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Support of FI-PPP

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Abstract:

The deliverable describes the activities to support and promote the FI-PPP programme, the FIWARE/FICORE project and the FI-PPP phase 3 ("FIWARE Accelerator Programme") carried out by the FINESCE work package 6 "Dissemination and Business Exploitation".

There were 3 types of activities performed:

1. How FINESCE contributed to the FI-PPP working groups and events
2. How FINESCE promoted FIWARE in FINESCE marketing, FINESCE events and FINESCE workshops
3. How FINESCE supported the FI-PPP phase 3 by building an FINESCE Innovation Community, actively supporting the open calls of the energy-related accelerators and offered technical support to the winning SMEs.

The central effort to sustain the use of FIWARE in the energy sector is the provision of the FINESCE Smart Energy Platform enabled by FIWARE. These efforts beyond the project's end are described in the chapter "conclusions and outlook".

Keyword list: FIWARE, FI-PPP, FIWARE Accelerace, open call, ECFI, innovation, SME, Phase 3, FIA, Netfutures

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Executive Summary

FINESCE as an integral part of the FIWARE concept and the FI-PPP programme community supported the FI-PPP programme on many levels.

First and foremost the concept of the FINESCE project covered the Smart Energy part in a larger Smart City concept in a new Future Internet of things world.

Many FINESCE trials already displayed interfaces to other industry areas like the Hyllie trial in Sweden (FINESCE applications as part of a Smart City project), the Smart Factory in Aachen (interface to industrial production) or the Serious Games of the dissemination work package (interface to Infotainment).

In the area of business development and marketing/dissemination the FINESCE partners performed a variety of actions to make FIWARE and the FI-PPP known in the world and inspire companies and other organisation to use and further develop FIWARE and become part of the FIWARE developer community:

- Actively participating in the FI-PPP Dissemination Working Group, preparing joint events, workshops and fairs
- Contributing to create a joint understanding how to develop and evaluate upcoming business models around FIWARE in the FI-PPP Exploitation and Business Model Working Group.
- Contributing to one of the major challenges of the FI-PPP: How to attract SMEs to the programme (e.g. by creating the FINESCE innovation days and the establishing the FINESCE Innovation Community)
- Directly supporting FI-PPP/ FIWARE related events and workshops (Open call announcements, FIWARE roadshows etc.)
- Participating in all joint FI-PPP performances on Future Internet related events (like FIA, Campus Party and Netfutures)
- Playing a major organisational part in the “European Congress of the Future Internet” in Munich
- Creating a FIWARE integrated marketing approach
- Supporting the FIWARE technology on many energy related events, workshops and fairs (IEEE events, ISGAN workshops, Smart Grids Week congress, etc.)
- Supporting the FIWARE Accelerator Programme by building a FINESCE Innovation Community of SMEs and later by organising dedicated workshops, events and FINESCE Open Days for FIWARE Accelerators.
- Supporting the SMEs of the FIWARE Accelerator Programme by providing easy access to the FINESCE API, FINESCE trial site data and the FINESCE DSEs.
- Organising a joint INCENSE/FINESCE workshop to support SMEs with the integration of FIWARE GES.

As a main result, FINESCE created a Smart Energy Platform that will be maintained and further developed by the follow-up project “Flexible Energy Networks (FEN)”.

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1. Introduction

The FI-PPP programme was designed as a cross-industrial collaborative programme from the very beginning. As one of the phase 2 use case projects FINESCE promoted the use of FIWARE in the energy sector.

One emphasis was the alignment of the dissemination work throughout the whole phase 2 use case projects reaching out to FI-PPP phase 3 (“FIWARE accelerator programme”) and the development of business cases that fit into the idea of FIWARE as an open source software platform supported by a community of developers and business people.

Especially the change from FI-PPP phase 2 (proof of concept for FIWARE in 5 major use cases) to phase 3 (roll-out of FIWARE to thousands of new businesses) was a challenge regarding the design of the communication material and the conceptualisation of events. FINESCE supported the FI-PPP programme on several levels that are described in the following chapters.

2. How FINESCE contributed to joint FI-PPP activities

2.1 FINESCE participating in the FI-PPP Working Groups

2.1.1 Dissemination Working Group (DWG)

The Dissemination Working Group (DWG) was established in April 2013 to align the dissemination work of the several use case projects of FI-PPP phase 2. It was led by Concorde and closed at June 1st 2014. After June 2014 the dissemination work was coordinated by the professional marketing agency Ogilvy One.

Joint Marketing

A main challenge in the DWG was to define and promote what all FI-PPP phase 2 use cases have in common (the use of FIWARE Generic enablers), to define the key messages and keep the individual approach of each project to address their specific area.

An additional challenge was the missing marketing approach for FIWARE itself and could not be solved in the Dissemination Working group. This was later covered by introducing Ogilvy One as a professional communication agency to the FI-PPP programme, who created the basic set of marketing tools for FIWARE, especially for FI-PPP phase 3 (the FIWARE Accelerator programme).

FINESCE updated its marketing materials accordingly and put the platform approach (enabled by FIWARE) as the key message for the energy and smart city area.

Joint Events

The main focus of the DWG was to support the appearance of the FIWARE use case projects on EC Future Internet events (FIA in Dublin and Athens, Netfutures in Brussels and ICT in Vilnius) and to organise the joint FI-PPP events, the “European Conferences on the Future Internet (ECFI)” in Brussels and Munich.

The booths concepts and workshop contents were agreed as well as the communication to the relevant target groups to make the events known.

FINESCE took over a special responsibility for the ECFI in Munich: FINESCE together with the FI-Star project chaired the organisation team, organising the several venues for the event, the speakers, the agenda and the project fair in the Technical University in Munich

Attended DWG Meetings

- DWG and EBM Group 19.6.-20.6.2013 Brussels
- DWG Meeting 20.11.2013 Brussels
- EBM, DWG final meeting 2.4.2014 Brussels

2.1.2 Exploitation and Business Model Working Group (EBMWG)

The Exploitation and Business Model Working Group (EBMWG) was established to align business models across FI-PPP use case projects and to share the individual approaches to integrate SMEs into the FI-PPP programme.

It was led by Concorde and closed at June 1st 2014.

FI-PPP phase 2 use case business models

The main objectives this effort was:

- Providing a toolkit of analysis
- Helping to identify common features of FI-PPP business models"
- Providing a harmonized guidance on implementing business models for exploitation within the FI-PPP

Several business models like Canvas Strategic fit or Value Network Design were discussed and FI-PPP phase 2 projects shared their approaches.

FINESCE presented the FINSENY uses case evaluation methodology and the FINESCE roadmapping approach to support the exploitation efforts of the FINESCE trials.

In FINSENY the relevance of use cases and functions were measured and the chances of business opportunities were assessed.

The FINESCE roadmapping (see also Deliverable 6.4 “Roadmap”) is a three-layer model that identifies core innovations, application/services and technologies.

