

JOIN THE URBAN INNOVATION

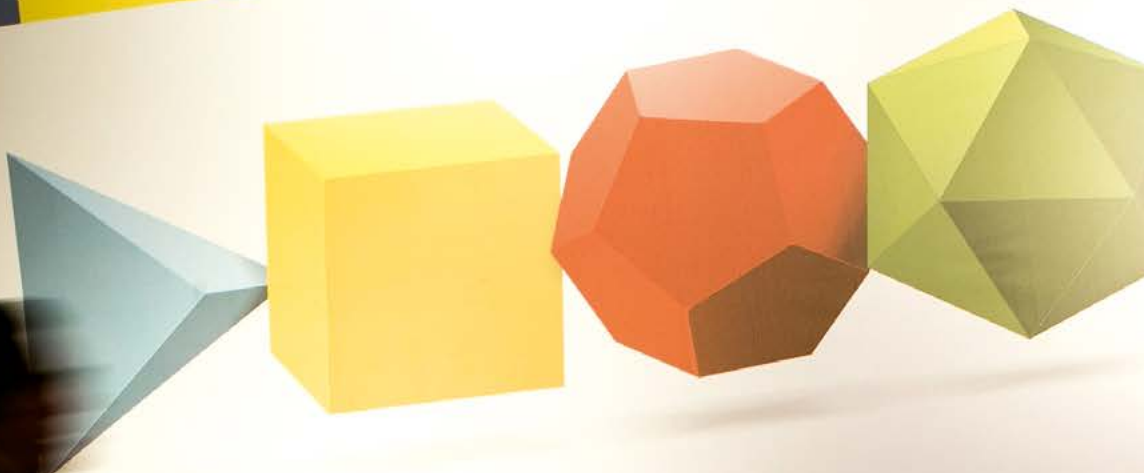
JOIN THE  
**URBAN**  
INNOVATION

# Report 2015



<b>1. SCEWC 2015</b>	<b>3</b>
<b>2. Exhibition Area</b>	<b>6</b>
Global Partners	<b>6</b>
Supporting Institutions	<b>14</b>
Event Partners	<b>20</b>
Hosted by	<b>25</b>
Organized by	<b>25</b>
<b>3. Smart City Plaza</b>	<b>26</b>
Speakers' Corner	<b>27</b>
Partners' Solutions	<b>27</b>
Call for Solutions	<b>30</b>
Call for Apps	<b>30</b>
<b>4. World Smart City Awards</b>	<b>32</b>
Honorary Award	<b>33</b>
Awards Winners	<b>34</b>
Awards Finalists	<b>36</b>
Awards Ceremony	<b>37</b>
<b>5. Side Events</b>	<b>38</b>
<b>6. Networking Activities</b>	<b>46</b>
<b>7. Cities and Countries</b>	<b>50</b>
<b>8. Smart City Expo Abroad</b>	<b>52</b>
Montreal	<b>52</b>
Kyoto	<b>53</b>
<b>9. Congress</b>	<b>54</b>
Keynotes	<b>59</b>
Plenary Sessions	<b>64</b>
Parallel Sessions	<b>72</b>

Smart City  
WORLD CONGRESS



JOIN THE  
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INNOVATION





# 1 SCEWC 2015

## Beyond Urban Innovation: a new dimension of “smart”

It is not about definitions anymore. It is more about thinking strategically about urban innovation and harnessing the talent of all stakeholders to support the development of the cities of the future.

Smart City Expo World Congress (SCEWC) has become the leading international event for the smart urban solutions industry, the key meeting point for experts and leaders of the world's most innovative cities, companies, research centers and international organizations, and the place to share knowledge and get inspired.

The 2015 edition recorded its best-ever figures with **14,288 attendees, 485 exhibitors, 421 speakers, technical and political representatives from 568 cities, all of them coming from 105 countries** to discuss the latest thinking on sustainable and efficient city development.

They all gathered and networked in a 20,000 square meter zone that combined an exhibition area to attract companies and institutions developing ground-breaking solutions and a congress area to drive debate on crucial

issues such as sustainable transformation, livability and resilience, energy efficiency, equity, urban mobility and the transition to a 'circular economy'. This model will be fully discussed at the Circular Economy European Summit, which will be held together with the Smart City Expo World Congress in 2016 and is aimed at becoming the worldwide trademark event related to this theme.

Furthermore, real and tangible solutions could be experienced at the Smart City Plaza, a special area recreating a smart city, where different companies showcased the latest developments and found business opportunities within a market which is expected to reach \$1,386.56 billion, in 2020<sup>(1)</sup>.

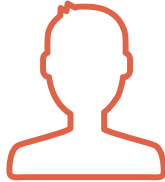
As an expression of its commitment with sustainable and economically viable cities, the event itself adhered to the Towards 0 Waste initiative, substantially reducing residual waste and saving resources during the three-day event held at Fira de Barcelona. Everyone needs to do their bit for a better world.

(1) Global Smart Cities Market - Growth, Trends and Forecasts (2014-2020) - Report Buyer, Sept. 2015.

## SCEWC 2015 in Figures



**485**  
Exhibitors



**14,228**  
Attendees



**568**  
Cities



**105**  
Countries



**421**  
Speakers



**399**  
Accredited Press

## Public / Private Sector

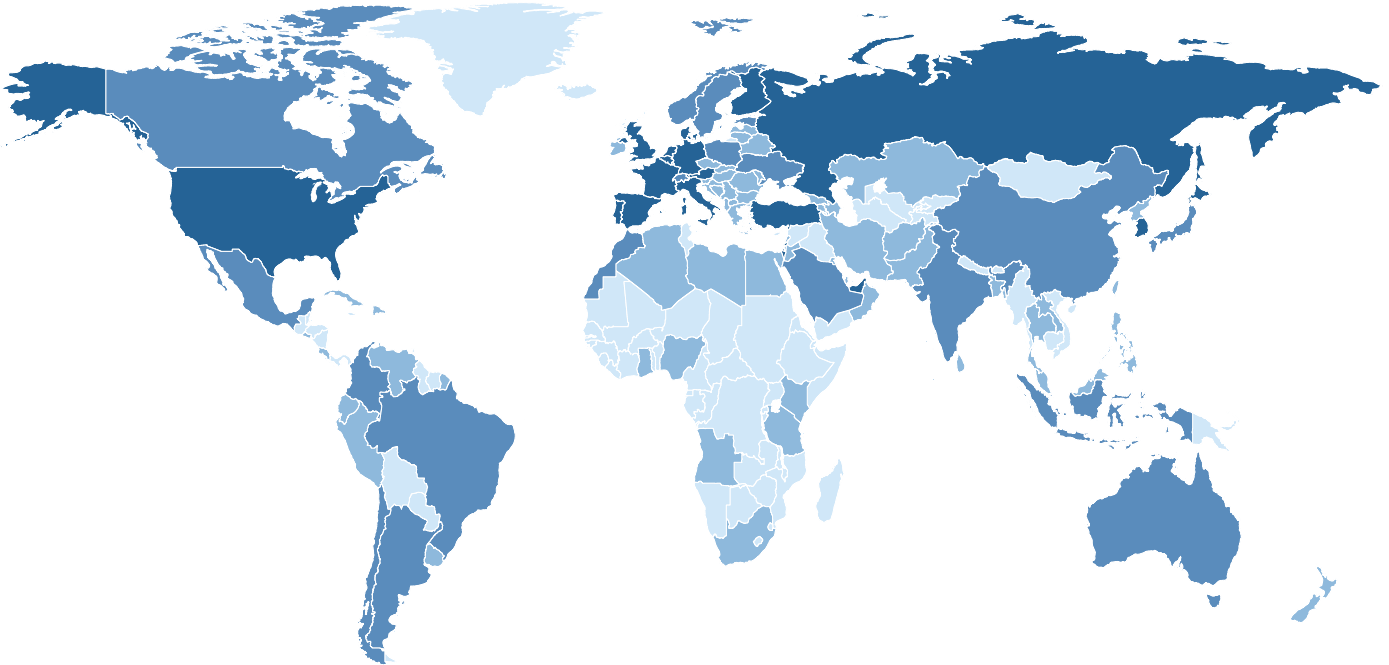


**70%** Private Sector   **30%** Public Sector

**“70% of the attendees came from the private sector, showing an increasing business interest in Smart Cities”**

Presidents, CEOs and high-ranking executives accounted for more than 40% of the attendees

## Worldwide Attendees



Attendees came from 105 different countries



**“A global congress for a globalized smart world”**

## Professional Profiles

- 41%** C-Level Management & President
- 20%** Middle Management
- 19%** Technical
- 8%** Academia
- 7%** Elected Politician
- 5%** Sales, Marketing & Others



# 2

# Exhibition Area

## Global Partners

We are thankful to our partners and supporters, without whom this event would not have been possible.



### AWS Collaborative City

Cities are leading the way in the drive to innovate for and with citizens. Whether through open data initiatives, education reform, citizen service improvements or infrastructure programs, more and more local governments are turning to Amazon Web Services to provide a highly reliable, scalable, low-cost infrastructure platform in the cloud that powers hundreds of thousands of businesses and institutions in 190 countries around the world. With data center locations in the U.S., Europe, Brazil, Singapore, Japan, and Australia, government customers are taking advantage of the AWS Cloud's performance and reliability. The AWS Collaborative City is a place where government, citizens, city councils, start-ups, and technology partners are enabled by the AWS Cloud to work together to transform the city into a place where citizens have access to all of the services they need to live better and smarter. The AWS Collaborative City demonstrates how Amazon Web Services supports the world of mobile applications, data analysis, information sharing, and dynamic decision-making. By working together, we can unleash the creative power of collaboration and technology.

[aws.amazon.com](http://aws.amazon.com)





## Audi Urban Future Initiative

In an effort to actively shape the transition to a new mobility era, Audi started the Audi Urban Future Initiative in 2010. The initiative aims at the establishment of a vital dialog on the synergy of mobility, architecture and urban development through anticipating the future. Rooted in the belief that our current challenges of mobility can only be solved in a collective and interdisciplinary way, it represents an essential part of the brand's commitment to urban mobility.

[www.audi-urban-future-initiative.com](http://www.audi-urban-future-initiative.com)



## Cisco

Helping Cities Envision the New Global Urban Services Industry. The vision for smart cities offered by Cisco is of an integrated urban information and communication technology (ICT) overlay on a city that can support delivery of connected urban services and allow for efficient management of those services on a global scale. Cisco helps cities gather, share, understand and act on data from and with other agencies, from and with city residents and visitors, and from and with business and social organizations. By leveraging the Internet of Everything, cities can integrate people, processes, data and things to create safe and vital places to live, work, learn and play.

[www.cisco.com](http://www.cisco.com)



## Engie

ENGIE develops its businesses (power, natural gas, energy services) around a model based on responsible growth to take up today's major energy and environmental challenges: meeting energy needs, ensuring the security of supply, fighting against climate change and maximizing the use of resources. The Group provides highly efficient and innovative solutions to individuals, cities and businesses by relying on diversified gas-supply sources, flexible and low-emission power generation as well as unique expertise in four key sectors: independent power production, liquefied natural gas, renewable energy and energy efficiency services. ENGIE employs 152,900 people worldwide and achieved revenues of €74.7 billion in 2014. The Group is listed on the Paris and Brussels stock exchanges and is represented in the main international indices: CAC 40, BEL 20, DJ Euro Stoxx 50, Euronext 100, FTSE Eurotop 100, MSCI Europe and Euronext Vigeo (World 120, Eurozone 120, Europe 120 and France 20).

[www.engie.com](http://www.engie.com)

## Global Partners



### FCC

For more than 100 years the FCC Group has been providing smart services to improve people's quality of life in collaboration with city governments and public institutions. Present throughout the five continents, it works on a daily basis to make the objectives of a smart city a reality. It does this through its three lines of business: infrastructure management, environmental services and comprehensive water management. Sustainability, Innovation, Optimization, Technology, Proximity and Commitment are the key concepts that define FCC's proposal for Smart Cities, with a clear emphasis on quality citizen services.

[www.fcc.es](http://www.fcc.es)



### Ferrovial

Ferrovial Services, with revenue of €4.4 billion in 2014, is a business division of Ferrovial, one of the world's leading infrastructure groups. Ferrovial Services maintains and enhances infrastructures and operates in Europe, the Middle East, the Americas and Australia. Ferrovial Services provides a broad range of urban services (e.g. asset management, environmental services, lighting, facility & energy management) to more than 800 municipalities, mainly in Spain and the UK. Urban Innovation is strategic to Ferrovial Services in order to effectively support cities in their challenge of combining efficiency, sustainability and citizen experience. The company's global Centre of Excellence for Cities develops and delivers innovative solutions, programs and cutting-edge service provision models, working collaboratively with forward-thinking city stakeholders.

[www.ferrovial.com](http://www.ferrovial.com)



## FIWARE

FIWARE is the open standard platform for Smart Cities that provides the basis for an open and sustainable ecosystem where app developers, startups and companies, can faster materialize their ideas into applications/services developed for multiple cities, enabling the transformation of cities into engines of economic growth and well-being. The European Commission's support has been key in stimulating the adoption of FIWARE and the creation of a digital single market for Smart Cities. 60+ cities have joined the Open and Agile Smart Cities Initiative, adopting common standards for managing context information and making it available as real-time open data. These standards are integrated in the FIWARE platform, laying the foundation for public-private partnerships where cities and platform providers can jointly develop and deploy interoperable Smart Digital Services infrastructures.

[fiware.org](http://fiware.org)



## IBM

Combining world-class business, industry and technology expertise, IBM provides the integrated solutions that help visionary leaders achieve their objectives. Drawing on thousands of client engagements and proven strength across the breadth of city operations and services, only IBM offers the experience that today's challenges demand.

[www.ibm.com](http://www.ibm.com)



## Microsoft

Founded in 1975, Microsoft (Nasdaq "MSFT") empowers every person and every organization on the planet to achieve more. Microsoft CityNext empowers cities to be more sustainable, prosperous, and economically competitive—with a simplified approach. It helps cities unlock their potential by delivering innovative digital services that can help citizens lead safer, healthier, and more educated lives. Cities can tap into the solution portfolios of Microsoft and our partners and innovate at their own pace; deploying real-time solutions that can interoperate with and improve upon existing IT investments. These transform their operations and infrastructures, engage citizens and businesses, and accelerate their economic development and environmental sustainability.

[www.microsoft.com](http://www.microsoft.com)

## Global Partners



### SAP

SAP FUTURE CITIES helps improve livability for all by increasing urban resilience, enabling digital transformation and boosting economic prosperity. With 4500 regional, local and city customers across the world, over 20 years of city experience and a market-leading portfolio, SAP is helping to inspire, create and empower the next generation of city leaders and city innovators to use technology in a way that delivers greater value to all those who live and work in, and visit the city. Using the broadest set of applications, technology and network platforms, SAP is helping address 36 critical scenarios in cities, from the Internet of Everything to public safety, from digitization to public health. With SAP solutions cities can run better, help make it easier for businesses to thrive, and provide a safe environment for citizens.

[go.sap.com](https://www.go.sap.com)

### SIEMENS

### SIEMENS

Siemens is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 165 years. The company is active in more than 200 countries, focusing on the areas of electrification, automation and digitalization. Siemens' intelligent infrastructure offering includes integrated solutions for safe, reliable and efficient power distribution, smart grid technologies that balance supply and demand, prevent power outages and integrate renewable power cost-effectively. The company is also a leading provider of integrated mobility solutions that move people and goods faster, safer and with fewer resources, and smart building technologies that drive energy efficiency, reduce costs, and protect assets.

[www.siemens.com](https://www.siemens.com)





## Telefónica

Telefónica aims to contribute to cities' digital transformation, helping them to achieve social, economic and environmental balance as well as to discover new ways of interacting with citizens. We aspire to play an active role in converting cities into places full of possibilities.

In Telefonica we offer a wide range of digital solutions in the areas of smart mobility, security, health, environment, government, economy and education, raising a new generation of services and businesses where decision-making is faster and more efficient thanks to intelligent data management. Telefonica is an end-to-end provider of Smart City solutions. We integrate vertical services in an open and interoperable platform to enhance city services management, count on the best possible partners to deliver those services and hold good relationships with companies and knowledge networks (universities, business schools, etc.) to help bring together the different stakeholders and players in the Smart Cities Ecosystem.

[m2m.telefonica.com](http://m2m.telefonica.com)



## ThyssenKrupp

ThyssenKrupp Elevator is one of the world's leading elevator companies and it brings together the ThyssenKrupp Group's global activities in passenger transportation systems. With sales of €6.4 billion in fiscal 2013/2014, customers in 150 countries, and with more than 50,000 highly skilled employees, the company offers innovative and energy-efficient products designed to meet customers' individual requirements. Its portfolio includes passenger and freight elevators, escalators and moving walkways, passenger boarding bridges, stair and platform lifts as well as tailored service solutions for all products. Over 900 locations around the world provide an extensive sales and service network to guarantee closeness to customers. Innovations like TWIN, ACCEL and MULTI are key for the future of people transportation. Our engineering technology enables efficient and comfortable urban mobility. ThyssenKrupp is investing in the development of new technologies, in people, and in enlarging their global footprint to contribute to making existing and future cities the best living spaces ever created.

[www.thyssenkrupp-elevator.com](http://www.thyssenkrupp-elevator.com)









## Supporting Institutions



**ICEX**

### ICEX Spain

ICEX Spain Trade and Investment is a public business organization which works worldwide with the objective of promoting the internationalization of Spanish companies in order to improve their competitiveness, as well as boosting foreign investment in Spain. ICEX offers its services through 98 Economic and Commercial Offices worldwide, the largest foreign network, 31 Provincial and Territorial Trade Offices in Spain and 17 Business Centers abroad, keeping close contact with Spanish companies. Every year, ICEX organizes around 1,200 promotional activities in foreign markets and answers over 90,000 queries on internationalization.

[www.icex.es](http://www.icex.es)



**UK Trade  
& Investment**

### UKTI

UK Trade & Investment seeks to raise the profile of UK cities and the companies who work with them in the Smart Cities arena. The UK Pavilion was again the largest national stand at the Expo, with a focus on intelligent transport systems and smart mobility. In addition to cutting edge autonomous vehicles and advanced transport data analytics, the UK is a global leader in the provision of innovative and integrated transport solutions to the rest of the world. With representation from the Transport Systems Catapult, the Future Cities Catapult and over 60 UK companies, we showed the world what UK cities and companies are doing to innovate in the area of Smart Mobility.

[www.ukti.gov.uk](http://www.ukti.gov.uk)



**Generalitat  
de Catalunya**

### Generalitat de Catalunya

The Government of Catalonia presented a corporate booth hosting 20 innovative companies from different Smart City sectors. Information on Smart Catalonia and its strategy by several public enterprises was also shown. The Smart Catalonia Strategy (smartCAT) is designed to make Catalonia an international smart region benchmark, taking advantage of digital technology and information to encourage innovation in public services, foster economic growth and promote a more intelligent, sustainable and integrative society. With this strategy the Catalan Government aims at improving the services provided to citizens, thanks to more efficient use of resources and more intelligent performance by handling the maximum amount of available information in real-time.

[www.gencat.cat](http://www.gencat.cat)





## Diputació de Barcelona

### Diputació de Barcelona

Diputació de Barcelona, as the Provincial Council, provides financial and technical resources to the 311 municipalities in its area to support them in the process of becoming smart cities. In the exhibition area, Diputació de Barcelona showed major Smart region projects in which the institution is involved (sensor platform, new apps, open data, apps catalog, etc.). Projects from several municipalities and local authorities in the area were also shown at the stand (Sentilo platform use cases, European Green Leaf 2015 Award winner, collaborative itineraries using mobile, etc.). Moreover, Provincial Council Members participated in two Congress sessions.

[www.diba.cat](http://www.diba.cat)



### AMB

AMB, the third public organization from Catalonia, is clearly directed towards public service related to the management of large infrastructures and services aimed at the 36 municipalities and the citizens that make up the metropolis. AMB is working intensively to become a major smart 'city of cities'. To this end it has created an advanced technology platform for public service management based on open data: Smart AMB. It will serve AMB itself and the public and city councils, who will be able to use it to create their own projects and apps. As it becomes consolidated, the platform, which aims at making the metropolis a benchmark European smart city, will also be opened to companies and academia, amongst other groups.

[www.amb.cat](http://www.amb.cat)



### The World Bank

Innovation from within, to help convene a global community to face critical challenges to make cities more accessible, manageable, communicative, and citizen-centered. The World Bank hosted dozens of stakeholders including city and municipal leaders, urban and energy specialists, and technologists at the third annual CitiSense conference in Barcelona. As a part of SCEWC, the conference helped attendees to learn how to implement new approaches for urban management focused on open innovation and developing practical solutions based on smart technologies.

[www.worldbank.org](http://www.worldbank.org)

# Supporting Institutions



United Nations

## Habitat III

Together Towards a New Urban Agenda. Habitat III is the United Nations Conference on Housing and Sustainable Urban Development to take place in Quito, Ecuador, from October 17-20, 2016. Habitat III Conference has the convening power to bring together all actors to achieve a new urban paradigm for global development. Solutions for the complex challenge of urbanization can only be found by bringing together national governments, local governments, multilateral organizations, the private sector and civil society. “The Conference is a unique opportunity for rethinking the Urban Agenda in which governments can respond by promoting a new model of urban development able to integrate all facets of sustainable development to promote equity, welfare and shared prosperity.” (Dr. Joan Clos, Secretary-General of the Habitat III Conference)

[unhabitat.org](http://unhabitat.org)



ADVANCING  
PUBLIC  
TRANSPORT

## UITP

The International Association of Public Transport is a passionate champion of sustainable urban mobility and is the only worldwide network to bring together all public transport stakeholders and all sustainable transport modes. UITP stands for 3 missions: **ADVOCACY:** UITP engages with decision-makers, international organizations and other key stakeholders to promote and mainstream public transport.

**KNOWLEDGE & OUTREACH:** UITP generates and shares cutting-edge knowledge and expertise. **NETWORK & BUSINESS:** UITP brings people together to exchange ideas, find solutions and forge mutually beneficial business partnerships. The Association has 1,300 member companies with over 14,000 contacts from 92 countries. Members are public transport authorities and operators, policy decision-makers, research institutes and the public transport supply and service industry.

[www.uitp.org](http://www.uitp.org)



## ExportGov

### **U.S. Commercial Service - Global Access, Trade Expertise, Customized Business Solutions.**

The U.S. Commercial Service is the trade promotion arm of the U.S. Department of Commerce's International Trade Administration. Located across the United States and in U.S. Embassies and Consulates in nearly 80 countries, our global network of trade professionals connects U.S. companies with international buyers, providing them with market intelligence, trade counseling, business matchmaking, and advocacy/commercial diplomacy support.

Smart City Expo World Congress was certified by the DOC to maintain our agency's mission as we strive to connect companies and initiatives from the United States with like-minded, goal-oriented counterparts from all over Europe in order to further this space of action, where we have identified a tremendous amount of opportunities for collaboration.

**[www.export.gov/](http://www.export.gov/)**



## City Protocol Society

City Protocol Society provides common solutions and solution platforms, crossing the silos within and between cities. City Protocol is a global community of cities, corporations, academic and nonprofit organizations designed to help cities face their challenges together and enable the development of more sustainable, efficient and innovative solutions.

The goal of City Protocol is to define an interoperable city platform which will allow cities to communicate and operate across silos and across communities, spawning an ecosystem of solution development and innovation. In short, City Protocol aims to define the Internet of Cities.

The Society performs its technical work through the City Protocol Task Force (CPTF) to carry out research & development, education, pilots and other collaborative activities. City Protocol aims to break down intra-city vertical compartments (silos) and inter-city isolated solutions by establishing, via rough consensus, de facto standards for city operation, finance, governance, evaluation and ultimately transformation.

