MEMO

Smart Cities in Central and Eastern Europe Workshop
SMARTPOLIS PROJECT

03 May 2017, 10:00

BME EIT Neumann room

Budapest University of Technology and Economics
H-1111 Budapest, Egry József utca 18, V1. Building

For participants, please see separate list.

Opening addresses

László JAKAB (Dean, Faculty of Electrical Engineering and Informatics VIK, BME, Hungary)
Welcomes the participants of the workshop. Recalls the similar event of last year, and reiterates the goal of this workshop as opening a venue to establishing a Smart City Forum for the CEE countries.

Péter BAKONYI (Smartpolis Project Coordinator, BME, Hungary)
Presented a short summary of the H2020 Smartpolis Teaming Project aiming at establishing a regional centre of excellence for smart cities. The teaming project will work as joint venture with a long-term horizon of cooperation. Project partners include Western and Eastern European entities as Fraunhofer Fokus, Urban Institute, and the Hungarian Intellectual Property Office and the BME. Among the results he underlined acting as a catalyst for the introduction of the European Innovation Partnership on Smart Cities and Communities (EIP-SCC) in the region.

Lutz HEUSER (Project Partner, Urban Institute, Germany)
Provides overview of the organisation formed in Germany by the German Innovation Roundtable in 2013, the Smart City Forum (SCF). Gives and introduction to the concept of the Forum. A poll that year found that cities are interested in Smart City (SC) issues, but are vaguely informed, while vendors offer complete solutions.
Therefore the key messages of the activities are a) education, knowledge sharing especially with public services is important, this is the foundation to start, b) fear of getting locked with a single vendor, c) the solution needs to be scalable – this means scalable downwards, as there are no megacities in Europe, unlike in China, India, etc.

The Forum by today has grown a large group including 150 members, where cities learn from each other, as they are not at the same level: there are active and observer cities in the group. The group includes large, medium and small cities. Large cities have complex decision making

processes, structures which make them slow to innovate. Smaller cities are quicker to innovate. In 2013, the Forum became official member of the European Innovation Partnership on Smart Cities and Communities (EIP-SCC) represented by the urban institute (ui).

Achievements of the Forum on European and International levels include:
- leading the "Sustainable Urban Mobility" Action Clusters
- Successful application to SCC 1 in three major German cities
- 1 million Humble lampposts (physical infrastructure) initiative
- Partnership with the Australian Smart Communities Association in 2016
A German delegation visits an Adelaide conference in May 2017 with a large exhibition booth. Australia is getting ahead of Europe in smart city technology. Relevant tenders are frequent (monthly) there.

When working with cities, we must consider the digitization of the city, its value, who does it represent value for? Cities need help in understanding and assessing their own digitization process.
Open access to city data is like open (public) access to drinking water service.
An example for this is traffic light and traffic management system for sustainable urban mobility by using raw data from traffic management on the open urban platform to convert it to smart data to be used by users (e.g. courier firms).
To participate the Open Urban Platforms, a MoU is to be signed for this expressed goal: open APIs, Standards and Reference Architecture.

Commitment #6670 of EIP-SCC:
The Pan-European 1,000,000 Humble Lampposts (physical infrastructure as integrated infrastructures and processes across energy, ICT, and transport) project.
This currently is in five classes of DIN SPEC 91347 "imHLa" (integrated multifunctional Humble Lamppost) for configuration and capabilities (public Wi-Fi, emergency response, environmental sensors, parking sensors, etc. future: drone landing spots for charging, storing.) Currently low cost solutions are preferred.

The Forum offers:
Collaboration on standardizing "imHLa" on EU level (now is the opportunity to Join ELENA application to transform 1,000,000 Humble Lampposts into imHLas with EIB financing), and collaboration on standardizing "Open Urban Platforms".

