



Dear Reader,

A pivotal point in the implementation of the Triangulum project will be reached in month 36 of the project: January 2018 sees the completion of implemented activities in the Lighthouse Cities (LHC) and the start of the monitoring phase of the implemented measures.

In the course of the year 2017, the replication of project activities has already become a focal point for the partners. Some 59 replicable use cases from the LHC have been identified and the Follower City Training Mission – including webinars and workshops – carried out. This edition of the newsletter focuses specifically on these replication activities and our three Follower Cities – Leipzig, Sabadell and Prague. Read more in the section “Focus Topic: Activities in the Follower Cities”.

You can also learn about the latest news from our Lighthouse Cities Eindhoven, Manchester and Stavanger.

We hope that you enjoy reading this newsletter and we kindly invite you to visit our website at www.triangulum-project.eu where you can stay up to date with all of Triangulum’s present and upcoming activities.

Project coordinator of Triangulum

6th Triangulum Newsletter October 2017

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Triangulum ID

Title

Triangulum
Demonstrate, Disseminate,
Replicate

Programme

European Union's Horizon 2020
Research and Innovation
Programme

Duration

01/02/2015-31/01/2020

Budget

29.5 million Euro overall budget
25.4 million Euro funding from
H2020

Project management

Fraunhofer Institute for Industrial
Engineering (IAO)
Steinbeis-Europa-Zentrum



News

Saving CO₂ emissions thanks to waste water in Stavanger

Stavanger municipality has installed a new renewable energy plant for three municipal office buildings. The energy unit heats and cools the buildings using energy from the city's waste water, reducing the CO₂ emission by 85%.

In Norway, there are great natural renewable resources in hydropower. In the Triangulum project, however, Stavanger strives to find solutions that can be replicated in most cities around the world.

The new energy facility harvests energy from every toilet flush, all the water that goes down drains, rain water, water from dishwashers and washing machines. The water flows in a gigantic tunnel underground. For this demonstration, the municipality uses 100 meters of the tunnel where 108 drain heat exchangers are placed, absorbing heat from the waste water that flows in the tunnel. In a new video, this thermal energy plant is presented.

[Read more](#) | [Watch the video](#)



Energy management solution in Stavanger shows results

The rehabilitation department at Bergåstjern, an old people's home in Stavanger, is now testing energy management provided by the Innovation Department in Lyse. The solution allows staff at the department to adjust the heat in order to provide the inhabitants with the best indoor climate, based on their personal needs.

"We have both older and young residents and thus very different needs to be covered," says head of department Bryndis Gudbrandsdottir. She is very interested in her department being at the forefront of technology and considers contributing to testing as a important natural activity.

Energy management also means that the rehabilitation department can control light and air quality. In addition to the old people's home, the same control device is also installed in a gym at Kvaleberg Primary School.

[Read more](#)





News

Manchester cuts carbon thanks to Triangulum

Manchester's universities are using technology to cut their carbon emissions, thanks to the Triangulum project which showcases the economic and environmental benefits of electric vehicles. The project sees Manchester City Council working with the University of Manchester and Manchester Metropolitan University to transform their vehicle fleets and make significant energy savings, while demonstrating the power of the new innovations to help create economic growth.

Diesel operational services vans have been changed for electric vehicles and electric cars have been added to Manchester Metropolitan University's car fleet. Many mail deliveries are now made by electric bikes and electric cargo bikes have been made available to local businesses on a free trial.

A short film is now presenting the project's work in the Corridor Manchester innovation district.

[Read more](#) | [Watch the video](#)



Need to move it? Manchester's cargo bikes are here!

Manchester's Triangulum e-cargo bikes have been hard at work helping businesses get moving. Working with cargo bike specialists Manchester Bike Hire, Manchester City Council has bought four electric assist cargo bikes to be used by businesses in and around the city.

They are now being used for delivering letters at Manchester Metropolitan University and by different local entrepreneurs.

The bikes are fully GPS tracked to evaluate journeys, distance and carbon savings.

