demanded from the projects.

- **Courses.** FI-ADOPT will offer technical training through a set of audiovisual courses compiled from FIWARE university (e-learning platform), FIWARE catalogue (<http://catalogue.fi-ware.org/>), programmers discussion web pages, XI-FI and FIWARE YouTube Channel. From user's feedback, FI-ADOPT training team will add new material that help developers to overcome troubleshoots. FIWARE Developer's week materials will be recorded, edited and post-produced to be offered to the community through the platform.
- **Dashboard.** The platform will provide each funded project with a unique space designed for FI-ADOPT, in which they can manage the day to day activities of their projects. This Dashboard comes complete with functional ability to invite team members, a FI-ADOPT discussion forum, a document repository, a task management and calendar system, and the ability to add a variety of extra services.
- **Help desk.** FI-ADOPT will provide the developers and enterprises with information and support related to FIWARE technology and FI-ADOPT services, to troubleshoot problems and provide guidance. From ATOS, a partner of FI-CORE project, as part of the "FIWARE coaching team", FI-ADOPT will offer access to a FIWARE coach. Its role is to serve as a bridge between the FI-ADOPT project and the FIWARE team. So help will be provided whenever FI-ADOPT has questions/requests which need support from the FIWARE project directly (working as a second level support).

There will be mailing lists setup by the FIWARE project for the coaching of each accelerator project, where questions from SMEs can be forwarded by FI-ADOPT when needed. Automatic tickets will be created in the FIWARE JIRA system for each email sent to these lists and FI-CORE will be able to direct these requests to the relevant GE owners as needed (mostly for on-demand info request).

At the moment, some guidelines are being defined about how this criteria should be checked, and the FIWARE coaches are supposed to review the shortlisted proposals for this criteria or review the assessment of the external evaluators with regards to this aspect.

- **Mentoring.** FI-ADOPT will provide mainly to the SMEs and the start-ups mentoring, pitching and support activities, to contribute towards their sustainability and business evolution. FI-ADOPT purpose is to support members with all aspects of enterprise including start-up, funding, growth, marketing and more.

3. Training material

FI-ADOPT is offering a structured set of FI-PPP training materials that can be used to solve the FIWARE gap that some of the entrepreneurs or developers that will join FI-ADOPT community.

3.1. Training materials from FI-PPP projects

FIWARE has created a dedicated web page that compiles the most of the training information that has been created in the FIWARE ecosystem (<http://edu.fi-ware.org/>). It constitutes a FI-WARE eLearning platform, where developers, entrepreneurs and providers can find training courses, lessons and many other contents regarding FI-WARE technology. There are different courses available regarding different topics.

These documents that guide developers in their journey learning how to use FIWARE, provide a comprehensive overview of what FIWARE offers to developers and software architects who design and implement Future Internet applications.



Figure 1: FIWARE Academy

The Quick FIWARE Tour Guide for developers section brings useful information that will help developers to learn how they can use FIWARE in order to incorporate certain functions in their applications.

A big set is made up by the FIWARE Enablers (<http://edu.fi-ware.org/course/category.php?id=11>).

- [FI-WARE Data/Context Management](#)
- [Internet of Things \(IoT\) Services Enablement](#)
- [Applications/Services Ecosystem and Delivery Framework](#)
- [Security](#)
- [Cloud Hosting](#)
- [Interface to Networks and Devices \(I2ND\)](#)

Each FIWARE GE provides APIs that are public and royalty free and it comes with an open source reference implementation. This allows that multiple commercial FIWARE providers emerge faster in the market, all supporting the same set of APIs. Thanks to that, anyone will be able to decide who will operate the environment where the application, and more importantly the data, will be hosted.

