

Private Public Partnership Project (PPP)

Large-scale Integrated Project (IP)



D.32.5.2: Technical coaching report

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Executive Summary

This document describes the main activities run to coach FIWARE users notably those from the FIWARE Accelerate Program concerning the second period of the project.

It provides an overview of performance statistics for the period on coach taking into account support provided through the Help Desk, Nodes and Generic Enablers.

In order to be self-explanatory, this document also provide an overview of the approach taken, the organizational structures and procedures adopted, describes the main tasks performed in addition to coaching such as the FIWARE technical assessment of FIWARE Accelerate projects, and concludes with the main statistics as derived from the FIWARE Backlog.

According to such statistics it is easily to see the trend and progress offered by FIWARE Coach team, how Generic Enablers are better supported, improved, and used by the FIWARE users.

The main conclusions are that coaching activities, particularly for young organizations, are of great importance and impact when introducing new technologies in the market and if performed in a systematic way. We encourage the FIWARE Foundation, but also other organizations working in similar context, to keep a coach team in place.

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1 Introduction

1.1 Document Conventions

The formatting of the document is compliant with the deliverable template provided by the project coordination. No other specific convention has been applied.

1.2 Intended Audience

This report is intended for those who, knowing FIWARE, intend to provide support either in a commercial or non commercial fashion. Indeed, it provides descriptions and elements of thoughts from what happened during the execution of the European Commission funded FIWARE initiative.

However, the experiences described and lessons learnt provided along this document can be generalized so that it could be also useful for those wanting to introduce new technologies in the market maximizing the impact in the short term.

1.3 Reading Suggestions

The document is divided into 5 chapters.

- Chapter 1: Introduction
Provides the information required to understand the rest of the document
- Chapter 2: FIWARE Coaches Team
Describes the FIWARE Coaches team in terms of organization and procedures
- Chapter 3: FIWARE usage assessment questionnaire
This section describes the work done to assess the adoption of FIWARE
- Chapter 4: FIWARE Coaches support statistics
Provide numbers about the support given by FIWARE Coaches to the FIWARE Accelerate sub-grantee projects.
- Chapter 5: Conclusions
Describes suggestions for the future and lesson learnt from the past

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2 FIWARE Coaches Team

2.1 FIWARE Coaches Mission

Within the process of coordination and end users support, FIWARE Coaches Team had the prominent role in making easier the adoption of FIWARE technologies by non FIWARE experts.

The first step was bootstrapping the work of the team well before the FIWARE Accelerate calls were published. Indeed, such first step took place at the project kickoff where the following was agreed and reinforced:

- A need for providing technical coaching for the sub-grantees of the FIWARE Accelerate program as well as to the accelerator projects themselves during the third phase of the FI-PPP programme is clearly identified. So the goal of the FIWARE Coaches Team is to provide the necessary and qualified support for such goal. By technical coaching it is meant activities such as:
 - providing advice to accelerator projects and, eventually participate in evaluation of proposals submitted to Open Calls issued by accelerator projects. In this context just the technical assessment regarding usage of FIWARE was provided as the business assessment was dealt directly by the FIWARE Accelerate projects
 - provide training, or facilitate connection to FIWARE GE owners for training, to the sub-grantees selected within the FIWARE Accelerate projects Open Calls
 - meet regularly with selected sub-grantees to coach and advice them on how to use FIWARE technologies
 - participate in monitoring and assessment of applications developed by the selected sub-grantees in Open Calls with respect to usage of FIWARE

In such context the role of the FIWARE Coaches Team is that of:

- being the unique entry point for the sub-grantee projects to FIWARE. This was immediately communicated to the FIWARE accelerate project coordinators and, during the programme development, to the various selected sub-grantees
- solving issues directly whenever the team can, or transfer requests internally to the GE owners if the case
- following the resolution of requests
- being pro-active in supporting the accelerators

The following working and approach principles were also established and agreed:

- work in a coordinated manner, sharing best practices and meeting periodically
 - Shared tools

- FIWARE Ticketing system
- Satisfaction questionnaires for SMEs -> Get 'users' feedback
- Inputs to the FAQ page
- Reporting / KPIs to be defined

2.2 FIWARE Coaches Team

The FIWARE Coaches Team was formed by the following experts all of them coming from inside the FI-Core project partners.