**[www.cityprotocol.org](http://www.cityprotocol.org)**

# Supporting Institutions



## Emerging and Sustainable Cities Initiative

The Emerging and Sustainable Cities Initiative (ESCI) is the Inter-American Development Bank's technical and financial assistance program providing direct support to national and subnational governments for crafting local development action plans and implementing prioritized projects. The ESCI employs an integrated and interdisciplinary approach to identify key urban interventions to tackle the main roadblocks preventing the sustainable growth of medium-sized cities across Latin America and the Caribbean. This transversal approach is based on three pillars: environmental and climate change sustainability; urban sustainability; and fiscal sustainability and governance. Over the course of five years, the ESCI has partnered with 57 emerging cities and seven local development banks throughout Latin America and the Caribbean, leading the way towards a sustainable urban future, and mobilizing US\$ 4 billion in long term financing.

[www.iadb.org/cities](http://www.iadb.org/cities)

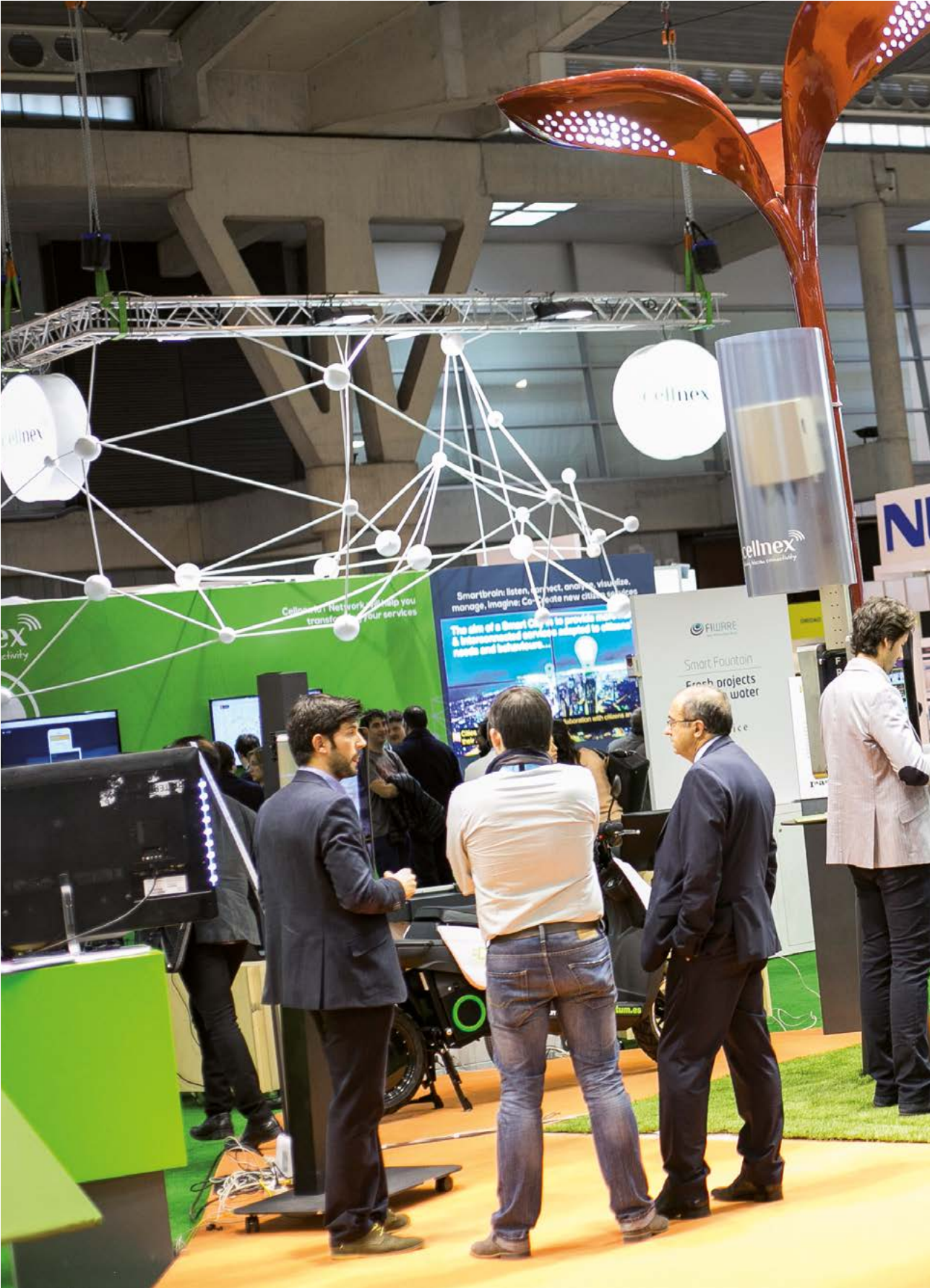


## Mobile World Capital Barcelona

**Mobile World Capital Barcelona (MWCB) is an initiative to make Barcelona a benchmark for mobile transformation.**

Its aim is to generate the optimum conditions for companies and stakeholders from different fields to carry out this transformation, and that this will result in an impact on the territory. MWCB is an instrument that will be engine for development and internationalization of the whole business of Barcelona, Catalonia and Spain. The broad integration of new technologies and mobile solutions into people's lives is transforming whole societies and economies, and the change has just started.

[mobileworldcapital.com](http://mobileworldcapital.com)





## Event Partners



Belong Anywhere

### Airbnb

Founded in August of 2008 and based in San Francisco, California, Airbnb is a trusted community marketplace for people to list, discover, and book unique accommodations around the world – online or from a mobile phone. Whether an apartment for a night, a castle for a week or a villa for a month, Airbnb connects people to unique travel experiences, at any price point, in more than 34,000 cities and 190 countries. And with world-class customer service and a growing community of users, Airbnb is the easiest way for people to monetize their extra space and showcase it to an audience of millions.

[www.airbnb.com](http://www.airbnb.com)



### Cellnex Telecom

Cellnex Telecom is Europe's leading independent operator of wireless telecommunications and broadcasting infrastructures. It offers sites to rent for telecommunications operators and provides the most advanced audiovisual services to national, regional and local broadcasters. It also develops solutions in the "smart city" projects field and has rolled out a smart communications network, making it possible to connect objects and develop a strong ecosystem for the Internet of Things (IoT) in Spain. Cellnex Telecom has made a firm commitment to developing a network of over 15,000 sites and has enjoyed strong growth in the mobile phone towers area through agreements with other operators, the purchase of the Italian company TowerCo and the recent acquisition of 7,400 towers in Italy.

[www.cellnextelecom.com](http://www.cellnextelecom.com)



### Concotel

SII Concotel is the Spanish subsidiary of SII Group, specializing in Information Technology and Communication services and Engineering for Business Management. It offers a comprehensive and personalized service covering all technological areas by means of specific and customized solutions for each client. Thus SII Concotel responds to the set of processes that can be developed in the field of business management, so customers can focus on their core business in full confidence with our work. In the field of Smart City, SII Concotel focuses on accompanying municipalities in taking decisions that affect the management of their telecommunications infrastructure and services, as well as in everything related to the development and deployment of ICT in their relationship with other local players.

[www.sii-group.es](http://www.sii-group.es)





## FM&BS

Facility Management & Building Services was founded in 2011 with a clear goal: Provide companies with new tools, allowing them to be more efficient in managing their services and facilities. In its 5th edition within the SCWEC, FM&BS offered to companies, institutions and cities seeking international partners a connected and strategic environment where they could boost business opportunities but also be part of the global community of Smart Cities and Smart Buildings. FM&BS provided a network and activities for sharing success stories, projects and knowledge based on Facility Management and Smart Facilities for Smart Cities during the event.

The partners for this edition were Rosmiman Software Corporation SL, Optima Facility, Grupo BN Facility Services, OCA Corporate Services and the GME Grup.

[www.fmandsb.com](http://www.fmandsb.com)

## HABIDATUM

### Habidatum

Habidatum develops analytical tools to navigate city administrations, business networks and local communities in the hyper-dynamic urban environment. Habidatum translates complex urban data into ready-to-use indicators and visuals providing actionable insights for lean urban planning and business development. Habidatum assembles and fine-tunes software, trains algorithms, develops new visualization techniques and builds analytical methodologies to serve processing of raw data into the deliverables for decision-makers: reports / dashboards, monitoring / alert systems and interactive analytical visualization interfaces. The key tool of the company is the Habidatum platform - an “urban data factory” performing the whole cycle of data analysis from collection and refinement to sense extraction and analytical visualization. Habidatum’s know-how in urban planning and interactive visualization combined with powerful technologies and algorithms ensures automated measurement and analysis of the urban metabolism, both offline and online.

[www.habidatum.com](http://www.habidatum.com)

## Event Partners

Orchestrating a brighter world



### NEC

NEC can provide a holistic approach for Smart Cities enabling an integrated solution to be deployed in an efficient way, together with Advanced Vertical Solutions for Smart Services. Today what the city really needs is a solution engineered to manage a multitude of evolving smart services whilst enhancing its inhabitants' quality of life. The NEC Platform acts as the "brain" of the city, monitoring and controlling various vertical services. NEC also provides solutions based on smart technologies, helping to optimize resource consumption and improve services through better management of demand and supply. In that way the city can offer better services to its citizens.

[www.nec.com](http://www.nec.com)



### Saba

**Saba is a leading industrial operator in developing solutions in the area of urban mobility and logistical flow.**

The company operates in five countries: Spain, Italy, Chile, Portugal and Andorra, and employs more than 1,400 people. It manages around 190,000 parking spaces distributed in more than 350 centers and has 5 logistics parks with a gross area of 400 hectares. The key to Saba's business model is based on the privileged geographic location of its assets, excellence in the quality of the service provided and the commercial approach, as well as the introduction of technology, management of contracts and a suitable size that facilitates efficiency, competitiveness and internationalization.

[www.saba.eu](http://www.saba.eu)



### Silver Spring Networks

Silver Spring Networks is a leading networking platform and solutions provider for smart energy and smart city networks. Silver Spring's pioneering IPv6 networking platform, with more than 21.5 million Silver Spring enabled devices worldwide, is connecting critical infrastructure around the globe to help improve energy reliability, enable cities to provide better services to citizens, and unlock the next generation of applications for the Internet of Things (IoT). Silver Spring connects smart city infrastructure in cities on five continents including Bristol, Chicago, Copenhagen, Glasgow, Melbourne, Miami, Paris, Sao Paulo, San Francisco, Singapore and Washington, D.C. Silver Spring is partnering with Florida Power & Light for the world's largest connected lighting project; nearly 500,000 networked street lights across South Florida.

[www.silverspringnet.com](http://www.silverspringnet.com)

# THALES

## Thales

Thales is a global technology leader for the Aerospace, Transport, Defense and Security markets. With 61,000 employees in 56 countries, Thales reported sales of €13 billion in 2014. With over 20,000 engineers and researchers, Thales has a unique capability to design and deploy equipment, systems and services to meet the most complex security requirements. Its unique international footprint allows it to work closely with its customers all over the world. Positioned as a value-added systems integrator, equipment supplier and service provider, Thales is one of Europe's leading players in the security market. The Group's security teams work with government agencies, local authorities and enterprise customers to develop and deploy integrated, resilient solutions to protect citizens, sensitive data and critical infrastructure. As an expert in security solutions for critical infrastructure, Thales works together with its customers to design and implement comprehensive security solutions, harnessing technologies to ensure cross-system interoperability and seamless service for users and operators alike.

[www.thalesgroup.com](http://www.thalesgroup.com)



## Urbaser

The ACS (Actividades de Construcción y Servicios) Group is a worldwide benchmark in infrastructures, industrial services, energy and the environment. The ACS Group, through its environmental company URBASER, is a leader in waste management and treatment. It specializes in street cleansing, waste removal and transportation, urban waste treatment and recycling and comprehensive management of the water cycle and urban landscaping and gardening. URBASER is the leader in removal and treatment of used mineral oils and treatment and removal of industrial waste. URBASER covers the entire value chain when providing these services, from design and conception, carrying out the project, construction, financing and operating a highly-qualified professional team. URBASER also operates in the field of renewable energies with a view to limiting the negative impact of greenhouse gases, for the purpose of which it is developing treatment processes for alternative sources of energy, biomass from biomass crops, waste woodland mass, biodegradable agricultural and industrial waste.

[www.urbaser.es](http://www.urbaser.es)

## Event Partners



### Wonderware

For more than 30 years, Logitek has been providing consultancy and high-performance technology solutions for industry and urban infrastructures. Logitek works to advise the industry and infrastructure sectors to optimally manage the generation and exploitation of information in real-time. Logitek contributes to creating Smart Cities by providing technological solutions from sensors to balanced scorecards to improve cities' efficiency and sustainability. The company specializes in the implementation of technological solutions based on Wonderware, and its solutions help improve the management, control and supervision of essential infrastructures and services in the city such as waste water treatment, building management, drinking water supply, energy management, mobility and public transport. Logitek helps those in charge of these infrastructures use critical data in real-time decision-making and so improve efficiency and make cost savings. This information can come from various systems in the city and it can be accessed from anywhere, at any time, through a single smart platform.

**[www.wonderware.es](http://www.wonderware.es)**

## Hosted by



### Ajuntament de Barcelona

Barcelona is working towards a model which is economically, socially and environmentally sustainable. Barcelona City Council works on improving the quality of life of its citizens and guarantees sustainable social, economic and urban development. It is a city that backs innovation and the use and modernization of new technologies so as to achieve more efficient management of the services and resources in the city, ensuring that this leads to an improvement in quality of life.

[www.barcelona.cat](http://www.barcelona.cat)

## Organized by



### Fira de Barcelona

Fira de Barcelona is one of the most important trade fair organizations in Europe in terms of its size and quality, the scale of its exhibition areas and venues, its comprehensive logistics and organizational experience, and its professionalism and leadership. It is one of the finest platforms to do business, share knowledge and hold major international events, twinned with the unmatched Barcelona brand, one of the most dynamic cities in Europe.

[www.firabarcelona.com](http://www.firabarcelona.com)

# 3 Smart City Plaza

**A unique opportunity  
to see real solutions**

Right at the heart of the exhibition area, we recreated a real smart city in a 2,000 m<sup>2</sup> space designed to showcase groundbreaking solutions and shift innovation.



## Speakers' Corner

Selected speakers presented the most innovative case studies on urban innovation in a dynamic environment at the Smart City Plaza. Among the projects included in Speakers' Corner's busy agenda were the European Innovation Partnership on Smart Cities, a guide for

smart energy, a range of IoT solutions, smart data initiatives, emerging technologies such as organic photovoltaics, and a great variety of case studies and apps. A holistic view of the smart city ecosystem.

## Partners' Solutions

Throughout the plaza a total of 20 top corporations' projects were showcased:

### Audi Urban Future Initiative

(Audi)

A platform for an international and interdisciplinary dialogue about the future of mobility in cities.

### Cellnex Telecom Small Cells

(Cellnex)

A Small Cell camouflage being deployed in the center of Barcelona. Small Cells are a key link in the medium term for the full roll-out of mobility-based broadband.

### Scutum Connected Scooter

(Cellnex)

A scooter permanently connected through the Sigfox IoT network.

### Black & Veatch Smart City Solutions

(Cisco)

Real-time data analytics to drive intelligent decisions.

### NextAgent

(Cisco)

An innovative hybrid of a ticket office, call center and ticket vending machine.

### Budapest Community Bike

(Cisco)

The public bike sharing system delivered by T-Systems, Hungary.



## Partners' Solutions

### Fab City Barcelona

(FabLab)

The Fab City project is to develop a fully productive city made up of citizens who share knowledge.

### Drone for aerial inspection of the seawater quality

(FCC)

A new way to secure seawater quality.

### FIWARE and OASC Enabling smarter car navigation through cities

(Fiware)

### Smart Fountain

(Fiware)

Innovative and cost-effective monitoring of ornamental fountains in real-time.

### Geocraft™ - 3D Urban Planning "Your Recipe for a Smarter City"

(Microsoft & Geodan)

A 3D urban planning solution that enables collaboration between professionals and involved citizens.

### Face Recognition and Accurate Counting in Crowd

(Microsoft & IOMNISCIANT)

A facial recognition system that can operate in crowded scenes.

### Siemens City

### Performance Tool - CyPT

(Siemens)

A dynamic solution to reduce the environmental impact of everyday activities in the city.

### Apparcar

(Telefónica)

A mobile app to find and research on-street parking that will change the way you park forever.

### thethings.io

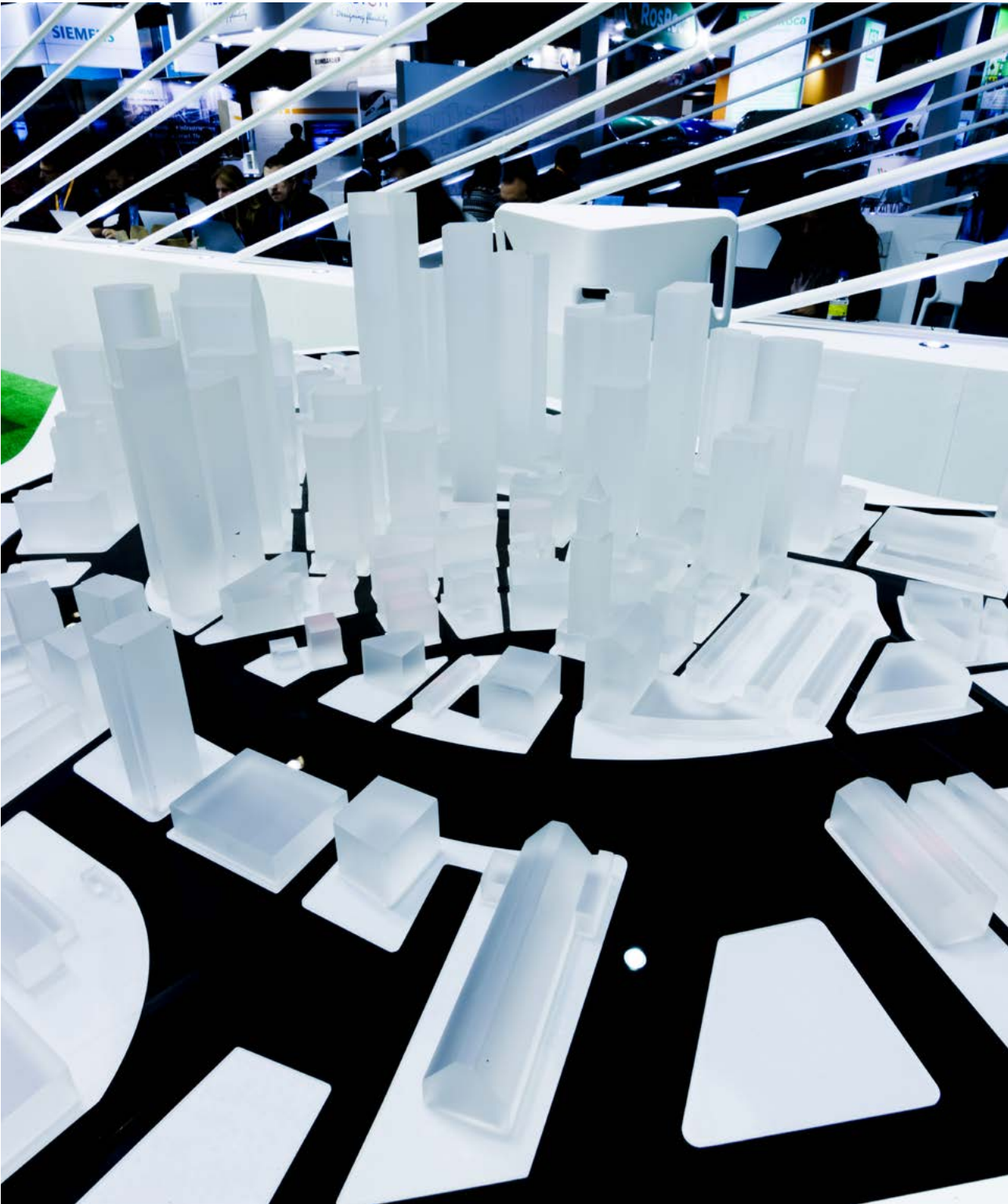
(Telefónica)

An IoT Platform, enabling hardware companies to connect their devices to the internet.

### ThyssenKrupp Elevator

(ThyssenKrupp)

A way to experience the soaring heights of urban development.



## Call for Solutions Winners

The smart solutions from the five startups selected in this year's Call for Solutions were on display at the Smart City Plaza.

### Climatekiosk

(Oleg Oe)

**#environmentalawareness**

A public environmental awareness tool for public entities and educational communities.

### Eixverd

**#sustainability**

A way to 'naturize' rooftops and promote green roofs, renewable energy, cool roofs and large-scale urban gardens.

### Evolo

The vehicle to move freight anywhere a bike can go.

### Urbiotica

**#noisereduction**

A noise monitoring solution based on wireless, autonomous sensors.

### Watticorp SL

**#homeautomation**

A solution to turn your home into a smart home.

## Call for Apps Winners

These were the winning solutions for the future of apps. The awardees had the chance to present their products at the Smart City Plaza, the most visited area of the SCEWC.

### BCN Contactless

**Smart Destination Winner**

A window in Barcelona's material space opening onto the virtual Barcelona.

### Knock

**Networking Winner**

A mobile marketplace and relationship builder for neighbors and local communities.

### Mr-Bubo

**App for Cities Winner**

A management and cooperation platform that connects citizens and local governments.

### Outbarriers

**Smart Mobility Winner**

A universal system to improve self-mobility and accessibility to the blind and visually impaired by audible alerts to a mobile.





# 4

# World Smart City Awards

The World Smart City Awards have been established with the aim of rewarding pioneering smart projects, maximizing their outreach and nurturing their development, to aid cities in becoming more sustainable, efficient, economically viable and livable. Businesses, entrepreneurs, research hubs, non-governmental organizations and public or private consortiums were encouraged to participate with their innovative smart city strategies or solutions.

## Honorary Award



**India**  
**Ministry of Urban Development**  
**Government of India**

This year the organization decided to recognize with an Honorary Award the commitment, dedication and exemplary efforts undertaken by the Ministry of Urban Development in the Government of India in promoting the smart city concept and thereby providing Indian citizens with world class citizen services.

# The 2015 World Smart City Awards winners

In its fifth edition, 280 proposals were submitted from 52 countries around the world. The finalists were selected by an international panel of technical experts in three categories. Each category winner was selected by the Honor Jury, which was composed of Jerry Hultin (Senior Presidential Fellow and President Emeritus, Polytechnic Institute of NYU), Kumaresh Misra (Deputy-Secretary-

General of Habitat III Conference, United Nations), Eugenie Birch (Co-Director of the Penn IUR and Lawrence C. Nussdorf Professor of Urban Research), Álvaro Nicolas (Mobility Advisor - Barcelona City Council), Jorge Alvar (Director of Infrastructures, Environment, Energy and ICT of ICEX), Shannon Lawrence (Director of Global Initiatives at C40), Pilar Conesa (Congress Curator, Smart City Expo World Congress).



## City Award



### **Peterborough City Council for: A Living Smart and Circular Urban Laboratory (United Kingdom)**

Peterborough, one of the four UK Future City Demonstrators, aspires to become the UK Environment Capital and its first Circular City. Its smart city Program, namely Peterborough DNA, run since 2013 to implement its Growth, Innovation and Sustainability interlinked endgoals through bottom-up collaborations.