FIWARE Catalogue (<http://catalogue.fiware.org>)

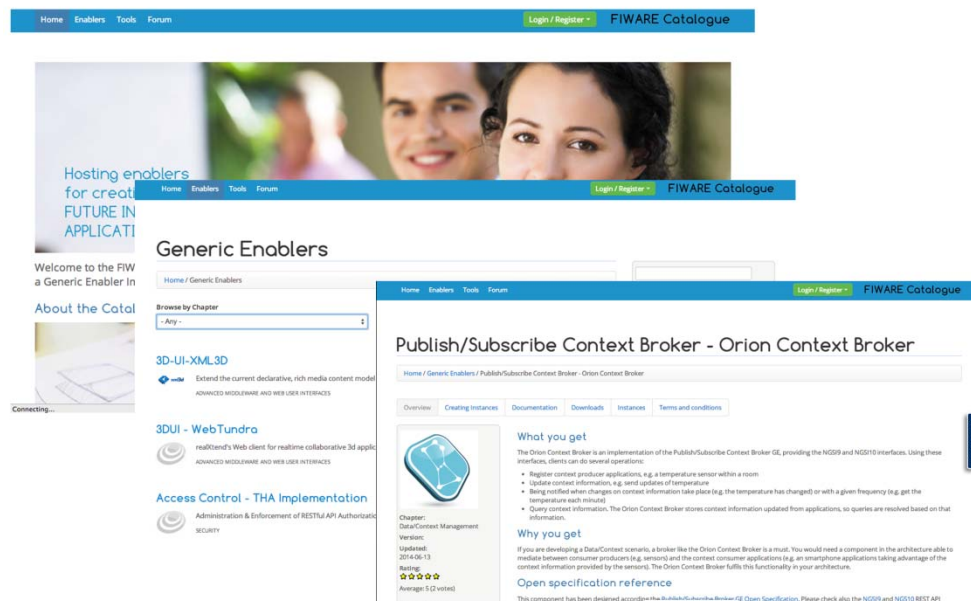


Figure 2: FIWARE Generic Enablers catalog

These courses are focused on the eight big areas of FIWARE knowledge that have been developed in the first and second phase of the FIWARE-PPP initiative.

For the [Applications and Services Ecosystem and Delivery Framework](#) there are six courses available for developers, there are four for [Cloud Hosting](#) and another four for [Data/Context Management](#). [Advanced middleware and interfaces to Network and Devices](#) and [2D 3D capture](#) just have one course available. For [Internet of Things \(IoT\) Services Enablement](#) there are five courses available, six for the [Security](#) enablers, and ten regarding [Advanced Web-based User Interface](#). Finally, there are nine courses dealing with [Development Tools](#).

Course categories

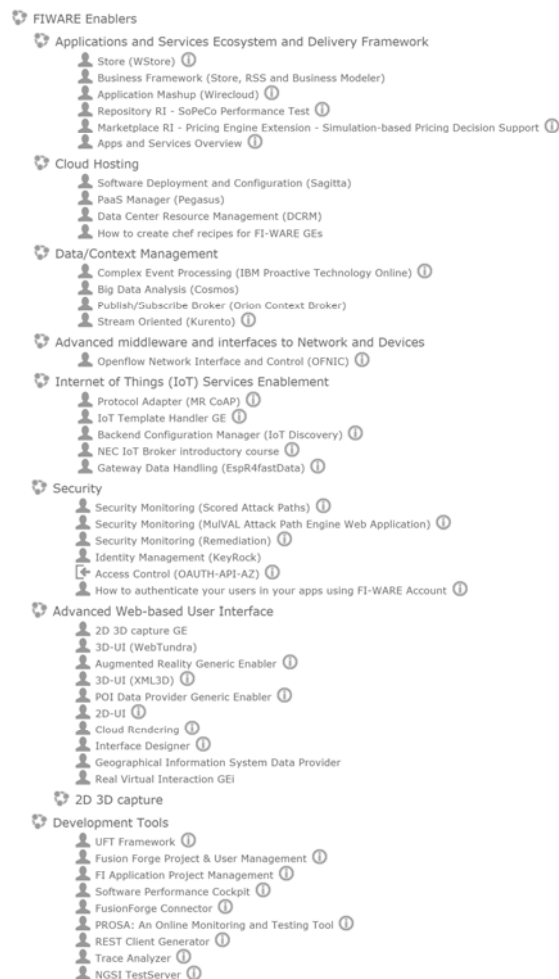


Figure 3: FIWARE Generic Enablers courses

Other big core of training material is provided by XIFI. XIFI Training and Education contents are available at: <https://www.fi-xifi.eu/training.html>

Figure 4: XIFI training material

XIFI offers three blocks regarding XIFI core concepts, materials for SME's, developers and accelerators. A FIWARE and FIWARE Lab introduction course for SME's, developers and accelerators, and a FIWARE Lab advanced course for developers.