Accelerator Project	Expert	Company
CEED Tech	Marco Terrinoni	CONSOFT
CreateFI	Silvio Cretti, Leandro Guillen	Create-Net, Telefonica
European Pioneers	Thierry Nagellan	Orange
FABulous	Pasquale Vitale	Engineering
FiAdopt	Ilknur Chulani	Atos
FI-C3	Franck Le Gall	EGM
FICHe	Franck Le Gall	EGM
Finish	Ilknur Chulani	Atos
FINODEX	Pasquale Vitale	Engineering
FRACTALS	Ilknur Chulani	Atos
Frontier Cities	Francesco Arigliano	Engineering
IMPACT	Leandro Guillen	IMDEA
INCENSE	Pasquale Andriani	Engineering
SmartAgriFood	Ilknur Chulani	Atos
SOUL-FI	Sergio Garcia	Telefonica
SpeedUp Europe	Leandro Guillen	IMDEA

Table 1 – FIWARE Coaches Team

Among the experts listed above, Ilknur Chulani was acting as a coordinator and single point of contact for a team set-up by Atos for the purpose.

As said earlier, to avoid confusion and to well keep track of all the requests coming from the various FIWARE Accelerate projects a dedicated mail list for each of such projects was created and communicated to the FIWARE Accelerators projects coordinator. Such mail list was also connected to the internal FIWARE Ticketing system so to avoid requests to be lost or not promptly attended. Having this mail list has been crucially important exactly to foster team building between the various projects

and their coaches. Indeed, the project teams knew that whenever they were encountering a problem there was somebody ready to support them in addressing their issues.

The mail lists are:

Accelerator Project	Mail list ¹
CEED Tech	fiware-ceedtech-coaching [at] lists [dot] fiware [dot] org
CreateFI	fiware-creatifi-coaching [at] lists [dot] fiware [dot] org
European Pioneers	fiware-europeanpioneers-coaching [at] lists [dot] fiware [dot] org
FABulous	fiware-fabulous-coaching [at] lists [dot] fiware [dot] org
FiAdopt	fiware-fiadopt-coaching [at] lists [dot] fiware [dot] org
FI-C3	fiware-fic3-coaching [at] lists [dot] fiware [dot] org
FICHe	fiware-fiche-coaching [at] lists [dot] fiware [dot] org
Finish	fiware-finish-coaching [at] lists [dot] fiware [dot] org
FINODEX	fiware-finodex-coaching [at] lists [dot] fiware [dot] org
Fractals	fiware-fractals-coaching [at] lists [dot] fiware [dot] org
Frontier Cities	fiware-frontiercities-coaching [at] lists [dot] fiware [dot] org
IMPACT	fiware-impact-coaching [at] lists [dot] fiware [dot] org
INCENSE	fiware-incense-coaching [at] lists [dot] fiware [dot] org
SmartAgriFood	fiware-smartagrifood-coaching [at] lists [dot] fiware [dot] org
SOUL-FI	fiware-soulfi-coaching [at] lists [dot] fiware [dot] org
SpeedUp Europe	fiware-speedup-coaching [at] lists [dot] fiware [dot] org

Table 2 – FIWARE Coaches Team mail lists

Messages sent to the above mail lists were received by the relevant coach, but also by the FIWARE Coach Team Responsible and the FI-Core Project Coordinator to allow them to monitor the progresses and to provide their direct contribution when this was needed or requested.

2.3 FIWARE Coaches internal procedures

Given the specificity of the task to be performed, the team decided to meet on a regular basis. In order to keep efficiency, the team agreed to have every Tuesday morning a synchronization call where to discuss and share what happening in the context of the various FIWARE Accelerate projects. Such

¹ Please note the mail lists were created before the new FIWARE naming convention. So now all the mail lists point to fiware.org (without hyphen).

meetings were of course decision points, but also and above all, a place where to share info and experiences.

The team continuous communication mean was, and is, a dedicated mail list: fiware-coaches [at] lists [dot] fiware [dot] org²

To proper manage all the actions and responses to tickets, due to some negative feelings among FIWARE users are due to the delay or complete lack in responses by the relevant stakeholder, on 31 March 2015, it has been agreed the following Escalation Procedure:

GEi/GEri technical aspects:

1. assign the ticket to the GEi/GEri owner according to the contact point as in the FIWARE Catalogue
2. if after 3 working days there is no answer, inform the relevant FIWARE Chapter Leader
3. if after 3 working days there is no answer, inform the FIWARE Coaches Team Responsible

GEi/GEri overall aspects (e.g. training)

1. assign the ticket to the relevant FIWARE Chapter leader
2. if after 3 working days there is no answer, inform the FIWARE Coaches Team Responsible

The above escalation procedure revealed suitable for the purpose, making very clear all the roles of the various stakeholders, and, above all, did not generate additional workload.

² Please note the mail lists were created before the new FIWARE naming convention. So now this mail list point to fiware.org (without hyphen).

