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Annual report #1 on ecosystem building activities

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Executive Summary

The WP 6.1 "*Ecosystem Building*" task is aiming to describe the current state of the ecosystems surrounding the involved DIHs: Who are the main entities and How are they connected to each other? Secondly, the task aims to understand the different learning opportunities within the ecosystems; both to see what exists and to understand how these learning opportunities are utilized.

By understanding the different players in the ecosystems and the needs in regards to learning they have, it will be possible to identify gaps in the learning market that could be addressed by the DIH's over time.

HUB Sustainability is a separate task (Task 6.3) that is dependent of the outcome of this task. Therefore there is a close corporation between the two tasks.

A task force within the FED4SAE Project is now identified, with representatives from each DIH that are responsible for their national ecosystem.

The activities are divided over a couple of steps with a corresponding analysis of the collected data in between the steps; just to get the opportunity to adjust and tune the efforts along the way.

The final result should serve as one of the foundations needed for the long-term sustainability of the DIHs.



Work package WP6

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1. Introduction

The FED4SAE Ecosystem Activities provides the participating Digital Innovation Hubs with a good overview of the ecosystem that they are active in. These activities also ensure the long-term sustainability and growth of major project outcomes. In relation to that, FED4SAE aims to engage and build a growing community of active players, from industry, SMEs, start-ups, Midcaps and the researcher community, to facilitate the creation of an integrated sustainable ecosystem of stakeholders active in the Cyber-Physical Systems domain. To achieve this objective, the FED4SAE consortium will gradually and systematically build up and mobilize a large industrial community committed to adopt and exploit the results in a sustainable way, during and beyond FED4SAE.

Task 6.1 part in this is to *describe* the FED4SAE Ecosystem from the perspective of learning opportunities, provide an *analysis* of available learning opportunities to indicate which are the most valuable to whom, and *act* on this analysis by engaging with Third Parties.

1.1 Task Objective

This task will be dedicated to building a network of stakeholders around the platforms and technologies supported by the different FED4SAE centres for their focused smart domains, to support establishing user-supplier relationships and to enable the exchange of learning assets (e.g. best practices). A central element in building such innovation eco-systems to achieve synergy will be to establish links between the FED4SAE centres and other existing regional and national innovation hubs. The task will comprise the following set of activities:

Understand the FED4SAE eco-system by:

- Create a validated inventory and network mapping of offerings of the FED4SAE centres and other relevant entities to which centres have access by distributing questionnaires and/or performing interviews of FED4SAE partners and experiments. This primarily includes identifying key firms, key research institutes, key academic partners, learning networks, innovation centres, digital hubs, incubators, investors and funding programs.
- Develop an analysis of the eco-systems existing around the FED4SAE centres based on inventory. Focus is (a) eliciting learning opportunities, such as courses and common interests, and (b) understanding obstacles to leveraging on these opportunities.
- Based on aforementioned inventory, at regular intervals of the project, develop an understanding of current offerings of exhibitions, courses and workshops.
- Distribute questionnaires to both Third parties suggesting an application experiment and to those who contact the centres outside the open calls to elicit what forms and content of learning opportunities are of interest to them.
- Based on aforementioned questionnaire, at regular intervals of the project, develop an analysis of Third parties. Of particular importance are businesses whose proposals have not been selected in the open calls and those who contact the centres outside the open calls. Focus is matching the Third parties with activities mentioned in the next section ("Encourage...").

Encourage collaboration within the FED4SAE eco-system by:

• Connect to external innovation support organisations to promote Third parties supported by FED4SAE through their participation at relevant events. Of particular importance are supporting cross-domain opportunities, e.g. highlighting relevant business and learning opportunities in other

domains. Focus is on exhibitions, courses and workshops.