- XIFI Core Concepts video - [e-learning portal](#)
- SMEs and Accelerators - [e-learning portal](#)
- Developers - [e-learning portal](#)

Additionally, XIFI Team has launched the Training Portal dedicated to Infrastructure owners and Infrastructure operators.

This section of the training portal is entitled "FIWARE Ops for Infrastructure Owners and Operators" and provides training materials relevant for Infrastructure Owners and Operators who are interested in joining the FIWARE Federation of Infrastructures.

The topics addressed useful for SME's are listed below and available at <http://edu.fi-ware.org/course/view.php?id=95>:

3.1.1. Introduction to FIWARE Lab

- FIWARE Lab at a glance
- Project scope and objectives
- FIWARE Lab in the FI-PPP programme
- Technical offering
- FIWARE Lab for federated infrastructures– Nodes, capacities, architecture, services, networking
- Deployment timeline and upcoming challenges

3.1.2. FIWARE Lab for Developers

- Introduction
- How to use the FIWARE LAB portal
- Command Line Interfaces
 - Install the OpenStack command-line clients
 - Managing virtual machine images
 - Working with virtual machines
 - Working with infrastructure monitoring

The offer is completed with two webinars

"FIWARE Lab Solution for Managing Resources & Services in a Cloud Federation" dedicated to researchers and developers who want to take advantage of the solution concerned with FIWARE Lab management tools and components and that covers the following topics:

- Introduction to FIWARE Lab;

- FIWARE Lab Solution for Managing Resources & Services in a Cloud Federation;
- Q&A Session.

"**XIFI for Developers**" dedicated to application developers aiming to develop and deploy to the XIFI federation.

The course explains how to utilise the XIFI portal for creating, managing and deploying services to the federation complemented by an introduction how to utilise command line tools for those tasks not yet supported by the portal.

The course is focusing on the basic tasks and is suitable for less-skilled users but is also guiding more knowledgeable users by some best-practice examples.

The webinar covers the following topics:

- Using the FIWARE Lab portal
 - Getting access, getting started, getting help
 - Setting up your tenant
 - Working with your tenant
 - Exploring the cloud
- Using command line tools
 - Installing OpenStack client tools
 - Managing virtual machine images
 - Working with virtual machines
 - Working with volumes

Finally, there is a Wiki created to compile the information available about FI-WARE on the FI-WARE wiki, website and catalogue. This page intends to provide a guided tour through the essential information that may help anyone to get started with FI-WARE.

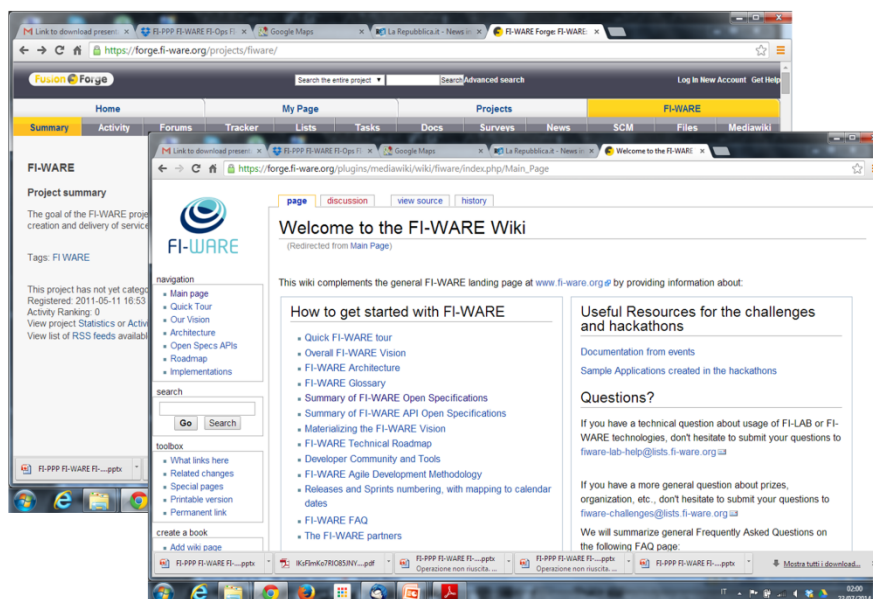


Figure 5: FIWARE Wiki

There are three big blocks of materials: First is related to Basic Vision and Mission, second are different technical chapters defined in FI-WARE, and the third is dealing with the implementations.

