Collaborative Open Market to Place Objects at your Service

SEVENTH FRAMEWORK PROGRAMME

D8.2.1

COMPOSE training plan

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Abstract

The COMPOSE project aims to perform research leading to the development of an IoT platform that will easily enable relevant stakeholders to be engaged. Stakeholders include (i) developers, who wish to develop services and applications based on real-world smart objects (ii) Smart objects providers and owners who wish their smart objects to be exposed and available to developers, and (iii) end-users who wish to make use of existing services and applications. The goal is to create such a platform that will automatically take the burden off the identified stakeholders and enable each one to concentrate on their areas of expertise while leaving all systems related aspects and more for the COMPOSE platform to take care.

This deliverable provides a plan and description of the COMPOSE training activities. First, it identifies the different segments of the users and our audience that might benefit from training activities. Second, we propose the appropriate training activities that will be carried out and how these might vary for different target groups, along with the range of tools and training material types that will be employed. Third, we describe our overall training methodology that will be applied, which includes a description of the analysis, design, delivery and evaluation phases of the performed activities. Finally, a detailed activity plan and timeline is proposed for the duration of the project.

The main goal of the training plan is to foster a community of developers around the COMPOSE platform.

Document History

Version	Date	Comments
V0.1	27/08/2013	Initial version
V0.2	11/09/2013	Index and template ready for partner's discussions
V0.85	20/09/2013	Implemented comments from CREATE-NET
V0.95	23/10/2013	Restructured and extended section 3,4 Added section 5 with integrated plan and responsibilities.
V0.96	28/10/2013	Addressed comments from IBM Added summary Added CREATE-NET contribution
V1.0	30/10/2013	Final formatting Addressed comments from OU

Table of Contents

List of Figures

List of Tables

Acronyms

Acronym	Meaning
COMPOSE	Collaborative Open Market to Place Objects at your Service
IoT	Internet of Things
SMEs	Small and Medium Enterprises
PaaS	Platform as a Service
API	Application Programming Interface
SDK	Software Development Kit
DOW	Description of Work

1 Introduction

As ever more internet connected smart objects are being put into use, engulfing many aspects of life and society, while producing large amounts of data, not enough emphasis has been placed on the creation of useful services and applications making good use of all the available smart objects. COMPOSE aims to tackle that aspect, and along the way unleash the full potential of the IoT by providing a platform that will make it easier for smart objects providers to offer their service on the one hand, while making it easy for individual developers and SMEs to create and deploy innovative services based on the available smart objects.

COMPOSE aims to provide a technological platform for easily creating services based on the Internet of Things (IoT). As a consequence, the simplification of absorbing internet connected smart objects into the platform, and using them in the creation of new services is a centre piece in the COMPOSE architecture. In addition, a developer portal provides easy access to the platform, and the supporting run-time is designed with many automation aspects.

COMPOSE will ultimately provide an open and scalable marketplace infrastructure, where smart objects will be ingested and represented in the platform in a readily available form for use by services that may be combined, managed, and integrated in a standardized way, to easily and quickly build innovative applications.

Key to the establishment of the COMPOSE vision are innovations spanning several areas:

- *IoT Platform as a Service*: It will provide a customized platform to ease the development, deployment, running, and consumption of IoT based services.

- *Developers' portal*: It will help external developers throughout the cycle of creating a new service based on smart objects. From locating the desired base services, through the addition of user defined logic, and composition with additional services, all the way to the automatic advertisement and deployment of the newly created service.

- *Objects as a Service*: including ingestion of smart objects into the platform in an easy and standardised manner, with standard access to objects' data and calculation based on it.

- *Semantic technologies*: The extensive use of semantic based technologies to drive the external developer's experience by populating an internal registry of semantically enhanced descriptions that is exposed externally via entity discovery mechanisms. These technologies will serve the basis for a composition and recommendation engines which should significantly ease the developers' burdens.

- *Security and trust*: It will be kept within the platform and will be transparent to the user to a large extent and will alert the user upon the discovery of potential issues. This aspect will include data provenance capabilities that will track the path the data takes and its associated policies.

- *Scalability*: Scalable communications technologies will connect all COMPOSE entities providing membership services as well as advanced group communication capabilities.

Based on the advances on these areas as a result of the effort in COMPOSE, the main outcomes of the project are (1) the architecture specification, and a (2) reference implementation of a customized IoT PaaS, including all detailed internal and external facing components.

As part of the project, WP8's objective is to ensure that the vision, activities, and results of COMPOSE become as widely known and understood as possible from a scientific and technical point of view, as well as from a commercial point of view.