Endorse DIN SPEC 91347 as part of your national standardization effort to make it a true European standard

Short summary of the smart city activities of the participants, focusing on the main priorities and the expected market situation of their country-institutions

01. Aurel GONTEAN (Politehnica University of Timisoara, Romania)

Outlines developments since last year in various areas, including energy, energy efficiency, public transport and internet access:

1. Thermal energy - Romania has 3rd highest potential in the EU.
2. Solar energy – the continuous rise in the use of solar energy was halted in the last two or three years as tax was levied on such products.
3. The green house program was stopped in 2014, and is rumoured to be restarted later this year as a 1300EUR subsidy per house.
4. Green certificates support the mechanism for encouraging electricity production for renewables (proj. 3% by 2020)
5. Building refurbishment – the EU funded 51 blocks of flats under construction now
6. Smart lighting started in 2014 with children's park, evolved to several districts of the city with illumination remotely controlled on several streets
7. Excellence in internet speed – 9 Romanian cities among the top 10 speed cities. Among top 20 worldwide (1GB/sec widely available).
8. electric/hybrid cars – free parking, 5000 EUR subsidy for new hybrid car, 10k EUR for new electric car purchase.
9. Free bicycles - 300 new bicycles rolled out, RATT (Timisoara public transport company) card owners receive a bonus +1 hour free ride
10. Traffic management – 4 million EUR dedicated to control centre with 230 video cameras currently at 134 crossings
11. Water road – 114 km waterways from Timisoara to Titel (Serbia) once linked the city with Rotterdam, built in the 18th century. It has been closed. Plans: rehabilitation of Bega Rivers, 80% ready. Vaporettos will operate soon. Deployment is hindered by legal battle over who is the owner of the landing sites (government, national authority or local government)?
12. Santier Openville –a 220m EUR investment plan spanning 2015-18, with its area of 594,000m2 and 25 stories height it is the largest building in Romania. 10% will be green area; will include intermodal transport stations, Smart City control centre;
13. City hall plans to own power and data network to overcome ownership problems; Vision Timisoara 2030 is a sustainable concept for development of infrastructure, approved in 2007.
14. Timisoara has won the title of European capital of culture in 2021.
15. Conclusions: need to find balance between strengths and weaknesses (mostly: politician instability, no holistic approach, indecision, a lot of investment needed, citizens' reluctance in some aspects).
16. Extra information about a private project related to smart solutions called Thermo-Electric Hybrid Solar System is available at tess.upt.ro.

02. Eduard DUMITRASCU (Romanian Smart City and Mobility Association)

Introduces smart cities opportunities in Romania through the activities of the Romanian Smart City and Mobility Association (ARSCM).

What we do: create SC industry, organize events, education: SC institute, SC magazine publication, SC cluster

The main activities of ARSCM include regulatory, dissemination activities, advocacy of interests at various levels of local, government and EU decision making.

The Smart Start Up Romania: Romania will have 2,000,000 EUR for IoT projects.

Besides national partnerships, ARSCM also works internationally to complete its mission: develop the smart city industry in Romania.

A very new approach from city mayors has been perceived recently.

Operational programs for big infrastructure (Operational Programme Big Infrastructure, POIM) for approximately 11.8 bn EUR (EU and Romanian funds) to finance transport infrastructure, environmental protection, risk management and adaptation to climate change, energy and energy efficiency, contributing to the Union strategy for smart, sustainable and inclusive growth.

In current and 2017 projects 10 Romanian counties are members, including Alba Iulia.

The city of Alba Iulia is not only one of the first smart projects in Romania, but it is also the first project in what I call the Holy Trinity - central authority (the Ministry of Communications), local authority (the City Hall of Alba Iulia) and private companies (led by Orange Romania). Alba Iulia SC is a successful project.

The Reșita Smart City aims for a vibrant, mixed-use attraction for both residents and visitors, best-practice public and private effort in brownfield reconversion.

Open to cooperate with European entities, ARSCM is a gateway to a 20bn EUR market in the next 5 years, where European expertise is needed.

