



13<sup>th</sup> to 15<sup>th</sup> November 2012  
www.smartcityexpo.com



The second edition of the event will feature 300 international speakers

## The future of smart cities will be designed in Smart City Expo World Congress 2012

**Cities will be at the centre of world development in the next few decades and will be home to the majority of the planet's inhabitants. How new towns and cities are built and existing ones are transformed will be a key aspect in the future of humanity. At Smart City Expo World Congress, the leading world event on smart cities, leading urban experts, the most revolutionary thinkers and the main companies from the sector are tackling this challenge from November 13<sup>th</sup> to 15<sup>th</sup> 2012.**

In order to tackle the challenges of urban transformation, cities will have to adapt to the forecast demographic evolution and manage existing resources, guaranteeing the quality of life of their inhabitants and driving economic development. This involves combining the ideas, resources and tools of disciplines such as mobility, ICTs, the environment, energy efficiency, town planning, knowledge economy and demographic management.

317 internationally renowned speakers will set forth the guidelines for this urban future in the congress's sessions and round tables, alongside 140 companies that will showcase their solutions in the expo and 73 cities that will provide their acquired knowledge and experience by presenting the projects they have undertaken.

The international scope of Smart City Expo World Congress has meant that various countries have organised official delegations to visit the event in search of the most appropriate solutions for their cities. The list includes delegations from various emerging countries, such as Brazil, China, Colombia, India and Malaysia, which are recording big urban migratory movements and which, in the next few years, will have to build dozens of mega cities or transform existing ones, and from other countries, such as Argentina, Denmark, Israel, Japan and the United Kingdom.

For Ramón Roca, co-President of Smart City Expo World Congress *"Smart City Expo World Congress has already become the sector's benchmark event and a meeting point for public administration heads, experts, professionals from different spheres and companies prepared to source practical solutions that enable them to understand and drive the development and working of smart cities"*.

*The show will bring together 140 companies, 317 speakers and 73 cities from the five continents*

*In Smart City Plaza, the show is replicating a small section of a city fully equipped with the latest available technologies*

*The Open Innovation Marketplace will put large corporations and investment funds in touch with innovative companies*

Roca added *"the construction of smart cities is a collective commitment, in which we must all be involved. Collaboration between the different players, both companies and public bodies, is essential if we want smart cities to be a reality in the near future"*.

The co-President of the Congress and deputy Mayor of the Barcelona City Council's H abitat Urbano, Antoni Vives, said *"it is an international benchmark event, which positions Barcelona as the smart city capital, in the same way we are the mobile world capital"*. According to Vives, *"far beyond turning Barcelona into a meeting point for companies and leaders from around the world, the congress will serve to offer business opportunities to small local firms and reveal the projects we are already developing in the city and that, on more than one occasion serve as inspiration to other cities all over the world"*.

The deputy Mayor also said *"we have to get down to work for the future of our cities in order to be able to launch, during the congress and through other cities, big companies, universities and research centres, the City Protocol Society through which to share globally knowledge on how to proceed so that cities are more habitable, the quality of life of their inhabitants is improved, they are more efficient and administrations manage them better in the immediate future"*.

The second Smart City Expo & World Congress, which will highlight technology and energy, will reflect this diversity of disciplines in its congress programme that will be structured around 9 topics: Energy, Technology and Innovation, Smart Society & Collaborative City, Environment, Town Planning, Mobility, Economy & Governance, Emergency & Security, Smart GEO; the latter two are new to this year's programme.

The list of keynote speakers reflects the multi-disciplinary nature of smart cities and includes Carlo Ratti, Director of the SENSEable City Lab, Massachusetts Institute of Technology; Kenneth Berlin, lawyer specialising in the environment and advisor on the subject to US President Barack Obama; Dan Hill, coordinator in design of the Finesa Foundation for Innovation, Sitra; Charles Landry, economist specialising in urban development and founder of Comedia; Robert Puentes, specialist in infrastructures and urban mobility at the Brookings Institution, New York; Thomas Barrett, Director of technical services and financial advice at the European Investment Bank; John Moore, analyst and founder of Government in the Lab; and Ricky Burdett, architect specialised in Urban Planning and Professor at the London School of Economics, among others.