[Read more](#)





News

New video features Eindhoven's Project Milestones

The Triangulum partners in Eindhoven created a video documenting what has been achieved in the Lighthouse City since the beginning of the project. In a timeline of images, the viewer is guided through all the activities carried out during the first two years of Triangulum in Eindhoven. The video is a dynamic document: further Triangulum initiatives which are still being worked on will be added to the video in time.

[Watch the video](#)



Opening of Lighting Route in Eindhoven

Around two-hundred residents of the neighbourhood Eckart-Vaartbroek were present at the official opening of the innovative lighting route on 2nd October 2017.

A footpath around a pond is illuminated with smart lighting poles to make it more accessible and safe to walk. But that's not all: A smart interactive trail of lights is set out to guide walkers or runners on their way. They can determine their own pace by setting the lights which turn on and off in a certain time-span.

For the opening, children from schools in the neighbourhood were invited to run the route for the first time.





Focus Topic: Activities in the Follower Cities

LHC visits – Replication of best practices

During the year 2017, the Triangulum replication team visited the three Lighthouse Cities Manchester (UK), Eindhoven (NL) and Stavanger (NO). The aim of these visits was, on the one hand, to identify replicable use cases, which can be accessed through a user-friendly replication tool. On the other hand, they aimed to identify the driving factors which supported the implementation of innovative solutions in these cities.

All the information gathered during the three visits was presented to the Follower Cities and will be part of the Triangulum Smart City Framework due in January 2018.

[Read more...](#)



Training Mission for the Triangulum Follower Cities

The Follower City Training Mission focuses on supporting the Triangulum Follower Cities to replicate solutions from the Lighthouse Cities. The three Follower Cities (FC) Leipzig, Prague and Sabadell have been closely accompanied by the replication team of the project by conducting a comprehensive and tailored training programme during the year 2017.

The aim of the different activities is to help the FCs write their implementation strategies. With these strategies, the FCs outline their concrete plans to replicate smart city solutions, providing details such as the area for implementation, technologies to be implemented, costs and funding, reference to the Lighthouse Cities (LHC), etc.

The Training Mission includes three different vehicles: the Follower City Days, carried out in the three Triangulum Lighthouse Cities, as well as workshops and webinars on specific topics for the FC to learn from the experiences of the LHC.

[Read more...](#)





Focus Topic: Activities in the Follower Cities

Leipzig progresses to the next level of its Smart City Strategy

At the beginning of June 2017, Leipzig successfully finished the first draft of its Smart City Implementation Strategy. This marked an important milestone on the way towards an integrated strategy, which will enable the implementation of practical measures.

The strategy focuses on projects to be implemented in Leipzig West. It singles out the four categories climate-friendly district, sustainable mobility, smart living and active neighbourhood community as the most important ones for the district. As the pilot district includes a former cotton mill which is in the process of reutilisation, the project Strijp-S (Eindhoven, NL) could provide valuable input on the transformation of former industrial buildings.

One of the city wide projects is a data platform which connects the municipality with the utilities. This pilot project profits substantially from the input provided by the City of Eindhoven on their OpenData platform. It is one of the first projects to be implemented and is set to start mid 2018.

[Read more...](#)



Planning the future – Sabadell follows ambitious plans

During the last months, Sabadell has worked actively to design the actions that are included in the local Triangulum's Smart City Implementation Strategy. The strategy is planned to be approved by early 2018 and is strongly inspired by the training workshops and webinars organised within Triangulum. It is being created within a co-design process, where the local and regional knowledge ecosystem is closely involved and funding opportunities are being analysed.

As a result, financed by the Triangulum project, an open-source digital platform for municipal data integration has been implemented, connected with real-time data from sensors and meters from several municipal services.

Moreover, the city is thriving with further ideas for new projects on energy, mobility and ICT, some of them inspired or influenced by the Lighthouse City projects. Examples of these new plans are innovative recharging points for electric vehicles, innovative public lighting, traffic light priority for delayed buses and incentives for the green last mile urban delivery of goods.