## Innovative idea Award



### **Findeter for The Digital Diamond. Caribe & Santanderes (Colombia)**

An initiative for competitiveness & eco-development in a complex region in Colombia, combining “Urban Intelligence” & “Digital Technology”. Led by Findeter, Government Development Bank, and the governors of 10 departments, it also has the conceptual and technological collaboration of the Fundación Metrópoli and Microsoft.

## Project Award



### **Smart City and Educational Equity in Shijiazhuang (China)**

Under the support of the Hebei provincial government, Hebei Digital Education Collaborative Innovation Center promoted the modernization of education by collecting grass-roots teaching and learning micro information, making education assessments based on bigdata analysis and providing targeted help.



# The 2015 World Smart City Awards finalists

## City



### Bandung

Department of Communication and Informatics of Bandung Municipality - **INDONESIA**  
*Smart city? Connected Citizens! Encouraging participatory governance for smarter urban dynamics*



### Buenos Aires

Government of the City of Buenos Aires - **ARGENTINA**  
*Real Time Flood Situation Awareness*



### Curitiba

Municipality of Curitiba - **BRAZIL**  
*Curitiba's Sanitation Transformation Through Hydric Depollution by Improving Water Quality of Rivers*



### Dubai

The Executive Office of Dubai - **UNITED ARAB EMIRATES**  
*A Comprehensive Approach To Generating Happiness*



### Moscow

Moscow City Government - **RUSSIAN FEDERATION**  
*Moscow City Solutions System*



### Peterborough

Peterborough City Council - **UNITED KINGDOM**  
*Peterborough, a living smart and circular urban laboratory*

## Project



Energy efficiency through district heating and cooling: connecting cities across Europe with CELSIUS **Göteborg Energi. Gothenburg - SWEDEN**



"L'HDC" Indicator Carbon Footprint of the City of L'Hospitalet, Barcelona **L'Hospitalet City Council. L'Hospitalet de Llobregat, Barcelona - SPAIN**



MK:Smart - Data-driven innovation to address city growth challenges in Milton Keynes **Open University. Milton Keynes - UNITED KINGDOM**



mVoting, Opening a New Era of Citizen Participation **Seoul Metropolitan Government. Seoul - REPUBLIC OF KOREA**




Smart City and Educational Equity **Hebei Digital Education Collaborative Innovation Center. Shijiazhuang - CHINA**



Smart water data management optimizes resources and saves money **Irecon BV. Amsterdam - THE NETHERLANDS**



## Innovative Idea

-  A Smart Business Model for Electric Vehicles **Weschool - Welingkar Institute of Management Development & Research. Mumbai - INDIA**
-  THE DIGITAL DIAMOND. Caribe & Santanderes: The Emergent Region in Colombia **Findeter. Bogotá - COLOMBIA**
-  Flocktracker: Flexible, easy and accessible urban measurement **Singapore-MIT Alliance for Research and Technology. Singapore-SINGAPORE**
-  HAND an innovative platform for immersive intelligent experiences in a children's hospital **Kids Cities 2020. São Paulo - BRAZIL**
-  BreezoMeter's mission is to help cities to improve the health and quality of life of their citizens. **BreezoMeter. Haifa - ISRAEL**
-  Loop **CityBIG - Bjarke Ingels Group. Copenhagen - DENMARK**
-  "Smart metropolitan parks and beaches" project in the Barcelona Metropolitan Area **Barcelona Metropolitan Area. Barcelona - SPAIN**
-  The Virtual Town Hall of Molenwaard **Municipality of Molenwaard. Molenwaard THE NETHERLANDS**

## The 2015 World Smart City Awards ceremony

The World Smart City Awards Ceremony took place on November 18th. The event, with an innovative format, gave recognition to the winners of the three categories and the Honorary Award. The selection was based on three aspects: the innovation, impact and feasibility of the proposals.

# 5 Side Events

## BcnRail Smart Mobility

BcnRail 2015, held alongside the Smart City Expo World Congress, brought together high-level speakers and global, national and regional representatives, proving it is the most important railway industry event in Southern Europe.

After the official opening of the event on November 17th, the first day was dedicated to questions regarding Smart technologies. During the morning, sessions dealt with the future of mobility, new technology in rail transport and contactless tickets, among others. Leading experts like Alain Flausch, General Secretary of the International Union of Public Transport (UITP), and Peter Gurnik, head of the UNIFE's Next Generation Train Control, participated in the debate.

The afternoon focused on energy efficiency, cybersecurity and the European Union's program for fostering innovation: Shift2Rail. Representatives from institutions and companies like UITP, TFL and ENISA were there.

On the second day, the congress examined the wealth of new business opportunities and projects opening in the international market. Andrew McNaughton, the Technical Director of the high speed train line linking the North to the South of the UK, Christian Schang,

the Director of Projects for France's SNCF, and Mangu Singh, Managing Director of the Delhi Metro in India, were among the specialists who travelled to Barcelona to join the event.

On the last day of the three-day event, mercantile logistics were the main subject of discussion as leading companies and associations, such as the nonprofit FERRMED, analyzed the current situation in the European Railway Corridors.





## Circular Economy

SCEWC devoted a great number of sessions to one of the trending subjects of the moment, the Circular Economy, which aims at revolutionizing today's disposable mentality.

### What is a Circular Economy?

A Circular Economy is one that is restorative and regenerative by design. We currently have a linear and unsustainable economy, where we take, make and dispose of primary materials, water and other sources of energy. The principle of a Circular Economy is to keep products, components and materials at their highest value and to complete their life cycle, ensuring that we re-use, repair or recycle them.

### Why is a Circular Economy a good idea?

Making the most of the life cycle of things and energies would have a huge environmental impact. Products and services will be sustainable from their conception and design and the economy will be more about efficient use rather than owning. We will produce less waste and this in turn will be effectively exploited. This multibillion dollar industry will contribute to the global economy and generate many new job opportunities.

### The sessions

Two top experts in the field, Stephanie Hubold, from the Ellen McArthur Foundation, and Sergi Ferrer-Salat, from the Advisory Council on Sustainable Development (CADS, in Catalan), outlined the transition to this Circular Economy, which requires a collaborative, multistakeholder approach. As Stephanie Hubold pointed out, "we are at the beginning of a journey".



## Rural Smart Grids

"There is no smart city without smart rural." Experts on different fields debated balancing the bidirectional urban-rural flow of resources, materials, products and services, and pointed out that rural areas are also jumping onto the smart revolution bandwagon.

This year, due to overwhelming demand, the Rural Smart Grids sessions were held as a side event in the Congress area of the SCEWC, so that the participants could truly live the whole experience.

This side event was the meeting point where professionals from the sector could share their experience and put to work the projects that contribute towards a more sustainable and developed city-countryside relationship, exchanging relevant information and innovative solutions, thus offering business opportunities and improving people's quality of life everywhere.

The speakers highlighted the need to balance rural and urban development during one plenary and four sessions, mainly focused on the move towards renewables and the current state of the art in urban planning.



## 4YFN at SCEWC

Innovation is a crucial issue at SCEWC. In this fifth edition, SCEWC opted again for a special space to give global visibility to startups with groundbreaking and innovative tech projects. 4YFN (4 Years From Now), the business platform for digital startups, led the entrepreneurship area with a curated selection of startups with groundbreaking solutions that showcased their projects at the 4YFN Village, located at the heart of the exhibition area. Networking activities and an exclusive meeting area were available for these companies to network with potential partners and investors, enhancing their experience in the search for new business opportunities. The collaboration between SCEWC and 4YFN also included participation in the SCEWC's congress program through three talks to promote entrepreneurship related to smart cities. The talks addressed the needs and challenges of a startup

in the context of smart cities, and how to bolster the scalability of projects so as to maximize their global impact. Keynote speakers like Daniel Doctoroff, CEO and President of Sidewalk Labs, and Ivan Caballero, CEO of The Social Coin, presented their own experience and vision of the industry.

Furthermore, on November 19th the first edition of the 4YFN Awards at the Smart City Expo World Congress took place in the 4YFN Village. The 4YFN Awards distinguished those startups that demonstrate a high impact mobile solution to enhance the well-being of citizens. This year, Mapillary was the winner. The Swedish company offers a fast, lightweight street view solution for cities, GIS integration, automatic traffic sign detection, and an easy way to add photos using smartphones.

## 4YFN





## CitiSense and Negawatt

As part of the Smart City Expo World Congress, the World Bank organized the CitiSense 2015 conference on November 16th and 17th in Barcelona. CitiSense focused on cities as “co-creation platforms” or enabling ecosystems that foster better conditions for catalyzing innovation, experimenting with urban technologies, and delivering public services collaboratively.

Negawatt is a global competition empowering communities to innovate around local energy issues. At SCEWC, five innovative teams pitched their hardware and software solutions to solve critical resource efficiency issues in their cities. The majority of them tackled electricity consumption demand-side issues faced by their cities. STIC Labs from Tanzania was announced as the global winner of this year’s Negawatt Challenge. The Tanzanian team develops a water efficiency system that monitors consumption and revenue making, also providing data on consumption.



## NEGAWATT

## Ethiic

People are increasingly better informed about environmental issues, human rights and animal rights. Ethical products and services are booming and ready to go mainstream. Consumers are ready to take steps to make a difference... provided it is easy. The ETHIIC round table debated on the importance of re-directing the money flow from unethical businesses toward a sustainable economy that respects humans, animals and the environment according to a paradigm developed for urban areas.

## FM&BS

FM&BS offered to companies, institutions and cities seeking international partners a connected and strategic environment where they had the possibility of boosting business opportunities but also to be part of the global community of Smart Cities and Smart Buildings. The event emphasized facility management, defined as how to manage efficiency, functionality and durability in buildings at the lowest cost, using the best available technologies and making them compatible with the user’s comfort and health.

## KIC InnoEnergy Award

With the aim of promoting cleantech businesses in Spain and Portugal, KIC InnoEnergy Iberia organized its second KIC InnoEnergy Award for the best cleantech startup.

The winner, who received €18,000 and gained direct access to the KIC acceleration program, was BeON Energy, a plug and play solar system which can be plugged directly into any wall socket. Ampere and Eneida came second and third, respectively.

## Network Eleven

The Digital Technologies for Sustainable Urbanization Network aims to promote sharing experiences and good practices in the use of digital technologies to deliver sustainable urbanization, and provide key elements to the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) and the New Urban Agenda. The conference provided recommendations and ideas for achieving the objective of sustainable urbanization, including the Sustainable Development Goal 11 to “make cities and human settlements inclusive, safe, resilient and sustainable”, as a follow-up to Agenda 2030.

## PPP for cities

The objective of the Conference was establishing a point of debate among public administration, private sector, academia and international organizations on how PPPs can help to transform cities into Smart and Sustainable Cities. PPP for Cities is a research, innovation and advisory center providing support to public administrations throughout the world to develop projects involving collaboration between the public and private sectors in the smart and sustainable cities arena.

## Singapore Dialogue

An interactive panel featuring smart cities experts and representatives from government agencies shared and discussed how Singapore is co-creating smart solutions to address urban challenges and enhance quality of life. Dr. Vivian Balakrishnan, Minister-in-Charge of the Smart Nation Initiative, participated in the event and highlighted the fact that ‘smart’ is not simply about technology but about how it impacts people’s lives at the economic, social and environmental levels.

## Smart City App Hack

The Smart City App Hack (SCAH) is a 6-month multi-city hack challenge that brings together a global network of smart cities facing similar challenges and a common vision: to turn citizens into solutions builders, empowering them to make apps and businesses that will make for a better city.

To round up the project, SCAH in collaboration with Smart City Expo World Congress organized the Final Award Ceremonies inviting the 15 best apps to pitch on stage before an international jury of experts. The winners were:

-Knodes (SCAH New York), an app that enables users to manage low-cost, solar-powered hardware devices and send and receive data from the physical environment.

-TripunIQ (SCAH Barcelona), a tourism app that solves the “what-to-do” in destination.

-Indoors (SCAH San Francisco), an app for visually impaired travelers at SFO.

## Smart Up!

A pioneering event in fostering Smart Cities' innovative collaboration between Asia, Latin America and Europe. What should the city of the future be like? What can we learn from each other to improve our citizens' well-being?

The aim of SMART UP! was to create a unique gathering between speakers and the audience to promote knowledge and share experiences that encourage learning and public participation in the conversation about smart cities.

The 2015 edition focused on “How to Foster Smart Business and Investment between Smart Cities from Asia & Latam”

## UTC Housing Conclusions

The UTC driven by the UN-HABITAT's (United Nations Human Settlements Program) World Urban Campaign (WUC) consisted of working sessions led by experts in order to take forward conclusions for the forthcoming agenda of the HABITAT III World Summit to be held in 2016 in Quito.

After two days of debate, this session, which was possible thanks to the agreement between several planners' associations, presented the conclusions arising from the main strategic issues about housing: Housing as a fundamental right; legal mechanisms to ensure its tenure; necessary conditions to have access to it, etc.



# 6

# Networking Activities

## Brokerage Event

Brokerage Event, organized by SCEWC and ACCIÓ, the Catalan agency for business competitiveness, with the support of Enterprise Europe Network, was the main networking spot of SCEWC.

It aimed to assist SMEs, start-ups, entrepreneurs, universities, research groups, corporations, institutions and cities in finding international partners for product development, manufacturing and licensing agreements, joint ventures or other types of partnership.

In this second edition of the international matchmaking event for smart cities, 428 participants sat for 30-minute pre-scheduled meetings in a room specially designed for networking to meet potential cooperation partners, establish connections and create bridges to carry on future projects. The event recorded its best-ever figures with 3,117 meetings requested and 1,200 meetings accepted.

## Job Marketplace

The Job Marketplace took place on November 17th. The meeting put companies searching for professionals from the Smart Cities sector in contact with candidates that Barcelona Activa had pre-selected for them. The interviews enabled the companies to choose the profiles that best fitted the positions they needed to cover, ranging from marketing positions to app developers or personal shoppers online.

## Open Innovation Marketplace

The SCEWC Open Innovation Marketplace, organized by XPCAT (Network of Science and Technology Parks of Catalonia) and SCEWC, offered a great opportunity for entrepreneurs, spin-offs, SMEs and technology centers to meet major corporations and large cities and to present their work. Big companies and specialized investors launched an innovative challenge to the international Open Innovation Community to find new ideas and solutions. In this 4th edition, 27 projects, mainly coming from Argentina, Belgium, Sweden, Canada, France, Italy, the Netherlands, Switzerland, Spain and Catalonia, were selected. They all had interviews with four big companies: Microsoft, SAP, Cisco and IBM.



## SynergyS

The SynergyS activity, organized by Barcelona Activa, aimed at linking together major corporations, SME's and startups searching for immediate new means of collaboration during the event.

Leading companies presented a series of challenges with a view to finding the most innovative solutions from SME's and startups. At the end of the presentations, all the participants went to the networking area to present their solutions to the companies, share information and generate professional opportunities.

This dynamic activity provided the perfect ground to prove what medium-sized and small companies or startups can offer to major players and an opportunity to learn about the current challenges that companies within the sector are facing.

## Event Activities

### BIMCITY Plaza Event

BIM is an acronym that stands for Building Information Modeling, and also a parameterized geometric model linked with various types of information.

BIMCITY Plaza Event was the perfect opportunity to discover BIM solutions, workflow, uses, and their benefits throughout a huge scale BIM pilot project promoted by SIMBIM Solutions as one of the young, smart, and innovative BIM startup consultancy groups in Spain in partnership with Smart City Expo World Congress (SCEWC).

BIMCITY project, which was presented within the event, consisted of BIM modeling of the main exhibition area in SCEWC 2015 by means of all permanent building elements of the expo building facilities, in addition to exhibition stands of different exhibitors. Correspondingly, the main agenda of this event was to deliver a series of demonstrations of this project and its creative workflow at the Smart City Plaza, in addition to case study presentations at Speakers' Corner about BIM software solutions, BIM workflow, and BIM management techniques.



# Event Activities

## Towards 0 Waste

Reducing residual waste, saving resources and ensuring maximum sustainability at the SCEWC was the objective of Towards 0 waste, a pioneering initiative adopted by SCEWC to contribute to sustainable development.

The objective for the SCEWC is to work towards creating efficient, sustainable and economically viable cities, so naturally the event itself was no exception.

In line with the European Commission's Circular Economy strategy, there were three ways to ensure minimum wastage at the 2015 Smart City Expo World Congress: Dematerializing or using fewer materials, re-using and recycling products and aiming for no food waste.

These were some of the ways SCEWC contributed Towards 0 Waste:



### PAPERLESS

**Actions:** Mobile app, online invoicing, electronic invoicing, using QR's/TFC, e-kiosk (press corner).



### REUSE

**Actions:** Returning accreditations, using reusable stands, reusable carpet, reusable decorative items.



### RECYCLE

**Actions:** Separate waste collection, collection of paper before the dismantling of stands, ensuring the correct management of special waste products like paint.



### SUSTAINABILITY

**Actions:** Putting to use leftover food, use of biodegradable and compostable utensils, venue with solar panels.



### ENVIRONMENTAL AWARENESS

**Actions:** Communication about the project (website, social networks) and participation in The European Week for Waste Reduction.

### EWWR Awards Nomination 2015

[www.ewwr.eu/en/ideas/awards](http://www.ewwr.eu/en/ideas/awards)

## Catalonia Smart Drone

Drones will be flying over our cities in a near future. SCEWC 2015 hosted live demos of drone applications developed by the Catalonia Smart Drone working group, which promotes smart services and solutions with UAV (Unmanned Aerial Vehicles).

Live demonstrations of drones providing help after natural disasters and other emergencies, or to preserve the environment by monitoring protected areas for example, took place in the outdoor drone flight area, located between halls 1 and 2.

The experts involved in those projects answered the questions of SCEWC attendees at the exhibition zone during the three-day event.

Moreover, in the Congress area two expert panels presented several services and experiences related to drone technology applied to Smart Cities, such as emergency services (help after natural disasters, victim detection, etc.), during the Catalonia Smart Drone Conference. The session also highlighted that the smart drone market is expected to exceed €8 billion in the next three years and that Catalonia has leading companies in this sector as well as technology centers, universities and other institutions boosting this industry.

## Creative processes

A talk to investigate and debate creative processes, with the city as a setting for innovation. This tandem session featured two well-known innovation experts, scientific popularizer Jorge Wagensberg and business consultant Alfons Cornella, to describe the creative process needed to bring about projects and

how those ideas are applied to different settings, in this case; the city.

Wagensberg and Cornella debated whether the city has always been smart, what makes the present moment unique and to what extent the smart city provides an urban setting capable of feeding creative processes.



## EZ10 Tour by EasyMile

EZ10 is a 100% electric and autonomous vehicle. It is a last mile driverless transportation solution that can carry up to 12 people (6 seats and 6 standing positions). It is also accessible to people with disabilities thanks to its access ramp. The EZ10, developed by EasyMile, a joint venture between Ligier Group and Robosoft Technology, moves autonomously combining a hybrid of 3 different location technologies: GPS tracking system, visual guidance, and SLAM technology.

It is designed to cover short and predefined routes and requires no infrastructure at all. The potential applications are infinite: city centers, airports, amusement parks, hospitals, university campuses or even industrial sites.

SCEWC gave attendees the opportunity to try this cutting-edge transport solution during the event.

# 7

# Cities and Countries

Smart City Expo World Congress was the meeting point for technical and political representatives from 568 cities, as well as attendees from 105 countries around the world, to tackle urban challenges as well as sharing different visions and solutions towards becoming a more livable and sustainable city.

Cities and countries participated in the Exhibition Area to showcase their projects, promote their local companies and find funding.

City and country delegates organized a multitude of activities (receptions, workshops, cocktails, performances, etc.) at their meeting points throughout the venue and presentations for companies through their established network, so that they could establish significant partnerships and different forms of collaboration with companies and institutions worldwide.

## Pavilions

### Denmark

In addition to the official opening and a Nordic reception, the Danish Pavilion organized two presentations that stressed the importance of municipalities as smart city drivers and how big data can contribute to the smart city development.

### Estonia

The Estonian delegation was represented with companies on three different fields: Light and energy; transport and mobility; and the tech hub Tallinn.

### Finland

The Finnish pavilion consisted of 12 companies and 6 cities: Helsinki, Espoo, Vantaa, Tampere, Turku, and Oulu. A special feature was the graffiti design with the

numbers 25/7, to symbolize the smart solutions giving you one more hour a day.

### France

The French delegation was composed of 10 French cities (Montpellier, Grenoble, Toulouse, Rennes, Nantes, Mulhouse, Issy les Moulineaux, Lyon, French tech Normandie, Paris), which presented their numerous initiatives related to the smart city.

### India

The Government of India's vision on smart cities combines both upgrading existing Indian cities to turn them into smart cities as well as making new smart cities. Both strategies were displayed at the

Indian Pavilion, which had Navi Mumbai Smart City Infrastructure and the New Delhi Municipal Council among its exhibitors.

## Israel

Israel’s pavilion was led by the Israel Export Institute and included over a dozen start-ups and SMEs, with Tel Aviv and Jerusalem and other major companies also participating with a significant presence. The Israeli delegation organized a number of workshops on smart education and innovation with representatives from all of the country’s major cities.

## Italy

The Italian Pavilion was made up of 11 companies (including startups) and 6 research centers. All these exhibitors presented initiatives and solutions within various fields such as mobility, smart society, innovation, technology and lighting.

## Mauritius

The Mauritius Pavilion highlighted the country’s Smart City Scheme, an ambitious economic development program aimed at consolidating the Mauritian International Business and Financial Hub by creating ideal conditions for working, living and spurring

investment through the development of smart cities across the island.

## New York

New York City’s focus was to present the cutting-edge efforts made to build a smart and equitable city. Over 15 sessions, the pavilion enjoyed the participation of 8 companies as well as Minerva Tantoco, NYC’s CTO, and Jeff Merrit, Director of Innovation.

## South Korea

As one of South Korea’s Ministry of Science, ICT and Future Planning most dynamic organizations, KISA (Korea Internet & Security Agency) participated for the second year in a row with a pavilion that hosted 10 companies from a number of technological sectors, including services integration, sensors, cloud, apps, geo information and data analysis.

## United Kingdom

The UKTI Pavilion was composed of 22 exhibitors: 6 cities & public bodies and 16 private companies representing relevant and important developments in the different fields of the smart cities.

The UKTI official reception and a presentation program of its exhibitors were held inside the pavilion.

# Cities

<b>Aarhus</b>	<b>Hamburg</b>	<b>Mulhouse</b>	<b>Seongnam</b>
<b>Adelaide</b>	<b>Helsinki</b>	<b>Nantes</b>	<b>Seoul</b>
<b>Bandung</b>	<b>Ilhabela</b>	<b>New Delhi</b>	<b>Tampere</b>
<b>Barcelona</b>	<b>Istanbul</b>	<b>New York City</b>	<b>Tel Aviv</b>
<b>Berlin</b>	<b>Jerusalem</b>	<b>Oulu</b>	<b>Toulouse</b>
<b>Dubai</b>	<b>Kansas</b>	<b>Paris</b>	<b>Turku</b>
<b>Eskişehir</b>	<b>Kyoto</b>	<b>Pistoia</b>	<b>Valladolid</b>
<b>Espoo</b>	<b>L’Hospitalet de Llobregat</b>	<b>Puebla</b>	<b>Vantaa</b>
<b>Florence</b>	<b>Lucknow</b>	<b>Quito</b>	<b>Vienna</b>
<b>Grenoble</b>	<b>Lyon</b>	<b>Rennes</b>	
<b>Hannover</b>	<b>Montpellier</b>	<b>Rivas Vaciamadrid</b>	



# 8

# Smart City Expo Abroad

## The next place for smart innovation

As Smart Cities proliferate across the globe, so is SCEWC with a variety of spinoffs from its main event taking place in strategic cities around the world, and establishing these events as key players for entrepreneurs, businesses, and different stakeholders in the regions. The international dimension of Fira de Barcelona, which has delegations with representation in over 40 countries, has enabled the emergence of all these regional events that consolidate the Smart Cities concept as a global brand. In 2015, SCE was held in Montreal (Canada) and Kyoto (Japan). Puebla (México), Istanbul (Turkey) and Delhi (India) will join the Smart City community in 2016.