FIWARE quick tour:

https://forge.fiware.org/plugins/mediawiki/wiki/fiware/index.php/Quick_FI-WARE_tour

FIWARE Architecture:

https://forge.fiware.org/plugins/mediawiki/wiki/fiware/index.php/FI-WARE_Architecture

FIWARE Implementations:

- [Catalogue of Generic Enabler Implementations in the Data/Context Management Chapter](#)
- [Catalogue of Generic Enabler Implementations in the IoT Services Enablement Chapter](#)
- [Catalogue of Generic Enabler Implementations in the Applications/Services Ecosystem and Delivery Framework Chapter](#)
- [Catalogue of Generic Enabler Implementations in the Security Chapter](#)
- [Catalogue of Generic Enabler Implementations in the Cloud Hosting Chapter](#)
- [Catalogue of Generic Enabler Implementations in the Interfaces to Network and Devices \(I2ND\) Chapter](#)

Other useful resources for developers are the Stack Overflow community forum and the FIWARE videos uploaded at FIWARE Lab (<http://lab.fi-ware.org>) and Youtube FIWARE channel.

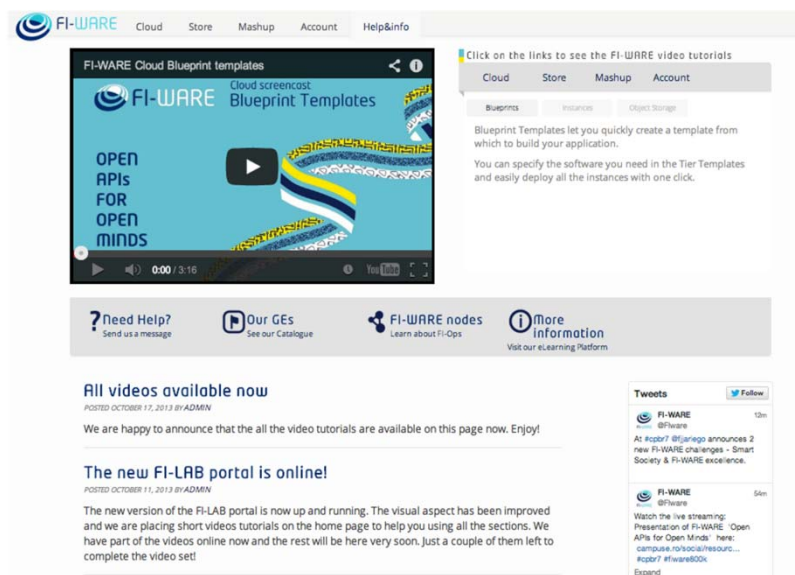


Figure 6: FIWARE Lab

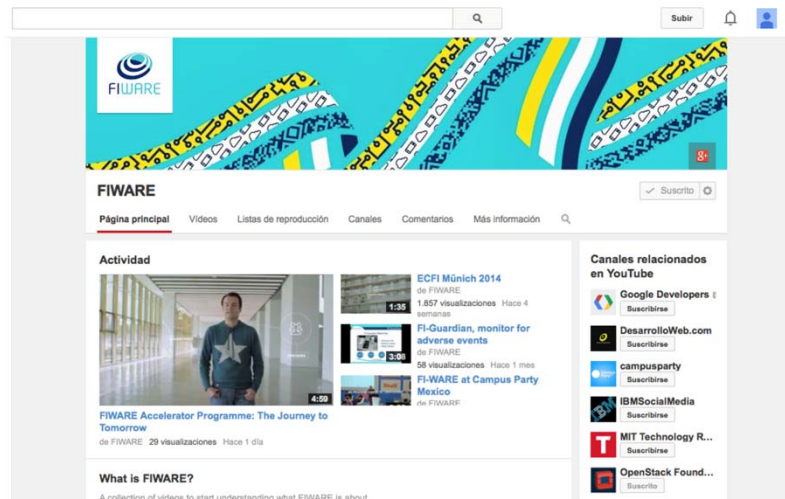


Figure 7: Youtube FIWARE channel

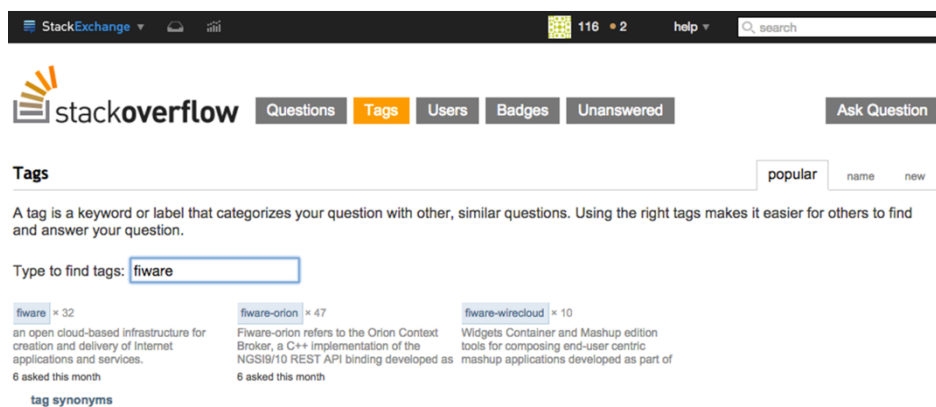


Figure 8: Stackoverflow FIWARE threads

3.2. FI-ADOPT developers needs and requests