Figure 1 shows a high level view of the planned timeline of the tasks defined as part of WP8, as well as the resulting deliverables. This document, deliverable D8.2.1, focuses on defining the training activities to be carried out within the COMPOSE project in order to facilitate and promote the use and adoption of the infrastructure and tools developed in the project. It serves as a compilation of the planning work needed to create a comprehensive and effective training plan, mainly (1) identification of the segments to target, (2) definition of the training activities customized for the specific segments, (3) definition of the training material to be created for, but not exclusively, to support the training activities and finally (4) the actual plan and timeline.
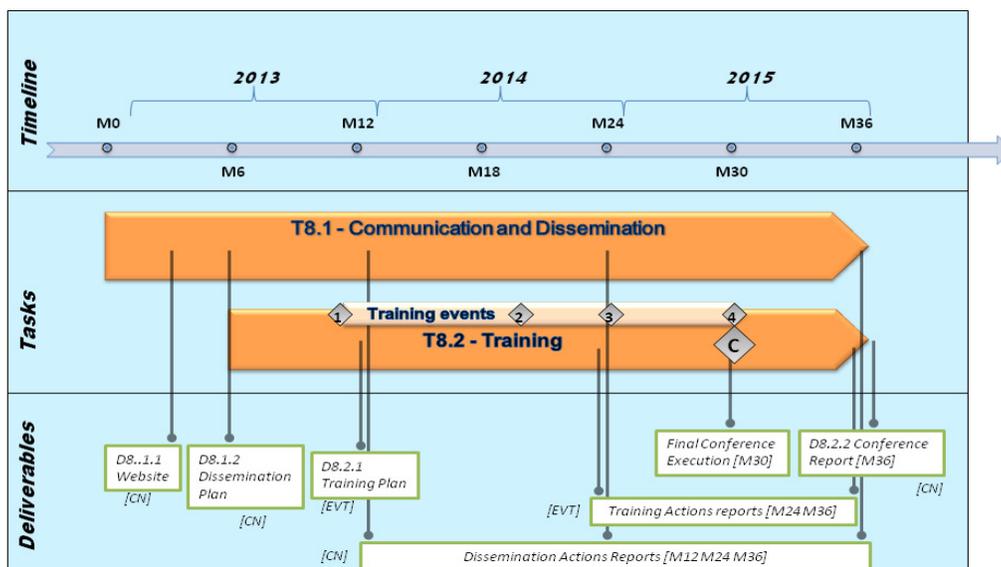

Figure 1: WP8 Timeline overview (from D8.1.2)

1.1 Training plan objectives

The main goal of WP8 is to design and implement a strategy to maximise the positive impact of the COMPOSE project (its aim, the know-how acquired, and the results achieved by the project) to the broadest audience: the scientific and academic community and the industrial entities of any size with special attention towards SMEs.

With the work in WP8 we seek the dissemination of the project results on the one hand, and the active engagement of multiple developer communities to encourage widespread adoption of the platform and its associated interfaces on the other hand. The second aspect might encompass multiple activities, from training events and materials, to online content (source code, tutorials, etc.), to hackathons and other participatory events, which will be defined as part of this deliverable. The purpose of these activities will be to encourage external parties to produce tangible and important assets that utilize the COMPOSE framework.

For the success of the training plan defined in this deliverable there are some key objectives to be considered. In general, we aim at:

- Leveraging existing developer communities, one of them being EVRYTHNG's developer base and the "Web of Things" blog and community.

- Gathering as much feedback as possible, by running a series of workshops and hack-days, disseminating the results and enlarging the community of users, as well as creating new ones associated to the outcome of COMPOSE.

- Promoting collaboration and generating synergies among existing research projects by creating events specifically for them.

- Developing a training network of resources and professionals with the goal to scale COMPOSE's reach globally.

- Facilitating the adoption of the technologies and tools developed in COMPOSE to external stakeholders by providing adequate examples and documentation material.

In order to achieve a successful training program it is planned that all the partners contribute in one way or the other to the activities. The overall responsibilities of each partner, as defined in the COMPOSE DoW document, are as follows:

- **OU** to generate more "traditional" training material, such as presentations, and audio / visual material.

- **EVRYTHNG** and **BDIGITAL** to organize the workshops and hack-days, based on their existing developer communities and experience.

- **RETEVISION** to publicize its "smart partner program" (aspp) in COMPOSE related events, for related applications.

- All other partners to support all technical aspects of such events.

1.2 Strategy and Approach

The analysis performed during the dissemination plan definition has led to the identification of all the relevant dimensions under which the COMPOSE training will be undertaken.

The training strategy will aim primarily at facilitating the understanding and usage of the technical outcome of the COMPOSE project. Closely attached to the dissemination activities, the training will cover aspects where technical expertise is needed. The training strategy that we are going to define covers two main aspects, the training activities and the training material.