## Smart City Expo Montreal 2015

The first edition of SCE Montreal, held on March 25-27 2015, examined how citizens can play a more active role in their cities. The program of the international conference, jointly organized by Eventium and Fira de Barcelona, gathered together urban experts, government representatives, companies and thinkers who focused on four main themes: urban resilience, open government, sustainable mobility and energy and climate change.

The three-day event in North America brought together more than 40 speakers including keynotes such as Gil Peñalosa, Founder and Chair of the board of the nonprofit organization 8-80 cities, Louis Zacharilla, co-founder of the Intelligent Community Forum, and Brock Carlton, CEO of the Federation of Canadian Municipalities.

Among the 75 exhibitors showcasing their products at the Expo were big players in the smart city industry such as Cisco, Thales Silver Spring and GDF Suez.

Microsoft was a global sponsor of the event, which was also supported by UN Habitat, the United Nations program working towards a better urban future.

## Smart City Expo Kyoto 2015

In 2015, Kyoto hosted the Asian edition of the Smart City Expo for a second year. The conference gathered 4,000 attendees interested in key solutions to tackle current urban challenges and transform cities into smart, sustainable and more livable places.

Smart City Expo Kyoto showcased the technologies, projects and solutions of 115 exhibiting companies and attracted outstanding international interest. Several delegations from both cities and countries in America, Asia and Europe attended the symposium to establish new partnerships and share knowledge and experiences. Among these official missions were those of Australia, Canada, China, Colombia, France, Indonesia, India, Israel and Taiwan as well as the cities of Barcelona (Spain), Malaga (Spain), Quebec (Canada) and Tel Aviv (Israel).

The congress program featured over 60 speakers including a keynote by the MIT Mobile Experience Laboratory Director, Federico Casalegno, as well as lectures by Microsoft Japan CTO, Shunichi Kajisa; the Director of Sustainability Initiatives at the New York Metropolitan Authority of Transportation, Projjal Dutta; the Global Head of Market Development – Internet of Things at Cisco Systems, Matthew Smith; the Director-General of the Research Institute of Innovative Technology for the Earth, Kenji Yamaji; the Mayor of Kyoto, Daisaku Kadokawa; and Kyoto Prefecture Vice Governor Akimasa Yamashita, among others.

Jointly organized by the Kyoto Prefecture, Kyoto City Government and Fira de Barcelona and held in both Kyoto and Keihanna Science City, the event promoted regional and technological exchange among governments, corporations, universities and other organizations and contributed to expanding the Asian smart city market.



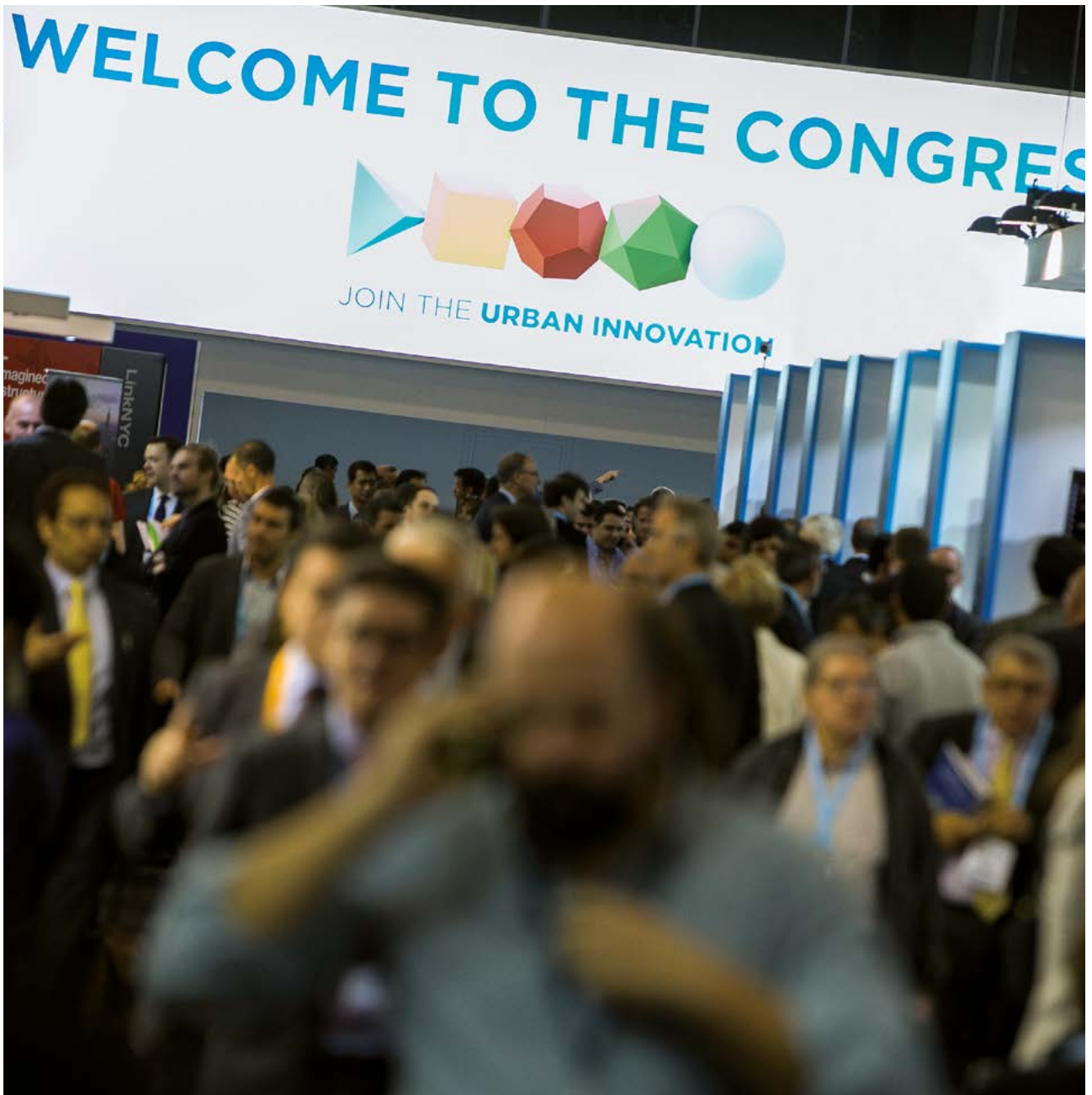
# 9 Congress

## Smart Cities towards urban innovation

Most people equate the term “smart city” with the increased use of digital technology, almost for its own sake. The fifth edition of the Smart City Expo World Congress proved that becoming ‘smart’ means more than ever putting citizens at the core of urban innovation.

The Congress brought together the world’s leading city experts to share the latest thinking on sustainable and efficient city development and suggest innovative solutions, giving a new perspective to urban growth. With a full program of 62 sessions, structured in 6 tracks -Technology, Society, Governance, Sustainability, Mobility and Innovation & Startups-, the 2015 edition of the conference attracted 4,957 delegates (49.56% more than 2014) and 421\* speakers who stressed the need to manage growth, regeneration and renewal of cities and contributed their vision on the following topics.

(\*) Speakers’ Corner included



## Society

**#socialinnovation #livablecities  
#collaboration #socialwellbeing  
#sharingservices**

***“We are not in the dreamers’ land anymore. What is happening out there concerning smart city is real.”***

*Jeff Merritt, DBA Candidate, Maastricht School of Management - Brazil*

Cities are places that must foster sustainable economic development, innovation, creativity, and active participation. To be a smart city means to combine the potential of new urban infrastructures with collaborative technologies and platforms, enabling citizens to contribute with information to improve their quality of life and addressing equity issues such as social, cultural and economic exclusion.

## Governance

**#opengovernment, #opendata,  
#publicprivatecollaboration,  
#innovation #security #privacy**

***“Open data, open source and open standards are more about a cultural challenge rather than an investment decision.”*** *Vivian Balakrishnan, Minister-in-Charge of Smart Nation Initiative - Singapore*

The use of technology can help promote good governance by enhancing transparency and accountability through open data, using online platforms and real time data. Partnerships and bottom-up approaches are the key strategies in achieving giving better service to citizens.

## Technology

**#servicesintegration #sensors #cloud  
#apps #geoinformation #dataanalysis**

***“Before we connect things, we need to connect people.”*** *Edna Pasher, Ph.D. & Ass. Management consultants - Israel*

The impact of new technologies has substantially changed our everyday life in many aspects, such as mobility, energy, environment, social networks and governance. Enhancing collaboration and openness is crucial to change how cities are managed and operated, promoting social and economic development.

## Sustainability

**#urbangrowth #zerocarbon  
#greenbuildings #urbanregeneration  
#energyefficiency #resilience**

***“If technology is the answer, what is the question actually?”*** *Steve Turner, Head of Future Cities, Manchester City Council - UK*

The growth of world population, the consumption of limited natural resources and the production of energy that our cities need, impose great environmental challenges. A new urban model, developing a more intelligent and sustainable way of living in our cities is urgently required, where all kinds of remaining green areas, public spaces and urban services are integrated.



## Mobility

**#smartmobility #mobilitychallenges  
#publictransport #pedestrians  
#electricvehicles**

**“Congestion and difficulties in public transport are named by inhabitants as topic issue #1.”** Christoph Klaes, Head of Light Rail & e-Bus of Siemens AG Mobility, Siemens - Germany

Urban mobility still remains a great challenge for managing the smart city as congestion may cause not only economic losses but also a burden for people's health and the environment, through its resulting air pollution. The development of new technologies applied to all means of transportation, the integration of services, the availability of real time data and shared services can help improve the management of citizens' mobility and freight within our cities.

## Innovation & Startups by 4YFN

**#startups #disruption #urbaninnovation  
#innovationlabs #digitalgrowth**

**“Startup culture is a crucial change point for economic and social development in cities.”** Menny Barzilay, CEO & Cyber Security Strategist | FortyTwo - Israel

Startups are pushing hard to disrupt the smart city industry with their innovations, new products and services for redesigning life in the cities and enhancing the wellbeing of citizens. The startup ecosystem is in the spotlight of many industries and is getting the attention of investors, large corporations, governments and other startups, who are used to collaborating in this new market.

## BcnRail Congress

**#mobility #transportation #connectivity**

**“Historically, the railway sector has proved a spearhead regarding the application of new technical developments. Now it is time to design the cities of the future, thus its contribution is almost essential.”** Javier Vizcaíno, President of BcnRail - Barcelona

The future of mobility: urban, metropolitan and suburban. Showcasing the most important ways of transportation and new services. Integration and connectivity services between systems. Operating System strategies. Successful sustainable urban policies. The vision of the experts.

## Circular Economy

**#circulareconomy #reuse**

**“We are at the beginning of a journey.”** Stephanie Hubold, Gov. & Cities Programme Lead | Ellen MacArthur Foundation - UK

Circular Economy is turning the way we make, use and dispose our resources on its head by maximizing usage and value and then reusing the materials when they can no longer provide the function intended. A circular economy is one that is restorative and regenerative by design, and which aims to keep products, components and materials at their highest utility and value at all times, distinguishing between technical and biological cycles. The subject will be fully discussed at the Circular Economy European Summit in 2016.



## Opening

# Smart cities towards urban innovation

### Keynote



17/11/2015 09:30-10:15h

#### **MODERATOR**

**Jerry MacArthur Hultin** / Senior Presidential Fellow and President Emeritus - Polytechnic Institute of NYU

#### **SPEAKERS**

**Gerardo Pisarello Prados** / First Deputy Mayor of Barcelona, with responsibility for Work, Economy and Strategic Planning - Barcelona City Council - Spain

**Kelly R. Welsh** / General Counsel - U.S. Department of Commerce Washington, DC - USA

**Hayri Baraçlı** / Secretary General - Istanbul Metropolitan Municipality, Istanbul - Turkey

**Joan Clos** / Executive Director - UN-Habitat Nairobi - Kenya

According to Gerardo Pisarello, a “smart city is a democratic city of open code that protects public services and public spaces, a city that promotes collaborative economy and the public participation.” So, the innovation process has to be understood not only in a technological or finalistic way. Therefore, in this line, he stressed the need to re-orientate the policies of the city council towards data openness, strengthening of democracy, environmental sustainability, reduction of inequalities and progress for all. Hayri Baraçlı pointed out that cities in the new economic order must stand out with stable, standard, sustainable and measurable services. In other words, become ‘smart’ cities. Kelly R. Welsh followed on with the Obama administration’s concerns about big data and its implications for privacy. Thus, he highlighted the need to be clear-eyed about the benefits and risks of big data. He also mentioned that building smart cities is one of

the Obama administration’s strategic objectives. In September 2015, the administration announced a new smart cities initiative that involves spending \$160M on research and multi-city collaborations. Welsh concluded by pointing out that global architecture will allow communities to communicate in a common language about smart cities. Finally, Joan Clos spoke about the UN Habitat III conference on housing and sustainable urban development, to be held in Quito (Ecuador) in 2016, aiming at rethinking the urban agenda and integrating equity to the development agenda. “We cannot accept the inequalities that are emerging from the current model of production,” he said, while asking to pay attention to the real problems of people. “Improving the conditions of urbanization is important for humanity and for peace,” he concluded.



## Keynote

# Beth Simone Noveck: Smart citizens, smarter cities

## ○ Keynote



18/11/2015 09:30-10:00h

### INTRODUCED BY

**Esteve Almirall** / Associate Professor - ESADE Business Law School, Barcelona - Spain

### SPEAKER

**Beth Simone Noveck** / The Governance Lab

What can governments learn from the open data revolution? Beth Simone Noveck illustrated how data help spot critical issues and improves the experience of public and private services on a local and global scale. It's not only about big data technologies, she said, it's about the policy of open data, greater accessibility of data from governments and also sometimes data collaborative, that is to say greater accessibility of data from businesses. Yet to do that we need the trusted frameworks that allow sharing appropriately, respectful of civil liberties, privacy and security. But data is only half of the story. In the end, the greatest asset any city has is its citizens, she stressed.

to this process. She strongly believes "tapping into the wisdom of the crowd" and the use of advanced technologies will create smarter cities.

***“Use technologies to leverage human expertise.”***

Noveck quoted Challenge.gov, where 450 government agencies over the last five years have put out prize challenges asking citizens to solve hard problems, as an example of how citizens can contribute back

## Keynote

# Edward Glaeser: “The genius of cities”

### Keynote



18/11/2015 16:30-17:00h

#### **SPEAKER:**

**Edward Glaeser** / Professor of Economics and Urban Economist - Harvard University - Boston - USA

#### **INTRODUCED BY**

**Eugenie L Birch** / Lawrence C. Nussdorf, Professor and co-Director - University of Pennsylvania - Philadelphia - USA

Edward Glaeser stated that the city is man's greatest invention. This is because proximity makes people more inventive, productive and kinder to the planet. Let's think about proximity outcomes in terms of technologies. They are either centrifugal if they separate people from each other or centripetal if they bring them closer. There are numerous examples of life-changing technologies that are attributed to individuals, but that are in fact the result of cities. Clusters of genius rest within cities. The most important technologies are not complex inventions, but the simplest ideas rightfully addressed to make life better.

**“Face-to-face contact is the lifeblood of innovation.”**

The professor insisted that cities are miraculous because of the collaborative chains of creativity they nest, but there are also demons that come with density. Thus, the value of a city is not about how cool technologies are, but how it withstands and

prevents the downsides of it. Still, cities are places where you get smart by being surrounded by smart people. From philosophy to Facebook, we proved that knowledge is more important than space. The more complicated the world is, the more valuable it is to be in the same room. The payoff for getting smart cities right is not just about technologies, but also about science, beliefs, democracy, freedom and, ultimately, the empowerment of people to put us in charge of our own future.



## Keynote

# Pankaj Ghemawat: “Global cities: a new approach - and applications”

## Keynote



19/11/2015 09:30-10:00h

### SPEAKER:

**Pankaj Ghemawat** / Global Prof. of Management and Strategy - IESE & Stern School of Business - Barcelona & NY - Spain

Ghemawat argued that the world today is not as “globalized” as many strategists believe, and that cross-border differences still matter in the world economy. The economist and global strategist started the session explaining why we actually do need better global rankings of global cities. In fact, he said, the most obvious way of classifying global cities is in terms of the amount of global economic activity. However, being very large is not necessarily synonymous with globalization, he added. In this scenario he compared two of the bigger global cities, which are New York and Tokyo, and reminded us that some of the correlates of globalization don’t really agree very well with the prior notions that most people have about which is more globalized.

Thus, he stated the Globalization Giant Index is the one that probably makes the most sense. Top ten giants in this index are: London, Singapore, Hong-Kong, New York, Paris, Tokyo, Shenzhen, Beijing, Seoul and Toronto. It is worth noticing that six of the top ten cities are already cities located in East Asia, so in some sense, said Ghemawat, there is a fundamental change in terms of shift of economic gravity from the West towards the East. Barcelona ranks at 18, ahead of Madrid. For the IESE and Stern

Business School professor, this is not an especially surprising list. In contrast, the Globalization Hotspots Index brings the top ten cities that are not so large, as it takes into account the intense amount of international interaction that these cities have. In this second Index, Barcelona ranks 17. The results of the data-driven ranking of cities developed by Ghemawat will probably be published in Spring 2016.

## Keynote

# Juliana Rotich: “Innovation, opportunity and possibility: platforms, community and technology”

## Keynote



19/11/2015 16:30-17:00h

### **SPEAKER:**

**Juliana Rotich** / Executive director Ushahidi

### **INTRODUCED BY:**

**Rosa Suriñach** / Advocacy, Outreach and Communications Coordinator - United Nations, Habitat III Secretariat - New York - USA

Smart cities of the future are not only about sensors. Juliana Rotich, Executive Director of Ushahidi, a platform developed in 2008 to map reports of violence in Kenya which has turned into a technology leader in Africa, stressed the importance of connecting people through open platforms and changing the way information flows to further explore collective intelligence and make sure that top-down policies are responsible with bottom-up information.

***“If we can’t connect people, we’re doing half of the job.”***

Rotich, named the Schwab Foundation Social entrepreneur of the year in Africa in 2011 by the World Economic Forum, insisted that “feedback loops” are very powerful and can act as a way to make information public and help cities with transparency. To illustrate this idea, she quoted Joi Ito, Director of the MIT Media Lab, who stated that “the solution to journalism, civics, and governance won’t be a single

a-ha moment, but the cumulative effect of work done together in a network.” She eventually made clear that “sharing creates value” and quoted a tweet from Sean Gourley, co-founder and CTO of Quid -which is building a global intelligence platform-to present what she considers the toolkit for today’s decision makers: Artificial intelligence + collective intelligence + augmented reality.

## Plenary Session

# How governance must change to enable the smart city?

### Governance



17/11/2015 10:15-11:15h

#### CHAIR

**Tom Dallesio** / CEO - Next City - Philadelphia - USA

#### SPEAKERS

**Vivian Balakrishnan** / Minister-in-Charge of Smart Nation Initiative - Government of Singapore

**Aisha Bin Bishr** / Smart Dubai Taskforce leader - Assistant Director General of the Executive Office - Dubai - UAE

**Matthew Pencharz** / Deputy Mayor for Environment & Energy - Greater London Authority (GLA) - London - United Kingdom

**Amr Salem** / Global Managing Director, Smart Cities - Cisco Systems - Dubai - UAE

What barriers must be overcome to implement a smart governance? Vivian Balakrishnan highlighted the fact that 'smart' is not simply about technology but about how it impacts people's life at the economic, social and environmental levels. Aisha Bin Bishr echoed this sentiment by mentioning the aim of Dubai to become "the happiest city in the world" while emphasizing the critical role of leadership and change management abilities to achieve this goal. Amr Salem weighed the previous statements regarding people's wish to live in a sustainable environment and emphasized the importance of creating a private-public agenda enabling residents to participate. Matthew Pencharz focused on the necessity to liberate data, thus giving opportunities to promote innovative ideas and then deliver more efficient solutions.

***“Open data provides avenues for citizens’ participation and for the creation of efficient solutions.”***

**Vivian Balakrishnan**

## Plenary Session

# How can we achieve more resilient and sustainable cities?

### Sustainability



17/11/2015 15:45-16:45h

#### CHAIR

**Dan Lewis** / Chief, Risk Reduction and Resilience - UN Habitat - Nairobi - Kenya

#### SPEAKERS

**Ming Zhang** / Urban Practice Manager - World Bank - Washington - USA

**Anusha Rahman Ahmad Khan** / Minister of Information Technology and Telecom - Government of Pakistan - Pakistan

**Martin Powell** / Head of Urban Development - Siemens plc - London - UK

**Shannon Lawrence** / Director, Global Initiatives - C40 Cities Climate Leadership Group - London - UK

**Andreas Schierenbeck** / CEO - ThyssenKrupp Elevator AG - Essen - Germany

The growth of the world population, energy crisis, climate changes and disaster risks are the greatest challenges for the planning and management of our cities. How can we build a livable, sustainable and resilient city? Panelists fast-forwarded to cities in the future and what actions must occur soon in order to achieve resilience and sustainability. Martin Powell shared that cities' resilience depends on upgrading infrastructure from its current state. Across the globe, infrastructure is aging, presenting a significant challenge to cities. Andreas Schierenbeck contrasted the aging infrastructure with the accelerated growth of urbanization.

In fact, in order to meet the demands of this rapid growth, a new Manhattan would need to be built each day for the next fifteen years. Schierenbeck also addressed the issue of energy consumption accompanying higher density and the obstacles to be overcome in order to deliver better energy efficiency. In the end, speakers acknowledged that resilience is not just about building anew but retrofitting communities to become more efficient.

**“Increasing the resilience of cities demands an interdisciplinary approach.”**

Dan Lewis

## Plenary Session Implementing more sustainable urban mobility patterns

### Mobility



17/11/2015 17:00-18:00h

#### CHAIR

**Boyd Cohen** / Professor of Entrepreneurship & Sustainability - EADA Business School and the Universitat de Vic - Barcelona - Spain

#### SPEAKERS

**Ridwan Kamil** / Mayor - City of Bandung - Bandung - Indonesia

**Stephen Buckley** / General Manager, Transportation Services - City of Toronto - Toronto - Canada

**Sean Patrick O'Brien** / Global Lead - SAP Future Cities & Public Security - SAP- Nice - France

**Richard Mark Soley** / Chairman and Chief Executive officer - Object Management Group, Inc. - Needham, MA - USA

**Carlos Conde** / Chief Technology Evangelist, Amazon Web Services EMEA - Amazon Web Services - Luxembourg

Mobility is often a question tackled with the perspectives of reducing traffic and CO2 emissions and increasing transportation efficiency by opening big data and using sensor networks, but people should be at the core of smart mobility reflection. Sean O'Brien pointed out that many questions emerge about the behavior of the citizen towards their own mobility and perception of it.

transportation needs remodeling. It gets the public involved and participating to give life to the collective mobility system. Nonetheless, Ridwan Kamil recalled that urban planning comes before mobility planning because the fundamental solution to improve mobility is to cut down movements.