3 FIWARE Usage Assessment

3.1 Rationales and Questionnaire

Since the start of the FI-PPP Phase 2, one of the main concern of the whole FIWARE initiative was to measure the usefulness of the various FIWARE GEis/GERis. In this context a first was made through the analysis of what done by the FI-PPP Use Case projects. Such analysis revealed very useful as many suggestions on how to improve the marketability of the various FIWARE technologies were proposed. The limitation of such analysis work mostly resided on the fact that such Use Case projects were made by FIWARE experts.

So, given the availability of a much larger base and in particular taking into account that the sub-grantee projects of the Accelerate Programme were called to put the result of their work in the market, it was agreed to have a much more meaningful study. This was conducted by a dedicated questionnaire to gather feedback from the various projects on the actual usage, in a sort of production environment, of the FIWARE GEis/GERis. The questionnaire was developed by the FIWARE Coaches Team under the direct supervision of the FI-Core Project Coordinator given the strategic relevance of the study.

The projects were asked to compare their “planned” intentions about FIWARE with the “actual” results of usage. Respondents were supported in their work by the FIWARE Coaches Team.

In the following the questionnaire is reported.

1) FIWARE Lab usage (Cloud hosting services)

(please use column “D”)

- 1) Are you using the FIWARE Lab cloud hosting capabilities (VMs, Object Storage, Blueprints)?
 - a) yes/planned/no [yes=2pt, planned=1pt]
 - b) if yes/planned, explain which resources and cloud services you need
 - c) if not, why?
- 2) Will you use the cloud GEs for setting up your own Cloud hosting service (public or private cloud)?
 - a) yes/planned/no [yes=4pt, planned=3pt]
 - b) if yes/planned, explain how
- 3) Will you define a blueprint of your app that will allow FIWARE Cloud users (e.g., FIWARE Lab users or commercial FIWARE cloud instance users in the future) to deploy instances of your app?
 - a) yes/planned/no [yes=4pt, planned=3pt]
 - b) if yes/planned, explain how.

2) FIWARE Lab usage (Global GE instances)

(please use column “E”)

- 1) Do you use global instances of GEs deployed on the FIWARE Lab (Cosmos, Open Data portal, Wirecloud portal, Keyrock IdM, AuthZForce PDP)?
 - a) yes/planned/no [yes=2pt, planned=1pt]
 - b) if yes/planned, explain which ones

- 2) Do you use the FIWARE Lab global instances of the authorization and access control framework (Keyrock IdM, AuthZForce PDP) combined with the Wilma PEP proxy or your own developed PEP proxies to control authorization and access to your application, APIs or data?
 - a) yes/planned /no [yes=4pt, planned=3pt]
 - b) if yes/planned, explain how

3) Context information

(please use column "G")

- 1) Does your application support a context-aware behavior based on the update, gathering, storage, publication, querying, or subscription on changes of context information (attributes describing relevant entities, events, information describing the status of real-world objects , etc.)?
 - a) yes/planned/no
 - b) if yes/planned, explain which entities and attributes your app manages as context information
 - c) Does your application use the FIWARE NGSI API supported by the Orion Context Broker to manage context information?
 - d) yes/planned/no [yes=2pt, planned=1pt]
 - e) if yes/planned, explain which entities and attributes your app manages as context information using the NGSI API
 - f) if not, why?
- 2) Does your application support integration of context information sources from 3rd parties with the Orion Context Broker using some sort of NGSI adapter component (e.g., through a NGSI adapter library that perform updates on context information using the NGSI API or a NGSI server endpoint registered as context provider using the NGSI API)?
 - a) yes/planned/no [yes=4pt, planned=3pt]
 - b) if yes/planned, explain

4) Big Data

(please use column "H")

- 1) Does your application generates or gathers large amounts of data that you want to analyse later on?
 - a) yes/planned/no
 - b) if yes/planned, explain which data, how much data and what kind of analysis)
- 2) Does your application perform Big Data analysis on historic data about context using the Cosmos Big Data platform?
 - a) yes/planned/no [yes=2pt, planned=1pt]
 - b) if yes/planned, explain
 - c) if not, why?
- 3) In order to perform big data analysis of historic Context Information,do you use the Cosmos shared cluster on FIWARE Lab or deploy the Cosmos GE in your infrastructure to deploy big data clusters on demand?
 - a) yes/planned/no [yes=4pt, planned=3pt]
 - b) if yes/planned, how?

5) Complex Event Processing (CEP)

(please use column "I")

- 1) Does your application require to detect complex situations and execute actions or take decisions upon events that take place?
 - a) yes/planned/no
 - b) if yes/planned, explain
- 2) If your answer to the previous question was affirmative, do you use the Proton CEP?
 - a) yes/planned/no [yes=2pt, planned=1pt]
 - b) if yes/planned, how?
 - c) if not, why?
- 3) If your answer to the previous question was affirmative, do you use the Proton CEP to process events related to updates on context information integrating CEP with the Orion Context Broker?
 - a) yes/planned/no [yes=4pt, planned=3pt]
 - b) if yes/planned, how?
 - c) if not, why?