#### **Boosting environmental entrepreneurship**

One of this year's new features will be the Smart City Open Innovation Marketplace (OIMP) created to enable and promote contact between large corporations, involved in the construction and design of smart cities, and entrepreneurs, SMEs and technological and research centres that work on developing urban solutions and technologies.

The 155 registered companies from Argentina, Denmark, Spain, Finland, France, Italy, Poland and the United States will be able to meet with representatives from technology purchasing divisions of large multinationals to explain their ideas and projects and try to get the investment necessary to carry them out.

The list of companies includes the technology purchasing divisions of large multinationals, such as Accenture, Aqualogy, Cisco, Enel-Endesa and Ferrovial, as well as the investment funds Active Capital Partners, American Industrial Acquisition Corporation, Baring Private Equity Partners, Compas Private Equity, EIX Technova, HighGrowth Partners and Saba Accel.

#### **The smartest street**

Another important new feature of the second smart city summit will be the Smart City Plaza. This new space, created to show that smart cities are already a reality, will allow participating companies to show their technologies in a real time, 1,200-square metre setting that will replicate a small

section of a city, where some of the new technologies available to us today have immediately transformed cities through the installation of interacting smart sensors and devices.

From a telepresence cabin to car parks with sensors that allow drivers to reserve a place when they enter a city, including water iPhone-controlled water management... Visitors to this space will get an insight into how these innovations will lead to improvements in citizen's quality of life and help reduce the environmental impact of human activity and the costs of use and management of services

#### **A new market**

The transformation of current cities into smart cities is not only an objective necessity from the environmental and economic standpoint if we wish to guarantee the viability of our society but also offers a new business opportunity for large and small companies in a host of sectors. Multinationals such as IBM, Cisco, Accenture and Ferrovial have created specific divisions that develop products and solutions for urban transformation.

This new smart city market has great growth potential and, according to the calculations of Cisco Systems in 2010, the potential business value of smart cities could reach 1.2 billion Dollars by 2020. In this sense, IBM estimates that ICT business linked to smart cities will come close to 10,000 million Dollars in the next three years; while, in 2011, Ferrovial calculated that Spanish city councils with over 50,000 inhabitants could outsource services to the value of 10,000 million Euros.

The second Smart City Expo & World Congress will be held from the 13<sup>th</sup> to 15<sup>th</sup> November 2012 in the Fira de Barcelona Gran Via Exhibition Centre and will host some of the sector's leading companies, such as Abertis Telecom, Accenture, Aqualogy, Cisco, Enel-Endesa, FCC, Ferrovial, IBM, Indra, Philips, Ros Roca, Schneider Electric, Telefónica, Thales, Urbaser and Wonderware.

**Barcelona, November 2012**

**Folc Lecha**  
93233 3555  
*flecha@firabarcelona.com*



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Delegations from all over the world are coming to Barcelona to design the transformation of their cities

## The hub of smart cities

The world map of smart cities is getting bigger and bigger and includes names from each of the five continents: Birmingham, Bogotá, Boston, Buenos Aires, Copenhagen, Durban, Fukushima, Guangzhou, Haifa, Helsinki, Kansas City, Nueva Delhi, Nueva York, Rio de Janeiro, Santander, Shenzhen, Sydney, Tokyo, Vancouver, Vienna, Yokohama and Zapopan. Smart City Expo World Congress will bring together 73 cities that have chosen the Barcelona summit to learn from one another and explain to the world the details and advances of their smart programmes.

The role that these cities play in an event like Smart City Expo World Congress is crucial, since they are not only the recipients of the changes but also the main precursors of the transformations. For this reason, the experiences accumulated by those cities, which have already implemented smart initiatives, are decisive. Wishing to capitalise on this expertise, the event has created a specific area in the congress, in which the latest projects implemented successfully in different parts of the planet will be showcased.

The experiences of the European Union and countries such as Japan, China, the United Kingdom and the United States will be the subject of a series of papers and symposia entitled City & Country Cases. The list of keynote speakers includes Colette Maloney, Head of the Smart Cities and Sustainability Unit, European Commission; Shinji Yanagisawa, Councillor, Japanese Regional Development Bureau; Peter North, Senior Manager, Smart City Programme, Greater London Authority; and Shao Weimin, Deputy Mayor of the Chinese city of Wuhan, among others.