1.2.1 Training activities

As part of the training plan defined for COMPOSE, we have identified the following activities to be organized:

- **Hackathons**: hackathons are specialized events where groups of not only developers, but also designers and other people interested in certain technologies gather and work on prototypes as proof of concepts of the selected technologies. These events serve to raise awareness to certain technology and more precisely to collect feedback from prospective users and stakeholders.

- **Workshops/tutorials**: tutorial sessions will be oriented to present in detail certain aspects of COMPOSE, comprising of both oral presentation as well as hands-on experience. We will evaluate the submission of tutorial proposals or project demonstrations to selected forums and conferences, such as the IEEE World Forum on

Internet of Things or the Mobile World Congress. This will be evaluated in conjunction with the dissemination activities, as described in D8.1.2.

- **Specialized activities** (for interested audience): Existing partners mechanisms, such as EVRYTHNG's developer community or RETEVISION's smart partner program will be used as well both to inform the interested community as to interesting COMPOSE related developments, share technical material with them, and invite them to try out the evolving platform.

1.2.2 Training contents

The training activities within COMPOSE will require or provide tangible training material in the following form:

- Online presence: the COMPOSE project training activities will be advertised in blogs, social media and other channels, such as screencasts.

- Online Community Building: material that will be created for the web and made available to the community:

  - A blog powered web site will be used to drive a bi-directional communication channel between COMPOSE and external developers.

- Examples and documentation of the different components will be made available in different flavours:

  - Source code of components of the platform (with licenses agreed by the partners).

  - Presentations or screencasts showcasing how to use of the platform.

  - Prototypes made available to developers utilizing the COMPOSE platform.

2 Training TARGET GROUPS

In order to define an effective training plan, we need first to identify who are the user segments of the COMPOSE project at different levels and define the appropriate content and activities that cover the different levels of abstraction needed by the identified audience. The nature of COMPOSE leads us to identify the following main user segments:

- **Software Developers**: individuals and developers associations (i.e.: Web of Things)

- **Business partners**: SMEs, large corporations, commercial and industrial associations and groups eligible to adopt the COMPOSE platform

- **Research projects**: ongoing research projects in the IoT field.

- **Scientific community**: academic associations and groups (i.e.: IEEE, ACM ...)

The training plan defined for this audience has to promote the results of COMPOSE at every level of abstraction, from the high level conceptual models, where the platform is presented to potential developers and users and its potential explained, to the low level technical aspects.

Based on the target groups and the outcomes of COMPOSE we will define a periodic set of activities to keep the audience informed at different stages in the project. Sections 3 and 4 show in detail the type of activities and contents that will be created during the execution of the project.

3 Training ACTIVITIES

Training activities comprise events that are oriented to active gatherings and participation of people in different environments, either physical or virtual. Within the COMPOSE project we aim to organize training activities in order to:

1. Involve Software developers and sustain the technical development of the platform.

2. Gather feedback and evaluation of our work from the scientific and developer community.

3. Keep the audience informed and up to date of the results of the project.

4. Foster interaction and collaboration among potential partners and users of the COMPOSE platform

The main training activities that will be defined under the umbrella of the COMPOSE project are training sessions (hackathons, community activities, partnership programmes) and workshops/tutorials (including a conference).

3.1 Training sessions

Training sessions are defined as specialized activities originated by the interest of different stakeholders of the COMPOSE platform. In practice, this is translated in an effort to being able to respond to interest from the community of developers and early adopters by finding specific channels where they can easily access and experience first-hand the COMPOSE platform for application development.

3.1.1 Hackathons

As we stated already in D8.1.2 for the dissemination plan, several hackathons have been planned to be held at different milestones of the project. The following sections describe in detail the premises under which the hackathons will be organized.

3.1.1.1 First hackathon plan[1]

HACKATHON 1	
Location	Zurich, co-located with UbiComp conference
Date/COMPOSE Month	September 2013 / M11
COMPOSE components	Prototype version of Service Object API for creating, storing and retrieving COMPOSE Service Objects. Also provide update capabilities connected to real objects.
Aim	Sanity check of our assumptions about the APIs and Service Object model. Collect feedback from developers.
Target group	Developers, hardware hackers, and interaction designers
Training material	Sample application to introduce the functionality Code examples API documentation
Devices	Flyport devices, Kindle, Smartphones
Additional material	Blog posts announcements Material presentations
Organization Planning	Due Date: M11 Coordination meetings as defined by organizers, with two synchronization meetings with the team the last two months before the due date.
Organizer	EVRYTHNG
Set-up	A one day event in an open space area with different groups of people defining a prototype they want to build during the day utilizing the platform's capabilities. They will be provided with sensor devices sponsored by the partners or they can use their own. A short introduction about the COMPOSE platform and the capabilities will be given at the beginning of the session.