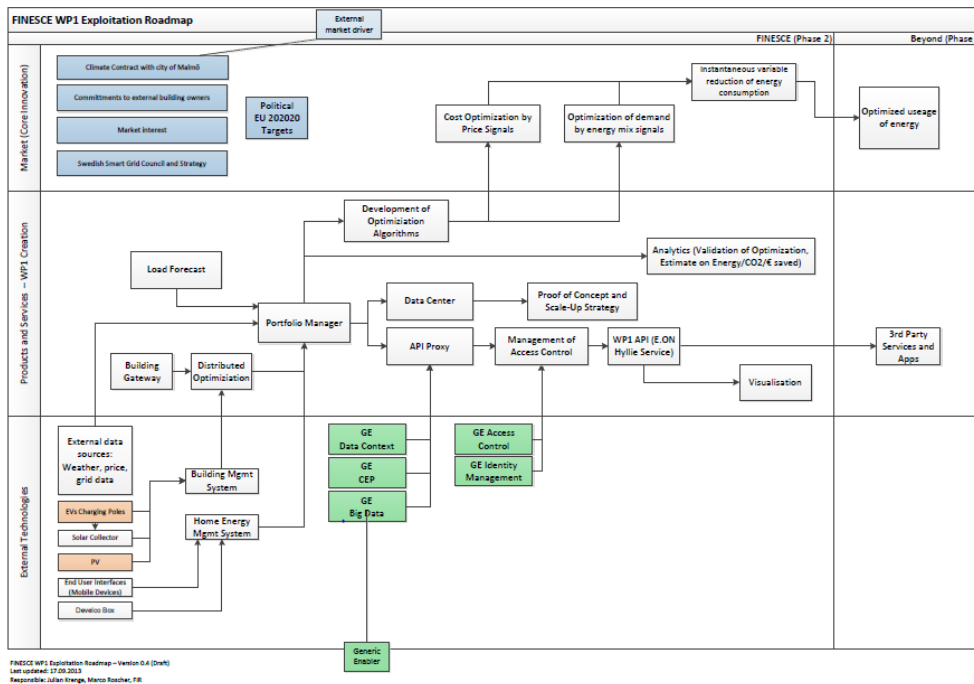


Figure 1: Contribution to the FI-PPP EBMWG: The FINESCE Roadmapping methodology
 FINESCE enhanced its D6.4 “Roadmap” with the D6.4bis “Business Models” as a direct result of the EBMWG. All trials analysed their exploitation opportunities with the Canvas methodology. The methodology was also applied to the new FINESCE SME partners.

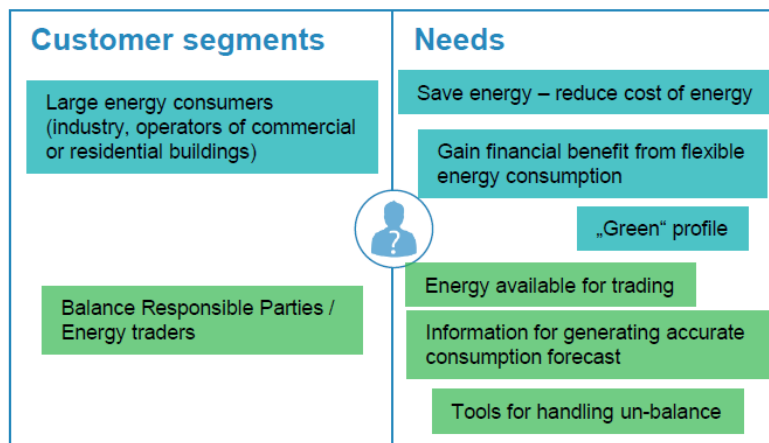


Figure 2: Outcome from the EBMWG: Canvas applied for trials and new partners

Integration of SMEs into the FI-PPP programme

The other focus of the EBMWG was to create an aligned approach to integrate SMEs into the FI-PPP programme, preparing the FI-PPP phase 3 (the FIWARE accelerator programme). A “SME task force” was established to find the best practice examples.

The main objectives were

- Identifying challenges and bottlenecks for SME engagement to be removed during FI-PPP phase 3.
- Supporting SME engagement for FI-PPP phase 3 through the promotion of stories of valid business cases.
- Capturing and distribute FI-PPP value while providing evidence of commercial success.

FINESCE presented its successful local innovation event approach and how SMEs were integrated into the trial sites processes via the Open Call.

To give a best practice example of how to integrate SMEs into utility software structures via open APIs was one of the main FINESCE contributions to the FI-PPP programme in the field of energy.

FINESCE also contributed with its expertise to attract SMEs to the programme via the innovation event format such as the “99sec” pitches and the networking table system.

The Accelerator support activities at the beginning of phase 3 (in June 2014) replaced the SME task force.

Attended EBMWG Meetings

- FI-PPP DWG and EBMWG 19.6.-20.6.2013 Brussels
- EBMWG meeting 21.-22.11. 2013 Brussels
- EBMWG, DWG final meeting 02.04.2014 Brussels

2.2 FINESCE participating in jointly organised FI-PPP performances

2.2.1 FIA and Netfutures

One major activity of the FI-PPP programme organised by the Dissemination Working Group was the joint performance of the FIWARE use case projects on Future Internet events.

The most prominent one were the Future Internet Assembly events (FIA) in May 2013 in Dublin, in March 2014 in Athens and (under its new name “Netfutures”) in March 2015 in Brussels.

FINESCE was always present with a booth, showing how FIWARE was successfully implemented in the FINESCE trial sites and contributed workshops dedicated to the area of Smart Energy.

At the FIA in Dublin FINESCE created a video blog showing interviews with representatives from FI-PPP and the European Commission.



Figure 3: FINESCE booth at the FIWARE stand at Netfutures 2015 in Brussels

2.2.2 ICT event in Vilnius 2013

The focus of the ICT event in Nov. 2013 was on opportunities for participation in the next EU Research Programme Horizon 2020.

Almost 5000 people attended the event, which was organised by the European Commission in cooperation with the Lithuanian Presidency of the Council of the EU.

Apart from the networking session, FINESCE was present at the FI-PPP stand describing the outcome of the past 5 FINESCE Innovation Events.

2.2.3 ECFI 1 in Brussels 2./3.4.2014

The 1st European Conference on the Future Internet („ECFI") showed the first results and demonstrations of the Future Internet - Private Public Partnerships (FI-PPP) phase 2 use case projects.

The two-day programme addressed current discussion about the implementation of FIWARE, business models, legal considerations and more.

FINESCE provided a workshop regarding the challenges of Future Internet technologies in the energy area: "Future Internet and Smart Utilities".

All use case projects showed applications based on FIWARE Generic enablers at the booths area.



Figure 4 FINESCE booth at the ECFI 1 in Brussels

Eye catcher of the booth was a smart grid model provided by QSC Via iPad game the visitors could balance energy consumption and production by steering the speed of a model railway.

2.2.4 ECFI 2 in Munich 17./18.9. 2014

The 2nd "European Conference on the Future Internet – ECFI" Munich took place at the research centre of the Technical University Munich in Garching. The event was the grand opening of the Future Internet accelerator projects. 16 accelerator projects from different business areas provided through open calls 80 million Euro funding for small and medium-sized enterprises who take the challenge to build innovative applications on the basis of FIWARE Future Internet technologies and bring their business into the market. Different workshops and panel discussion informed the participants about the open calls, the funding beneficiaries and the progress of phase two of the FI-PPP programme.

The FINESCE team played a vital part in the organisation of the whole event being responsible for the organisation of the fair and the presentations of use cases and accelerators on the main stage playing the role of the second chair in the organisation team.



Figure 5 ECFI 2 –Grand Opening of the FIWARE Accelerator Programme, Munich, 17./18.9.2014

The FINESCE project was present with a booth and a session on “Future Internet technologies in the energy and cleantech industry sector”.