03. David BÁRTA (CityOne Czech Republic – Brno)

A perception of Smart City is how we should buy technologies. The city needs to know its own hardware, what to buy and how to manage it in the future. In cities, there are usually no people responsible for Smart City, however, the city of Brno has a Smart City leader city councillor, a Smart City committee, and a Smart City ecosystem (the Brno 2050 strategy) which make up a good practice.

A key SC project is public transport (PT) ticketing, including an eShop with 30 thousand user accounts currently in the city. The system is characterized by open tender, modularity and user financial motivation.

Expand token gateway to other areas as digital ticketing in e.g. parking, events, etc.

Population uses citizen card, or citizen card for students – this combines payments and SC functionalities into one tool.

Introduces Transport Research Centre and aits activities that include testing lab for traffic and environment, big data for traffic management, IoT lab.

Another initiative is SmartNet – a sensors network to regulate traffic based on impact on environment.

Introduces the smart city magazine city:one publication which is a Central Eastern European platform to share ideas, projects, products, networking, and raising awareness.

04. Nebojša GVOZDENOVIĆ (University of Novy Sad, Serbia)

Introduction to the Novi Sad University which has two campuses: one in Novi Sad (approx. 340,000 inhabitants) and another one in Szabadka (Subotica, population approx. 140,000).

A public company under the named Informatika provides utility-residential, telecom and information products and services to persons and firms with a vision to attain synergy of IT and human life components to meet the needs of citizens.

Personally involved in a spin-offs "Generic crowd sensing platform for traffic in urban areas and direct communication between authorities and the residents" and "City logistics and real time traffic information".

In Subotica, the university has SC projects in the areas of public transport, GIS and street light control system.

Their important research compares the medium size CEE cities on the idea of the study titled "Smart cities: Ranking of European medium sized cities".

05. Sándor NAGY (Vice Mayor of the City of Szeged, Hungary)

The presentation about the SC activities of the City of Szeged starts with an introduction to the context of the city as a SC development field. An important note about current and future SC plans points at the limited authority of cities in various fields (e.g. local schools, district heating, garbage collection, etc.) as these have been taken over by government. This limits the capability of cities to devise and roll out complex SC projects.

Yet, the SC Concept of the city was approved by city assembly the previous year, two projects already started and currently more project proposals are worked out.

The focus is on cashless city, open data, and mobility. The critical element is the business model.

Mobility includes the provision of information (counselling) to employees how to get to work without using a car. Local decree on parking spaces supports mobility planning by financial incentive toward new building developments. A lot of people cycle, but when it rains, they use cars.

As for public transport, Wi-Fi for bus stops is planned to inform bus drivers and log bus routes, number of passengers waiting at the bus stops. The problem is the business model. Passenger incentives to use monthly tickets (so they can use Wi-Fi). When this is rolled out citywide, various sensors can be installed at the stops.

Szeged plans to develop dedicated mobility hubs (Wi-Fi, vending machines, and live passenger information with number of passengers on the buses, to attract more passengers to public transport).

06. Zoltán PÓSER (CEO, EDC Debrecen, Hungary)

Introduces the other presenter of the company, consultant to the city senior expert Mr. László Mátyus, with whom they started working on a complex strategy for Debrecen.

One of EDC's focus areas is Smart City, in which key elements for Debrecen SC are transportation, digital literacy, energetics and community building social.

Flagship transportation area already has successful projects, as the country's first Smart Crosswalk. Second in the country, the city joined the Waze Connected Citizens Program this March, and plans an intelligent surveillance camera system. After an introduction to Waze, its short-term benefits for Debrecen are listed as detours appear on the Waze map, the most detailed map of Debrecen is on this service (the Waze live map is integrated into the Debrecen website at www.debrecen.hu). The goal is to make Debrecen transportation smoother and to reduce congestion.