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- Invite external stakeholders to "community events" organised by FED4SAE centres around their supported platforms and technologies for their focused smart domains, to inform about new developments, showcase experiments, and exchange experiences. Again, of particular importance are supporting cross-domain opportunities.
- Develop internal, relevant visualizations and catalogues for the aforementioned inventories, network mappings, elicited offerings and learning opportunities. Provide other WPs in FED4SAE with these for facilitating creation of FAQs for newcomers, networking, etc.

1.2 Activities in Year 1, September 2017 – August 2018

Task 6.1 started by KTH contacting all partners in the project to map out the FED4SAE ecosystem. It soon became apparent that several partners perceived how to define the ecosystem, and how to engage with it to create valuable outcomes, differently.

After meetings had been organised to arrive at a common understanding all partners were asked to provide information on the learning opportunities available in the ecosystem. Data was gathered and summarized during several months in the spring of Year 1. Unfortunately, the information received during the spring of 2018 was patchy and varied in focus. Despite several attempts, it was not possible to develop a coherent analysis on the available data.

1.3 Activities in the Autumn of Year 2, September 2018 – December 2018

To move forward a new approach was created:

- To arrive at a more coherent perspective only the Digital Innovation Hub partners (henceforth called DIH partners) were invited going forward. After additional opt-outs from these partners, those that remained were Digital Catapult (UK), fortiss (D), CEA (F), CSEM (CH) and UNICAN (ES).
- KTH met separately with each of the DIH partners to emphasise the focus going forward. The partners agreed to gather the requested data in preparation for a meeting with all involved partners during the spring of Year 2.
- Which data to gather was redefined (see Section 2)
- A new plan for Year 2 was created (see Section 3)

2. Data for Defining Learning Opportunities

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To avoid only generating a "Yellow Pages" of learning opportunities the ecosystem needs to be understood in regard to who connects to whom, and why learning opportunities are valuable. Therefore, the ecosystem needs to be mapped out in regard to:

- The involved ecosystem participants and their characteristics, including key customers and key business partners of private entities.
- Lasting cooperation between the ecosystem participants. Research projects involving several of the ecosystem participants were initially chosen as the basis for this, but other types of cooperation might be used in the future.
- The existing learning opportunities.
- The motivation for engaging with the learning opportunities.

2.1 Involved Ecosystem Participants

The ecosystem participants will be mapped based on:

- ID / Name
- Primary Category
- DIH
- Country
- City
- Description (URL, Contact Details, etc.)
- Reputation for innovativeness
- Network Type (only if Category is Network)
- Key Customers
- Key Business Partners
- Key Sponsor

2.2 Research Projects

Research projects from the last 5 years will be used to map the networks in the ecosystem, based on:

- ID / Name of Participants
- Project Leader ID / Name
- Project Area
- Description (Name, Length, URL, etc.)

2.3 Learning Opportunities

Learning opportunities will be mapped based on:

- ID / Name of Provider
- ID / Name
- Description (URL, Contact Details, etc.)
- Importance (To whom, and why)



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3. Activities in Year 2, January 2019 – August 2019

The following activities are planned for Year 2.

3.1 Initial dataset and Analyses

The DIH partners will provide an initial data set for the information requested at the end of January after iterating with their ecosystem contacts. KTH analyses the initial results and puts together an analysis.

Task 6.1 task force meets to align on further data gathering.

3.2 Tuning of the dataset

Task 6.1 task force gathers final set of data for Year 2. KTH will synchronise the result with Blumorpho to make sure that the we are in line with the expectations from Task 6.3 (DIH sustainability).

3.4 Third Party Interviews

KTH interviews participants in FED4SAE ecosystem to validate results and prepare questionnaire for Experiments / Third Parties. Third Parties which have proposed experiments which were not selected will be targeted to further the analysis.

Task 6.1 task force meets to discuss the events that the project partners are planning for Year 3, to understand which opportunities there are for encouraging collaboration using the analysis arrived at.

3.5 Opportunities

The last step of Year 2 will be to summarize the opportunities for encouraging collaboration within the FED4SAE eco-system during Year 3. KTH will provide an initial suggestion for Year 3 plan.