**“Failure is one of the things you have to pay for success.”**

**Richard Mark Soley**

Stephen Buckley banked on diversifying the alternatives offered to reach a complete multimodal transportation system. Yet with the democratization of IT resources, the business model for public



## Plenary Session

# How citizen engagement, collaboration and partnerships are reshaping cities

## Society



18/11/2015 10:00-11:00h

### CHAIR

**Rosa Suriñach** / Advocacy, Outreach and Communications Coordinator – United Nations, Habitat III Secretariat - New York - USA

### SPEAKERS

**Stephen Goldsmith** / Professor - Harvard Kennedy School, Chicago, IL - USA

**Peter Madden** / Chief Executive - Future Cities Catapult - London - UK

**Michael Dixon** / General Manager, Smarter Cities - IBM - Melbourne - Australia

**Natalya Kataeva** / Deputy Chief of Staff to Moscow City Mayor - Moscow - Russia

**Iñigo Jodra** / Centre of Excellence for Cities Director - Ferrovial Services - Madrid - Spain

How can cities give a satisfactory response to citizens' need for change while they keep growing? Peter Madden started the session with a reflection on the increasing popularity of the civic crowdsourcing phenomenon as an effective tool in urban management. Michael Dixon announced the beginning of a revolution in the way governments interact with citizens, emphasizing that data opens a very exciting future.

Natalya Kataeva showcased the Moscow web-based civic platform enabling residents to both complain and give new ideas for reshaping the city. Iñigo Jodra underlined the importance of promoting and implementing city solutions coming from urban entrepreneurs. Finally, Stephen Goldsmith stressed that the technology is there but governments still need to change the way they listen to their citizens.

**“20 years ago we measured engagement by the shouting, today we mine social media.”**

Stephen Goldsmith

## Plenary Session More equitable cities with better quality of life

### Society



18/11/2015 17:00-18:00h

#### CHAIR

**Eugenie L Birch** / Lawrence C. Nussdorf, Professor and co-Director - University of Pennsylvania - Philadelphia -USA

#### SPEAKERS

**Sameer Sharma** / Government of India

**Joan Subirats** / Professor of Political Science - Universitat Autònoma de Barcelona - Barcelona - Spain

**Daniel Doctoroff** / CEO & President - Sidewalk Labs - New York - USA

**Ossi Savolainen** / Regional Mayor - Helsinki-Uusimaa Region Helsinki - Finland

**Toni Townes-Whitley** / Corporate Vice President - Worldwide Public Sector - Microsoft Corporation - Redmond - USA

The growth of slums, sprawl, housing and infrastructure shortages, social segregation and exclusion pose a need for strategic and innovative approaches for the global community. Speakers acknowledged that governance is a key element for smart equitable cities. This does not only mean a fair distribution of wealth, equal life expectancy or gender equity but mostly political participation and common capacity of governing. Smart cities need smart citizens and “smart citizens can be everyone” because, as Ossi Sovalainen pointed out, it is not just about knowledge, but also about actions and connections. “It is a life-long learning,” he added.

Sameer Sharma argued that having smart city missions implies having specific goals. Daniel Doctoroff said that he believed in shared cities with shared assets, spaces, data, knowledge and, most of all, responsibilities and rewards. Finally, Joan Subirats insisted on the “embedding of citizens in the process to improve results”.

**“We are just at the dawn of a historic moment.”**

**Daniel Doctoroff**

## Plenary Session

# Technological challenges for urban development

### Technology



19/11/2015 10:00-11:00h

#### CHAIR

**Sarah Murray** / Contributor - Financial Times New York - USA

#### SPEAKERS

**Steve Leonard** / Executive Deputy Chairman - Infocomm Development Authority of Singapore (IDA)

**Minerva Tantoco** / Chief Technology Officer - City of New York - USA

**Ingrid Van Engelshoven** / Deputy-Mayor Knowledge Economy, International, Youth and Education - City of The Hague - The Netherlands

**Eduardo Navarro** / Chief Commercial Digital Officer - TELEFONICA S.A. - MADRID - Spain

**Jesús Villasante** / Head of Net Innovation at the European Commission - Brussels - Belgium

Technologies play a significant role in our cities, supporting business functions, city logistics and grids, transport, delivery of basic services, environmental management systems, government operations, data-driven industries, and people-to-people interactions. The choice of a particular technology is a strategic choice for the city, as Jesús Villasante put it: "It cannot be delegated to the IT department", as it is going to be the city's "nervous system".

along the way will become obsolete or replaced," stated Steve Leonard, while Minerva Tantoco replied that it is important to make sure that strategy, technology and budget are in one line. Tantoco insisted that it is important to link smart city and equity and concluded that "the future is already here. It is just not evenly distributed".

**“The smart city is an equitable city.”**

**Minerva Tantoco**

Moreover, cities are more and more globally connected so interoperability and portability are key elements: "it is inevitable that some of the things

## Plenary Session

# Public-Private Partnership strategies in smart cities

### Governance



19/11/2015 17:00-18:00h

#### CHAIR

**Martin Saballs Pons** / Deputy Chief Editor at EXPANSIÓN - Unidad Editorial - Barcelona - Spain

#### SPEAKERS

**Markku Markkula** / President of the European Committee of the Regions (CoR) - European Union - Brussels - Belgium

**Karine Dognin-Sauze** / Vice President, Innovation, Smart City and Digital - Métropole de Lyon - France

**Antonio Alfonso Avello** / Managing Director. Head of the International Division - FCC ENVIRONMENT - Madrid - Spain

**Mateu Hernández** / CEO - Barcelona Global - Barcelona - Spain

**Steven Fifita** / Executive Director - City Digital, UI Labs - Chicago - USA

The financial capacity of cities is limited and the development of new business models is required to attract the collaboration of the private sector. The speakers shared some diverse experiences and results of PPP strategies and enhanced that collaboration and citizen participation are key drivers for the development of smart city solutions to improve citizen's lives. Markku Markkula pointed out that the gap between latest research knowledge and real-life practices need to be filled. Karine Dognin-Sauze explained that the first step forward in Lyon's digitization was related to communicating and teaching citizens about the positive effects of innovation on a daily basis.

Mateu Hernández insisted that cities are not governed by a unique person but by many, and thus the citizen-centered approach is key to any smart city project. Antonio Alfonso agreed that PPP initiatives do really help develop the solutions that the cities need. Steven Fifita elaborated on the notion of collaboration and Markkula insisted that citizens have a lot to say about the future of cities. In addition, a member of the audience brought up an additional consideration: PPP should be replaced by PPC: Public-Private partnership and Citizen participation.

**“The city is actually the best proxy and does actually advocate for us as end users.”**

Steven Fifita

## Dialogue Session Rethinking Urban Mobility

### Mobility



17/11/2015 18:00-18:45h

#### CHAIR

**Martha Thorne** / Dean - IE School of Architecture and Design Madrid - Spain

#### SPEAKERS

**Rupert Stadler** / CEO - AUDI AG Ingolstadt - Germany

**Joseph A. Curtatone** / Mayor - City Hall, City of Somerville, Ma - USA

**Alain Flausch** / Secretary General - UITP - France

In order to rethink urban mobility, a dialogue is necessary between stakeholders represented by the triangular relationships between society, industry and government. Mayor Curtatone said that smart mobility can only happen within smart cities. All cities are unique, but they present similar patterns which must be understood. Stadler explained how the private sector tries to push the limits of technologies to satisfy emerging needs. Space and time are valuable goods and thus need new forms of currency.

On the other hand, Alain Flausch pointed out the value of human connections between people. Therefore, cities are valuable for being hubs of interconnections. This is the leverage point to think about mobility and mass transit.

**“The car used to be freedom; nowadays traffic is a prison.”**

**Alain Flausch**



## Parallel Session Cities transitioning to a circular economy

### Society



17/11/2015 11:45-13:00h

#### MODERATOR

**Arnau Queralt** / Director - Advisory Council for Sustainable Development - Government of Catalonia Barcelona - Spain

#### SPEAKERS

**Matthew Pencharz** / Deputy Mayor for Environment & Energy - Greater London Authority (GLA) London - United Kingdom

**Jeff Merritt** / Director of Innovation - City of New York - USA

**James Pennington** / Specialist, Circular Economy Initiative - World Economic Forum - Geneva - Switzerland

**Cécile Faraud** / Circular Economy Lead - Peterborough City Council Peterborough - UK

**Paz Nachón Lopez** / Director Accenture Strategy Sustainability Services - Accenture Strategy - Madrid - Spain

Tackling the challenges ahead will require actions that are sustainable and permanent. We must move from a linear to a circular economy, which is restorative and regenerative by design. Matthew Pencharz introduced the roadmap to achieve a circular economy transition, defined by London authorities to face demographic growth challenges. Jeff Merritt emphasized that when thinking about the future, it is crucial to admit that what is needed today may not be necessarily needed tomorrow.

In addition, James Pennington referred to the purpose of the World Economic Forum to start moving to a global agenda addressing circular economy transition. Lastly, Paz Nachon López highlighted that the time for a circular transition has come but admitted that the journey for every city is different, according to its size.

**“More than 80% of business executives believe governments need to step up their efforts on sustainability.”**

Paz Nachón Lopez

## Parallel Session

# Co-creation: harnessing the talent of citizens for urban innovation

 **Society**



17/11/2015 14:15-15:30h

### MODERATOR

**Mike Lake** / President & CEO - Leading Cities Boston - USA

### SPEAKERS

**Alistair Cole** / Professor of Political Science - Institute of Political Studies, Lyon, France

**Marco Berlinguer** / Researcher - UAB / Barcelona City Council - Spain

**William Kistler** / Managing Partner - Urban Innovation Network London - UK

**Mark Elliott** / Founder & Managing Director - Collabforge - Melbourne - Australia

**Stephanie Hodges** / Director of Civic Partnerships - Airbnb London - UK

**Paola Pollmeier** / Open Innovation Leader - Ruta N Medellin - Ruta N

**Miguel Aristizabal** / Co-creation Director - OpenCol Medellin - Colombia

Co-creation, a model originally created in the private sector, seeks to engage multiple stakeholders and citizens from initial problem identification to the implementation of solutions. Mike Lake introduced the session contemplating whether co-creation can be applied to the public sector. Alistair Cole said that the heart of the co-creation approach in leading cities might be linked with the quintuple helix: public-private, nonprofit, academic and citizens working together. He admitted citizen engagement is attractive, but that it is easier said than done.

Miguel Aristizabal highlighted that there are five phases in the co-creation process: the elaboration of the challenge, the wisdom of the crowd, the evaluation process and the implementation process. Paola Pollmeier explained a concrete example of a

**“The idea of productive citizen engagement is a great idea but citizen mobilization is often a recipe to stop innovation.”**

**William Kistler**

co-creation process in Medellin (Colombia) aimed at letting the city create its own innovation ecosystem. Marco Berlinguer reminded us that the most well-known example of co-creation is open source software. Lastly, William Kistler provided a more skeptical perspective on the co-creation model.

## Parallel Session Open data solutions for social challenges

### Society



18/11/2015 11:30-12:45h

#### MODERATOR

**Esteve Almirall** / Assoc. Professor - ESADE Business Law School - Barcelona - Spain

**Tuty Kusumawati** / General Director (Head of Board) - Regional Development Planning Board, Jakarta Capital City Government - Indonesia

**Juan José Cué** / Secretary of Innovation - Municipality of Puebla - Mexico

**Thimo Thoeve** / Data manager - Stad Gent - Belgium

**Bart Rosseau** / Head of Data and Information Management - Stad Gent - Belgium

**Jorge Muñoz** / Alcalde - Municipalidad de Miraflores - Lima - Peru

**Joan Carrillo Torrell** / General Director - SII Concatel - Hospitalet de Llobregat - Spain

Open Data started with the promise of an increase in transparency and services (apps) at almost zero cost, not only benefiting citizens but also triggering growth. The session gave an overview on how much this promise has become a reality. Tuty Kusumawati underlined how the Indonesian community is pushing towards new digital transformation plans in order to improve citizens' lives. Similarly, Juan José Cué raised the question on how governments can solve the problem of social equity using open data solutions.

Bart Rosseau brought our attention to data transparency and made clear that the real value of opening data lies in enhancing the co-creation process. Thimo Thoeve followed on mainly focusing on reasons to open data. Jorge Muñoz explained why launching a digital government is a key factor in improving citizens' perceptions of government performance. Finally, Joan Carrillo Torrell got back to fundamentals proclaiming that open data is above all an "act of democracy".

**“Open Data has become a new hope which can leverage effort in achieving efficient and transparent governance.”**

Tuty Kusumawati

## Parallel Session

# Raising resources and creating platforms to develop more equitable cities

## Society



18/11/2015 11:30-12:45h

### MODERATOR

**Jarmo Eskelinen** / CEO - Forum Virium Helsinki - Finland

### SPEAKERS

**Majed Abdulfattah** / Mayor - Municipality of Rawabi - Palestine

**Hafed G. S. Benasi** / Mayor - Municipality of Zuwara - Libya

**Eckhart Hertzsch** / Content Coordinator - EU Smart City Initiative EIP SCC Berlin - Germany

**Martin Brynskov** / Chair - Open & Agile Smart Cities - Aarhus - Denmark

Building more equitable cities requires creating infrastructures to deliver key public services, which cannot be developed without raising funds and securing additional resources. In light of the challenges of providing basic services and infrastructure in a fragile environment of peace, two interesting case studies were presented. The mayor of Rawabi (Palestine), the first new planned community in Palestine and expecting to attract over 40,000 residents, spoke of the challenge of building community and said the city is taking a proactive approach to inclusion. Zuwara's (Libya) representative stressed that the old city that is emerging from war is looking to attract external foreign investment to drive growth.

On the European side, Eckart Hertzsch pointed out that by launching a Smart Cities and Communities European Innovation Partnership (EIP), the European Commission aims to boost the development of smart

technologies in cities by pooling research resources from energy, transport and ICT and concentrating them on a small number of demonstration projects which will be implemented in partnership with cities. EIP has over 370 initiatives with 4000 partners from 31 countries.

## Parallel Session

# Solutions for participatory and inclusive cities

### Society



18/11/2015 13:45-15:00h

#### MODERATOR

**Nicky Keefe** / Chief Executive - ViewPoints Media - Barcelona - Spain

#### SPEAKERS

**Jesús Hernandez Galán** / Director of Universal Accessibility - Fundación ONCE - Madrid - Spain

**Tanja Seppänen** / Marketing & Communications Coordinator - Dimenteq Oy - Salo - Finland

**Anuja Agarwal** / Former Business Design Thinker - WeSchool - Mumbai - India

**Peter Van Waart** / Senior lecturer / researcher - Creating010, Rotterdam University of Applied Sciences - Rotterdam - The Netherlands

**Ari Fernando Valerdi Moroni** / Urban Designer - Mobility Coordinator - Re Genera Espacio - Puebla - México

**Alfonso Zamarro** / CEO & Co-founder - DEA Drones Sant Cugat - Barcelona - Spain

**Cristina Corchero** / Researcher - IREC - Barcelona - Spain

**Angel Domínguez Ortega** / General Manager Skidata Ibérica - SKIDATA Ibérica - Alcobendas, Madrid - Spain

**Ricard Espelt** / Researcher & Consultant - apps4citizens - Barcelona - Spain

**Miguel Bernardo Treviño de Hoyos** / RISKOP - Social Intelligence Consultancy - San Pedro Garza García - México

Diversity offers myriad opportunities but also potential problems and conflicts. How can we meet these challenges? Nicky Keefe started the session reminding us of the importance of putting people at the center of innovation. Jesús Hernández Galán wondered whether smart solutions are really prioritizing citizens. Tanja Seppänen stressed how important public participation is for local decision-making and showcased a project developed in the city of Vantaa concerning the areas of a riverside. Anuja Agarwal spoke out against the hazards and impacts caused by overconsumption and put forward different initiatives to “humanize the metropolis”. Alfonso Zamarro showcased the advantages of

drones in emergency services within the smart city and Cristina Corchero claimed that giving electric vehicles’ batteries a second life is possible. Integrated parking solutions with open interfaces applicable to cities all around the world were presented by Angel Domínguez Ortega. Ricard Espelt followed on with apps4citizens, an apps library of technology improving responsiveness and the democratic quality of decision-making. Lastly, Miguel Bernardo Treviño de Hoyos presented the case of San Pedro in Nuevo León, Mexico, which illustrated how inclusion as a process often emanates from a moment of collective emotion.



## Parallel Session

# Prioritizing equity in new urban policies

### Society



18/11/2015 15:00-16:15h

#### MODERATOR

**Josep Roig** / Secretary General - UCLG Barcelona - Spain

#### SPEAKERS

**ChunLan Jiang** / President - Hebei digital education Collaborative Innovation Center - Shi Jiazhuang - China

**Poonam Sharma** / Municipality of Chandigarh - India

**Thomas Madreiter** / Director of Planning - City of Vienna - Executive Group for Construction and Technology - Vienna - Austria

**Lourdes Casanova Seuma** / Senior Lecturer and Academic Director Emerging Markets Institute - Johnson School of Management Cornell University - Ithaca, NY - USA

**Zulma Bolívar** / President - Instituto Metropolitano de Urbanismo de la Alcaldía del Área Metropolitana de Caracas - Caracas - Venezuela

Since most of the world's population lives in urban environments, cities must address equity issues such as social, cultural and economic exclusion. Chunlan Jiang introduced some ideas on educational equity and collaborative innovation by explaining the current situation of education in Hebei (China). He underlined that educational inequity is an urgent livelihood issue to be tackled in this Chinese province of more than 187,000 square kilometers and presented some solutions based on improving the quality of dissemination through platforms of in-post teaching practice.

Thomas Madreiter pointed out that only a holistic approach can manage climate change in cities and made clear that humans go first and technology, second. Then Zulma Bolívar portrayed a dramatic situation in Caracas and wondered whether it is possible to build a smart city without freedom, education and above all without respect. Poonam Sharma gave a more optimistic point of view on sustainable transport and eco-mobility. Finally, Lourdes Casanova insisted that providing the best education to children is the only guarantee that future cities will be inclusive.

**“We need an innovation-driven and not only a technology-driven smart city.”**

Thomas Madreiter

## Parallel Session

# Democratic forms of participation and platforms to engage and empower citizens

## Society



19/11/2015 11:30-12:45h

### MODERATOR

**Manu Fernández** / Founder - Human Scale City - Bilbao - Spain

### SPEAKERS

**Hila Oren** / Founder & CEO - Tel Aviv Global - Tel Aviv - Israel

**Lawrence Lai** / Mayor - Miri City Council - Miri - Malaysia

**Matteo Kalchschmidt** / Professor - University of Bergamo - Dalmine - Italy

**Rashiq Fataar** / CEO - Future Cape Town - Cape Town - South Africa

**Renato Lucio De Castro Junior** / DBA Candidate - Maastricht School of Management - SAO PAULO - Brazil

Citizen participation in decision-making processes, in various shapes and forms, plays a significant role in urban development initiatives. Hila Oren explained why Tel Aviv is a startup city and described all its unique selling points. Lawrence Lai shared Miri's most successful campaigns in Malaysia, among them "say no to plastic bags everyday", and "green walk and ride".

***“We are not in the dreamers' land anymore. What is happening out there concerning smart city is real.”***

Renato Lucio De Castro Junior

Matteo Kalchschmidt presented a research project aimed at turning the city of Bergamo into a smart urban prototype. Rashiq Fataar showcased the process of building democracy in Cape Town (South Africa), and how dialogue with citizens can help redesign modern cities. He also encouraged promoting democratic participation in cities. Finally, Renato De Castro emphasized that "smart solutions must solve problems for people".

## Parallel Session

# Technology-driven tools and services for social well-being and aging populations

## Society



19/11/2015 13:45-15:00h

### MODERATOR

**Rosa-Maria Martín Santiago** / inLab FIB Technical Director - UPC - Barcelona - Spain

### SPEAKERS

**Mark Nieuwenhuijsen** / Professor - CREAL - Barcelona - Spain

**Felip Miralles** / Director of eHealth Technology unit - Research Center -Barcelona - Spain

**Marc Zaballa Camprubí** / Director - Lagula Arquitectes SLP - Barcelona - Spain

**Jean-Paul Close** / Initiator - STIR Foundation - Eindhoven - The Netherlands

**Chong Wey Lin** / Professor / Founder - National Chiao Tung University Taiwan / OurCityLove Social Enterprise Hsinchu City - Taiwan

**Marta Cruells** / Advisor to the Councilor Department of Life Cycle, Feminisms and LGTBI - Barcelona City Council - Spain

What solutions should smart cities adopt to ensure more comfortable lives for seniors? Felip Miralles put forward the advantages of the eKauri project, aimed at supporting active aging through participation, healthcare and safety services. Marta Cruells showcased a similar initiative, namely Vincles, designed to break the isolation and loneliness of seniors by means of social intervention.

Mark Nieuwenhuijsen stressed the need for better understanding of the relationship between environment and people's health and described how new sensor technologies can provide solutions to air pollution problems. Jean-Paul Close followed on in the sustainability field with a neologism created with the combination of sustainable human progress and democracy: sustainocracy. Marc Zaballa spoke in favor of rethinking the way children spend their

leisure time and showcased a project to encourage outdoor active play. Chong Wey Lin closed the session with an inspiring story about how to foster social participation for disabled people.

## Parallel Session Living labs and social entrepreneurship

### Society



19/11/2015 15:00-16:15h

#### MODERATOR

**Tomas Diez Ladera** / Fab Lab Barcelona - Spain

#### SPEAKERS

**Masaaki Yoshikawa** / Director General for Innovation - Economic Strategy Bureau, Osaka City Government - Japan

**Torben Gleesborg** / Executive Director - Copenhagen Solutions Lab, Technical and Environmental Administration of the Municipality of Copenhagen - Denmark

**Maria Grazia Rosa** / Innovation Scientist - beMINT srl - Matino, Lecce - Italy

**Bruno Centrone** / Co-founder - PugliaSmartLab - Lecce - Italy

**Rafael Fernández** / Spain Projects Director from the Center of Excellence for Cities of Ferrovial Services - Ferrovial Servicios - Madrid - Spain

**Pedro González Torroba** / Council Officer - Madrid City Council - Madrid - Spain

**Ana García Robles** / Director - European Network of Living Labs (ENoLL) Brussels - Belgium

Many cities around the world are launching living labs as open innovation ecosystems with an interdisciplinary approach. A range of stakeholders engage in a collaborative space to create pilot projects in social innovation and entrepreneurship to address urban challenges. Speakers brought different examples from various cities. Masaaki Yoshikawa spoke about the Osaka Innovation hub, developed in the center of Osaka. He admitted that the most important problem the city is facing is the slowing economy and the growing gap with Tokyo. Torben Gleesborg introduced the smart city strategy of Copenhagen, which puts the stress on open source and open data. Maria Grazia and Bruno Centrone presented living labs experiences in Lecce and

***“For innovation, we need an open-minded mindset respecting diversity with challenging and collaborative spirits.”***

**Masaaki Yoshikawa**

Puglia respectively, both based on open innovation, co-creation and public-private-people partnership. Finally, Pedro González showed how Madrid is moving towards open innovation.



## Parallel Session

# Thinking strategically about urban innovation

### Governance



17/11/2015 11:45-13:00h

#### MODERATOR

**Arturo Muenta Kunigami** / Senior ICT Policy Specialist - The World Bank - Washington - USA

#### SPEAKERS

**Masato Nobutoki** / Executive Director for Future City Promotion - City of Yokohama - Japan

**David Altabev** / Senior Programme Manager, Innovation Lab - Nesta - London - UK

**Dong Zhengguo** / Director - Website Management Center of Hebei People's Government - Shijiazhuang - China

**Timo Cantell** / Director - City of Helsinki Urban Facts - Helsinki - Finland

**Peng Tao** / CEO - Hangzhou Insigma & Great Wall Sci-Tech Service Co. Ltd. - Hangzhou - China

**Mark Saunders** / UK Projects Director - Ferrovial Services - Birmingham - UK

**Mark Tucket** / Head of Policy & Improvement from Sheffield City Council - City of Sheffield

What are the key drivers in the design and deployment of innovation in urban strategies? David Altabev displayed the indicators developed by Nesta to measure current strengths and areas of improvement in urban areas and presented them as an effective diagnostic tool. Other panelists focused on open data platforms highlighting that high performing cities can be characterized by their openness and transparency.