Long-term benefits of the Waze partnership include that Waze provides all collected user data in its region to the City of Debrecen, analysis of various measures based on real traffic data is now possible, provides the opportunity to compare findings and results of various researches (traffic, noise and environmental pollution, etc.) with real traffic data and further big data analyses.

There will be a number of road/junction reconstructions in the city in the near future. Transportation planned projects include smart crosswalk network, smart bike roads, intelligent survey camera system, and hosting conference on intelligent transport of cities in the V4 countries this fall.

07. Zuzana NEHAJOVA (EY Czech Republic – Prague)

Smart Cities are testbeds for smart solutions. Beyond sensors and digitization, smart cities have to be green, friendly and stimulating, innovating and digital to support growth and cohesion. The EY products are complex – combination of Smart City Index, Smart Street, Smart Park, Smart Bicycle Path, Smart School, and Smart City Ecosystem.

It is important to understand what the need actually is.

EY uses an open innovation model to explore and offer solutions for cities. This involves analysis, vision and strategy, project planning, project financing, project implementation and data economy, project monitoring and evaluation using EY SCI.

EY success stories besides the public sector include environment, mobility and energy.

The Regional InnovEYtion HUB provides support to the regional innovation ecosystem, develops Smart cities solutions, connects start-ups and investors and creates innovative partnerships.

08. Michael Frank (Hungarian Telekom)

The presentation about Smart City at Deutsche Telekom (DT) Europe details current activities, solutions and general strategy of the company.

They have ongoing smart city projects in more than 10 countries with projects in Europe.

The SC portfolio of DT Europe includes smart waste, air quality, mayor dashboard, traffic and crisis monitoring, IoT solutions, etc.

Participation at the Smart City World Congress in Barcelona later this year is important to establish worldwide presence as there will be 600 cities and over 15,000 visitors.

T-Systems Hungary is a unique player in the DT group.

As a "transformation partner" it has 1,600 employees with strong IT/SI knowledge.

The key to success is to understand your customer (e.g. efficient management of challenges, adding real value to citizens and the city in the exemplary case of cities and as regards banks, cost reduction, customer experience and proactive risk management are key aspects).
As regards EU financing, it is important to utilize the current window of opportunity of EU funds to create the basis for real smart city solutions, set up value chain.
The Smart City Dashboard as basis for value added services. This solution is useful to show the basis of smart city strategy.

--- NETWORKING LUNCH ---

09. Bálint DÖMÖLKI (IT Star EU)

Dömölki will not talk about Smart City, but about international cooperation that is the basis of creating smart cities. Calibrated for creative communications, IT Star is a regional ICT association established in 2001, now with 15 institutional members from over 10 countries in Europe.
Main activities: annual conferences, publications (workshop proceedings and Newsletter), consultations and statements, and project participation.
The printed English language quarterly newsletter is publication forum opportunity for researchers besides including news from Member Societies.
A successful project was the completion of a study on the situation on talents in informatics in a number of countries in 2012.
IT Star cooperation includes EU organizations (JRC, CEN, ENISA).
IT Star is trying to find SC project cooperation possibilities, e.g. with BME.

10. Tamás MIHÁLYDEÁK (University of Debrecen, Hungary)

First we need to understand what SC is. There are too many aspects (political, economic, etc.). We cannot be sure that we are being smart when using informatics, however, using informatics is a necessity.
From informatics point of view SC is a special umbrella: there are many different parts of informatics involved. Because this I felt that work was missing in this. We were speaking about SC projects and quality of life, but when we speak about these, in this context, we understand, we speak about everyday life. In SC projects we want to achieve that everybody feels that their living is better and better – it is the everyday aspect which is important. How can we offer knowledge to this kind of project?
The University of Debrecen Faculty of Informatics provides education (BSC/MSc, BA/MA) in Hungarian and English, including business informatics BSC/MSc. They can translate special needs to the language of informatics, computer science BSC/MSc to create applications, computer science engineering BSC/MSc to manage IT instalments.
Provides an overview of Debrecen University and the Faculty of Informatics, the Doctoral School of Information Sciences, the R+D labs history. The Faculty education services cover 1800 students in 7 Departments and 7 labs, including BME VIK EIT (Knowledge Centre of

Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics).