The session focused on business development with the help from FIWARE infrastructure and accelerator programmes. The session gave insights into funding opportunities within the FIWARE accelerator programme. Representatives of the accelerator projects INCENSE, Speed UP! Europe and CEED Tech also took part in this session and offered funding and support for developing new ideas, applications and business models.

The FINESCE booth gave insights into the latest results of implementing FIWARE technologies in the energy sector. Presentations about the smart energy control app of the smart buildings in Hyllie/Malmö and Horsens, the real-time monitoring app of the smart factory in Aachen, a control and monitoring app for virtual power plants and an augmented reality app gave insights into the progress of the different FINESCE trial sites. Additionally, an augmented reality app gave an introduction into the FINESCE project in a playful manner.

The event was attended by 450 participants.

2.2.5 Other FI-PPP events

During the project time of public FI-PPP a lot of other FI-PPP events took place, where FINESCE contributed with presentations and workshops (efforts regarding the support of the FIWARE Accelerator Programme see chapter 4)

List of public other FI-PPP related events where the FINESCE team participated with presentations and workshops

- FI-PPP Architecture Week, 02.04.-05.04.2013, Madrid, Spain Participant in Generic Enabler presentation Technical presentation on FINESCE WP4 and WP6 activities
- FI-PPP information day (BMW), 22.5.2013, Berlin, Finesce project presentation
- FI-PPP 3rd Call Roadshow in Italy, 27.06.2013, Pisa (Italy), Participation to FI-PPP event and Presentation of Phase 1 and Phase 2 results
- FuNeMS in Lisbon, Portugal, 3.7.-5.7. 2013, Lisbon, Portugal, FINESCE video blog
- FIWARE at the Campus party, 2.9-7.9. 2013 in London, FINESCE participation in FIWARE booth
- FI-PPP Info Day in Poznan, 17.9.2013, FINESCE presentation
- FI-PPP Info day Open calls phase 2, 25.9.2013, Brussels, FINESCE presentation
- FI-PPP information days phase 3, Brussels, 3.10.-4.10.13, presentations
- FI-PPP workshop at FUSECO Forum, 28.11-29.11.13, Berlin, presentations

- FIF meeting of National Representatives, 1 July 2014, Brussels, Belgium, Presented FINESCE use of GEs as an example of a Phase II use case
- FIWARE Accelerator meeting, 16 July, 2014, Berlin, Germany, ECFI representation
- NETFutures Concertation Meeting, 26 Sept 2014, Brussels, Belgium, Presentation of FINESCE use of GEs as an example of a Phase II use case
- FIWARE: Enabling SMEs, web entrepreneurs and Developers to Enter the Future Internet, 30 Sept 2014, Brussels Belgium, Presentation of FINESCE as Use Case Project in FIWARE Accelerate project's info day
- FIWARE Technology Camp at DTU Skylab, 03.12.2014, Presentation of use of FIWARE in FINESCE

2.2.6 The FI-PPP/FIWARE Newsletter

Apart from the events organisation, Concorde published several FI-PPP/FIWARE newsletter (internal and external) where FINESCE was always represented with reports about current events and activities in the project.

Newsletter 10/13 "Getting 150 SMEs involved in the FINESCE innovation events"

Newsletter 12/13 "Featuring FINESCE-"What a wonderful world!","Talking Energy!"

Newsletter 02/14 "FINESCE Open Days – Trial sites of Smart Energy project open their doors"

Newsletter 03/14 "FINESCE in Horsens – Families of today living in the Smart Homes of tomorrow"

Newsletter 07/14 "FINESCE pronounces the winners of the FI-PPP Phase 2 Open Call"

Newsletter 10/14 "Successful 3rd FINESCE Open Day at the Trial Site in Ireland"

Newsletter 01/15 "SMART CITIES: FIWARE IN MALMÖ"

Newsletter 05/15 "The FINESCE Smart Energy Platform is emerging"

Newsletter 07/15 "FINESCE will contribute to shaping the future energy system beyond the end of the project"

3. How FINESCE promoted the use of FIWARE GEs in the energy sector on workshops and fairs.

FINESCE is the energy use case phase 2 project within the FI-PPP programme. After the successful integration of FIWARE GEs in the FINESCE trial site architectures, a strong emphasis of the project dissemination and marketing was to promote the idea of using a toolbox of software components (FIWARE GEs and FINESCE DSEs) in the energy sector. The idea of using a software platform was quite revolutionary for the established energy companies, because most software solutions at that time were proprietary.

FINESCE promoted the use of FIWARE GEs as basis for Future Internet solutions in the energy sector in workshops and fairs. The team developed a fair booth concept and marketing materials to inform and attract people to this idea

3.1 Promoting FIWARE at energy related workshops and events

The FINESCE marketing and presentation materials had to serve two main purposes:

1. To explain the integrated FINESCE/FIWARE ecosystem and to describe all relevant elements from the FIWARE universe and the Smart Energy universe and how they work together in an integrated system
2. To highlight the benefits of this approach for several stakeholders

For the general presentations we decided to present a layer-system as typical way to describe ICT architecture and put the FIWARE GEs in the very core.

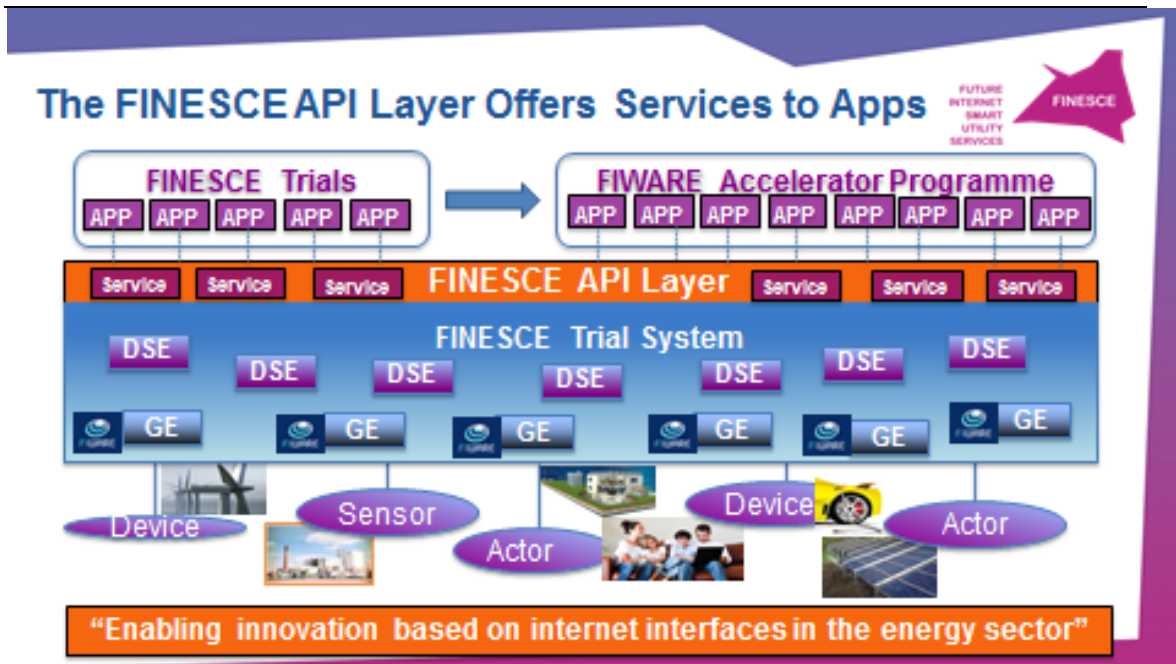


Figure 6 FIWARE GEs as the core of the FINESCE architecture

In the presentations of the trial architectures this picture was further developed into a diagram, how FIWARE GEs and FINESCE DSEs work together for individual use cases. It was important to convey that the trial sites used the same GEs for different purposes to show the multi-functionality of FIWARE.