Speakers also made clear that, when becoming smarter, cities can adopt a startup mindset and come to be less bureaucratic. Various case studies were presented to share the success of developing and implementing open data platforms as a tool to accelerate entrepreneurial approaches to the community. Masato Nobutoki illustrated the importance of developing cities as incubators for living laboratories. Timo Cantell concluded that "imagination is the only limit".

***“Any problems your cities have can be alleviated, if not solved, with open data.”***

**Arturo Muenta Kunigami**



## Parallel Session Developing innovative public procurement practices

### Governance



19/11/2015 15:00-16:15h

#### MODERATOR

**Alexander Heichlinger** / Expert & Manager - European Institute of Public Administration (EIPA) Barcelona - Spain

#### SPEAKERS

**Jaak Raie** / CEO - Tallinn Science Park Tehnopol - Tallinn - Estonia

**Albert Sanfeliu** / Full Professor - Universitat Politècnica de Catalunya - Barcelona - Spain

**Carles Miranda** / Manager of Business Innovation - ACCIÓ - Barcelona - Spain

**Alba Trepát** / Electronics Watch affiliations and publications Manager in Spain - Barcelona - Spain

**Gracia Vara Arribas** / Lawyer, Expert in EU Law and Governance at the European Institute of Public Administration (EIPA) - European Institute of Public Administration (EIPA) - Barcelona - Spain

**Carlos Vázquez González-Román** / Head of Waste Management - Barcelona City Council - Barcelona - Spain

**Francesc Martínez de Foix Llorens** / Director - Grup Cooperatiu TEB Barcelona - Spain

Public procurement is the process by which public authorities purchase work, goods or services from companies. It has a crucial role to play in socio-economic development, progress and competitiveness across the entire world. The session started with a global perspective given by Gracia Vara, from EIPA, one of the leading think tanks in the European Commission. She remarked that public procurement accounted for 19.4% of EU GDP in 2009 and explained that the EU is promoting two types of procurement: pre-commercial procurement with less stringent normative requirements, and procurement for innovation.

Then Jaak Raie presented the Estonian smart city strategy putting the stress on green-tech infrastructure. Carlos Vázquez showcased an app

***“We have the need and the means to promote innovation through public procurement.”***

**Gracia Vara Arribas**

aimed at improving garbage collection. Albert Sanfeliu stressed the robotics urban challenges for elderly care. Finally, Alba Trepát spoke about Electronics Watch, a consortium of seven European organizations with EU funding aimed at creating market demand for decent working conditions.

## Parallel Session

# Innovative financial instruments enabling city transformation

## Governance



18/11/2015 11:30-12:45h

### MODERATOR

**David Burrows** / Managing Director - International Organizations - Microsoft Corporation - London - UK

### SPEAKERS

**Ellis J. Juan** / Emerging and Sustainable Cities Initiative General Coordinator - Inter-American Development Bank - Washington D.C - USA

**Jae-myeong Lee** / Mayor of Seongnam - Seongnam City Hall - Seongnam - Republic of Korea

**Amy Leung** / Deputy Director General, East Asia Department - Asian Development Bank - Mandaluyong City - Philippines

**Gaetan Siew** / Chairman - State Land Development Company - Port Louis - Mauritius

Finding new ways of financing urban projects is one of the major challenges for most cities, especially in the wake of the global economic crisis. Amy Leung reminded us that small, medium and megacities in Asia continue to grow, which comes with an important set of challenges. Finance is certainly one of them. Leung said that the ultimate goal of the Asian Development Bank is to make Asian cities “green, competitive and inclusive”. Gaetan Siew remarked that to achieve smart growth, every city needs economic growth. Thus, smart growth would be the best way to achieve it sustainably doing “more with less”.

From a Latin American perspective, Ellis J. Juan explained that in 2011 the Inter-American Development Bank launched the Emergent and Sustainable Cities Initiative, a technical and financial program to tackle the effects of rapid urbanization and climate change. He finally remarked that “generating jobs is the only way to fight urban inequality and poverty.”

**“Successful cities anticipate how growth will influence the needs of the city.”**

Gaetan Siew

## Parallel Session

# Strategic projects underpinning urban transformation

### Governance



18/11/2015 11:30-12:45h

#### MODERATOR

**Miquel Sodupe Roure** / Urban and infrastructure consultant - Architect Barcelona - Spain

#### SPEAKERS

**Young-Hoon Choi** / CIO - Seoul Metropolitan Government Seoul - Republic of Korea

**Joe Paiva** / CIO - Chief Information Officer for the ITA-International Trade Administration U.S. Department of Commerce - Gaithersburg - USA

**Alfonso Vegara** / Founder & President - Fundación Metr poli Madrid - Spain

**Luis Fernando Arboleda Gonzalez** / President - Findeter - Bogot  - Colombia

**Eneko Goia Laso** / Mayor - City of Donostia/San Sebasti n - Spain

**Jos  S mano Castillo** / Quality Management Coordinator - UNAM City of Mexico, D.F. - M xico

**Jaime Salinas** / City Councilor, Chairman Foreign Relations and Cooperation Committee, Lima Metropolitan Municipality - Peru

What are the key factors in the deployment of strategic projects underpinning urban transformation, and what urban governance approaches do they require? Young-Hoon Choi stated that Seoul has one of the most advanced e-governments in the world, according to Rudgers Global e-Governance Survey, but the Asian city still has some challenges, such as finding the smarter way to finance new projects.

Joe Paiva reminded us that anywhere you go in the world, the primary challenge for a local government does not change because what people care about does not change. Thus, he quoted the saying “think globally, and act locally”, meaning cities must “think big” from the beginning even if they “start small”. It is also important to “empower citizen developers” and try to survive the “Hype Cycle Culling”. Luis

Fernando Arboleda mentioned the Digital Diamond initiative, which won the Smart City Award for Innovative Idea. Finally, Eneko Goia stated that the San Sebastian smart city strategy currently focuses on social sustainability and economic growth.

## Parallel Session

# Strategic and innovative management of key urban services

## Governance



18/11/2015 13:45-15:00h

### MODERATOR

**Mila Gascó** / Senior analyst - Institute of Public Governance and Management - ESADE Business & Law School - Barcelona - Spain

### SPEAKERS

**Lisa Trickett** / Cabinet Member for Sustainability - Birmingham City Council Birmingham - UK

**Huann-Shiuh Shy** / Deputy Executive Secretary - Committee of Communications Industry Development Taipei - Taiwan

**Carsten Brosda** / Commissioner for Media, Head of Digital City Steering Centre - Free and Hanseatic City of Hamburg, Senate Chancellery - Hamburg - Germany

**Giacomo Parenti** / City Manager - Municipality of Florence - Italy

**Eduardo Fernández Giménez** / R&D innovation and urban sustainability Manager - Urbaser - Madrid - Spain

**Carlos Vayas** / Metropolitan Director - Municipality of Quito - Ecuador

New Public Governance and Digital Governance theories have reformulated public services delivery in an open systems context, giving rise to urban public services that use new emerging technologies, as well as internal and external collaborations, to improve the effectiveness, efficiency and legitimacy of services. Huann-Shiuh Shy divided urban services into four groups: government, transport, commercial activities and environment.

**“Citizens can transform cities into an intelligent and efficient organism, if they are endowed with tools that generate information connecting and**

**helping local administrations to improve services.”**

**Eduardo Fernández Giménez**

The most efficient way to manage them all is using a centralized digital platform, according in Shy. Carsten Brosda pointed out that we are living the third era of technology, which means that cities must connect infrastructure to sensors and centralize the information to improve their performance instead of building more urban facilities. Finally, Carlos Vargas insisted that we are living a disruptive technological period.

## Parallel Session

# Habitat III: Together towards a New Urban Agenda

### Governance



18/11/2015 15:00-16:15h

#### MODERATOR

**Tom Dallesio** / CEO - Next City Philadelphia - USA

#### SPEAKERS

**Kumaresh Misra** / Deputy-Secretary-General Habitat III Conference - United Nations

**Eugenie L Birch** / Lawrence C. Nussdorf Professor and co-Director - University of Pennsylvania - Philadelphia - USA

**Pietro Garau** / Tenured Researcher - First Faculty of Architecture at University of Rome

**Josep Roig** / Secretary General - UCLG Barcelona - Spain

By the middle of the century, more than 80% of the world's population might be living in urban areas, Urbanization and development are inextricably linked and it is necessary to find a way of ensuring the sustainability of growth. The United Nations Habitat III Conference, to be held in Quito in October 2016, aims at reinvigorating the global commitment to sustainable urbanization and has the convening power to bring together Member States, multilateral organizations, local governments, private sector and civil society. Eugenie L. Birch detailed the timetable for Habitat III and how stakeholders can be involved in the conference.

It is a unique opportunity to rethink a new model of urban development, able to promote equity, welfare and shared prosperity. Design features prominently in this New Urban Agenda and Pietro Garau stressed that the best design is often simple and does not require a tremendous investment of resources. Citizen engagement, however, is a fundamental element for success, sustainability and resilience.

**“The compact city is the solution to climate change.”**

**Pietro Garau**



## Parallel Session

# City standards and indicators spreading smart cities

### Governance



19/11/2015 11:30-12:45h

#### MODERATOR

**Carlos Gadsden** / President - International Foundation for the Development of Reliable Governments FIDEGOC  
Mexico City - Mexico

#### SPEAKERS

**Biyu Wan** / Chief Scientist - China National Smart City Joint Lab; China Smart City Planning & Design Research Institute Co., LTD Beijing - China

**Washington Tavares** / CTO - Tacira - São Paulo - Brazil

**Suhono Harso Supangkat** / Director - Institute for Innovation & Entrepreneurship Development, Institute of Technology Bandung - Indonesia

**Catherine Mulligan** / Head of digital strategy and economics - Future Cities Catapult London UK

**Katalin Gallyas** / Founder of Civic Tech Amsterdam - The Netherlands

Smart city initiatives provide information that facilitates the development of city standards and indicators. How can these indicators help city authorities and managers provide guidance in decision-making processes, and assess the impact of ongoing projects? Katalin Gallyas presented Open and Agile Smart Cities, a European network advocating interoperability and standards through different mechanisms, such as sharing APIs and using basic civic apps repositories. Biyu Wan said that the Beijing smart city project tries to solve very local problems from small communities with international connections and partnerships.

Finally, Suhono Harso Supangkat considered that the most important areas, where cities must focus on measuring results, are land occupation, public and

***“Instead of collaborating, sometimes the public sector seems to compete internally and that hinders standardization.”***

**Catherine Mulligan**

private transport, water and energy. This effort will enable the local government to understand urban systems and take the right decisions. Clear standards and indicators are the only way to integrate city systems and sectors.

## Parallel Session Solutions to improve urban governance

### Governance



19/11/2015 13:45-15:00h

#### MODERATOR

**Jennifer Belissent** / Principal Analyst - Forrester Research Paris - France

#### SPEAKERS

**Pablo Manuel Rivera Búa** / Executive Secretary - European Grouping of Territorial Cooperation Eurocity of Chaves-Verín - Spain

**Tomás Llorente Aguado** / Architect - Administración Pública Molina de Segura - Spain

**Manfred Frey** / Regional Director Europe - Riva Modeling Systems Inc.

**Celestino García-Arias** / Associate Professor - Universidad de Santiago de Compostela - Spain

**Pippa Gardner** / CEO & Smart Cities Consultant - Urban Tide - Edinburgh - Scotland

**Jyoti K Parikh** / Executive Director - Integrated Research and Action for Development - New Delhi - India

**Luís Fatás García** / Head of the Environmental Service - L'Hospitalet de Llobregat City Council - Spain

**Satyarupa Shekhar Swain** / Director - Government Outreach and Advisory - Citizen consumer and civic Action Group (CAG) - Chennai - India

**Fernando Suárez Lorenzo** / Chief of Innovation - Ayuntamiento de Santiago de Compostela - Spain

**María del Carme Fonseca Casas** / Researcher - Catedra Unesco de Sostenibilitat - Terrassa - Spain

**Thomas Casey** / Research Scientist - VTT Technical Research Centre of Finland Ltd Espoo Finland

**Traci L. Hughes** / Director - District of Columbia Office of Open Government - Washington USA

**Catarina Selada** / Head of Cities Unit - INTELI - Intelligence and Innovation, Lisbon Center of Innovation - Portugal

**Josué Sallent Ribes** / PARTNER-CIO - BARKENO ADVISORS - Spain

Cities are facing ever more complex social, economic and environmental challenges, which can only be addressed with equally sophisticated management and governance. Advanced competences and institutions are needed to address the urban agenda and manage all the stakeholders involved. According to Ian Woodbury, technology to regulate energy, water consumption and rationalize public services like garbage treatment could solve budget limitations. Jyoti K. Parikh pointed out that GIS (Geographic

**“Apps are a simple and effective way to improve citizen participation and public services.”**

**Luís Fatás García**

Information System) can solve the lack of information and options to face natural and social disasters. Celestino García-Arias concluded that common indicators are useful but absolute city rankings are not real.

## Parallel Session

# PPPP and strategic partnerships to foster smart cities

## Governance



19/11/2015 15:00-16:15h

### MODERATOR

**Eva Bufi** / Executive Director - PPP for Cities - Barcelona - Spain

### SPEAKERS

**Noriko Adachi** / Director for National Strategic Special Zone Coordination, Office of the Governor for Policy Planning - Tokyo Metropolitan Government - Tokyo - Japan

**Johannes Schmidt** / CEO of Project and Structured Finance Energy Management, Mobility and Industries - Siemens Financial Services GmbH - Erlangen - Germany

**Bernard Ewah** / Head, e-Government & IT Infrastructure Security Services - National Information Technology Development Agency - Abuja - Nigeria

**Arvind Satyam** / Managing Director, Business Development - Cisco Systems - San Francisco - USA

Sigit Hadi Prayoga / A&A Integration Engine Leader, Dept. Synergy - PT TELKOM - Jakarta - Indonesia

Speakers shared their experiences in smart city projects where collaboration has been the key to success. Noriko Adachi stated that a smart city should be a sustainable city from the economic perspective and explained that the long term vision for Tokyo includes eight strategies, and 25 approaches, with a three-year budget of 3.74 trillion yen (€27.7 billion) including the Tokyo Olympic Games to be held in 2020. “Our target is to make Tokyo the world’s best city,” she added while stressing they have been putting a lot of effort into attracting foreign companies to Tokyo.

Johannes Schmidt highlighted that a city “master plan” has to be shared by all stakeholders and advised against starting a project before allocating all risks. Bernard Ewah shared some key issues for

PPPP (public-private-people partnerships) success: it is important for governments to give legal backing through formal endorsements and approvals as well as making substantial investments in critical infrastructure to reduce risks and make the venture attractive to private investors. Arvind Satyam explained Cisco’s approach is to connect sensors and devices over a common network and data layer. Finally, Sigit Hadi Prayoga showcased different solutions based on microcells deployed in Jakarta by PT Telkom.

## Parallel Session

# Innovative platforms for multistakeholder processes to foster sustainable cities

## Technology



17/11/2015 11:45-13:00h

### MODERATOR

Victor Mulas / Sr. Program Officer, Innovation Labs - World Bank Washington, DC - USA

### SPEAKERS

**Edna Pasher** / Owner and GM - Edna Pasher, Ph.D. & Ass. Management consultants - Tel Aviv - Israel

**Geoff Snelson** / Director of Strategy - Milton Keynes Council Milton Keynes - UK

**Olga Kordas** / Director Energy Platform - KTH Royal Institute of Technology - Stockholm Sweden

**David Lazarevic** / Researcher - KTH Royal Institute of Technology - Stockholm - Sweden

**Juanjo Hierro** / Chief Technologist at Telefónica I+D (R&D Lab) and FIWARE Coordinator & Chief Architect - FIWARE / Telefónica - Madrid - Spain

**Paul Wilson** / Managing Director - Bristol Is Open Bristol - UK

**Raül González Prats** / Smart Cities Product Strategy - CELLNEX Barcelona - Spain

How important is it to bring collaboration and openness to the field of smart cities and urban development? Geoff Snelson provided a successful example of creating a collaborative environment in the city of Milton Keynes (UK) implementing MK Data Hub, where the interests of academia, commercial companies and citizens meet. Juanjo Hierro introduced the Fiware community and platform, and stressed the importance of setting the standards within the city ecosystem. He also recommended thinking global at a local scale, because nobody is able to build an efficient ecosystem alone.

**“You cannot boost innovation around the city without bringing the standards.”**

Juanjo Hierro

Raül González Prats focused on how collaboration between cities and the use of the iCity Project can ease the creation of new common apps that can improve citizens' experience. Olga Kordas showcased how to bring key actors together and develop a sustainable global energy system on a country scale. David Lazarevic pointed out how challenging it was to innovate with diverse actors when innovation has a different meaning to everybody. Edna Pasher stressed that culture always goes before technology. Paul Wilson proved that cities can bring fun and become playable for citizens. Victor Mulas concluded that open data could emerge as a good start for creating collaborative culture in cities.



## Parallel Session

# Co-production and interoperability to nurture city collaboration

## Technology



17/11/2015 14:15-15:30h

### MODERATOR

**Daniel Marco** / Director of Smart Catalonia - Government of Catalonia Barcelona - Spain

### SPEAKERS

**Jean-Luc Mate** / Chairman - EURIPIDESE - Paris - France

**Liora Shechter** / Tel Aviv Yafo Municipality - Israel

**Esteban Mirofsky** / Secretario de Innovación y Gobierno Abierto - Gobierno de Bahía Blanca - Argentina

**Mahadhir Aziz** / Head, Technology Hub Development Division - Cyberview Sdn Bhd - Cyberjaya - Malaysia

**Ignacio Arespacochaga Maroto** / Director - Systems and Information Technologies of the Environment Division of FCC - Madrid - Spain

Interoperability can provide ways to integrate, understand and share information produced by diverse sources, optimizing the production of urban services. Liora Shechter enumerated a range of applications to make the city of Tel Aviv more appealing to its residents, proposing special events or leisure activities to each user according to their hobbies and interests. In contrast, Esteban Mirofsky explained how people's willingness fostered the deployment of open government policies in the city of Bahía Blanca, and inspired the co-production of open platforms to overcome environmental issues.

For Mahadhir Aziz, technological hubs actively encourage interoperability between companies in the same area, but they also need strategic partnerships to create synergistic value and improve human capital. Ignacio Arespacochaga gave his vision of the relationship between his company as a service provider and municipalities. FCC leverages geo-referenced information from cities to provide smart services. Finally, Jean Luc Mate pinpointed the foundations of interoperability based on worldwide standards and open platforms. When developing smart services these prerequisites are fundamental.

**“100% of all Smart City innovations for citizens need smart electronic systems.”**

Jean-Luc Mate



## Parallel Session

# Big data, data analysis and visualization for decision-making in cities

## Technology



18/11/2015 11:30-12:45h

### MODERATOR

**Jorge García Vidal** / BSC-CNS - Barcelona - Spain

### SPEAKERS

**Qianxiang Xu** / Vice President - DaLian Jiucheng Surveying & Mapping Enterprise Group - Dalian - China

**Zhaohua Guo** / Senior Software Engineer - CETC54 - China

**Marc Torrent Moreno** / Director - Big Data Center of Excellence in Barcelona - Barcelona Spain

**Anja Jutraz** / Researcher - University of Ljubljana, Faculty of Architecture - Ljubljana - Slovenia

**Alexey Ershov** / Vice President, Smarter Cities Europe - IBM - Madrid - Spain

**Ramón Ferri Tormo** / Valencia City Council - Spain

The triad of big data, the analysis of that data, and its visualization offer a wide range of opportunities to better understand and manage cities. Quianxian Xu spoke about how geoinformation can act as a platform to integrate static and real data for comprehensive analysis and application across all sectors, systems and regions.

Zhaohua Guo introduced HooHoo, an innovative mobile application solution directed towards tourism. Marc Torrent Moreno pointed out the main challenges of implementing big data within cities, including determining the value for organizations as well as ensuring the access and quality of data. Anja Jutraz described the creation of a virtual reality database, acting as a solution for urban planning, which enables global collaboration and promotes dialogue. Alexey Ershov portrayed the value of big data by

explaining how Madrid uses analytics to cut costs, support outcome-based maintenance contracts, and incentivize service providers to optimize resource deployment. Lastly, Ramón Ferri highlighted how data is key to building a new generation of services that allow moving from an efficient city to a smart city.

## Parallel Session

# Privacy in the Smart City

### Technology



18/11/2015 15:00-16:15h

#### MODERATOR

**David Murakami** / Canada Research Chair in Surveillance Studies - Queen's University - Kingston - Canada

#### SPEAKERS

**Gemma Galdón Clavell** / Director - Eticas Research & Consulting - Barcelona - Spain

**Carmela Troncoso** / Senior Researcher - IMDEA Software Institute - Madrid - Spain

**Jarmo Eskelinen** / CEO - Forum Virium Helsinki - Helsinki - Finland

**Wismar Medina** / Director - WW Local & Regional Government - Microsoft Worldwide Public Sector Redmond - USA

David Murakami started the session by stressing that privacy is a key issue in the cloud-enabled smart city. Wismar Medina spoke about the key technologies that make the privacy issue bigger than ever and acknowledged that 91% of consumers feel their information is out of their hands. Moreover, cyberattacks cost businesses up to \$3 trillion a year. Yet he underlined privacy is one of the values that define Microsoft's commitment to the cloud. Its flagship product, Microsoft's Trusted Cloud, is used by 1 billion customers worldwide.

**“Citizens need to be able to control what is happening with their personal information.”**

Gemma Galdón Clavell

Gemma Galdón was less optimistic and followed on with several examples of smart city solutions that over-track citizens. She defined the current security issue as “smart fatigue”. Yet she believed the situation can be improved with responsible use of innovation in smart cities. Jarno Eskelinen advocated a shift in the concept of data ownership and presented a more human-centric personal data management platform, called myData. Last but not least, Carmela Troncoso highlighted how ubiquitous sensing technologies along with soft biometrics can infer the personal identity of citizens. She concluded that partial anonymity is achievable with suitable cryptography applications.

## Parallel Session

# Solutions connecting urban & data

### Technology



19/11/2015 11:30-12:45h

#### MODERATOR

**Mary Keeling** / Manager Economic Analysis - IBM - Dublin - Ireland

#### SPEAKERS

**Munish Khetrpal** / Managing Director, Solutions - Smart+Connected Communities - Cisco Systems Inc. - California - USA

**Katya Serova** / Vice-President - HABIDATUM New York - USA

**Philippe Joseph Poullain** / Co-Founder - Affinity Network Inc - Quebec - Canada

**Mitzi László** / Business Developer - Map That - Amsterdam - The Netherlands

**Oriol Pascual** / Director - IQS Tech Factory - Barcelona - Spain

**David Ruana** / Product Manager - Safelayer Secure Communications S.A. - Barcelona - Spain

**Víctor Martínez del Rey** / Director - Sant Cugat del Vallès Municipality - Sant Cugat del Vallès - Spain

**Stefano Landi** / Vice President - Sensity Systems - Sunnyvale - USA

**Lori Steele Contorer** / CEO - Everyone Counts - San Diego - USA

**Han Wammes** / Business Development Manager - ISpatial - Hoorn - Netherlands

**Jordy Van Kuijk** / COO - Red Ninja - Liverpool - UK

**Matthias Aebi** / CEO - dizmo - Zurich - Switzerland

**Samuel Ibbott** / Deputy Public Affairs Director - Environmental Industries Commission - London - UK

**Carles Ferreiro** / CEO - Dotopen - Barcelona - Spain

Technologies harvest increasing stocks of data, which opens new avenues for city management and better access to services for citizens. Philippe Joseph Poullain described how Affinity Network Inc.'s approach is based on the idea that solutions should first and foremost listen to what the people want. Mitzi Lazlo spoke about her venture challenges related to client engagement.