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[1] Note that the first hackathon was organized much earlier than planned in the DoW due the rapid advancements of some parts of the project.

3.1.1.2 Second Hackathon plan

HACKATHON 2	
Location	London
Date/COMPOSE Month	June 2014 / M20
COMPOSE components	Service Objects/Composite Objects in addition to first version of extended COMPOSE capabilities (Services, Security/Provenance/Advanced Communications), as well as developer environment.
Aim	Test initial showcase of an integrated version of the COMPOSE platform that supports the creation of Composite Objects for data processing/rules. Check integrated functionality of COMPOSE based on Smart Shopping scenario. Collect feedback from developers.
Target group	Developers, hardware hackers, and interaction designers
Training material	Showcase utilizing the first version of the prototypes. Code examples. Step-by-step tutorials for the advanced capabilities of COMPOSE.
Devices	Smartphones, Smart Objects (TBD)
Additional material	Blog posts announcements Material presentations Mail notification flier
Organization Planning	Due Date: M20 Coordination meetings as defined by organizers, with two synchronization meetings with the team the last two months before the due date. Coordination with the prototype partners to showcase and provide content accordingly
Organizer	EVRYTHNG
Set-up	A one day event in an open space area with different groups of people defining a prototype they want to build during the day utilizing the platform's capabilities. They will be provided with sensor devices sponsored by the partners or they can use their own. A short introduction about the COMPOSE platform and the capabilities will be given at the beginning of the session. The first version of the prototypes will be also available for them to play or even extend the functionality.

3.1.1.3 Third Hackathon plan

HACKATHON 3	
Location	Trento
Date/COMPOSE month	October 2014/M24
COMPOSE components	External APIs and interfaces for collecting data aggregated by COMPOSE platform. Mainly demonstrate how external developers can benefit from COMPOSE and utilize APIs for building custom applications (both web and mobile applications) based on the Trentino use case data.
Aim	Identifying potential exploitation of the COMPOSE platform by both business and community developers (makers) by evaluating how developers can use the data through the COMPOSE APIs for application development. Disseminating the COMPOSE platform in national and international level as a collection of services and an IoT platform. Collecting valuable feedback that will be used to assess the APIs and evaluate the COMPOSE platform in terms of efficiency and performance in both collecting and exposing data through the appropriate interfaces.
Target group	Web Application and Smartphone App Developers, OpenData researchers/enthusiasts
Training material	Showcase utilizing the first version of the prototypes. Code examples / Smartphone development libraries Step-by-step tutorials for the advanced capabilities of COMPOSE.
Devices	Smartphones/Web Objects
Additional material (GIT, marketing)	Blog posts announcements, Material presentations, Mail notification flyers, Posters
Organization Planning	Due Date: M24 Coordination meetings as defined by organizers, with two synchronization meetings with the team the last two months before the due date. Coordination with the prototype partners to showcase and provide content accordingly
Organizer	CREATE-NET

Set-up	Application (mobile and web) developers with special commercial interest in exploiting the data and services of COMPOSE.
	Researchers and any other type of developers who would like to build applications that interact with users in smart ways about the collected data or build applications for further data processing (e.g., data mining).

3.1.1.4 Fourth Hackathon plan

HACKATHON 4	
Location	Barcelona
Date/COMPOSE Month	Hackathon will be collocated within the Final Conference (M30)
COMPOSE components	Compose SDK, marketplace and smart objects.
Aim	Hackathon aims to provide an end-to-end validation of the COMPOSE concepts and implemented system. Main focus will be put on the development of added-value applications exploiting the core Objects and Services already deployed as part of the Barcelona use-cases.
	In addition, hackathon will also try to foster the use of the COMPOSE platform within the Maker Community in Barcelona in order to get a validation on the value the platform may provide to small- scale Smart Object providers.
Target group	Main target group will be developers (both backend and mobile communities will be targeted) and UX designers. In addition, Smart Object providers will be targeted through two relevant communities: medium and large scale infrastructure providers and Makers community in Barcelona
Training material	API documentation, overall technical documentation on system concepts and basic procedures (deployment, marketplace features)
Devices	Smartphones, tablets, smart objects (TBD)
Additional material (GIT, marketing)	• Dissemination material (press releases, e-mails) • a registration system should be available for the event • large posters and visual elements • food, drinks and goodies for developers

Organization Planning	A event management team will be defined in order to: • ensure the proper dissemination of the event and the enrolment of the targeted communities • set-up the logistics for the event • define the procedures and general rules for the hackathon • grant the availability of the COMPOSE platform setup and the set of Smart Objects and Services core to the Barcelona pilot.
Organizer	RETE/BDIGITAL
Set-up	A half-day/one day event in an open space area with minimum facilities fostering collaboration and idea sharing: sofas, large desks and blackboards. They will be provided with sensor devices sponsored by the partners or they can use their own. A short introduction about the COMPOSE platform and the capabilities will be given at the beginning of the session.

