



EU-INDIA FI-MEDIA PROJECT AND SMART CITIES LAB INDIA

PRESENTS

TRIP REPORT FOR WEEK OF 24-28 JULY, 2017

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1.0 Introduction

In the first two years of the EU-India FI-MEDIA project¹, a project funded by the Delegation of the European Union to India, there was a particular emphasis on the official launching and maintenance of two dedicated EU - India Cluster to Cluster (C2C) partnerships.

One of these was on the **bringing EU's FIWARE platform² to India**, (C2C launch event held on 22nd Jan. 2016 and numerous follow up events held throughout 2016 and early in 2017)³. In the FIWARE C2C, the project has teamed up with Smart Cities Lab India⁴ and the EU's FIWARE program (<http://www.fiware.org/>), through their FIWARE Mundus⁵ global component, which is being proactively extended towards other regions around the world, including India.

In order to build upon the excellent momentum already started with the support of EU-India FI-MEDIA project, a C2C building trip was carried out during July, 2017, in which Mr. Rahul Tomar, Smart Cities Lab India, a core member of FIWARE Foundation and EU-India FI-MEDIA C2C member, travelled from the EU to India to follow- up on previous established activities and to foster new opportunities to build upon for the FIWARE C2C to become a sustainable entity.

The visit was built upon existing collaborations already established and some new contacts achieved in 2017 in relation to the development of FIWARE platforms' potential use in Indian Smart Cities and Smart Villages activities (in conjunction with EU-India FI-MEDIA's C2C1 on Smart villages, initiated in the first year of the project in 2015), and could be extended later to other EU-India FI-MEDIA's C2Cs under development for year 3 including Internet of Things (IoT) and/or Smart Agriculture.

This report details the visit of Mr. Rahul Tomar in July, 2017, to investigate and achieve the above mentioned objectives of creating sustainability of this successful C2C partnership.

¹ <http://www.bic-fimedia.eu/> EU-India FI-MEDIA project is funded by the Delegation of the European Union to India.

² <http://www.fiware.org/>

³ A listing of all events can be found at <http://www.bic-fimedia.eu/?view=events>.

⁴ <http://www.fiware.in/>

⁵ <https://www.fiware.org/mundus/>

2.0 Trip details

2.1 World Bank and Smart Cities (and villages) and use of EU's FIWARE platform in the India context

For the next concrete steps in the field of Smart Cities and Villages in India together with FIWARE platforms' implementation and uptake, a very fruitful meeting was set -up and held with the World Bank in India during the mission in July, 2017. The meeting took place at the head office of World Bank in India located in the heart of New Delhi in Connaught Place. The full day meeting consisted of a full day workshop and presentation to all of the officials in the office. The planned agenda of the meeting was to propose a single digital platform for all Smart Cities and Villages in India, and the World Bank have agreed to approach with this concept to the Central Govt. of India in the next planned meeting in October, 2017.

The main host of the meeting was Dr. Shashank Ojha, Sr. e-Govt. Specialist and Mr. Vikas Kanungo, Sr. Consultant in Transportation and ICT Global Practice.

Mr. Rahul Tomar of Smart Cities Lab India presented the full features of the EU's FIWARE platform in centralising a single digital platform for Smart cities and villages in India and proposed having a pilot project in 3 different cities in India, to which they have agreed upon during the meeting. They have assured that the result in writing will come by the end of 2017.

2.2 Dell India, New Delhi

On 25th July, 2017, a meeting was held with Dell India in their office at Imperial Hotel Janpath, in New Delhi. The focus of the meeting was to bring Dell India on board as a large industry participant into the FIWARE C2C, especially for the supply of hardware and submitting tenders together with them for the further many opportune solutions to Smart Cities and villages, which could incorporate the EU's FIWARE platform. It was organised with the help of Mr. Ravinder Pal Singh, Director, Solutions Business Development at Dell.

As the FIWARE platform will provide the open source software for cloud infrastructure, the Indian smart cities will require dedicated hardware and this creates an excellent core market for Dell India, and they showed tremendous interest together with Smart Cities Lab to carry out this important function. In addition, Smart Cities Lab presented to them many solutions on offer for Smart Cities requirements, which could come together quickly with collaboration with Dell India if they are willing to jointly fill the tenders of interest.

Also on 25th July, 2017, a second meeting was held with Tata Consultancy Services at their office in New Delhi together with Mr. Harjit Singh, Sr. Consultant. Tata Consultancy Services is one of the largest companies in India having their own private cloud infrastructure running on OpenStack technology, which makes them an ideal candidate to participate to the FIWARE C2C activities in India, and the purpose of the meeting was to ask them to host a dedicated FIWARE Lab node at their premises. The presentation of setting up a FIWARE Lab node was well received and they indicated a possibility of establishing a FIWARE Lab by November 2017, which would be in addition to the already established FIWARE Lab node in India launched in IIIT D&M Jabalpur during November, 2016⁶.

2.3 Jabalpur, India

On 26-27th July, 2017, the venue of the mission shifted to Jabalpur, India, where there have already been excellent successes achieved in the FIWARE C2C activities.