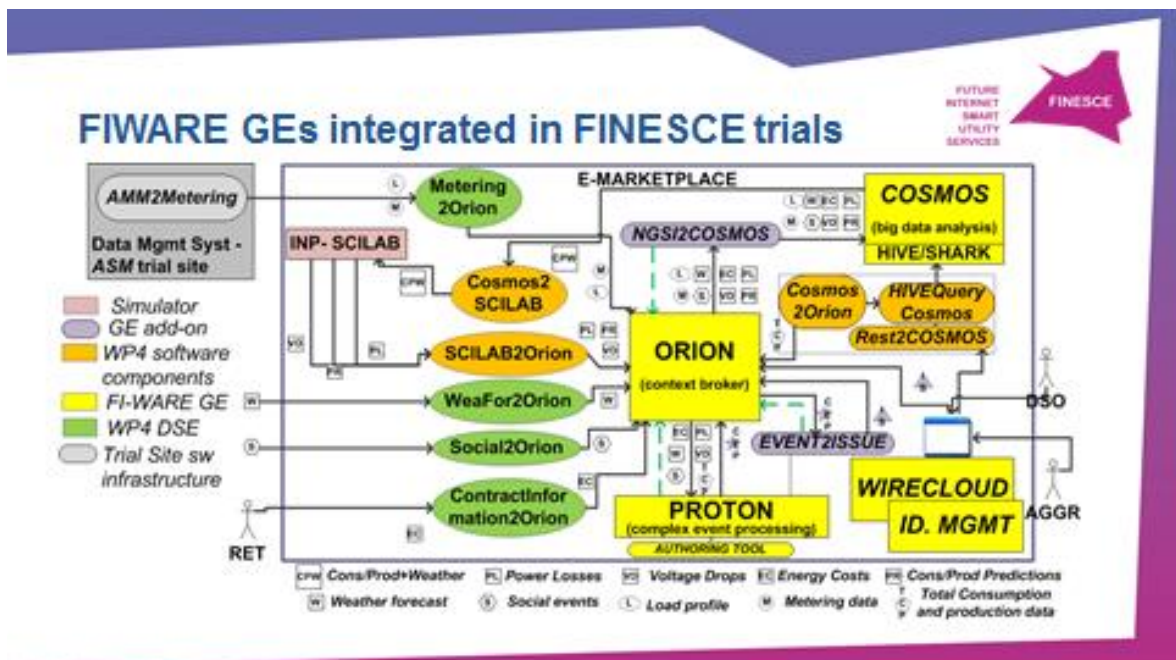


Figure 7 Terni trial architecture with integrated FIWARE GEs

For the design of posters and flyers the FINESEC team decided to choose a less technical approach that still shows all issues that are covered by FIWARE GEs (using the FIWARE chapter names), emphasizing that FIWARE is the core of the trial sites.



Figure 8 FINESCE Poster: Trial sites using FIWARE

For the FINESCE final event a special brochure is planned that shows how FIWARE GEs, FINESCE DSEs and proprietary software solutions were integrated as building blocks in the FINESCE trial software architectures.

Energy and ICT related Workshops and events where FINESCE partners gave presentations about FI-PPP and FIWARE

- Smart Grids Week, workshops, 13.5. - 17.5. 2013, Salzburg, Austria
- CDTM Smart Energy Day 24.6.2013, Munich, Germany
- EUROSOLAR Conference, workshop, 27.6. – 28.6.2013, Ulm, Germany
- UtiliNet Conference, pre-conference workshop, 2.7. – 4.7. 2013 Brussels, Belgium

- World Smart Grid Forum, pre-conference workshop, 23.9.2013, Berlin, Germany
- SmartGridComm workshop, 21.10.2013, Vancouver, Canada
- NWGN 9th General Assembly Meeting, 17.1.2014, Tokyo, Japan
- ISGAN Annex 6 workshop, 20.1.-21.1.2014, Stockholm, Sweden
- IEEE PES ISGT conference, 19.2. - 22.2.2014, Washington, DC, USA
- InnoGrid2020+ Conference, 25.3. - 26.3.2014, Brussels, Belgium
- Smart Grids Paris conference, 11.6. - 13.6.2014, Paris, France
- Smart Grids Week, workshop 20.5.2014, Graz, Austria
- IRED conference, presentation 17.-20.11.14, Kyoto, Japan
- Enel Workshop, 12.01.2015, Milano, Italy
- Distributech, workshop 03.02.2015, San Diego, USA
- IEEE Webinar, online workshop, 17.03.2015
- EON meeting, workshop, 26.03.15, Aachen, Germany
- Workshop ICT/energy with delegation from Kyoto University, workshop 7.4.15 Aachen, Germany
- EON Smart Hyllie Open day, 22.4.2015, Malmö, Sweden
- FEN workshop 26./27.5 and 18.6./19.6. 2015 Aachen, Germany
- FINESCE final event 14./15.9. 2015, Berlin, Germany

3.2 The FINESCE concept for Energy-and Smart City related fairs: Promoting FIWARE as Smart City platform

For the fair booths the marketing idea of an energy platform based on FIWARE GEs was translated into the plant world:

The platform with its applications is nurtured by FIWARE (represented as watering can).

The FIWARE GEs are the stem of the tree, in the tree crown the applications and services are the fruits.



Figure 9 Presenting FIWARE in the FINESCE booth concept (E-world, Essen, 11.2.2015)

The tree as an eye catcher worked well at fairs, as a giveaway we provided “seed bombs” with the icons of the FINESCE trials sites. The “seed bombs” represented the new ideas that can grow on the fertile ground of FIWARE.

The FINESCE team presented the concept of a smart energy platform enabled by FIWARE in short presentations to the visitors of the fair. A short survey amongst the booth visitors of the E-world Energy & Water 2015 provided the following results.

Survey participants	72
Utilities	38%
Service Providers for Utilities	25%
Consulting & Research	23%
Management	32%
Technical Experts	47%
Sales & Marketing	18%

Are you interested in the concept of a European ICT platform for Smart Energy?

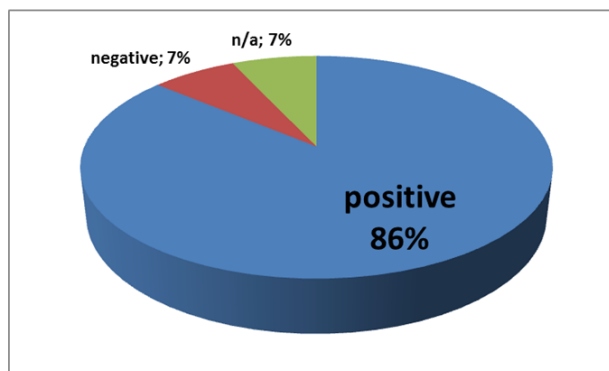


Figure 10 Results of the E-World Survey

The survey shows that the issue of using platforms and open APIs is a hot topic in the field of energy. This opinion was shared by all profession groups that were asked.