3.1.2 "Web of Things" community

The Web of Things initiative by EVRYTHNG (http://www.webofthings.org/) and related community groups (http://www.w3.org/community/wot/), as well as different initiatives inside BDigital will be leveraged to present COMPOSE results to developers. This will involve mainly the maintenance of an online community and putting in place online training material and raise awareness of the capabilities of the COMPOSE platform. This task will be synchronized with the maintenance of the online community and providing them with the appropriate material about the COMPOSE developing experience (see section 4.1).

3.1.3 ABERTIS Smart Partner Program

The Smart Partner Program is an initiative of ABERTIS/RETEVISION to create an ecosystem where different stakeholders of Smart Cities initiatives can collaborate. Final users, solutions providers, infrastructure operators, etc. unite together under this program to create innovation around Smart Cities.

The aim is to integrate COMPOSE as part of this program and have a showcase and collaboration point with different external participants where on-demand they can test and experience the COMPOSE platform and use cases.

The integration of COMPOSE in this program will be led by RETEVISION (http://aspp.smartabertis.com), who will coordinate with the rest of the partners the inclusion process and the requirements and materials to be provided in this ecosystem to train interested parties on the COMPOSE platform and use cases.

3.2 Workshops/tutorials

Developer workshops and tutorials are aimed at showcasing the COMPOSE functionality and providing dedicated training on certain aspects of the COMPOSE platform. These sessions can be organized independently or in conjunction with bigger events, like conferences or congresses.

As part of other training activities in COMPOSE we plan to prepare enough material to create at least one workshop proposal for each year, and then select appropriate forum where to organize it. A list of possible venues and external events was already presented in Deliverable D8.1.2 (reproduced below for informational purposes). As the workshops and tutorials are closely dependent and related to the actual development of the COMPOSE platform, the compilation of this material will be organized around the implementation phases of the project, mainly the releases of the prototypes (M18, M30). With at least two months in advance, coordination meetings will evaluate the state and define a more detailed plan based on the actual state of the COMPOSE platform.

As an alternative to organized events, screencast sessions or hangouts will also be considered to disseminate hands-on tutorials.

Table 1: Scientific channels for consideration of organizing training sessions COMPOSE (from D8.1.2)

#	Name	Description	Last edition link	Impact
1	PITSaC	International Workshop on Pervasive Internet of Things and Smart Cities	http://ants-webs.inf.um.es/conferences/pitsac/?m=1	High Impact - related to IoT and COMPOSE Use cases (Smart Cities)
2	PerCom	IEEE International Conference on Pervasive Computing & Communications	http://www.percom.org	High impact/visibility - Average relevance to the project
3	IoT-SoS	IEEE Workshop on Internet of Things: Smart Objects and Services	http://www2.ing.unipi.it/iot-sos2013	High impact/visibility - very related to interconnecting objects and services
4	esIoT	International Workshop on Extending Seamlessly to the IoT	http://www.esiot.com	Average impact, highly related content
5	ruSMART	International Conference on IoTs and Smart Spaces	http://rusmart.e-werest.org/cfp.html	Good impact, high relevance to the project
6	AINA	The 27th IEEE International Conference on Advanced Information Networking and Applications	http://www.aina-conference.org/2013/	Good impact, general context, context relative to various aspects of the project
7	DisCoTec	International federated conference on distributed computing techniques	http://www.discotec.org/	Average impact, context related to very specific aspects of the project

8	**Future Network and Mobile Summit**	Future Network and Mobile Summit	http://www.futurenetwork summit.eu/2013/	High impact for EU projects, networking and dissemination opportunities
9	**WATCC2013**	Workshop on Advanced Technologies of Cloud Computing	https://sites.google.com/site/watcc2013/	Average impact, context related to very specific aspects of COMPOSE
10	**CloudCom**	IEEE International Conference and Workshops on Cloud Computing Technology and Science	http://2013.cloudcom.org/	High impact, main conference related to specific aspects of the project
11	**HCI 2013**	The 27th International Human Computer Interaction Conf.: The IoT	http://hci2013.bcs.org/	Medium impact, conference context related to IoT
12	**iThings**	IEEE International Conference on IoTs	http://www.china-iot.net/iThings2013.htm	High impact/visibility - One of the first IEEE conferences on IoT
13	**UBICOMP**	The ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2013 is the result of a merger of the two most known conferences in the field: Pervasive and UbiComp)	http://www.ubicomp.org/	High impact, main conference related to ubiquitous computing aspects of the project