[Read more...](#)





Focus Topic: Activities in the Follower Cities

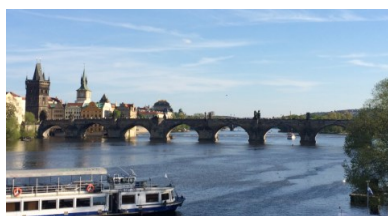
Improving the lives of senior citizens – pilot project in Prague

Like most European cities, Prague is facing the impact of global mega trends, including the ageing of its population. This presents great challenges for the city and its services.

The City of Prague plans to support the home care of its senior generation. Local Triangulum partner IPR Prague has been inspired by the approach of the Triangulum LHC Stavanger towards the smart home care agenda and has chosen it as the overarching approach for its pilot project to be designed within Triangulum. The main question of this pilot project is: "How can smart technology and cross-sectoral cooperation enhance the home care services that the city is currently providing?".

However, the project will not only look at how to provide safety and minimum wellbeing for senior citizens on the verge of self-sufficiency, but it will also explore means to enhance their quality of life. The pilot project will focus on one city district, testing approximately 15 households.

[Read more...](#)



Triangulum presented in New York within a Catalan event

A Sabadell company, Creaidealab, presented Triangulum among other projects in the event "Catalonia connects Smart Cities NYC'17", which took place in New York from 3rd to 6th May 2017.

The event gathered 10 selected Catalan Smart City companies which were able to present their projects to potential customers and partners in the New York area, in order to find opportunities for collaboration, including the municipality of New York.

Creaidealab had participated in the Triangulum's on-site assessment workshops in March 2016 and is also actively participating in the training mission webinars in 2017.

[Read more...](#) (in Catalan)



News

Triangulum presented as best practices for smart mobility

“On the path towards smart mobility: best practices from the three forerunner cities: Eindhoven, Manchester and Stavanger” is the title of a reviewed paper recently published by Marielisa Padilla and Sonja Stöffler from the University of Stuttgart, part of the Triangulum Coordination Team.

The article talks about the latest developments in the demonstration areas of the three Triangulum Lighthouse Cities, how these are being transformed into sustainable living environments, and the replication process of similar projects.

The article was part of a presentation at the 22nd International Conference on Urban Planning and Regional Development in the Information Society GeoMultimedia 2017, which took place in Vienna from 12th – 14th September 2017 and published in the conference’s proceedings. The presentation took place within the workshop “Measures for Smart Urban Environments”.

[Read more](#)



News from our Sister Projects

Triangulum is one of [nine European Smart Cities and Communities Lighthouse projects](#), currently receiving funding within the European Union's Horizon 2020 Research and Innovation programme.

Making sustainable cities with smart people and a smart economy a reality is the aim of the project [mySMARTLife](#). Activities will take place in the three demonstration cities Nantes, Hamburg and Helsinki. The four follower cities Bydgoszcz, Varna, Rijeka and Palencia will learn from these experiences. The latest newsletter of the project has now been released.

[Read more](#)

The [Smarter Together](#) Lighthouse City Vienna has just received an award for its mobility initiatives. The Verkehrsclub Österreich awarded its Mobility Award in the category ‘Active Mobility and Public Space’ to the project for its intelligent combination of various means of transport and the strong network character.

[Read more](#)



Past Events

An overview of events attended by Triangulum's project partners:

The Indo-German Smart City Solutions Workshop "Global Approach Local Solutions India", 09.05.2017, New Delhi (India)

[Further information](#)

Triangulum Tour during the Stavanger Impact Week, 15.06.2017, Stavanger (Norway)

[Further information](#)

Workshop "Smarter is cleaner — lessons learned from the SCC1 Smart City projects on grids, storage and prosumer models" during EUSEW, 22.06.2017, Brussels (Belgium)

[Further information](#)

Nordic Edge Expo, 26.-28.09.2017, Stavanger (Norway)

[Further information](#)



Upcoming Events

Find Triangulum's partners at the following events:

Smart City Expo World Congress, 14.-16.11.2017, Barcelona (Spain)

[Further information](#)





Partners

Project Management



Eindhoven



Manchester



Stavanger



Replication



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