FI-ADOPT will evolve its training material in order to solve specific problems developers could find in the progress of the accepted projects.

First, from the results of the calls, FI-ADOPT will get the width of the use of the different enablers offered by FIWARE and will provide to the SME's and developers with the training material dealing with their FIWARE architectures and FIWARE Lab if they are going to take advantage of FIWARE test capabilities. A brief survey to collect the needs of the developers regarding FIWARE training needs will be sent to all the selected projects to get a complete picture of the technical training needs for every call.

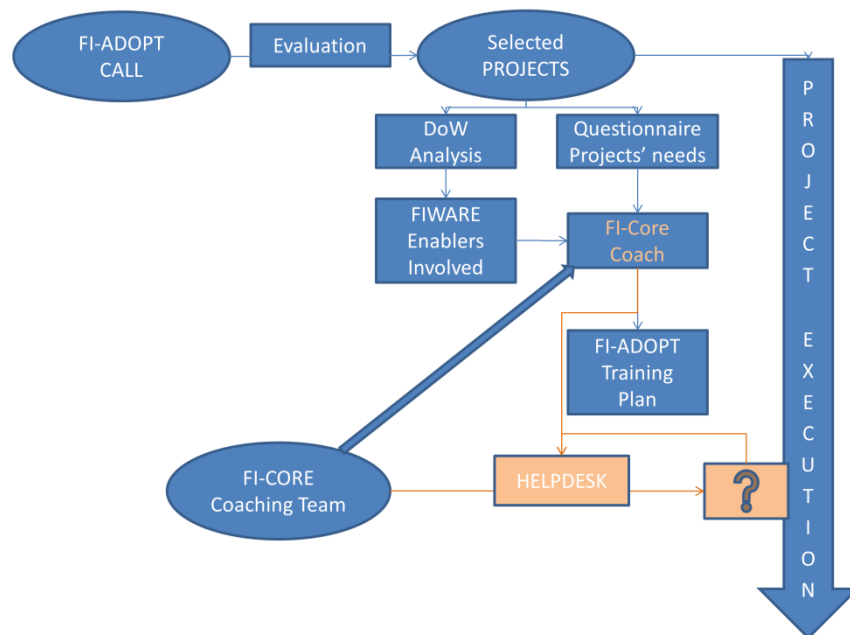


Figure 9: FIWARE Training flow

For further information, developers will have two different fora. One of them will be integrated in the eai360 platform. It will be an open forum for developers to interact among them, share their experience and implementation issues to enrich the global experience. UPM, ATOS and other partners of the consortium will follow the threads and will take part in the discussion to provide their own FIWARE background to the pool. On the other hand, ATOS will provide a help desk for the developers. As a member of FIWARE core, ATOS is involved in the global FIWARE support, and part of this team will be accessible for the FIWARE developers.