David Ruana explained how incorporating automatic mobile identity readers can solve the issue of identifying postmen in urban environments. Oriol Pascual promoted the concept of CleanWeb, an industry in which ICT is at the core. Víctor Martínez del Rey explained how Sant Cugat del Vallès is a pioneering city in the implementation of smart city procedures and urban resilience thinking.

Stefano Landi urged the importance of simpler, more

optimized lighting platforms that promote a wide range of data-driven services. Lori Steele endorsed her startup Everyone Counts to promote maximum citizen engagement. Han Wammes advocated the significance of spatiotemporal contextualized data. Jordi Van Kuijk described how his company Red Ninja created an effective tool aimed at reducing emergency vehicle response time. Samuel Ibbott spoke about the potential for smart cities to meet core environmental challenges. Munish Khetrpal urged the importance of maximizing the customer experience within smart urban environments. Matthias Aebi and Katya Serova introduced their respective companies, Dizmo and Habidatum, an interactive space-time data visualizer. Finally, Carlos Ferrero advocated the necessity to engaging an entire ecosystem to build and create solutions.

## Parallel Session

# Building the next generation of the Internet of Things

### Technology



19/11/2015 11:30-12:45h

#### **MODERATOR**

**Julio Navío** / Vice-dean and coordinator of the Public Policy and Regulation Group - COIT - Madrid - Spain

#### **SPEAKERS**

**Jamie Cudden** / Smart City Program Manager - Dublin City Council - Dublin - Ireland

**Junghoon Lee** / Professor of Technology & Innovation Management - Graduate School of Information, Yonsei University - Seoul - Korea

**Dante Ricci** / Senior Director SAP Global Public Services - SAP - Oakton - USA

**Larissa Romualdo Suzuki** / PhD Candidate in Software Systems Engineering - UCL/Imperial - London - UK

**Marco Rodriguez** / Senior Service Manager - ThyssenKrupp Elevator AG - Essen - Germany

The Internet of Things (IoT) has been defined as a global infrastructure for the information society, which enables advanced services by interconnecting (physical and virtual) things based on existing and evolving interoperable information and communication technologies. Speakers put forward the possibilities of the Internet of Things to improve urban management in the future. Jamie Cudden and Dante Ricci showcased various solutions to deal with floods, using IoT, in Dublin and Buenos Aires respectively. Junghoon Lee focused on smart lights developed in Korea.

Larissa Romualdo described how important platform-to-platform integration is to be able to develop applications for different cities at the same time. Finally, Marco Rodríguez gave an overview of the elevators industry and described how it is shifting from a corrective or sometimes preventive maintenance to a predictive one.

**“We are just scratching the surface of the IoT revolution.”**

Jamie Cudden

## Parallel Session

# Smart technologies fostering public safety and creating safe cities

## Technology



19/11/2015 15:00-16:15h

### MODERATOR

**Manel Medina** / Research director - esCERT-inLab-UPC - Barcelona - Spain

### SPEAKERS

**Ronnen Avny** / Head of Development Branch - Israel Home Front Command - Yehud - Israel

**Nuria Jimenez Ramon** / Area Manager Smart Cities Logitek - Logitek - Madrid - Spain

**Victor Martínez** / NEC Ibérica - Spain

What opportunities do smart technologies yield in the creation of safe cities? Manel Medina started the session by reminding us of the definition of risk, meaning “the possibility of loss of a digital asset resulting from a threat exploiting a vulnerability”. He also stated that the current trend is trying to assess the risk in real time and warned that data from a censored network can be hacked, thus delivering false information.

Ronnen Avny presented a system for emergency simulation and training for local authorities which offers complete training, debriefing, documentation and a learning environment. Víctor Martínez followed on with social infrastructure solutions provided by NEC, a company that helps governments around the world to process more than 850 million unique identities. Nuria Jiménez ended up the session by showing how to protect critical infrastructure, such as water supply networks and transportation, by means of different strategies such as creating

policies and procedures, securing the industrial networks, training cybersecurity professionals and leveraging security by design.

**“The real value [of security systems] is not understanding what happened, but predicting what it is going to happen.”**

**Victor Martínez**



## Parallel Session

# Managing growth, regeneration and renewal of cities

### Sustainability



17/11/2015 11:45-13:00h

#### MODERATOR

**Manuel Ruisánchez Capelastegui** / COAC - Barcelona - Spain

#### SPEAKERS

**Pedro Henrique Mascarenhas Villela Peracio** / Chief Digital Officer - Rio de Janeiro City Hall - Department of New Digital Media - Rio de Janeiro - Brazil

**Andrew Collinge** / Assistant Director - GLA Intelligence - Greater London Authority - London - UK

**Sebastien Sabatier** / Sales and Marketing - Thales - Velizy - France

**Christer Larsson** / Director of City Planning - Malmö City Planning Office - Sweden

**Joe Hancock** / Streetlight Restoration Leader and Lighting Products Engineer - Florida Power & Light Company - Junio Beach - USA

**Michael Sullivan** / Global Solutions Sales Manager, IBM Smarter Water - IBM - Boston - USA

How do we address urban challenges to ensure sustainable, resilient, and safe cities? Pedro Henrique Mascarenhas Villela Peracio spoke about what Rio de Janeiro is doing to manage the latest changes in the city and in the run-up to 2016 Olympics. Andrew Collinge pointed out shifting to shared data platforms sustained by the collaboration of political leadership, major stakeholders and infrastructure providers.

**“Big data with no human participation means nothing.”**

**Pedro Henrique Mascarenhas Villela Peracio**

For Crister Larsson, connecting cities using spatial planning is key as “public spaces are places for democracy and building trust”. Sebastien Sabatier argued that incorporating market-leading technology for more precise data evaluation is invaluable to promote the attractiveness of cities, all while ensuring security.

Michael Sullivan stressed the importance of smart water management. Finally, John Hancock exemplified the use of technology to improve citizens’ lives with the Smart Lights Project in Florida that works with predictive algorithms to save energy and prevent mistakes.

## Parallel Session Developing resilient cities

### Sustainability



19/11/2015 15:00-16:15h

#### MODERATOR

**Dan Lewis** / Chief, Risk Reduction and Resilience - UN Habitat - Nairobi - Kenya

#### SPEAKERS

**Manuel Valdés** / Barcelona City Council - Barcelona - Spain

**Duván López Meneses** / Researcher and advisor - RECNET - Bogotá - Colombia

**Jorge Montoya Restrepo** / Professor - Tecnológico de Antioquia - UNESCOsost-Colombia - Medellin - Colombia

**Anne Marie Zielstra** / Director Cyber Security & Resilience - TNO Research Organization

What are the challenges faced while implementing a resilient agenda? Four cities presented their cases on how they address different situations and their capacities to cope with crisis. Anne Marie Zielstra emphasized that our newly hyper connected world has made our cities more vulnerable to cyberthreats. She urged the necessity to move beyond simple collaboration between organizations and shift towards partnerships based on collective responsibility and shared information.

Manuel Valdés emphasized the value of understanding the actors who make decisions to promote cross-departmental engagement, needed to optimize resource capacity and improve the quality of life of all citizens. Finally, Duván López Meneses portrayed urbanization as a non-beneficial process and described how to leverage the crisis cycle to promote resilience and change. He particularly focused on the idea that urban spaces must be defined with the people to encourage growth and engagement.

**“Cities don’t fail  
in a segmented manner.  
They either succeed or fail  
systematically.”**

Dan Lewis

## Parallel Session

# Sustainable transformation to co-create smart districts

## Sustainability



17/11/2015 14:15-15:30h

### MODERATOR

**Alex Ivancic** / Senior Consultant - Anteverti - Barcelona - Spain

### SPEAKERS

**Barbara Möhlendick** / Climate Protection Coordinator, Project Director SmartCity Cologne - City of Cologne - Germany

**Jean Rottner** / Mayor - Mulhouse City Hall - Mulhouse - France

**Carlos Eduardo Correa Escaf** / Mayor Monteria - Colombia

**Bharati Chaturvedi** / Founder and Director - Chintan Environmental Research and Action Group - Delhi - India

**Steve Turner** / Head of Future Cities - Manchester City Council - Manchester - UK

**Damian Wagner** / Coordinator Smart Cities - Fraunhofer Institute for Industrial Engineering (IAO) - Sabadell - Spain

Smart districts have become icons for sustainable transformation and redevelopment projects in many cities. Barbara Möhlendick showed how developing a common vision with citizens about what a smart city should look like can lead to big changes in city processes and improve environment indicators. Jean Rottner presented the rebirth of Mulhouse from a forgotten post-industrial city to a smart city and emphasized the importance of educating citizens to better consume energy and be more sustainable at home.

Carlos Eduardo Correa presented a case study on how the river which crosses the city of Monteria can become an impressive resource for the development of an area. Bharati Chaturvedi mainly focused on waste management problems in India and how co-creation helped bring innovation to this field. Steve Turner showed some ecosystem approaches useful for fostering the collaboration and integration of different stakeholders. Finally, Damian Wagner concluded that there is no one-fit solution and model for the smart city, so maybe we'd rather go deeper into districts of cities.

**“If technology is the answer, what is the question actually?”**

Steve Turner

## Parallel Session Sustainable cities and innovative urban planning

### Sustainability



18/11/2015 11:30-12:45h

#### MODERATOR

**Miriam Roure** / Founder & CEO - Field Barcelona - Spain

#### SPEAKERS

**João M. Pereira Teixeira** / President - Lisbon and Tagus Valley Region Development Commission - Lisbon - Portugal

**Sylla Soualiho** / Mayor - City of Tiassalé - Côte d'Ivoire

**Pau Fonseca i Casas** / Professor - Universitat Politècnica de Catalunya - Barcelona - Spain

**Alexei Novikov** / President - HABIDATUM - Russia/ USA

**Sandra Rohner** / Senior Consultant - VDI/VDE Innovation + Technk GmbH - Berlin - Germany

**Andel Koester** / Americas Lead, Smarter Cities Challenge - IBM New York - USA

How can data provide new ways of understanding and analyzing cities to ensure they deliver appropriate services? Joao Perreira Teixeira highlighted the importance of smart planning concentrating on people and nature, where management adopts strategies based upon smart technologies and infrastructures.

Andel Koester presented the issue of declining cities, demonstrating how innovative models connecting data and proposing adequate analysis can help building communities where people want to come back and live. Sylla Soualiho detailed the advantages of implementing an eco-village and the challenges faced by cities to continue creating jobs and prosperity without compromising natural resources. Paul Fonseca i Casas showcased a tool to find an optimal solution for buildings in urban areas.

**“ Time sharing of commercial spaces can balance the economy, improve quality of life, change architecture as well as be an asset for urban planning.”**

**Alexei Novikov**

Finally, Sandra Rohner put the stress on middle-size cities and stated that the three key elements needed to realize a successful transformation into sustainable and resilient cities are people, participation (co-creation) and communication.

## Parallel Session

# Solutions for sustainable urban living

### Sustainability



18/11/2015 13:45-15:00h

#### MODERATOR

**Gregori Mora Cogul** / Smart Region Project Manager - Diputació de Barcelona - Barcelona - Spain

#### SPEAKERS

**Kathryn Willson** / Director Microsoft CityNext - Microsoft WorldWide Public Sector Redmond - USA

**Xavier Salto** / Director General - Caba sostenibilitat SL - Sabadell - Spain

**Gabriel Anzaldi** / Director of Smart Management Systems unit - Eurecat - Lleida - Spain

**Jorge Leon** / Project Manager - ITENE - Research Center for Packaging, Transport and Logistics - Paterna (Valencia) - Spain

**Pedro De Grado Sanz** / Director de Medio Ambiente - Ayuntamiento de Logroño - Spain

**Emmanuel Gentil** / Director - Recycle2Trade - Bagsværd - Denmark

**Antoni Orti Hernandez** / Project Manager - OTEM2000. Green Solutions & Management S.L. - Martorell - Spain

**Alberto Ipas** / Director Manager - City Hall Zaragoza (Spain) - Spain

**Giuseppe Spanto** / CEO - IsTech Srl - Rome - Italy

**Ifigenia Theodoridou** / Dr. Architekt Ingenieur T.U. Darmstadt - Energy Consultant (German Certification "Energieberater T.U.D. - e2 architects - Thessaloniki - Greece

**Gianni Minetti** / President and CEO - Paradox Engineering SA - Novazzano - Switzerland

**Vitor Pereira** / Chair/Director - Smart Travel Event - Bragança - Portugal

How can cities address environmental challenges? Xavier Salto stated that buildings can provide benefits to the urban environment on the condition that they are constructed as an atomic part of the urban tissue. Ifigenia Theodoridou emphasized the importance of cultivating a bottom-up approach to understand the actual energy needs of buildings to be refurbished and rebuilt. Gabriel Anzaldi tackled the issue of water scarcity and argued that comprehensive management of all sectors undeniably brings benefits as resources are strongly interconnected. Jose Leon promoted the use of electric bicycles for delivering goods and passenger transport. Antoni Orti Hernandez further developed the bicycle innovations topic, presenting his kinetic bike pathway project enabling a response to energy consumption and mobility challenges.

**“The real return on investment will come from cities being sustainable.”**

**Kathryn Willson**

Pedro de Grado Sanz presented self-management as a way of reducing costs for government. Giuseppe Spanto introduced the audience to cleaning ambient air, showing the possibility to create new value. Vitor Pereira gave insights on tourism impact on cities. Finally, Emmanuel Gentil demonstrated that a circular economy of waste is a shift towards sustainability. After all, said Alberto Ipas, being smart means to use nature, technology and private investment.



## Parallel Session Tracking and tackling climate change

### Sustainability



18/11/2015 15:00-16:15h

#### MODERATOR

**Victor Gancel** / Program Manager - Climate-KIC - Paris - France

#### SPEAKERS

**Jo Baker** / Development Director- Urbanization - Mott MacDonald - Birmingham - UK

**Susanne Krawack** / Chief Consultant - Concito - Denmark

**Sergi Lopez-Grado i Padreny** / Architect - L'Hospitalet de Llobregat - Barcelona - Spain

**Mikel Larrañaga** / Researcher - IK4-Tekniker - Eibar - Spain

Which instruments can be implemented to fight climate change? Jo Baker focused on the decisive role of transport in responding to climate change challenges. He referred to the Global Calculator as a tool giving expertise to analyze mechanisms that can be implemented to limit temperature globally. Susanne Krawack showed how enabling sustainable transport habits reduced CO<sup>2</sup> impact through data collection.

Mikel Larrañaga detailed how a platform analyzing big data can have a global impact and be a crucial tool for municipalities that need to tackle the issue of greenhouse gas emissions. Finally, Sergi López Grado echoed this sentiment by introducing the carbon footprint indicator project as a helpful tool enabling cities' sustainability.

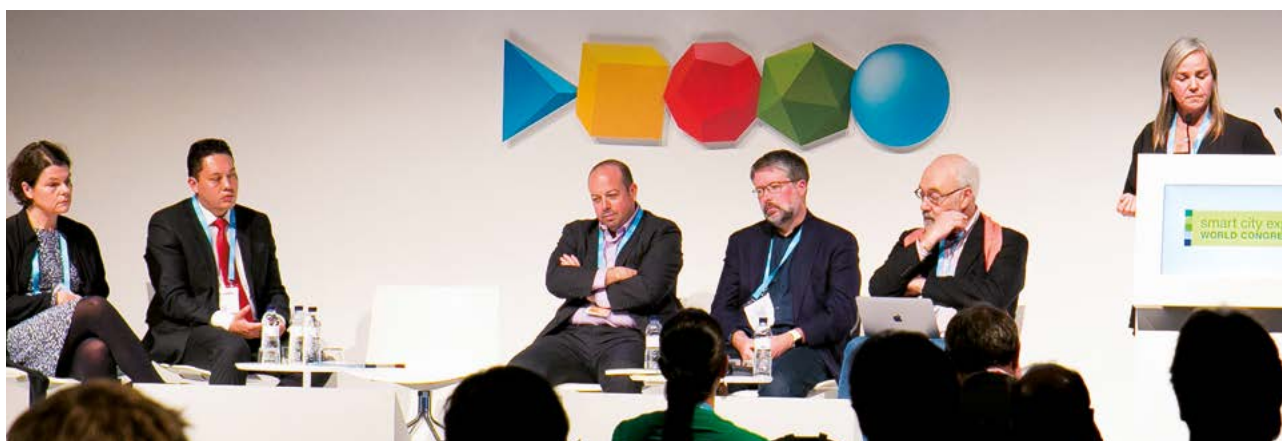
***“It is crucial to relate tracking with tackling, and to track the data we need to get the right decision.”***

Susanne Krawack

## Parallel Session

# Citizens at the core of sustainable urban development

## Sustainability



18/11/2015 15:00-16:15h

### MODERATOR

**Francis Pisani** / Independent journalist and writer - Le Monde & El País - Barcelona - France

### SPEAKERS

**David Troy** / CEO - 410 Labs, Inc. - Baltimore - USA

**Ron Dizy** / Managing Director - Advanced Energy Centre - Toronto - Canada

**Lisa Enarsson** / Assistant Coordinator - GrowSmarter

**Cristian Zamora** / City Councilor - Municipality of Cuenca - Ecuador

**Karolina Keyzer** / City Architect - Stockholm City Planning Administration - Stockholm - Sweden

Urban development should be guided by an approach that involves and engages citizens from the very outset. Francis Pisani started the session by stating that “participation is too often limited to consultation” and that citizens should be included in the design and management of the development of the sustainable city. David Troy showed how relationships between citizens are built through social networks and asked for that information to be available to residents, urban planners and governments.

Ron Dizy described how Ottawa’s ZIBI project aimed at designing a citizen-focused urban energy system and stressed that as citizens are more engaged with technology, transforming the urban energy system should rest on new strategies and collaboration models. Lisa Enarsson invited cities to join the GrowSmarter project aimed at transforming cities for a smart, sustainable Europe.

Christian Zamora insisted on the fact that citizens have to be at the core of sustainable urban development. Lastly, Karolina Keyzer underlined that Stockholm is growing at a rate six times faster than London or Paris and added that the city’s goal is being fossil-fuel free by 2050. Therefore, environmental policies are fully integrated in all city development at all levels.

## Parallel Session Fostering urban livability and resilience

### ○ Sustainability



19/11/2015 11:30-12:45h

#### **MODERATOR**

**Manuel Valdés** / Barcelona City Council - Barcelona - Spain

#### **SPEAKERS**

**Kilian Kleinschmidt** / Founder and Chairman - Innovation and Planning Agency - Vienna - Austria

**Duncan Fraser** / Senior Planner - City of Edmonton Sustainable Development Department - Edmonton - Canada

**Carlos Moreno** / Chairman - Live in a Living City Think Tank - Paris - France

**Paul Schindler** / Future Cities Program Lead - SAP - London - United Kingdom

Urbanization concentrates risk in cities, which become more vulnerable to shocks while also contributing to some of their causes. Resilience projects are crucial to better prepare and adapt cities for the future, ensuring their livability. Carlos Moreno focused his speech on Paris and the terrorist attacks that occurred on November 13th.

Paul Schindler explained how technology can help cities develop and improve their resilience after natural disasters, as in the case of Buenos Aires after the heavy rains and flash floods that hit the city in 2013. Another example was the city of Indiana (US), where the decision-making process is data driven and as a result citizens are happier and more engaged. On a different note, Kilian Kleinschmidt discussed the position of refugees and said 2.5 million people are expected to move due to poverty caused by climate change. Finally, Duncan Fraser explained that Edmonton has turned itself into a global city by

changing its downtown, as “a dynamic downtown is a key ingredient of a great city”.

## Parallel Session

# Strategies for reducing energy demand and to improve energy efficiency

## Sustainability



19/11/2015 11:30-12:45h

### MODERATOR

**Jaume Salom** / Head of Energy Efficiency (ECOS) - Catalonia Institute for Energy Research (IREC) Barcelona - Spain

### SPEAKERS

**Tsuyoshi Nagahiro** / Representative Director - SSCA2.0 - Osaka - Japan

**Gerardo Wadel Raina** / PhD in Architecture - ETSA La Salle - Universitat Ramon Llull - Barcelona - Spain

**Katrina Folland** / Smart Cities Coordinator - City of Gothenburg / Gothenburg - Sweden

**Vicente Carabias** / Deputy Head ZHAW Institute of Sustainable Development - ZHAW Zurich University of Applied Sciences - Winterthur - Switzerland

**Katrin Bernath** / Head Environment and Health protection - City of Winterthur - Switzerland

**Vincent Bryant** / Cofounder - Deepki - Paris - France

**Stefan M. Buettner** / Senior Policy Advisor - IPEEC, the International Partnership for Energy Efficiency Cooperation / Paris - France

Panelists showcased initiatives and strategies to reduce energy demand, increase energy efficiency, and improve the overall energy balance of cities. Tsuyoshi Nagahiro presented the Thermal Grid initiative developed in Osaka, which enables the reduction of carbon dioxide by 70%, primary energy and the running cost of heating and cooling systems. Gerardo Wadel spoke about a project aiming at taking advantage of the potential of vacant buildable areas in some buildings in Barcelona for energy savings.

Katrina Folland followed on with the Gothenburg climate strategy and estimated that “by 2050, the Swedish city will have a sustainable and equitable level of greenhouse gas emissions”. Vicente

Carabias proposed smart retrofitting of cooperative housing districts in Zurich and Katrin Bernath recalled smart solutions do not always need a lot of technology. In the end, Stefan Buettner concluded that cities are key to moving all economies on a low carbon and clean energy path.

## Parallel Session

# Alternative energy sources and innovative energy storage

## Sustainability



19/11/2015 13:45-15:00h

### MODERATOR

**Eddie Bet Hazavdi** / Director of Department of Energy Conservation - Government of Israel

### SPEAKERS

**Poul Rask Nielsen** / Project Director - Energycity Frederikshavn - Denmark

**Pep Salas Prat** / Chief Strategic Officer - Enerbyte Smart Energy Solutions - Sant Cugat del Vallès Spain

**Avi Brenmiller** / Brenmiller Energy - Israel

**Rupert Green** / Smart Design Lead - WSP | Parsons Brinckerhoff - London - UK

**Matthias Nabholz** / Head of Department - Department for Environment and Energy, City of Basel Switzerland

The transition to a new, lower-carbon energy mix scenario should encompass strategies to make renewables part of a more efficient energy mix, as well as the development of new technologies for storing and distributing energy. Poul Rask Nielsen detailed how the city of Frederikshavn in Denmark is taking action to become 100% renewable by 2030 all while promoting its workforce and reducing CO<sup>2</sup> emissions.

Rupert Green promoted system integration frameworks within cities to plan for smarter decentralized energy systems.

Avi Brenmiller introduced his company, Brenmiller Energy, an energy storage system that efficiently and cost-effectively decouples the production of heat with the production of energy. Next, Pep Salas presented Virtual Energy Advisor, an application that provides tailored recommendations for energy

bills and engages clients to obtain feedback for continuous improvement. Finally, Matthias Nabholz spoke about the challenges faced by the city of Basel in Switzerland in becoming a smart city, including promoting energy efficiency as economically attractive even without government funding.