Table 2: Business and networking-related events for consideration of organizing training sessions COMPOSE

#	Short Name	Description	Last edition link	Impact
1	**Internet of Things Event**	European Seminar and Exhibition about IoT Use Cases	http://iotevent.eu	High impact, many business stakeholders attending. Opportunity to exhibit COMPOSE project goals (posters, flyers, etc.)
2	**M2M & Internet of Things Exhibition**	Business Forum and Exhibition in the EU	http://m2minternetofthings.com	High impact, considerable opportunity to exhibit COMPOSE project goals (posters, flyers, etc.)
3	**Smartcity Expo World Congress**	Business Forum and Exhibition in Barcelona. A congress which is spearheading the movement to develop smart communities that will drive forward innovative, sustainable cities.	http://www.smartcityexpo.com/en/home	High impact, considerable opportunity to exhibit COMPOSE project goals (posters, flyers, etc.)

4	**Mobile World Congress**	MWC is one of the biggest mobile events in Barcelona	http://www.mobileworldcongress.com/	High impact, considerable opportunity to exhibit COMPOSE project goals (posters, flyers, etc.)
5	**Abertis Smart Partner Program (aspp)**	ASPP is a program that involves different companies in order to test and promote their solutions in a real environment (Smartzone)	http://aspp.smartabertis.com	Opportunity to show COMPOSE project and engage new participants.
6	**The Annual Internet of Things Europe**	EU Conference related to EU progress (with special focus on business) within the IoT	http://www.eu-ems.com/summary.asp?event_id=124&page_id=991x%x%	High impact, Great attendance by IoT stakeholders
7	**IoT Week**	Event with talks about businesses and trends, IoT Architecture, interoperability, IoT deployments, business models, IP technologies for the IoT, and further societal, ethical and security aspects of the IoT technologies	http://www.iot-week.eu	Various IoT EU research projects are involved during the IoT Week

3.2.1 COMPOSE Conference

A special event where training activities will be organized is scheduled as part of the project at M30, when a COMPOSE conference will be organized as part of the dissemination activities (see D8.1.2 Dissemination Plan), comprising training sessions as well.

This conference will have a broader scope than just training, but it will be a good opportunity to attract the attention of developers and possible early adopters. It will be collocated with the fourth hackathon, so organizational aspects will be merged. By the time the conference is organized we will have enough material to provide a comprehensive view and tutorial of the whole functionality of the COMPOSE platform.

Conference (Technical sessions)	
Location	Barcelona
Date / Compose Month	April 2015 / M30
COMPOSE components	Full functional COMPOSE platform
Aim	Showcase all the functionality of COMPOSE platform. Present to developers the whole lifecycle of application development inside COMPOSE.
Target group	Developers, early adopters.

Training material	Full set of code examples for the different aspects of the COMPOSE platform. Full set of prototypes for the different use cases. Full set of tutorials.
Additional material	Formal marketing material for the conference will need to be arranged
Organization Planning	Due Date: M30 Coordination meetings as defined by organizers. Planning for the conference, in terms of training material will be synchronized with the organization of the forth hackathon. Coordination with the prototype partners to showcase and provide content accordingly.
Organizer	IBM
Set-up	There will be slots allocated in the conference agenda to showcase the prototypes, as well

4 Training CONTENTS

In this section, we describe the core content, and support materials that will be created as part of the training activities.

4.1 Online community

As part of the training program we will create a "homebase" for the developer community where they can find all the information about upcoming events, training material, and more. We will use the forum on the main project website to store all the information to be shared with our developer community, which is available here:

<div align="center">http://www.compose-project.eu/forums</div>

Training material will be made accessible online under a section on the main COMPOSE Web site in order to store all the content related to the training activities. Online community building will focus on updating periodically a blog, a wiki, a discussion group and a mailing list. The organization of the online community related training content is as follows:

- The update process of the website is owned by CREATE-NET. We have set-up an email account where the training content to be included in the different channels shall be provided (for more information check D8.1.2):

<div align="center">dissemination@compose-project.eu</div>

- Partners organizing training activities or materials are responsible for creating and notifying the content accordingly and in a timely fashion to the previous address. This process is shared with the disseminations activities notifications.

4.1.1 Blog

The communication of the training activities and material with our community will happen via the main COMPOSE Website at

<div align="center">http://www.compose-project.eu/.</div>

As decided in the dissemination plan, during the second year of the project, we will create a dedicated blog for the COMPOSE project where training activities and material will be included as well. We will consider as well the inclusion of selected posts in two more general developer blogs, owned by other partners of COMPOSE:

Table 3: Developer Blogs

Blog Name	Communities and institutions of strategic interest	Reference Partner
Building Internet of Things Blog	Collection of hardware- and software-based projects (with focus on DIY community and open source h/w-s/w). http://blog.buildinginternetofthings.com/	CREATE-NET
Web of Things	Web portal about news, events, thoughts and ideas on the IoT. Many events, applications and IoT ideas are	EVRYTHNG

	shared within the community. http://www.webofthings.org/	

4.1.2 Discussion group & mailing list

To provide a convenient communication substrate amongst all the developers interested in the COMPOSE platform, we will setup a developer-centric mailing list where developers can share code samples, technical tricks or ask questions about specific topics.