The first meetings took place with the CEO of the Smart City of Jabalpur and the Director of IIIT D&M Jabalpur. The FIWARE Lab and benefits of having a single digital platform and also the features of an Open Source ecosystem was presented to the CEO of Smart City of Jabalpur by Mr. Rahul Tomar. The concept was well received and they agreed to jointly fill the Tender for Smart Wastage, Smart Lighting, Smart Bike rental and Smart Water management together with Dell India and a few other Indian partners of Smart Cities Lab. The tender process will be open in few months on a one-by-one basis and it was agreed to go through them together as a cluster activity.

The Director and Professors at IIIT D&M Jabalpur, who were responsible for the establishment of the first FIWARE Lab node in India⁷, enabled an excellent opportunity to allow Mr. Tomar to give a dedicated lecture on entrepreneurship and open source ecosystems to the students at IIIT D&M Jabalpur. The lecture covered how students can benefit the time of their studentships whilst becoming an entrepreneur and utilising the time to invent new innovations and techniques in the area of computers, electronics and mechanical engineering, which is a core mode of operation now in the EU programmes of research and innovation (R&I). During the lecture, it was stressed that today, there are many open source platforms to which they can benefit from in developing their own real world solutions. The lecture also afforded an excellent opportunity to provide the students with a number of practical hands-on projects that can be started immediately, which they could benefit from collaboration with EU partners in a quick fashion. In fact, a number of the students,

⁶ http://bic-fimedia.eu/content/pages/C2C-Fiware-Workshop-Report_231386202569.pdf

⁷ <https://goo.gl/photos/6yWcU9cWupcZL6VP8/>

under the guidance of Mr. Tomar, who due to his experiences, has an excellent understanding of both the EU and India ICT ecosystems, submitted a wonderful project for the NASA-GODAN challenge, to which we all were working for the last 6 months. A link of that project can be found at <https://farmsntech.github.io>. In addition, a number of other excellent project ideas discussed are now starting to take shape working toward other problems in relation to smart cities and smart villages that were fostered during the lecture and will be carried out as part of their official semester projects.

2.4 Mumbai, India

A number of excellent meetings were held in Mumbai, India in the next leg of the trip.

The first meeting was with one of the partners of the FI-MEDIA C2C brought on board by Smart Cities Lab, entitled Gaia Smart Cities⁸, and the purpose of the meeting was to align our next steps for getting projects started in the areas related to smart water management. This meeting was held in their office of Mumbai together with Mr. Bipin, CEO of the Gaia Smart Cities organisation.

A meeting was held with Momenta Partners venture capitalist (VC) in Mumbai in order to discuss the possibilities for obtaining the funds on board for the project implementation in the 3 cities after getting the contracts with World Bank as mentioned above in the initial part of the visit. They indicated a willingness and interest to provide funds once the contract awarded was shown in writing.

Finally, a meeting was held with the Municipal Commissioner of Navi Mumbai, which was a follow up to a previous meeting held last year in conjunction with European Business and Technology Center (EBTC⁹). The discussions focussed on potential business models to implement the project and will be followed up in due course.

⁸ <http://gaia.in/>

⁹ <http://www.ebtc.eu/>

3.0 Conclusions

During 2016 and early 2017, a number of key Cluster to Cluster (C2C) partnership events were organised by the EU-India FI-MEDIA project partners, Waterford Institute of Technology, Beyond Evolution Tech Solutions and IIT Delhi, in conjunction with Smart Cities Lab India, in relation to the bringing of the EU's FIWARE platform to the India context. A follow up trip was organised in July, 2017, to follow up on two key aspects of the sustainability of the FIWARE C2C set up by EU-India FI-MEDIA, including:

1. Continuation of the momentum of C2C members already on board; and
2. Recruit potential new members of the C2C, especially in relation to making the FIWARE C2C a sustainable entity with future projects and investigating potential business models.

The trip details have been presented in this report and successes obtained, including:

1. Continued active interest of the first FIWARE Lab node established at IIIT D&M Jabalpur with the support of EU-India FI-MEDIA and Smart Cities Lab;
2. Potential collaborators with an interest in tendering for Smart Cities and Villages activities with EU partners incorporating an efficient view towards utilising a single digital platform such as the EU's FIWARE platform;
3. Venture capitalists interested in participating to the sustainability activities made possible with the establishment of the FIWARE C2C in going forward.

Since the mission has concluded, follow ups are already taking place with further meetings with the World Bank in India scheduled in the latter part of September, 2017, to showcase a proof of concept for a potential pilot project involving the EU FIWARE platform in one of the designated cities in Goa, India.

In addition, a week long lecture series on FIWARE platform and the use of its Generic Enablers (GEs) for Smart cities is being planned to be held at IIIT D&M Jabalpur with the support of the FIWARE Foundation¹⁰ and Smart Cities Lab India. The lecture series will be designed to instruct the students in developing useful applications in the first FIWARE Lab node established in Jabalpur, which was officially launched in November, 2016 with the support of IIIT D&M Jabalpur, IIT Delhi, EU-India FI-MEDIA project partners and Smart Cities Lab India as part of their established FIWARE C2C partnership¹¹.



¹⁰ <https://www.fiware.org/foundation/>

¹¹ http://bic-fimedia.eu/content/pages/C2C-Fiware-Workshop-Report_231386202569.pdf