## Parallel Session

# Strategies for developing successful integrated transport services

## Mobility



17/11/2015 14:15-15:30h

### MODERATOR

**Andreas Trisko** / Head of Department - Vienna City Administration Municipal Department 18 - Urban Development and Planning - Vienna - Austria

### SPEAKERS

**Pedro Vidal** / Smart Cities Unit Coordinator - Undersecretary of Transport for the Government of Chile

**Ayman Smadi** / Exec. Director of Transport - Greater Amman Municipality - Amman - Jordan

**Álvaro Nicolás** / Advisor to the Mobility Councilor - Barcelona City Council - Barcelona - Spain

**Christoph Klaes** / Head of Light Rail & e-Bus of Siemens AG Mobility - Siemens - Erlangen - Germany

**Sonja Heikkilä** / Senior Advisor - Tekes the Finnish Funding Agency for Innovation - Helsinki - Finland

**Sebastien Sabatier** / Sales and Marketing - Thales Velizy - France

An integrated approach to transport is a key factor to improve the management of cities. As there is no one-size-fits-all solution, speakers sketched a range of strategies for efficient and integrated transport networks in cities like Amman, Valparaiso and Barcelona. They mainly focused on mobility enhancement options that go from commuting on foot, to gathering data from phone SIM cards to plan public transport. In the end, it became clear that decision makers are harnessing all the innovative thinking available, while businesses are developing interesting solutions to improve life in cities.

On the agenda of city administration is improving mobility, in spite of challenges like demographic growth, car dependence and aversion to shifting city planning paradigms. The emphasis now is put on walking, biking, public transport with advanced IT, as well as integrated transport (combination of public, private and biking for instance), and not on private car use. The private sector keeps up with the challenges by developing big and small-scale solutions such as highly efficient driver-less train systems, with broadband internet access for large-scale commuting, and small-scale solutions like tailored routes and asset sharing. In the end, government and businesses are working to enhance the overall experience of the user, and improve options and quality of life for citizens.

**“Congestion and difficulties in public transport are named by inhabitants as topic issue #1.”**

Christoph Klaes

## Parallel Session New approaches to traffic management

### Mobility



19/11/2015 15:00-16:15h

#### MODERATOR

**Sabine Flores** / Managing director - Kommunen in der Metropolregion Hannover Braunschweig Göttingen Wolfsburg - Hannover - Germany

#### SPEAKERS

**Naresh Kumar** / Chairman - New Delhi Municipal Council - India

**Frauke Fischer** / Project Manager - Berlin Agency for Electromobility eMO - Berlin - Germany

**Kaustubh Dhargalkar** / Associate Dean - Weschool - Mumbai - India

**Karl-Otto Schöllkopf** / ThyssenKrupp Elevator AG

**Li Li** / Senior Engineer - East China Research Institute of Electronic Engineering - Hefei - China

**Isabel Tejero** / Smart City Business Manager - ENGIE - Barcelona - Spain

How can new approaches to traffic management help cities improve mobility while keeping traffic impacts in check? Frauke Fischer started by highlighting that the Berlin Agency for Electromobility (eMO) has 100 projects underway on smart mobility in the region and many more in preparation. Among them, is electromobility, with 650 publicly accessible charging points in the German city.

**“Without traffic, cities would be the most sustainable place to live and work.”**

**Karl-Otto Schöllkopf**

Kaustubh Dhargalkar followed on by reminding us that it is crucial to reduce the real carbon footprint of

the automobile sector. Up to now, electric vehicle with zero tailpipe emissions seem to offer the greenest solution, but 83% of global energy requirements come from non-renewable sources. So, according to Dhargalkar, EVs are not a green option unless they draw electricity from renewable resources.

Karl-Otto Schöllkopf pointed out that drivers are spending up to three days a year stuck in gridlocks and that the cost of traffic for the economy in the UK is €5.3 bn/year. Then he mentioned the on-going trend in Super and Mega tall buildings and showcased the solutions developed by ThyssenKrupp to manage vertical traffic.

## Parallel Session

# Better cities through data

### Mobility



18/11/2015 17:00-18:00h

#### **MODERATOR**

**Marlo McGriff** / Product Manager - Google - San Francisco - United States

#### **SPEAKERS**

**Andrew Eland** / Engineering Director - Google - San Francisco - USA

**Berry Vetjens** / Business Director Urbanisation - TNO - Delft - The Netherlands

**Mahmood Rahmani** / Researcher - KTH Royal Institute of Technology - Stockholm - Sweden

Traffic in urban areas is at a critical point, with congestion contributing to lost time, wasted fuel, and overall increases in the cost of doing business. The session explored how Google began working with traffic research groups to improve urban mobility and how to get the most out of collected and analyzed data. Andrew Eland brought as an example a Google learning algorithm based on data sharing, to improve our mobility experience. Berry Vetjens explained how live data powered by Google can create mobility patterns and improve the efficiency and safety of traffic, emphasizing the benefits that can lead to potential cost savings.

Eland added that a differential privacy is applied to data derived from individuals' location history and analyzed by Google products to provide anonymity. Mahmood Rahmani illustrated the process of conducted research on Stockholm traffic using data provided by Google and also with the aid of a sophisticated sensor system. He emphasized how collected data can help get a better picture of traffic

issues and lead to solutions by implementing small changes and thus evaluating the feedback.

## Parallel Session

# Data solutions to improve urban mobility

### Mobility



19/11/2015 13:45-15:00h

#### **MODERATOR**

**Lluís Puerto** / Technical Director - RACC - Barcelona - Spain

#### **SPEAKERS**

**Gregory Blanc-Bernard** / Head of Digital Development Service - La Métropole de Lyon - France

**Rafael Requena** / Mobility Manager - Universitat Autònoma de Barcelona - Spain

**Josep Maria Deulofeu** / Director Divisió Transportes - Barcelona de Serveis Municipals, S.A. - Barcelona - Spain

**Silvan C. Rath** / CEO - Parktag GmbH - Berlin - Germany

**Thomas Hohenacker** / CEO - Cleverciti Systems GmbH - Starnberg - Germany

**Franziska Mayländer** / Marketing, PR, Communication - highQ Computerlösungen GmbH - Freiburg i.B. - Germany

**María Isabel Flores Varela** / Business Development Manager - Ally - Berlin - Germany

**Albert Isern** / CEO - Bismart / Barcelona - Spain

**Christian Oldendorff** / Owner, Co-Founder and CEO - ParkU - Verwaltung GmbH & Co. KG - Berlin - Germany

Transportation and mobility provide excellent illustrations of the potential of Big Data. The session revealed concrete examples of Big Data projects and solutions which have addressed significant mobility challenges. To start with, Gregory Blanc-Bernard presented Lyon's smart city strategy, working on more than 40 projects and spending more than €210 million. He made it clear that data is an innovation enabler but stressed that open data by itself is absolutely not sufficient to foster innovation, which needs public and private collaboration. Rafael Requena spoke about mobility patterns in the Universitat Autònoma de Barcelona.

Then Josep Maria Deulofeu showcased a traffic app for tourism bus parking. Silvan C. Rath, Thomas Hohenacker and Christian Oldendorff showcased three different applications that turn smartphones into parking sensors, so that the search for parking spaces has to do with data more than luck. Franziska Mayländer focused on public transport and wondered whether a simple app can have a positive effect on the environment. María Isabel Flores presented another app to use public transport more efficiently. Finally, Albert Isern shifted to Big Data and the Internet of Things, which enable the Barcelona City Council to gather real data about citizens and tourists.

## Parallel Session

# Mobility as a service

### Mobility



19/11/2015 15:00-16:15h

#### MODERATOR

**Sergi Marcén Lopez** / ICT & Mobile Industry Developer Manager - Government of Catalonia - Barcelona - Catalonia

#### SPEAKERS

**Jordi Cirera** / iCity Project Coordinator - IMI. Barcelona City Council - Barcelona - Spain

**Jordi Caus** / Head of new projects and external cooperation for alternative mobility - SEAT - Martorell - Spain

**Joan Viaplana** / Risks, Efficiency and Projects Director - SABA - Barcelona - Spain

**Jon Lewis** / Director of Strategy - Telensa - Cambridge - UK

The big debate about urban mobility according to Joan Viaplana is whether cities are a hub of industries and clusters of companies, or a living nucleus of inhabitants and collectivity. This conflict leads to the major problems associated with mobility such as traffic jams and pollution, since about 30% of car circulation in European cities is composed of individuals looking for parking spots. Jon Lewis added that mobility in smart cities also includes smart lighting solutions and building a smart network for parking systems. It requires standards, flexibility, real evidence of scale and a guarantee of supply from the partners for at least 30 years.

Jordi Caus sees the future of mobility as automated, connected, multimodal and shared. However, the actual problem is that many stakeholders are going there separately; the smart cities developing data and connectivity, the automobile industry working on interconnected cars, and smaller companies working

on lighting and parking solutions. A better alignment is sought in order to reach a zero cost connectivity solution. However, the barrier is actually the lack of standards in the system for an efficient alignment, pointed out Jordi Cirera.

***“We see car parks not only as part of the network but as a neuralgic nub of the multimodal system.”***

**Joan Viaplana**



## Parallel Session

# New startups that are disrupting smart cities by 4YFN

## Innovation & Startups



18/11/2015 13:45-15:00h

### MODERATOR

**Menny Barzilay** / CEO & Cyber Security Strategist - FortyTwo - Tel Aviv - Israel

### SPEAKERS

**Daniel Doctoroff** / CEO & President - Sidewalk Labs - New York - USA

**Ivan Caballero** / CEO - The Social Coin

What role do startups have in the current smart city market? Menny Barzilay started the session by asking the audience which common device or social media they use in their everyday lives, posing the question of how our digital world has been changed in the last ten years with new smartphones, Facebook and other mainstream networks. Daniel Doctoroff followed on introducing his current project called "Sidewalk Lab" and mentioning connectivity, reputation, location, sensing, computing power and fabrication as the pillars of the present and the basis of the future. By showing the example of the project of reimagining public telephones in NYC, Doctoroff also introduced the triple C model, aiming at finding the right balance among cities, community and commerce.

Ivan Caballero showcased the development of The Social Coin project, which stimulates people into doing acts of kindness in the place they live. In the end, speaking about the future of cities, the speakers believed that, in the next few years, cities will become testing labs for a wide spectrum of smart city initiatives.

**“Technology will disrupt the city, but will it make the city of the future greater?”**

**Daniel Doctoroff**

## Parallel Session

# How startups are innovating cities by 4YFN

## Innovation & Startups



19/11/2015 15:00-16:15h

### MODERATOR

**Menny Barzilay** / CEO & Cyber Security Strategist - FortyTwo - Tel Aviv - Israel

### SPEAKERS

**Beatrice Couture** / General Manager - InnoCité MTL - Montreal - Canada

**Simon Sylvester** / Chaudhuri / Managing Director - Global Futures Group - New York - USA

**Nick Searle** / Executive in Residence - ENTIQ - London - UK

**Bianca Dragomir** / Entrepreneurship Lead - Climate-KIC - Valencia - Spain

**Aldo De Jong** / Claro Partners

Menny Barzilay started the session by remarking that “being an entrepreneur is a state of mind, something that you are”. Beatrice Couture agreed and introduced InnoCité, MTL, a startup accelerator aimed at bringing together entrepreneurs and intrapreneurs passionate about developing a smart city. Simon Sylvester followed on with a presentation about networks for driving urban innovation. He also pointed out some global problems for startups, meaning limited access to capital, limited access to local talent, unsupportive legal frameworks and lack of opportunity to try new concepts. “Smart city startups don’t have the allure of Facebooks and Twitters,” he commented.

For the Internet of Things (IoT) companies, Aldo de Jong particularly pinpointed the need for bridging the physical and the digital. Bianca Dragomir said that customers are going to support a green economy, as the Volkswagen case showed recently. “Cleantech is not only nice to have, it is a must have,” she added. Finally, Nick Searle closed by saying that “we must really identify some of the drivers for corporate change and we must stay in front of what takes place there so that we can continue bringing innovation.”

**“Attention is the only currency that matters.”**

**Bianca Dragomir**

## Parallel Session 4YFN Awards Smart Cities Edition final

### Innovation & Startups



18/11/2015 13:45-15:00h

#### MODERATOR

**Menny Barzilay** / CEO & Cyber Security Strategist - FortyTwo - Tel Aviv - Israel

#### SPEAKERS

**Beatrice Couture** / General Manager - InnoCité MTL - Montreal - Canada

**Simon Sylvester- Chaudhuri** / Managing Director - Global Futures Group - New York - USA

**Nick Searle** / Executive in Residence - ENTIQ - London - UK

**Ziv Lautman** / Chief Marketing Officer - BreezoMeter - San Francisco - USA

**Jonathan Rodríguez** / CTO - smartcity.link - Barcelona - Spain

**Ian Alexander Burt** / Managing Director - Drive Smart - Madrid - Spain

**Ioustinos Sarris** / CEO - The City Game - Amsterdam - Netherlands

**Bianca Dragomir** / Entrepreneurship Lead - Climate-KIC - Valencia - Spain

**Aldo De Jong** / Claro Partners

**Pau Gargallo** / Computer Vision - Mapillary - Barcelona - Spain

The 4YFN Awards Smart Cities first edition was created to distinguish emerging companies that show a high impact mobile solution to enhance the wellbeing of citizens. It brought to the stage the best entrepreneurs and startups specializing in smart urban solutions based on mobile technologies. They were all able to pitch in front of the jury and the audience in order to be selected as the best startup of the 4YFN Awards Smart City 2015.

Mapillary, which was created as an alternative to the famous Google Maps Street View based on photos that users take and upload to the app, was the winner of the award. The company has survived as a free app after two years.

The other finalists were The City Game, a game that motivates the users to do good things for other people in order to improve our society- Smartcity Link, an app which communicates companies and city governments and makes them collaborate together to satisfy the needs of citizens- DriveSmart, an app that aims to be the first drivers community making them safe, social and sustainable, rewarding them and giving them feedback on how to be better drivers, and BreezoMeter, an air quality index app which rates the atmosphere of the cities using already-installed technology and shows where the next infrastructures should be placed in order to avoid air pollution as much as possible.

## Parallel Session

# Smart Regions, the case of the islands by AMETIC

### Workshop



17/11/2015 10:00-11:30h

#### MODERATOR

**Adolfo Borrero** / Chairman of the Smart Cities Commission of AMETIC - AMETIC - Madrid - Spain

#### SPEAKERS

**Jesús Ruiz Tutor** / Council Officer – Logroño City Council - Spain

**Juan Antonio Bermejo Domínguez** / Chief Technology Innovation Officer & GIS Technician - Cabildo Insular de la Palma - Santa Cruz de La Palma - Spain

**Gaetan Siew** / Chairman - State Land Development Company - Port Louis - Mauritius

**Nicolás Barrios** / Director de Proyectos del equipo de Destinos Turísticos Inteligentes - Segittur - Madrid - Spain

The EU is fully invested in the development of Smart Regions and promoting municipalities to join efforts for common smart city goals. In the case of the Islands, the Spanish Ministry of Industry, through its agency Red.es, has launched a singular project initiative with €30 million euros to the islands to get at least three leading projects. Adolfo Borrero, from AMETIC, the ICT Spanish association, started the session by promoting the concept of smart communities and enhancing the need for cities to “join forces”. Jesus Tutor explained the Logroño City Hall experience to improve public services with ICT and the trial and error experience since 2011.

Juan Antonio Bermejo detailed La Palma’s historical problems as an island and presented the ISSLand project, a smart platform with IoT infrastructure specializing in handling emergency situations and with open-data access. Gaetan Siew presented the case of Mauritius and summarized what he wanted to say in one word: resilience. Resilience to the economy, to climate change and natural disasters to improve value creation, job creation and quality of life. Nicolas Barros closed the session with a detailed description of El Hierro’s infrastructure that defines a Smart Tourist Destination.

**“We are small, but scale is not the issue anymore.”**

Gaetan Siew

## Parallel Session

# Financing urban infrastructures towards a smart and sustainable city by BID

## Workshop



17/11/2015 11:45-13:00h

### MODERATOR

**Ellis J. Juan** / Emerging and Sustainable Cities Initiative General Coordinator - Inter-American Development Bank - Washington DC - USA

### SPEAKERS

**Kristtian Rada** / International Finance Corporation (IFC) of the World Bank

**Arturo Buenaventura Pouyfaucón** / VP Strategy and Corporate Development - Abengoa - Seville - Spain

**José Antonio Teixeira** / Innovation Director, Santander City Council

**Stephen Goldsmith** / Professor - Harvard Kennedy School, Chicago, IL - USA

The greatest challenge our cities face upon making the transition to a smart and sustainable model a reality, is access to financing. Ellis J. Juan started the session stating that finding a smart way to manage a city poses the greatest challenges. Kristtian Rada elaborated on the IFC plan to help finance pipeline projects that will upgrade urban infrastructures of Latin American countries like Colombia, Mexico, Brazil, Peru and Chile. José Antonio Teixeira analyzed the smart city model to pinpoint the services to be improved and emphasized the role of public administration.

Stephen Goldsmith pointed out that how we bundle infrastructure investment is really critical and emphasized that the best financing model is a combination of public and private. In order to reach operational excellence, he encouraged everyone to seek high level consultancy. Finally, Arturo Buenaventura Pouyfaucón spoke about Abengoa's capacities to manage different water related issues and echoed Goldsmith in underlining that public-private partnerships are the best financing model.

***“We are increasingly defining the platforms for smart cities as critical pieces of infrastructure.”***

Stephen Goldsmith



## Parallel Session

# Solving problems through open data by World Bank

### Workshop



18/11/2015 13:45-15:00h

#### **SPEAKERS**

**Natalia Carfi** / Open Government Coordinator - General Direction for Innovation and Open Government - Buenos Aires City - Argentina

**Arturo Muento Kunigami** / Senior ICT Policy Specialist - The World Bank - Washington - United States

Natalia Carfil and Arturo Muento Kunigami, started the session by giving a basic explanation about the open data concept, which implies collaboration, participation and transparency. They also underlined that any problem a city faces can be alleviated, if not solved, through open data. Then they encouraged participants to form groups to think about what kinds of issues currently tackled by cities can be solved through data. As Muento pointed out, there was no correct answer. Then, after sharing the problems chosen by different groups, Carfil explained a similar experience of group dynamics carried out in Buenos Aires as well as a hackathon event where prototypes were made. Finally, participants had to think about how to finance open data projects. Muento closed the session by emphasizing that governments should think about 'killer databases' instead of 'killer apps'. He insisted that "databases can actually help solve problems".

## Parallel Session

# How cities promote and foster innovation, leveraging IoT and data by Future Cities Catapult

## Workshop



18/11/2015 15:00-16:15h

### MODERATOR

**Peter Madden** / Chief Executive - Future Cities Catapult - London - UK

### SPEAKERS

**Steve Leonard** / Executive Deputy Chairman - Infocomm Development Authority of Singapore (IDA) - Singapore

**Matthew Pencharz** / Deputy Mayor for Environment & Energy - Greater London Authority (GLA) - London - United Kingdom

**Minerva Tantoco** / Chief Technology Officer - City of New York - USA

The workshop focused on how to sow seeds of innovation in modern cities where data, security and privacy issues are the key. Steve Leonard explained that Singapore is working on the 'smart nation' concept, involving startups, risk capital, universities, corporations and government, to tackle the most difficult problems of the smart city.

Matthew Pencharz spoke about how London is managing population growth using data, and how the city is building a sense of data-led innovation, promoting active engagement of communities outside City Hall through regular blogs about smart technology, predictive modeling and data science.

the government. She highlighted that PPP, problem-based challenges and public prizes are a great way to encourage innovation and engage citizens on how cities should innovate. As an example, she mentioned a 'call for innovation' to solve the digital divide in NYC, resulting in 69 ideas from 52 sources in 11 weeks, to be now tested out through neighborhood innovation labs and challenges. After the presentations, Madden divided the room into two groups to reflect on and enrich the discussion.

***“Innovation by definition doesn't happen in a bubble.”***

**Minerva Tantoco**

Finally, Minerva Tantoco focused her remarks on how to innovate and encourage innovation within

## Parallel Session

# Urban platforms - connecting the data and the dots within cities

## Workshop



18/11/2015 17:00-18:00h

### CHAIR

**Graham Colclough** / UrbanDNA

**Colette Maloney** / European Commission

### SPEAKERS

**Alberto Bernal García** / Business Development Manager, Smart Cities, - Indra

**Larissa Romualdo Suzuki** / PhD Candidate in Software Systems Engineering - UCL/Imperial - London - UK

**Jordi Cirera** / iCity Project Coordinator - IMI, Barcelona City Council - Barcelona - Spain

**Bart Rosseau** / Head of Data and Information Management - Stad Gent - Belgium

Graham Colclough started the session by affirming that the discussion about smart cities is not about technology anymore, but about “data, services and value”. Then Colette Maloney introduced the EU urban agenda and highlighted that the amount of money available to bring it forward is €15 billion. “Smart cities will be one of the priorities of the EU urban agenda,” she insisted. Maloney also explained the European Innovation Partnership (EIP) on Smart Cities and Communities that launched an initiative on Urban Platforms. Then Jordi Cirera gave an IT point of view about this technology and noted that the biggest challenge now is designing from the bottom-up and anticipating some needs.

Bart Rosseau stressed that “data is just data”, so it has to be correlated with other data from other sources to be useful. He also highlighted that it has to be treated as a strategic asset. Larissa Romualdo Suzuki discussed on the requirements for an urban platform to avoid failures and help with platform-to-platform integration. Finally, Alberto Bernal wondered whether an urban platform is an IoT platform. “We still need to define what we need,” he concluded.

**“We cannot allow the industry to decide what data we need.”**

**Bart Rosseau**

## Parallel Session

# Innovations for Aging populations in Smart Cities by JEUIPSTE

## Workshop



19/11/2015 09:30-11:00h

### MODERATOR

**Amit Prasad** / Technical Officer, Urban Health - WHO Kobe - Japan

**Christin Pfeiffer** / INSME (International Network for SMEs) - Italy

**Stijn Lambrecht** / Japan EU Center for Industrial Cooperation

### SPEAKERS

**Zhiwei Luo** / Graduate School of System Informatics - KOBE University - Japan

**Fernando Alonso López** / Director - Aceplan - Barcelona - Madrid - Spain

**Barbara Vallespin** / Mobile World Capital - Barcelona - Spain

**Andrea Bartoli** / Project Manager - WorldSensing S.L - Barcelona - Spain

**Hiroyuki Maeomichi** / NTT Communications Japan

The aging of the population is a phenomenon that is affecting the majority of developed countries around the world and will soon affect developing economies too. Christin Pfeiffer started the session by stressing that we need, more than ever, to think about healthcare in an innovative way. Stijn Lambrecht brought further explanations about the JEUIPSTE project, an EU-funded project for the promotion, enhancement and development of Europe-Japan cooperation in Science, Technology and Innovation, and insisted on the need for collaboration to move forward. Amit Prasad spoke about how living in cities impacts health.

**“Cooperation of talents  
from different angles will take  
us higher.”**

Stijn Lambrecht

Barbara Vallespin stated that big data is helping citizens to find the right personalized medicine and improving the decision-making process. Yet privacy and security are still challenges to be overcome. Hiroyuki Maeomichi showcased an app to motivate seniors to go out and walk more. Andrea Bartoli pointed out the challenges within the IoT market, which are mainly related to technology, business value and acceptance. Zhiwei Luo presented different apps related to health and suggested adopting a new acronym: IoHP, where HP stands for Health Promotion. Finally, Fernando Alonso presented ACCEPLAN, a professional project for the research, development and promotion of accessible environments.

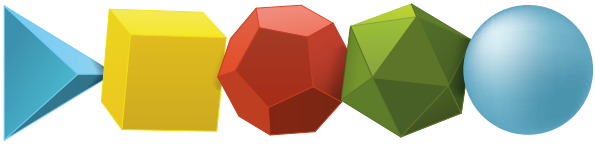


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