6) Stream Oriented media processing

(please use column "J")

- 1) Does your application need the processing of media contents (gathering, transcoding, analysing, producing/enhancing or publishing media)?
 - a) yes/planned/no
 - b) if yes, explain
- 2) Does your application require videoconferencing features (P2P or MP)?
 - a) yes/planned/no
 - b) if yes, explain
- 3) If your answer to any of the previous questions was affirmative, do you use the Kurento Stream-Oriented media processing GE?
 - a) yes/planned/no [yes=2pt, planned=1pt]
 - b) if yes/planned, how?
 - c) if not, why?
- 4) Do you integrate the Kurento Stream-oriented Media processing with Orion Context Broker in order to enrich context information or handle context information as input for media processing?
 - a) yes/planned/no [yes=4pt, planned=3pt]
 - b) if yes/planned, how?

7) Internet of Things

(please use column "K")

- 1) Does your application connect to sensors or other types of devices to gather measurements or actuate on them?
 - a) yes/planned/no
 - b) if yes, explain (which devices and protocols, how many, what for?)
- 2) Do you use FIWARE IoT GEs for this purpose?
 - a) yes/planned/no [yes=2pt, planned=1pt]
 - b) if yes/planned, how? (which GEs, how?)
 - c) if not, why?

- 3) If your answer to the previous question was affirmative, do you integrate IoT Data with other sources of context information by means of connecting FIWARE IoT GEs to the Orion Context Broker?
- a) yes/planned/no [yes=4pt, planned=3pt]
 - b) if yes, explain
 - c) if not, why?

8) Open Data

(please use column "L")

- 1) Does your application require to consume open data?
 - a) yes/planned/no
 - b) if yes, explain (which formats, APIs, sources)
- 2) Does your application publish open data?
 - a) yes/planned/no
 - b) if yes, explain (which formats, APIs, where)
- 3) If your answer to any of the two previous questions was affirmative, do you use the FIWARE Open Data Publication GE (extended CKAN) or a standard CKAN instance?
 - a) yes/planned/no [yes=2pt, planned=1pt]
 - b) if yes/planned, how?
 - c) if not, why?
- 4) if your answer to the previous question was affirmative, do you use the Open Data GE (extended CKAN) to publish datasets linked to NGSI resources as open data?
 - a) yes/planned/no [yes=4pt, planned=3pt]
 - b) if yes/planned, how?
 - c) if not, why?

9) Advanced Web UI

(please use column "M")

- 1) Does your application need to visualize 3D objects in web-based user interfaces or represent virtual worlds?
 - a) yes/planned/no
 - b) if yes/planned, explain
- 2) Does your application incorporate information about POIs (Points of Interest)?
 - a) yes/planned/no
 - b) if yes/planned, how is info about POIs stored and visualized?
- 3) If your answer to any of the two previous questions was affirmative, do you use any of the Advanced Web-based User Interface GEs in FIWARE?
 - a) yes/planned/no [yes=2pt, planned=1pt]
 - b) if yes/planned, how?
 - c) if not, why?
- 4) If your answer to the previous question was affirmative, do you use any of the Advanced Web-based User Interface GEs in FIWARE to visualize context information available using the NGSI API (e.g., exported by the Orion Context Broker)?
 - a) yes/planned/no [yes=4pt, planned=3pt]
 - b) if yes/planned, how?

- c) if not, why?

11) Wirecloud

(please use column "N")

- 1) Does your application provide a modular user interface? Will you provide a (customizable) dashboard?
 - a) yes/planned/no
 - b) if yes/planned, explain
- 2) If your answer to the previous question was affirmative, do you use the Application Mashup GE (Wirecloud) to create web dashboards?
 - a) yes/planned/no [yes=2pt, planned=1pt]
 - b) if yes/planned, how? (which widgets are you reusing or plan to create)
 - c) if not, why?
- 3) if your answer to the previous question was affirmative, does any widget you mashup using Wirecloud access to context information?
 - a) yes/planned/no [yes=4pt, planned=3pt]
 - b) if yes/planned, how? (which widgets are you reusing or plan to create)
 - c) if not, why?