The results of this fair influenced all dissemination activities: The FINESCE Smart Energy platform based on FIWARE Generic enablers continued to be the focus of each booth and presentation.

Energy and Smart City fairs where FINESCE participated with a booth

- European Utility Week, Amsterdam, Netherlands, 4.11.-6.11.2014
- E-World, Essen, Germany 10.2.-12.2.2015
- Metropolitan Solution, Berlin, Germany, 20.5.-22.5.2015
- PowerGen, Amsterdam, Netherlands, 9.6.-11.6.2015

4. How FINESCE supported the FI-PPP phase 3 (“FIWARE Accelerator Programme”)

The phase 3 of the FI-PPP programme was a special challenge, because the objective was to attract thousands of SMEs and entrepreneurs to the programme and support them to successfully use FIWARE and help them build a FIWARE user community

FINESCE took up that challenge on many levels that will be described in detail in this chapter.

4.1 Building the FINESCE Innovation Community

At a very early stage FINESCE built its own SME community (“FINESCE Innovation Community) with the FINESCE open call. The purpose was not only to attract SMEs to the FINESCE open call, but prepare SMEs to participate in the Open Calls of the FIWARE accelerators at a later stage.

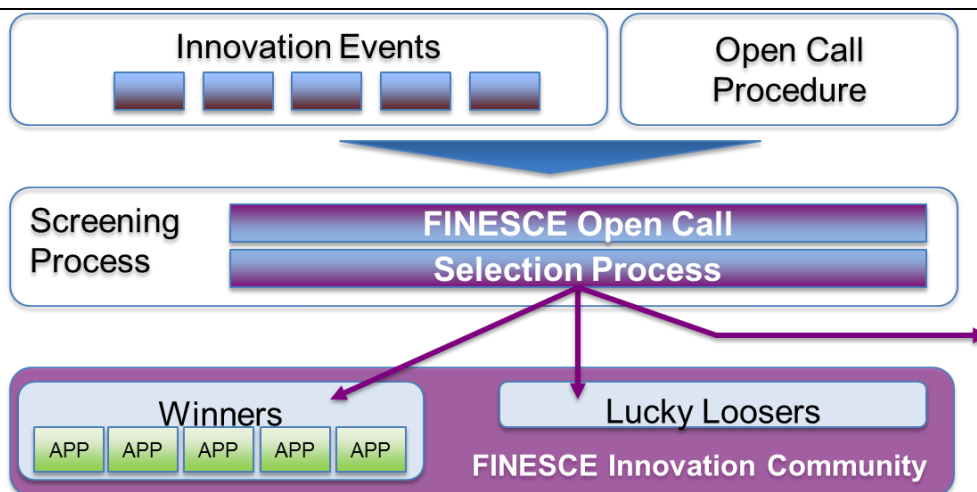


Figure 11 FINESCE Innovation process for SMEs

FINESCE organised 5 innovation events with SME pitches and networking opportunities in 5 European countries:

- Berlin (Germany), 10.9.2013
- Dublin (Ireland), 12.9.2013
- Malmö (Sweden), 1.10.2013
- Horsens (Denmark), 9.10.2013
- Terni (Italy), 17.10.2013



Figure 12 Impressions from the FINESCE Innovation Days

The results exceeded the expectations:

More than 40 SMEs and entrepreneurs applied for the FINESCE open call and over 150 SMEs showed interest in the open calls of the FIWARE Accelerator Programme. The FINESCE Innovation Community on LinkedIn had over 100 participants.

This was a great preparation for further activities like the FINESCE Open Days which promoted the Open Calls of the FIWARE Accelerator Programme.

4.2 Supporting the FIWARE Accelerator Programme at FI-PPP and local FIWARE accelerator events

The European Commission organised several events to directly promote the FIWARE Accelerator Programme. The FIWARE accelerators organised local events to attract SMEs to their open calls. Startup!Europe and INCENSE had a direct link Smart Energy applications. FINESCE partners shared their expertise with the integration of FIWARE GEs and supported the application process of the SMEs.

FI-PPP and FIWARE Accelerator Events in which FINESCE partners supported the FIWARE Accelerator Programme:

- FI-PPP information day (BMWi) 22.5.2013 Berlin, Germany
- FI-PPP 3rd Call Roadshow in Italy 27.06.2013, Pisa, Italy
- FI-PPP information day phase 3, 3.10.2013, Brussels
- FIWARE Accelerator meeting, 16 July, 2014, Berlin, Germany
- ECFI 2, 17.9.-18.9.2014, Munich, Germany
- SpeedUp!Europe Infoday, 5.9.2014, Hamburg, Germany
- iMinds Info session on the FIWARE Accelerator Programme, 30.9.14, Brussels, Belgium
- Accelerace workshop, 3.12.2014 Copenhagen, Denmark
- INCENSE Info Day about Call for Proposals of FIWARE Accelerators, 4.12.2014, Bologna, Italy
- IMPACT Jury Day event 18-19 12. 2014, Madrid, Spain

4.3 Promoting the FIWARE Accelerator Programme at FINESCE events

With the beginning of the FIWARE Accelerator Programme FINESCE provided presentations slots and workshops for the energy-related FIWARE accelerators on nearly all public events and fairs.

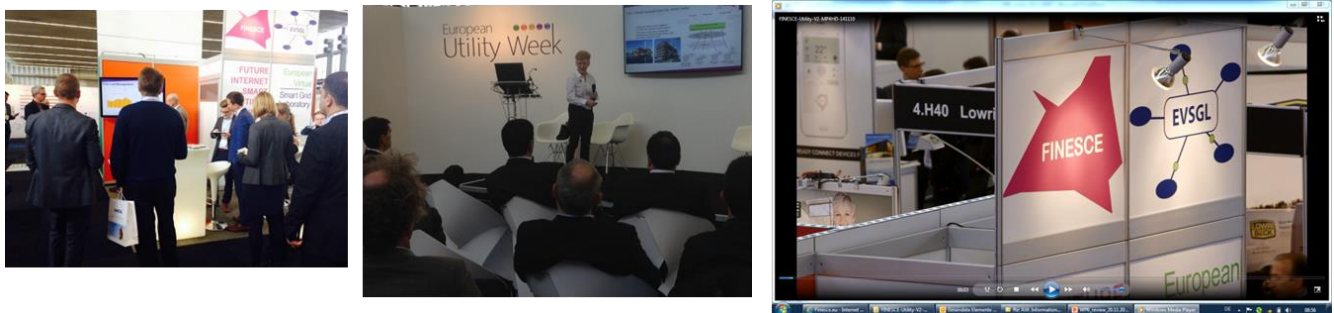


Figure 13 FIWARE Accelerator Programme workshop organised by FINESCE at the Utility Week in Amsterdam, November 2014

The main partner at these events was INCENSE, the FIWARE accelerator with the focus on Smart Energy applications.

Mostly the FINESCE Open Days of the FINESCE trial sites were used to promote the Open Calls of the accelerators.