The owner of the mailing list will be EVRYTHNG, with participation from the rest of the partners.

4.1.3 GitHub account

An official COMPOSE GitHub account has been created for the project, already available at

https://github.com/compose-eu

Through this account, developers will be able to easily access the components developed in COMPOSE and share new code samples, wrappers in multiple languages, and demo applications.

The GitHub account will have public read access to all the open source components of COMPOSE. Contributions by the community can be done using the Pull Request mechanism of GitHub.

4.2 Training materials

Training activities need to be backed up by a set of materials in different formats. As training activities are oriented for developers these materials will consist of technical information in the form of source code and sample apps, including tutorials and documentation of how to use the different components of the COMPOSE platform and finally some multimedia material.

We will take as a check-point for this material the main training events organized for this purpose, the hackathons. A series of coordination activities will be launched prior to the celebration of these events. The planned activity schedule is to start a detailed planification three months in advanced with another check point one month before the related event. Additional events that may arise during the execution of the project will be handled in the same fashion.

4.2.1 Source code & usage libraries

The COMPOSE platform is defined by a set of components, as defined in the architecture (Deliverable 1.2.1). These components will be developed under specific licenses (under the process of definition), but the usage of each component from the developer point of view will be documented as part of the training material definition, either by providing access points to the functionality and appropriate access libraries, as well as code examples if needed. All the source code will be accessible in the COMPOSE Github platform.

4.2.2 Tutorials & documentation

The creation of training documentation is also an important part of maximizing the acceptance of COMPOSE platform among developers. For this purpose, each component developed in COMPOSE will need to provide usage tutorials and documentation, especially those which provide an API for developers. The creation of this tutorials and documentations is linked to each individual development, but it must contain at least a Web version of it and it will be made accessible through all the suitable channels for public dissemination used in COMPOSE, being the main Web Site the main hub for this.

4.2.3 Other (Multimedia material (presentations, videos, screencasts…), sample apps)

Other training related material will be provided in form of presentations, videos or screencasts. For the different training activities planned also a set of sample applications for the trainees to work with will be assembled based on the state of the capabilities of the COMPOSE platform at those points in time. This material will be as well gathered and must be made accessible through the appropriate dissemination channels.

5 Integrated Plan of Training Activities

The general schedule for the training activities is depicted in Figure 2. The following table summarizes the activities the schedule and periodicity and the main coordinator.