12) Data Analytics

(please use column "O")

- 1) Does your application perform analysis of datasets and advanced charts or visualizations? Do you need a Business Intelligence tool?
 - a) yes/planned/no
 - b) if yes planned, explain (what kind of analysis, or visualization, which data?)
- 2) If your answer to the previous question was affirmative, do you use the FIWARE Data Visualization and Analysis GE (SpagoBI)?
 - a) yes/planned/no [yes=2pt, planned=1pt]
 - b) if yes/planned, how?
 - c) if no, why?
- 3) if your answer to the previous question was affirmative, do you use the FIWARE Data Visualization and Analysis GE (SpagoBI) connected to other GEs (Orion, CKAN, Cosmos)?
 - a) yes/planned/no [yes=4pt, planned=3pt]
 - b) if yes/planned, how? which other GEs (ckan, orion, cosmos,...) are integrated?
 - c) if not, why?

13) Authorization and Access Control

(please use column "P")

- 1) Do you need to implement some sort of authorization and access control mechanism in your application?
 - a) yes/planned/no
 - b) if yes/planned, explain
- 2) If your answer to the previous question was affirmative, is it your authorization system based on using the Wilma PEP Proxy, and the KeyRock IDM GEs?

- a) yes/planned/no [yes=2pt, planned=1pt]
 - b) if yes/planned, how?
 - c) if not, why?
- 3) If you are implementing some sort of access control mechanism, is it your access control system based on using the access control GEs (AuthZforce PDP with Wilma PEP Proxy)?
- a) yes/planned/no [yes=4pt, planned=3pt]
 - b) if yes/planned, how?
 - c) if not, why?

14) Business framework functions

(please use column "Q")

- 1) Does your application need to sell applications or data?
 - a) yes/planned/no
 - b) if yes/planned explain
- 2) Does your application have or support a payment process that requires revenue sharing or payments settlement?
 - a) yes/planned/no
 - b) if yes/planned, explain (stakeholders, revenue sharing models)
- 3) If your answer to any of the two previous questions is affirmative, do you use the Business Framework GEs (Store, Marketplace, RSS) for monetizing your application?
 - a) yes/planned/no [yes=2pt, planned=1pt]
 - b) if yes/planned, how? (which GEs, how,)
 - c) if not, why?
- 4) If your answer to the previous question is affirmative, do you use the Business Framework GEs for monetizing data published by your application?
 - a) yes/planned/no [yes=4pt, planned=3pt]
 - b) if yes/planned, how? (will you use the Business Framework linked to the Open Data publication GE (extended CKAN) for selling data?)
 - c) if not, why?

15) Specific Enablers from Use Case projects

- 1) Do you integrate Specific Enablers from one or more Use Case projects?
 - a) yes/planned/no
 - b) if yes/planned, how? (describe which SEs from which UCs and how they are used in your architecture).

16) Additional questions

- 1) Is there any feature you would like to have in the GEs that you are using or planning to use?
- 2) Which additional GEs would you like to find in FIWARE?
- 3) What are the FIWARE GEs that you found more useful when designing your app?
- 4) What are the FIWARE GEs that you found more stable/mature while developing your app?
- 5) Is there any service or capability do you miss to have in the FIWARE Lab?
- 6) Do you find helpful the way the support is currently provided in FIWARE? Which additional mechanisms you would like to see?

3.2 Results

The questionnaire was initially announced to the FIWARE Community through Basecamp in order to receive feedback on 28 July 2015 and then officially launched on 4 August 2015 with deadline on 31 August 2015.

Each coach had the responsibility to assist the SMEs/startups of his/her Accelerator project in contacting and filling the questionnaire. Final results were collect up to 31 August 2015 as planned. The final scores are in the following. Anyway, in order to have a more stringent control over the process and not to miss any request from the SMEs/startups a dedicated mail list, connected to FIWARE ticketing system, was created at the address: [fiware-survey-help \[at\] lists \[dot\] fiware \[dot\] org](mailto:fiware-survey-help@lists.fiware.org).

The following table summarises overall statistics on responses.

Accelerator	Coach		Number of SMEs	Responses	Response rate
	Name	Organisation			%
FABulous	Pasquale Vitale	Engineering	53	32	60
FINODEX	Pasquale Vitale	Engineering	48	32	67
FrontierCities	Francesco Arigliano	Engineering	28	24	86
INCENSE	Pasquale Andriani	Engineering	14	14	100
FRACTALS	Ilknur Chulani	Atos	43	33	77
FI-ADOPT	Ilknur Chulani	Atos	32	24	75
SmartAgriFood	Ilknur Chulani	Atos	49	42	86
Finish	Ilknur Chulani	Atos	32	23	72
SOUL-FI	Sergio Garcia	Telefonica	135	75	56
IMPACT	Leandro Guillen	IMDEA Software	19	13	68
SpeedUp!Europe	Leandro Guillen	IMDEA Software	80	68	85
EuropeanPioneers	Thierry Nagellan	Orange	12	8	67
CEED Tech	Marco Terrinoni	Consoft	34	25	74