The agenda of the FINESCE Open Days provided

- A comprehensive view on the FI-PPP programme, FIWARE as generic platform,
- FINESCE as the pilot implementation of FIWARE in the energy domain and the domain specific enablers that were developed in the FINESCE trials,
- Funding opportunities in the FIWARE Accelerator Programme,
- Open Call requirements of the specific accelerator presenting (e.g. INCENSE).
- Networking session between FINESCE trials, SME applicants and FIWARE accelerators



Figure 14 INCENSE presentation at the FINESCE Open Day, April 2015 in Hyllie, Sweden

The FINESCE Open Days were specifically designed to promote the FIWARE Accelerator Programme on a local level to SMEs. Participants had the chance to visit the trials and to talk to the FINESCE experts and find out about collaboration opportunities via the Open Calls.

FIWARE accelerator presentations and workshop were held in the following FINESCE events:

- FINESCE Open Day Trial Site Madrid, Spain, 10.3.2014
- FINESCE Open Day Trial Site Aachen, Germany, 12.6.2014
- FIWARE Accelerator Programme workshop organised by FINESCE at the Utility Week in Amsterdam, 4.11.2014
- FINESCE Open Day Trial Site Portlaoise, Ireland, 22.9.2014
- FINESCE Open Day Trial Site Horsens, Denmark, 2.12.2014
- FINESCE Open Day Trial Site Terni, Italy 9.3.2014
- FINESCE Open Day Trial Site Hyllie, Sweden, 22.4.2015

4.4 Providing the FINESCE Service package(including the FINESCE API) to energy-related SMEs

With the upcoming Open Calls of the FIWARE Accelerator Programme FINESCE partners prepared service package offered at the FINESCE website to provide sufficient support to SMEs that were interested in collaborating with the FINESCE trial sites:

- FINESCE API with access to trial data and functionality (description and direct access)

FINESCE API
Artemis Voulkidis - fam

Documentation Inspector

Show API Blueprint

FINESCE API

INTRODUCTION

The FINESCE API is an integrated API definition of the services provided by the FINESCE EU project (<http://www.finesce.eu/>). Assisted by an instantiation of the FINESCE API Mediator DSE, the FINESCE API presentation provided in this page offers free, unlimited experimentation of interested parties with the FINESCE trials, granted that access to the trials has been already provided, in the form of valid authentication credentials.

A Swagger interface can be used to assist the present API presentation and is available at <https://130.206.82.22/finesce/api/docs> (be sure to remove the intended spaces from the URL).

For details and support regarding the FINESCE project and developments, please visit: <http://www.finesce.eu/Contact.html>

For details and support regarding the FINESCE API Mediator DSE, please contact Artemis Voulkidis (voulkidis at synelixis dot com)

REFERENCE

Authentication

Authentication
Building information
Demand Response
Discrete Time Support
Energy demand / Power consumption
Energy supply / Power production
Electric Vehicles
External information
Metering infrastructure details
Optimization
Pricing
Regional Energy-Related Information
Simulation
Smart Factories
Virtual Power Plant
Weather forecast

Figure 15 Screenshot FINESCE API Access Page

- List of Generic Enablers used in the FINESCE trial sites (description)

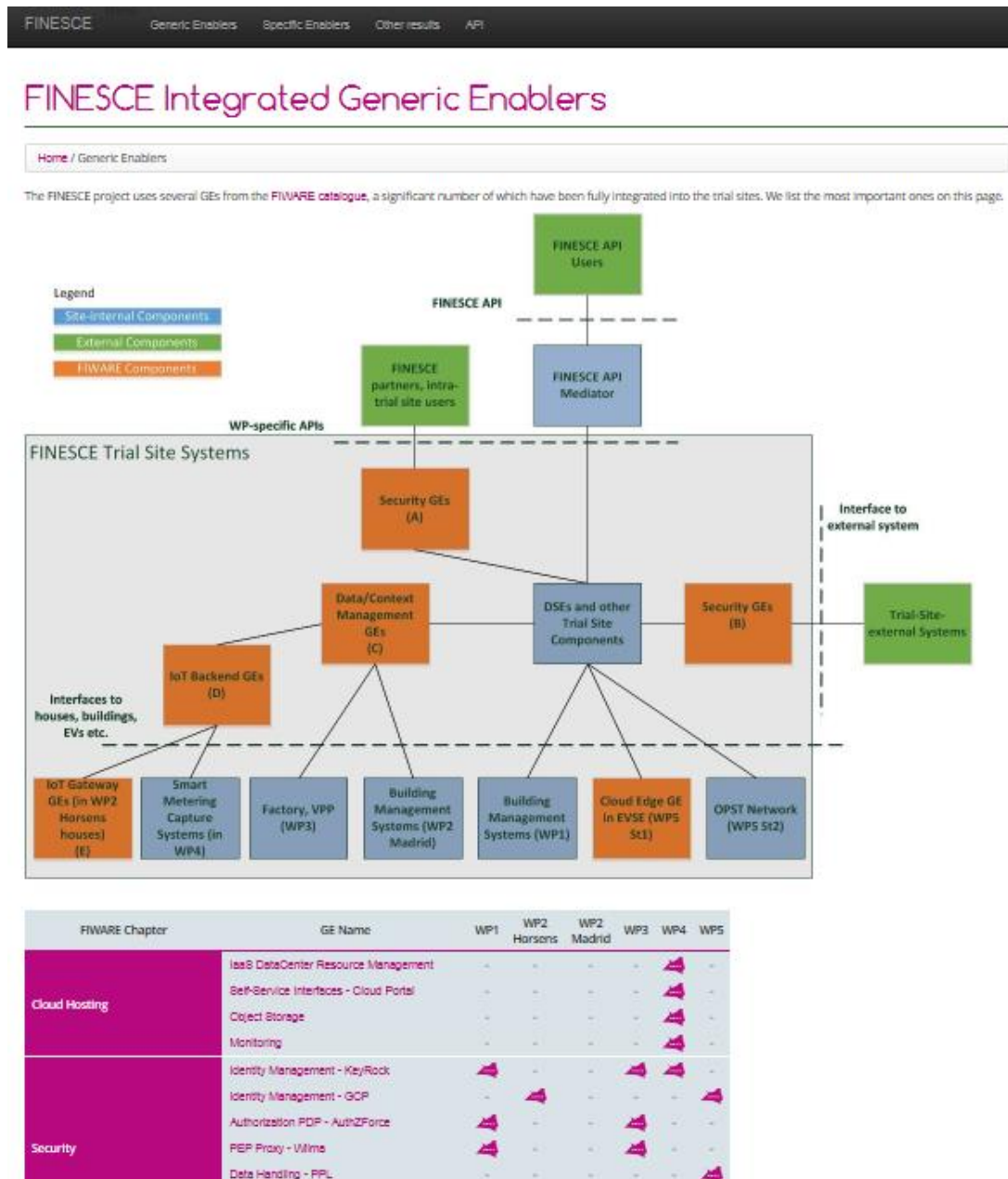


Figure 16 Screenshot FINESCE trial site architecture and list of integrated FIWARE GEs

- List of Domain Specific Enablers ready for download (description and download page)

FINESCE Generic Enablers Specific Enablers Other results API

FINESCE Specific Enablers

Home / Specific Enablers

This page contains the list of the Domain-Specific Enablers (DSEs) developed by the FINESCE project. We organised them by the Trial Site where we originally developed and used each of the DSEs. We have made them available for download, so please feel free to apply them to similar or other use cases.