Smart City Living Lab: working in the sense that we get some funds for the lab that integrates different kinds of knowledge to achieve results that have close connection to SC applications. A major research and development project is FIRST (Future Internet Research Services and Technology) with 6 subprojects. This is a large program funded by EU Social Fund, where the Faculty worked together with BME and other institutions. Deals with ICT tools for smart homes and assisted living for elders, crowdsourcing and crowdsensing implementations for SC applications and services (future internet social apps). SC definitions are varied. On a jocular note, Calvinist Debrecen needs to find a way to turn into (Calvinist) Smart City.

11. Zita BUDAY (Senior International Expert, RCISD, Hungary)

New to the Smart City project idea, the Regional Centre for Information and Scientific Development (RCISD) founded by scientists and R&D managers is a platform for regional and international cooperation by providing an exchange place and forum for the various sectors of economy, to prepare joint R&D projects.

RCISD also provides services (consulting, project management, scientific research and analysis, education and training). Proposal writing is getting overcomplicated, therefore companies need consultancy.

Successful activities in 9 FP7 and 7 H2020 projects, cooperation with EU, Danube Region, Eastern Partnership Countries, Central Asia, ASEAN, Japan, Brazil, USA (90 partners in 43 countries. Reference tasks include development and management of a grant scheme, R&I stakeholders mapping, organisation of Policy Stakeholder Conferences, facilitation of regional innovation and Dissemination and communication activities.

12. Gyula SALLAI (BME, Hungary)

This presentation provides information about the two-day "Focusing on Smart Cities" 4th Hungarian Future Internet Conference and Smart City Exhibition to be held at BME 8-9 November. The second day will be the Exhibition day.

BME is the main organizer of the event located in the BME Central Building (Building "K").

At the event webpage www.hte.hu/mjik2017, the preliminary programme and further information will be available.

The languages of the two-day event are Hungarian and English. The Conference is to have five sessions, the Exhibition is open under and beyond the conference. The first day's morning session is devoted to the Smart City trends, plans and experiments, the afternoon sessions to the Internet trends and research results. The second day is the review of the Smart City issues including strategic planning and best practices, societal impact and engineering solutions, as well as demonstrations of exhibited products.

Future Internet research goals: awareness in the social, environmental, resource, service and data and content areas. Future internet is a well-researched area.

Smart internet ecosystems divide into two main elements: Smart City and Smart Factory applications.

13. Kálmán KOVÁCS (Chairman of the Hungarian Smart City Forum)
Gives an introduction to the Hungarian Smart City Forum (SCF) and how EIT manages cooperation among BME faculties.
Three years ago a forum led by EIT for parties interested in SC was created – among others - with the aims of supporting developments and implementations of the regional and local SC concepts and strategies, and promoting the dissemination of ICT RDI activities and applications related to SC strategic objectives
Currently the Forum promotes cooperation among CEE regional partners, is creating the Smart Cities Forum for CEE countries, and provides professional support to the Smartpolis Project.
The Eastern European regional engagement of Smartpolis involves more than 10 countries.

--- Discussion ---

Closing remarks
Péter Bakonyi summarized the meeting.
The most important decision was to establish the Smart City Forum for the CEE countries.
All participants signed or will sign the Declaration of Intent.
Today we have 16 members from 7 countries. We are waiting to join some organization from Poland and Croatia.
Please visit our website http://smartpolis.eit.bme.hu/ for fresh information. This memo will be available there.
No comments received from the floor.
Announces that the next Smart City Conference and Exhibition will be held in 8 and 9 of November. The call is in the Smartpolis website.
We are inviting every participants of the Smartpolis workshop.
Closes the workshop, expresses gratitude for all the presenters for the great and insightful presentations.