CREAtiFi	Silvio Cretti	CREATE-NET	57	50	88
FI-C3	Franck Le Gall	EGM	11	11	100
FICHe	Franck Le Gall	EGM	20	20	100
Total			667	494	74

Table 3 – Questionnaire response rate

Concerning the “FAIWAREness” the result, weighted according to FIWARE relevance, is as follow:

Accelerator	Number of SMEs	Responses	Response rate (%)	Min	Max	Average	Median
FABulous	53	32	60	4	103	36	34.5
FINODEX	48	32	67	0	112	41	36
FrontierCities	28	24	86	9	73	30	26
INCENSE	14	14	100	11	96	41	39.5
FRACTALS	43	33	77	7	75	38	36
FI-ADOPT	32	24	75	6	84	40	42.5
SmartAgriFood	49	42	86	15	95	50	44.5
Finish	32	23	72	0	90	39	45
SOUL-FI	135	75	56	0	95	44	39
IMPACT	19	13	68	3	44	22	20
SppedUp!Europe	80	68	85	0	120	41	35.5
EuropeanPioneers	12	8	67	0	34	14	10.5
CEED Tech	34	25	74	0	51	11	8
CREAtiFi	57	50	88	10	66	28	25.5
FI-C3	11	11	100	4	99	41	31
FICHe	20	20	100	14	90	38	38
Total	667	494		0	120		
Overall Averages			74	5.1	82.9	37.07	34

Table 4 – FIWAREness

Although the main purpose of this document is not to provide an analysis of the above data, some lessons can be also highlighted here.

Taking into consideration that the max possible weighted score is 188 the first aspect to notice is that no project reached that maximum and, even more, the average maximum is less than half of the maximum possible maximum. However, it is also important to consider that the data from the questionnaire report a situation about half way of the FIWARE Accelerate sub-grantee projects life. So, it resulted clear

that the overall quality was certainly not satisfactory, considering also the average and the median, at that stage.

From that the conclusion was that of intensifying, even more, the FIWARE Coaches work in order to be closer to the sub-grantee projects.

Another measure was the full support in the creation of the iHubs network. Indeed at FIWARE overall level the iHub initiative, that bases its core aim in the creation of local and physical FIWARE competence centers, is seen as an added value for the spread of the FIWAREness culture and improvement of the skills of the Smart Applications FIWARE-based developers.

4 FIWARE Coaches support statistics

This section reports on the work done by the various coaches by showing the statistics of the tickets addressed and solved during the period.

The first diagram shows the FIWARE Coaches Team performances since the start of the project to nowadays. It is important to notice that even if formally the FIWARE Coaches task ended in month24, the FIWARE Accelerate projects still posted requests for help to the FIWARE Coaches team which anyway closed the issues. These new requests are due to FIWARE Success Stories program and to the extension till M30 of the FABulous Accelerator.