Browse by Trial Site:

All ▾

Contract Information (ContractInformation2Orion **)

ContractInformation2Orion is a REST service (developed in Java) which allows clients (e.g. Retailers) to register data about cost of energy produced from the DERs, costs of transmission system and power plants, energy costs in an instance of ORION Context Broker GE.

TERNI (DSE INSTANCE DEPLOYED ON FI-LAB)

Social Events Interface (Social2Orion **)

Social2Orion is a REST service (developed in Java) which allows clients (e.g. Social Events Information Providers) to register data about social events (affecting consumption/production in a specific area such as a concert or a football match) in an instance of ORION Context Broker GE.

TERNI (DSE INSTANCE DEPLOYED ON FI-LAB)

Weather Condition Interface (WeaFor2Orion **)

WeaFor2Orion consists of: a REST service (developed in Java) which allow clients (e.g. Weather Condition Information Providers) to register data about weather conditions and predictions in a specific area onto an instance of ORION Context Broker GE + a Java client which retrieves weather conditions and predictions from an external service (forecast.io in our implementation) and then "passes" the data to the above mentioned REST service.

TERNI (DSE INSTANCE DEPLOYED ON FI-LAB)

Metering (Metering2Orion **)

Metering2Orion consists of: a REST service (developed in Java) which allow clients (e.g. DSOs) to register data about metering and load profile in a specific area into an instance of ORION Context Broker GE + a Java client which accepts data about metering and load profile coming from the smart meters (via either an IoT gateway or an existing legacy system) and then "passes" the data to the above mentioned REST service.

TERNI (DSE INSTANCE DEPLOYED ON FI-LAB)

Contract Tailor Processor (ContractManager **)

This component will be responsible to calculate a new contract for a specific customer based on an incentive plan (issued by a Retailer and approved by a Market Regulator Authority).

TERNI (DSE INSTANCE DEPLOYED ON FI-LAB)

Figure 17 Screenshot List of FINESCE DSEs ready for download

The FINESCE DSEs, the FINESCE API and the access via the FINESCE webpage will be available till the end of the FIWARE accelerator programme. The persons responsible can be contacted and further collaboration with the trial sites is possible. Furthermore the FINESCE Smart Energy platform with the FINESCE API will be maintained by the FEN project and available to new companies and organisations for at least 5 years.

4.5 Organising a joint FINESCE/INCENSE Workshop with INCENSE Open Call winners

On June 25th the joint INCENSE/FINESCE workshop took place in Rome.

14 start-up companies got a detailed presentation about the FINESCE trial sites, the implemented use cases and how FIWARE Generic Enablers were integrated in the architecture of the trials.

Developers presented for Developers in a very practical way discussing architecture models, different ways to use and integrate Generic Enablers and how one can quickly setup a software feature based on FIWARE.

The start-ups especially appreciated the direct relation to live Smart Energy use case showing how diverse FIWARE can be used to create new Smart Energy services and how the FINESCE API provides easy access to the data of the trial sites.

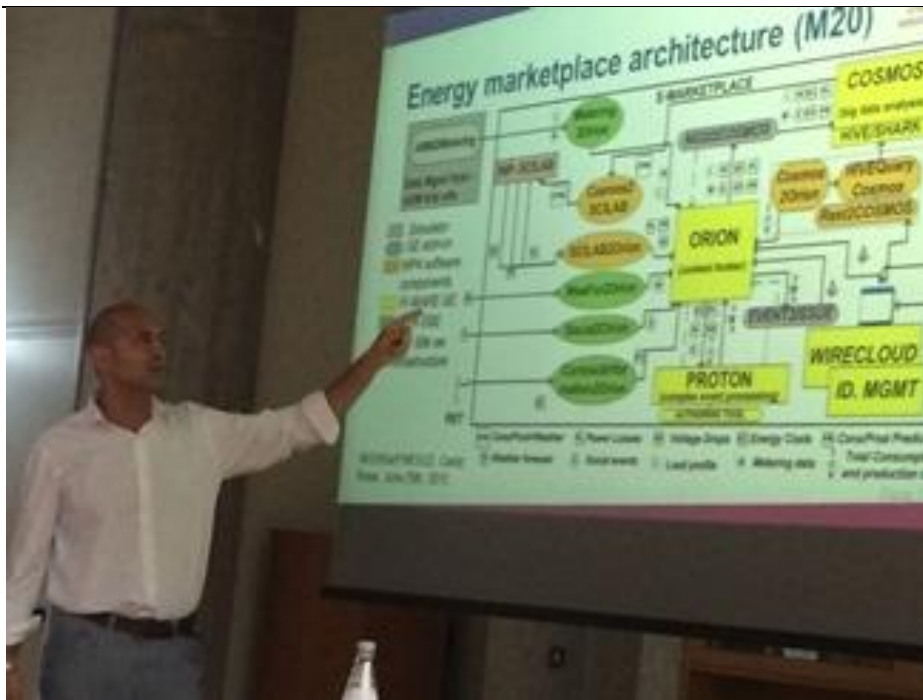


Figure 18 Massimiliano Nigrelli (Engineering) presenting the FIWARE GE integration in the trial architecture in Terni

In the afternoon all Start-ups got the opportunity to directly get a feedback on their architecture models by the FIWARE-experienced developers of the FINESCE trials and exchanged their experiences.



Figure 19 How to integrate FIWARE GEs in the most efficient way? Individual coaching by FINESCE developers

The workshop ended with a hands-on session showing tips and tricks to utilise the Orion GE in a very fast way.

The workshop was an efficient way to contribute to the creation of a FIWARE Open Source user community, because it offered a developer-to-developer approach, which is very important for an alive developer community. It accelerates the understanding how to use FIWARE in an efficient way and it offers the opportunity for new ideas approaches. Start-ups benefit from the experts' expertise and experts review their systems inspired by innovative ideas.

5. Conclusion and outlook

The FINESCE partners have successfully contributed to the FI-PPP programme on many levels:

- They have promoted the use of FIWARE in the energy sector on several energy-related events, workshops and fairs.
- They have supported the promotion of FIWARE as the EU smart city platform in several joint FI-PPP events and workshops.
- They have attracted innovative SMEs to the FI-PPP programme through the FINESCE Open Call and later through the promoting the Open Calls of the FIWARE accelerators with a direct link to energy.

Introducing FIWARE into the energy sector

The introduction of FIWARE into the field of energy was a challenging task. Since critical infrastructure for energy supply is involved the security requirements to software are very high compared to other areas of the future smart cities.

On the other hand the energy market is changing caused by the integration of renewable energies that are more volatile and distributed than fossil energy sources. There are new requirements to the new energy system and one essential one is the exchange of data between devices and actors.

Open data, open platforms, open APIs offer the opportunity for new services and new business models and so there was and is the right time to introduce the FIWARE concept to the energy market.

FINESCE has discussed the FIWARE concept on many levels and with many actors:

- With SMEs and Start-ups, assembling and implementing new ideas,
- With academic energy experts in the discussing requirements and architecture models
- With companies about possible business models and market chances

The FINESCE contact database comprises 3000 contacts from the Smart Energy area.