### International Delegations

The international scope of Smart City Expo World Congress has meant that various countries have organised official delegations to visit the event in search of the most appropriate solutions for their cities. Argentina, Denmark, Israel, Japan and the United Kingdom have also sent institutional representatives to Barcelona, who will make contact with exhibitors and explore the new technologies and solutions they find there.

Among them, is a delegation from Fukushima, Japan, afflicted by the nuclear catastrophe caused after a tsunami hit the Japanese coast in March 2011. This Japanese prefecture is committed to an integral change and will come to Barcelona in search of new ideas and proposals that will allow it to face the future in a more sustainable and innovative way. The list of representatives from Fukushima includes the Head of Renewable Energies, Seiichi Suzuki, and the Director of Planning and Regional Development, Shigeki Nishiyama.

Emerging countries are also coming to Barcelona in search of urban innovation and know-how, including delegations from countries such as Brazil, China, Colombia, India and Malaysia, which are recording big urban migratory movements. Many of these countries will have to build or rehabilitate dozens of new cities in the next few years. India is planning to build six mega cities before 2016: Navi Mumbai, Dholera, Manesar-Bawal, Indore-Mhow, Dighi, and Nasik-Igatpuri, all in the Delhi-Mumbai Industrial Corridor. Similarly, in the next 4 years, the Chinese Government will build various cities around Beijing, in the Tongzhou, Shunyi, Fangshan and Changping districts, all of them bigger than Barcelona, of 150 km<sup>2</sup>.



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The show is building an actual-scale city equipped with the latest urban technologies

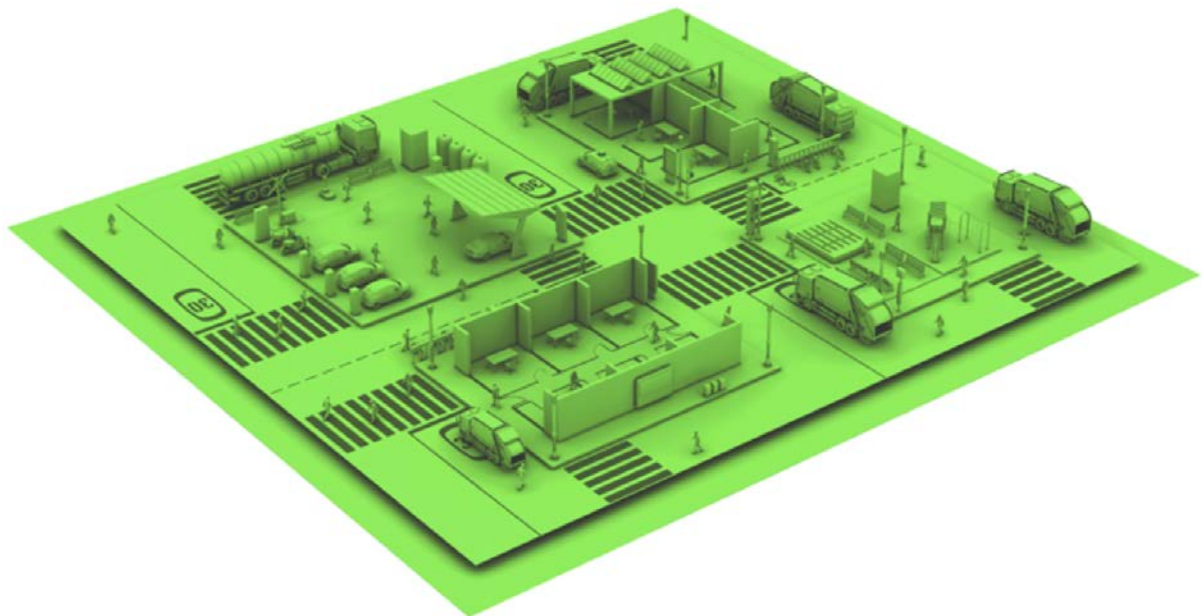
## The smart city becomes a reality in Smart City Plaza

**Are smart cities science fiction? The answer is clearly no, they are not and the proof can be found in Smart City Plaza. Technologies that allow current cities to transform their infrastructures and services to make them more habitable and sustainable are not technological pipedreams but tangible realities. Smart City Expo World Congress has built a small section of a city, in which visitors will be able to walk around real smart streets equipped with a fair number of fully functioning urban technologies.**

Smart City Plaza has a large variety of sensors and devices that interact with each other and with citizens, providing real time information about the city and different services related to mobility, energy consumption, communications and health. Visitors to the streets and buildings will be able to discover to what extent these innovations can improve citizens' quality of life.