Additionally, this expert team, which has been specifically trained for, will constitute an on demand second level support for GE's that can take care of the on-going problems the developers can't solve with the materials initially provided.

4. Technical training platform functionality

4.1. FI-ADOPT Platform for developers

The **eai360 Platform** (<http://360.eai.eu/home>) by EAI, with a special dedicated domain for FI-ADOPT will serve as the vehicle where the training, mentoring and other services will be provided to the selected projects.

FI-ADOPT will offer inside its platform a custom-made workspace for managing projects and teams, along with variety of boosting services. There, the developers can get feedback from peers and professionals, share and discuss ideas and technologies and build collaborative teams.

FI-ADOPT powers for their applicants a virtual platform designed to drive innovation into successful businesses. With EAI360° set of tools, guidance and services, FI-ADOPT can offer the support, training and monitoring of selected projects. Section 3.3 from FI-ADOPT Deliverable 2.2 offers a perspective of the platform specific area for FI-ADOPT projects and its capabilities.

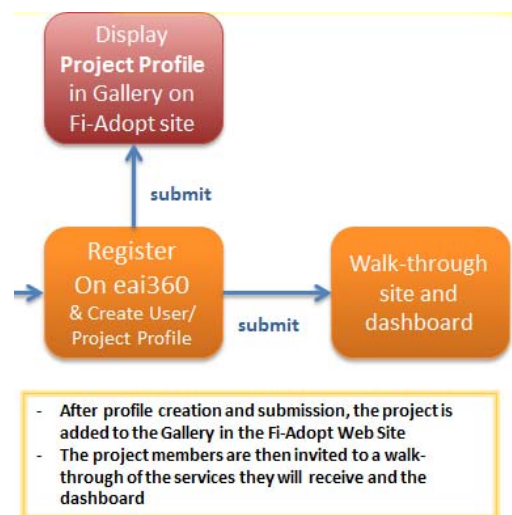


Figure 10: EAI platform area for FI-ADOPT accepted projects

4.2. FI-ADOPT Workshops and Webinars

For the technical training FI-ADOPT is providing a complete set of materials. Technical training is supported by FIWARE coaching team, that will provide training materials for the accelerators.

FI-ADOPT will provide to developers a complete plan of FIWARE technical training. The training would provide direction and vision for the product development teams for FIWARE adoption. Responsibilities would include being a point of contact for development product teams for architectural clarification on FIWARE software domains. Other responsibilities include aligning new technologies within the FIWARE architecture.

Training includes the following:

- Supporting software development for products
- Translating customer requirements into functional and design requirements/specifications
- Driving technology/architecture discussions
- Interfacing with FIWARE technology providers
- Negotiate, architect, and help implementation of a wide range of high complexity features and systems, analyze requirements, and define FIWARE strategies

Training will be focused around the two big structures offered by FIWARE ecosystem.

FIWARE: First, with comprehensive overview of what FIWARE offers to developers and software architects who design and implement Future Internet applications, plus analyzing plans for implementation of FIWARE technologies in their product; and then, participants will fine-tune their plans for the adoption of FIWARE technologies. Webinar on FIWARE and one on one mentoring online sessions with FIWARE experts will help them to better define which GEs and SEs to use for their product. Participants will also be provided with additional materials relevant to particular GEs and SEs which they are going to apply.

FIWARE-Lab (<http://lab.fi-ware.eu>): a meeting point around which a dynamic innovation ecosystem can be created engaging developers and entrepreneurs. Thus, the experimentation site will be offered which provides Cloud hosting capabilities so FI-ADOPT entrepreneurs can run their experimental applications and test them, and which makes Generic Enablers implementations available for experimentation (specifically, offering global accessible instances provided “as a Service”).