The concept of an Smart Energy Open Source platform was successfully introduced by FINESCE and will be further developed and extended by follow-up projects such as FEN (Flexible Energy Networks)

Supporting the FIWARE Smart City approach

To support the Smart City approach of FIWARE was another big task of the FI-PPP programme. Energy is a part of this concept as well as mobility, health, production and others represented by the several projects in all phases of FI-PPP.

It is one of the key benefits of FIWARE that it can be utilised in all smart city areas and via open APIs can communicate with other platform solutions.

The sharing of data across the smart city domains opens up the opportunity for new services (e.g. health/energy, energy/mobility).

FIWARE has the potential to grow into a powerful ecosystem sustained by an active Open Source Community and FINESCE supported this approach on many events and workshops organised by FI-PPP. Visitors, potential partners and clients always got a comprehensive insight into the utilisation of FIWARE in the several areas including the best practice examples provided by FINESCE.

Furthermore the FINESCE trials implemented the Smart City approach in their own business models and architectures (like in Malmö and Horsens).

The FINESCE Smart Energy platform (built on FIWARE GEs) is explicitly designed to get extended to Smart City platform and is able to communicate to other platforms via open interfaces.

Attracting SMEs to FIWARE and the FI-PPP programme

In the past rather large companies offered energy services. With the introduction of ICT in the world of energy, known as smart grids and smart energy, the game changed. The FIWARE approach is another step into the direction of integrating SMEs into the new energy system. FINESCE partners have shown how SMEs can be integrated in FIWARE based platforms via

open APIs and how new business models can be implemented by using open data and get access via open APIs.

The FINESCE Innovation Days and the FINESCE Open Days were specifically designed to promote this concept to local SMEs that are usually do not appear on EC events or on the big energy fairs.

All SMEs being interested in the work of FINESCE got access to the documentation of DSEs including the FINESCE API.

Outlook

The concept of the FINESCE Smart Energy Platform, based on FIWARE GEs is the heritage of the FINESCE project.

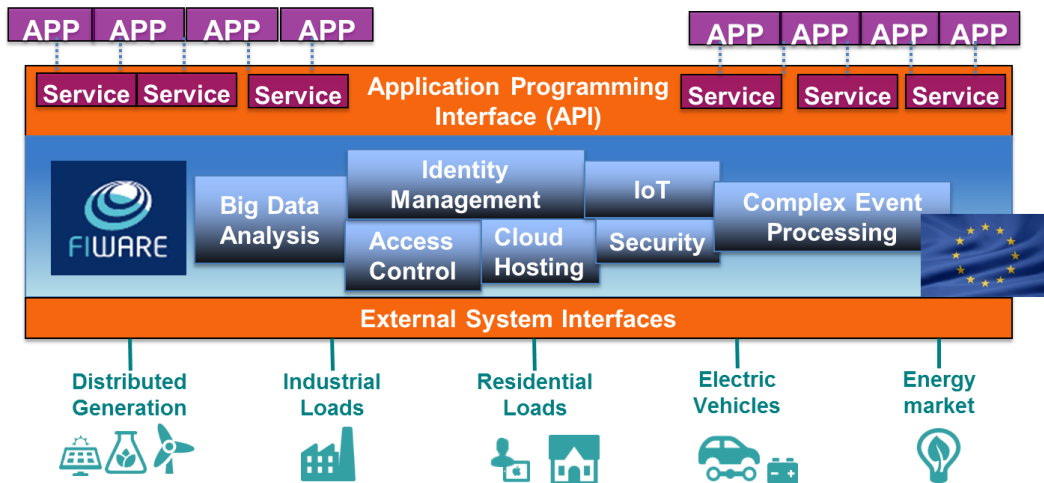


Figure 20 The FINESCE Smart Energy Platform based on FIWARE GEs

The Smart Energy Platform will be hosted as a “Smart Energy” FI-lab by one of the FINESCE partners, RWTH Aachen and transferred to a new project “Flexible Energy Networks (FEN)” funded by the German Government and the industrial partners from the FEN consortium. So the initiative is driven by the energy industry which is a great opportunity to promote the utilisation of FIWARE for energy application and services.

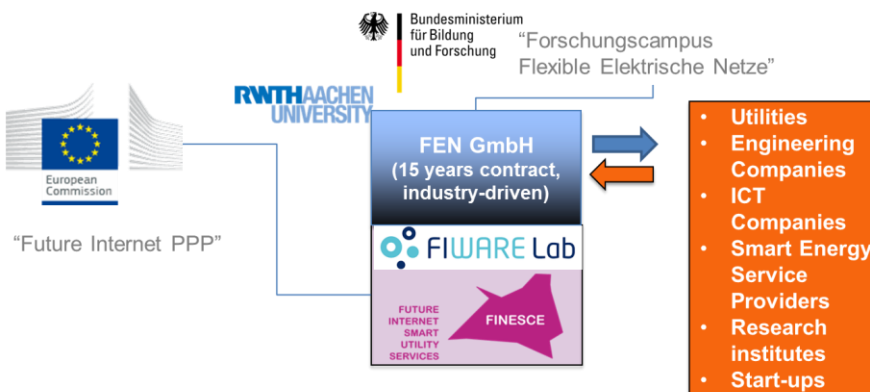


Figure 21 FEN: Securing FIWARE sustainability in the smart energy sector

The Smart Energy Platform will be used mainly to quickly implement prototypes of applications and services and thus more Domain Specific Enablers will be developed and the community of FIWARE users in the field of Smart Energy will be enhanced.

The FEN consortium will support this development by offering FIWARE training and support.

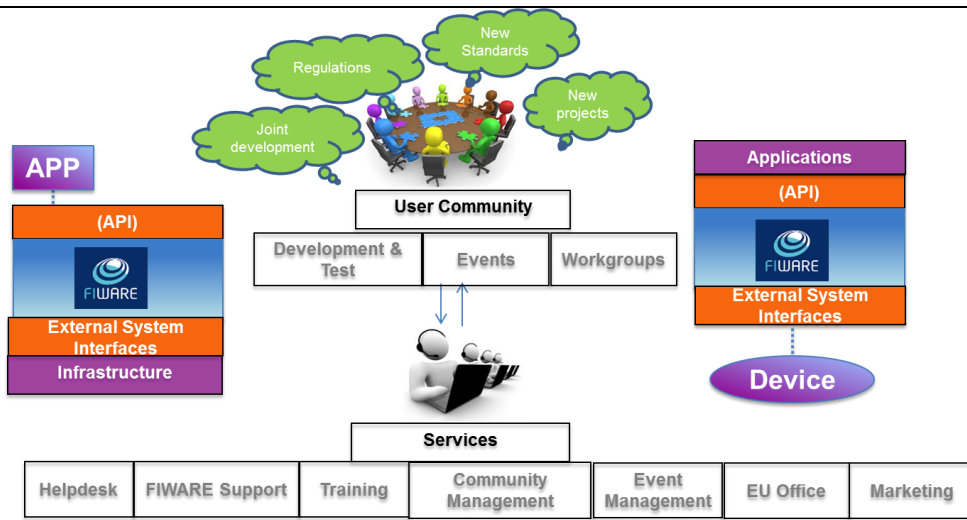


Figure 22 FEN Community: Utilising FIWARE for new Smart Energy projects

All historical data from the FINESCE trial sites and the FINESCE API will be available for at least one more year for SMEs to use them for new application and services.

So the sustainability of FIWARE is secured and this might be the biggest contribution from the FINESCE project to the FI-PPP.