Table 4: Integrated Training Plan

| Training	Type	Schedule activities	Coordinator
Activities	Hackathons	M11	EVRYTHNG
		M20	EVRYTHNG
		M24	CREATE-NET
		M30	RETEVISION/BDIGITAL
	Web of Things community	Same as the hackathons, material will be propagated to this community.	EVRYTHNG
	ABERTIS Smart Partnership Programme	Set up by M20, from there on demand by request from stakeholders	RETEVISION
	Workshop/Tutorials	Workshop tutorials TBD	Interested partners
		Conference M30	IBM/CREATE-NET
Contents	Online Community (Blog, discussion groups, github)	At any point by request of partners, with periodic check-ins every 3 months.	EVRYTHNG
	Training Material (source code, tutorials, other)	To be defined three months in advance of the training events, with a check-in one month before.	OU
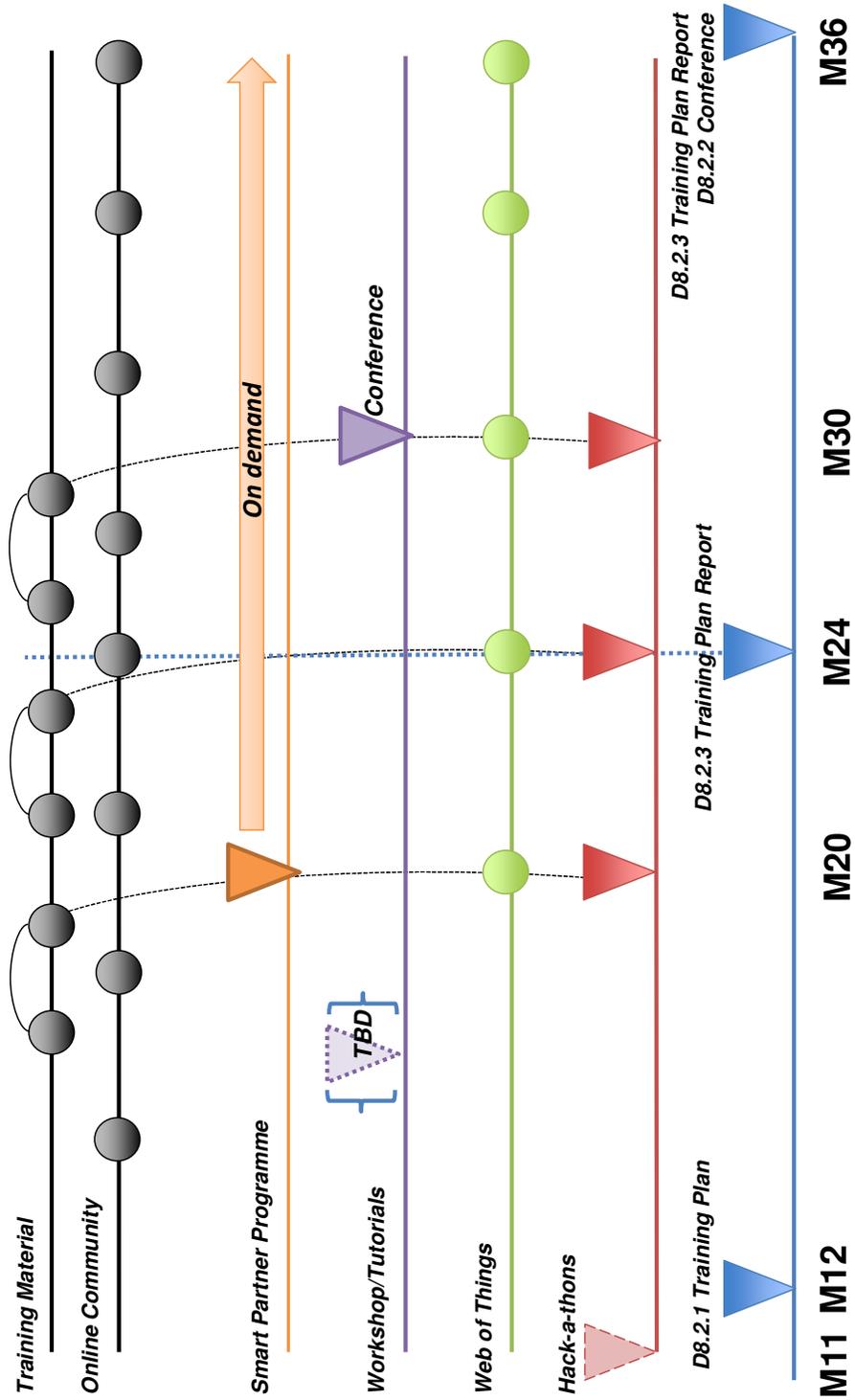
Figure 2: Integrated Training Plan schedule

6 Summary

The activities and schedule presented in this deliverable outlines the Training Plan that will be carried out as one of the main activities of WP8 in the COMPOSE project. Being one important outcome of COMPOSE a novel software platform, the need for an extended analysis of activities and material under the prism of developers is important. This is the main reason why the training plan was planned for the end of the first year of the project, when a more detailed view of the needs could be formed.

The Training Plan is defined as a sub-product of the dissemination effort in the project, but with a clearly define objective and target group. The main idea behind the training activities is to present the COMPOSE platform to developers, the people who will use the platform for creating new and innovative applications based on its functionality. For this purpose we have defined a series of training activities spaced in time around the main releases of our prototypes in the form of hackathons, a more informal but effective way of introducing the COMPOSE platform to developers. Additionally, workshops and tutorials will be accommodated during the progress of the project, culminating in a final conference organized by the partners. Already established communities around IoT and the Web of Things will be approached explicitly utilizing the channels at hand by different partners of the project (e.g. the Web of Things community and the Smart Partner Program).

Training activities require appropriate and compelling training content. In the training plan we have identified a minimum set of materials we want to prepare, as well as tools to build an online community around the COMPOSE platform, which we believe would be one of the most important assets for the project. Provide all the training support in order to build a community that not only utilizes the platform, but also keeps it alive and eventually improves or evolves it.

Finally we have defined responsibilities inside the project designating main coordinators for each main block, even though each partner involved in the development of the platform is entitled to contribute to the training material creation. To guarantee the creation of the training material on time we have established a series of check-points before the events, which gives us the opportunity not only to prepare in detail the content based on the status of the development, but also to react in time in case of unplanned delays.

All the material, as well as the feedback and outcome from the different training sessions will be made available through different channels and reported in the upcoming deliverable D8.2.3 Training actions report at M24 and M36.