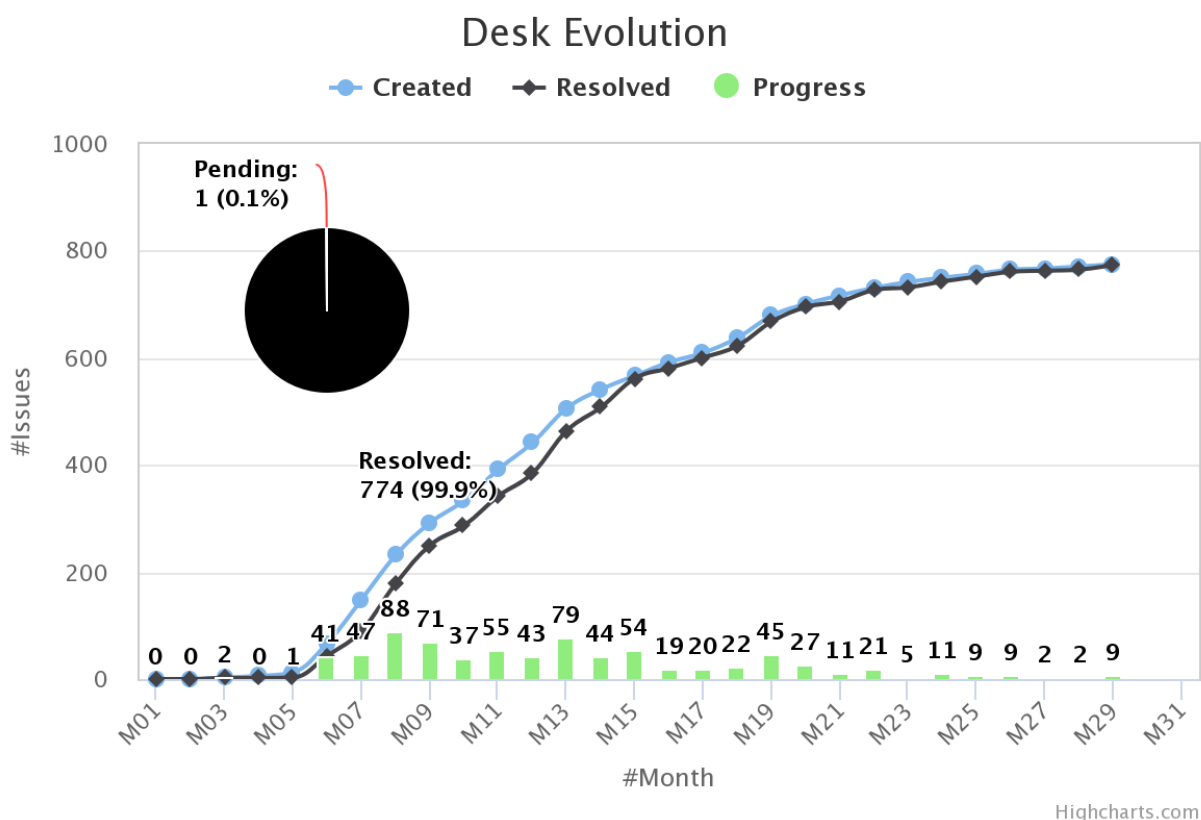


Figure 1 FIWARE Coaches Team performance

The monitoring systems was put in place since the very beginning of the FI-PPP Third Phase start, i.e. it was in place also to support the FIWARE Accelerate projects in setting up their calls. Of course the most of the tickets were issued by the sub-grantee projects developers in order to request some specific help or highlighting difficulties on the use, sometimes also installation, of GEis/GEris.

At a very first glance one may first notice that the number of tickets issued it is not so high. This has two main reasons:

- 1) Significant FIWARE training – following the good acceptance and lessons learnt from the FIWARE webinars and the training sessions organized in large event (starting from Campus Party), a significant effort was put to organize effective training sessions dedicated to the new developers.

They were organized three different large FIWARE Developers weeks where all the developers from the sub-grantees projects have been invited. During those training sessions, not only the attendees had a chance to learn FIWARE technologies in practice, but also they had the chance to meet their own FIWARE coach creating so a direct relationship.

- 2) Use of other communication channels – It is not to be forgotten that FIWARE provides a large number of communication channels towards its expert. In some cases the developers asked to the questions and support also using other channels such as the `fiware-tech-help [at] lists [dot] fiware [dot] org` which in fact has a significant number of requests received.

In fact, the above explanations are also well reflected in the constant decrease of ticket creation as it would be expected in any learning process also very clear in the FIWARE context. The observed peaks in fact correspond to new waves of sub-grantees joining the FIWARE Accelerate Program.

It is also interesting to note that the solution time was rather short, with a max of 20 tickets left open at the various check points. In this respect it is only after the Summer 2015 that the project coordination took the decision to unilaterally close those tickets that once resolved where left unanswered by the issuer (the FIWARE policy about ticketing is that the ticket is closed by the issuer when he/she is satisfied by the response(s) he/she received). This phenomenon was quite significant throughout the whole ticketing system.

The following picture shows where the tickets were created, i.e. from which FIWARE Accelerator.