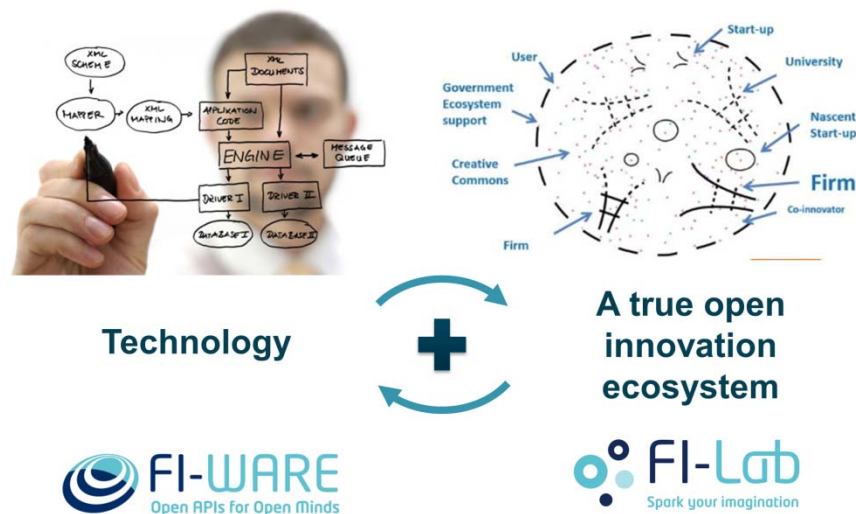


Figure 11: FIWARE offer for developers

The first technical training sessions are intended to capture the attention of developers and software architects by providing a very short and concise summary of what FIWARE brings. The idea is to bring useful information that will help developers to learn how they can use FIWARE in order to incorporate certain functions in their applications. From these sessions a complete understanding of what is FIWARE is expected. Developers should know that the FIWARE platform provides enhanced OpenStack-based cloud hosting capabilities plus a rich library of added-value functions offered “as a Service”, and get a global knowledge on components of the FIWARE platform or Generic Enablers (GEs).

The second part of the technical training will be focused in the particular needs of the FI-ADOPT project developers. For this purpose a two steps mechanism has been defined. First, a FIWARE adoption survey is sent to the projects in order to know which are they going to use and the kind of needs they are requiring for the technical training of FI-ADOPT. Second, participants will fine-tune through on-line tools their plans for the adoption of FIWARE technologies through one on one mentoring online sessions with FIWARE experts (from the FIWARE coaching team) provided by FICORE. Thus, FI-ADOPT training will help them to better define which GEs and SEs to use for their product. Participants will also be provided with additional materials relevant to particular GEs and SEs which they are going to apply. From this bilateral FI-ADOPT will decide the creation of additional material regarding the most demanded topics and always with the back-up of the FIWARE coaches.

The FI-ADOPT workshop will provide information regarding topics as:

- What FIWARE is
- The easy and quickest way to start using FIWARE
- FIWARE tour guide for developers
- Development of context-aware applications
- Context management
- Connection to the Internet of Things
- Real-time processing of context events
- CEP
- Handling authorization and access control to APIs,
- Access control GE
- Publishing (Open) Data in FIWARE
- Big Data analysis
- Creating application dashboards
- Real-time processing of media streams
- 3DUI, XML3D and Multiuser 3D
- and everything related to hosting an application on a FIWARE Cloud.

EAI will invite entrepreneurs accepted for FI-ADOPT project to participate in its idea incubation and acceleration programs. These programs consist of different educational and mentoring online events and tools. The programs include series of online webinars which aim to increase knowledge of its participants in areas which are relevant for entrepreneurs coming from different fields.

These webinars are coordinated through eai360 website and entrepreneurs receive there links which redirect them to Gotomeeting platform which hosts these live webinars. The platform enables speakers to share both their camera and presentations. Attendees firstly watch the lecture which is normally followed by short discussion with the speaker.

Webinars cover topics from different areas which are relevant for early stage ventures which want to fine-tune their product, get funding and reach the market in short time. Idea incubation and acceleration programs include webinars with following topics:

- Common mistakes of startups and how to avoid them
- Design of business model canvas
- Value propositions and customer's perception
- Lean startup & Business validation
- The value of right UX
- Intellectual property protection
- Go to market strategy
- Online marketing & Low budget marketing
- Investor pitch
- Soft skills and mental state tools to lead the project