Desk Channels' Contribution

Overview: #Total issues in channel

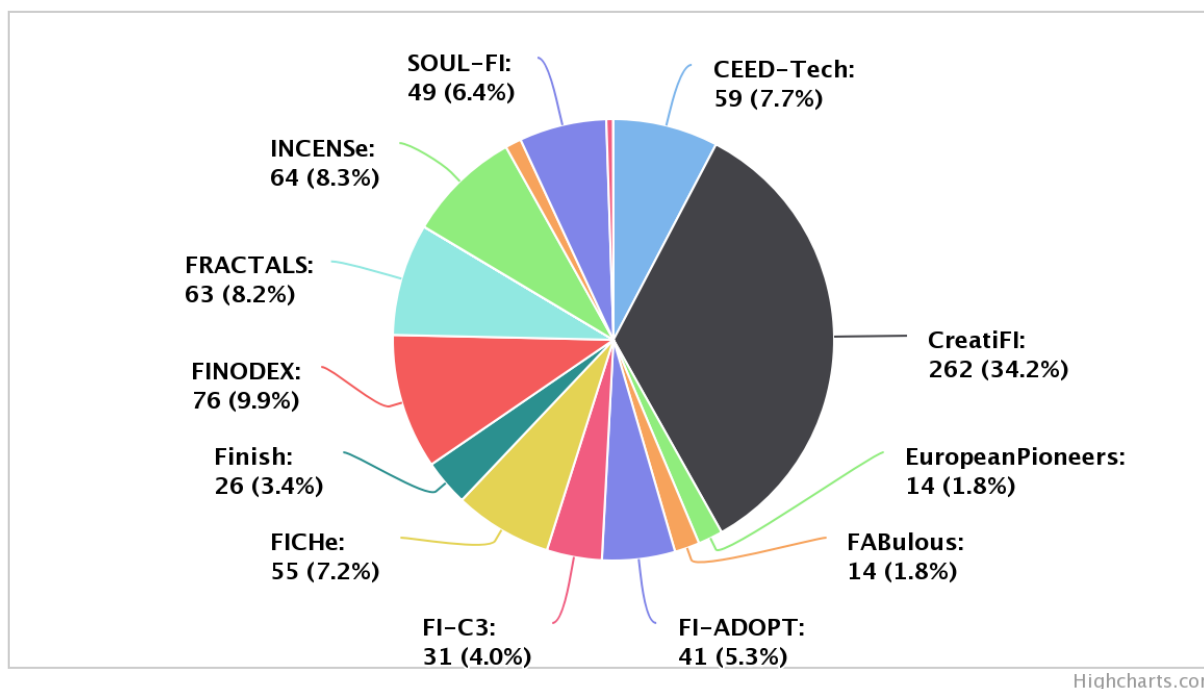


Figure 2 – Where the tickets were generated.

The above graph shows that there is no correlation between requests for help and support with the total number of sub-grantees as shown in of table 3. Even more, the above graph does not provide info from the following FIWARE Accelerators projects: FrontierCities, IMPACT, SmartAgriFood, and SpeedUp! Europe.

This is due to the fact that for those Accelerators the sub-grantees mostly interact directly with the GE owners or the coach without passing through the dedicated mail lists. Although this might potentially create situations in which requests for help could had gone lost, this actually did not happen.

As demonstrated by overall success rate coming from <http://map.fiware.org> and table 3 of this document, this, unwanted behavior, has nothing to do with the number of sub-grantees which for the above mentioned projects is well in average with the distribution of sub-grantees per FIWARE Accelerate project. In addition, also the response rate to the questionnaire concerning those projects is well in average. Perhaps this is simply due to the combination of personal behaviors of the coach and of the Accelerator project coordinator as, taking into account the behavior of only the FIWARE coach it is not enough. Indeed, in the case of Leandro Guillen and Francesco Arigliano the coach is the same for all its own projects, but in the other case statistics for the coach (Ilknur Chulani) differ.

However, in the prosecution, it is recommended that the FIWARE Open Source Community should keep the ticketing system in place as the number of projects/developers requesting support might considerable increase, and thus carrying with it an increase in a number of requests for help and support.

As a matter of fact, the quality of the overall FIWARE initiative is perceived from all its assets one of which is certainly the support provided to those developing applications using FIWARE technologies.

5 CONCLUSIONS

5.1 Lessons learnt

The FIWARE coaching activity was certainly a good mean to keep a direct contact between the FIWARE experts and the developers of applications FIWARE-based. It was recognized that this way the developers felt protected in their first steps in using FIWARE.

What it revealed remarkable important was the fact that the team had the opportunity to meet regularly in order to share experiences, problems, solutions and to harmonise the way to provide support.

However the coaching activity is certainly time consuming, indeed this is an activity that requires dedicated resources, well trained, and with adequate time at their disposal for performing the task. The heterogeneity of requests requires also and heterogeneous team, i.e. a team that spans over different skill and competencies.

5.2 Recommendations

Being the FIWARE Platform a complex set of technologies, in order to effectively go to the market an industrial best practices approach revealed necessary and this, for what concerns the support to Smart Application developers world-wide, was well achieved through the establishment of a dedicated team with its own structure, organization, well defined set of procedures and, above all, properly skilled and well reputed members: the FIWARE Coaches Team.

It is important to keep it in place for the prosecution of the work well beyond the boundaries of the time limits of the European Founded FIWARE initiative. In fact, it is well known that the quality of a product is well perceived not only by the quality of the product as such, but also by the quality of the support provided with it. This case, a team such as that of the FIWARE Coach should be in place taking into consideration that its work has to be carefully organized, enough and skilled resources assigned, and effectively performed.

Of course, to make it efficient and not so highly costly or uselessly time consuming, the work of the FIWARE Coaches Team must be accompanied on a regular basis by a set of training courses about the FIWARE Platform and how to best use its technologies to build Smart Applications. Such training can be both in the form of webinars, but also physical classroom session where developers can meet FIWARE experts.