The list of devices includes a telepresence cabin, car parks with sensors that allow drivers to reserve a place when they enter a city –it is calculated that a third of fuel consumed by automobiles is used looking for a parking space-, street furniture elements, such as water fountains that citizens can control with their smartphones, and bus stops that inform citizens of waiting times directly via their mobile phones.

The reduction in the environmental impact of human activity and in the cost of use and management of services is another key element of this space. An example of this is lighting by means of fifteen smart street lamps fitted with LED light bulbs and presence sensors, which will



show how street lighting can be adapted to the needs of each moment, switching itself off if the street is empty and turning itself on if a pedestrian comes along.

Mobility and its different alternatives will also be featured at Smart City Plaza. Electric and hybrid vehicles and different charging systems –including fast recharging points and other solar-powered ones– will be present in one of the sectors of this small smart city, in their two and four-wheel versions. Lastly shared bicycles (traditional and electric) will also fill the streets in this Plaza.

With 1,200 square metres and four blocks that replicate different areas of a city, such as an official building, a garden zone, a parking zone and an office building, Smart City Plaza shows accurately what any city in the world could be like today. Smart City Expo World Congress has designed and built this space with the collaboration of over a dozen leading companies working in the sphere of smart cities: Abertis Telecom, Accenture, Aqualogy, Cisco, Enel-Endesa, FCC, Ferrovial Servicios, IBM, Indra, Ros Roca, Schneider Electric, Thales, Urbaser and Wonderware and the Barcelona City Council.



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The event has created a forum to promote innovative initiatives in the Smart Cities sector

## Smart City Expo World Congress invests in entrepreneurship in the Open Innovation Marketplace

Cities will be at the centre of world development in the next few decades and making them more habitable is a challenge for all: citizens, administrations and large and small companies. In order to promote the most innovative initiatives, Smart City Expo World Congress, the leading world event on smart cities, has created the Smart City Open Innovation Marketplace (OIMP) together with the Barcelona Mobile World Capital, to promote contact between large corporations and SMEs and technological and research centres that work on developing urban solutions to drive projects with the most potential.

A total of 155 projects from Argentina, Denmark, Spain, Finland, France, Italy, Poland and the United States have been presented. Of these, 36% focus on Technology and Innovation; 14% on Energy; 13% Collaborative Cities and Smart Society; 12% on Mobility; 10% on the Environment; 4% each on Emergency Management, Smart Geo and Urban Planning, and finally 3% on Governance..

The participants will be able to meet with representatives from technology purchasing divisions of large multinationals, such as Accenture, Aqualogy, Cisco, Enel-Endesa and Ferrovial as well as investment funds, such as Active Capital Partners, American Industrial Acquisition Corporation, Baring Private Equity Partners, Compas Private Equity, EIX Technova, HighGrowth Partners and Saba Accel, to explain their ideas and projects and try to get the investment necessary to carry them out.

The OIMP has been led by the Barcelona Mobile World Capital. The project to turn the city of Barcelona into the global capital of mobile technologies has a program named mSmart City specifically focused on developing solutions in the urban area and wanted to create a space to foster mobility focused innovation within the smart city sphere and has selected the participating projects according to their market potential and their ability to focus on the major challenges that cities are currently facing.

### A networking hub

The meetings will be held in a specially designed networking space: the Business Hub. "With this initiative, we want to support small companies, a segment that, despite the fact that they design very creative city management solutions, often lack the financing needed to access global markets", explained Lluís Gómez, Director of the event.

This space will also host other activities focused on the promotion of business contacts. Among them are the Business Bridges, meetings between leading companies and some of the International delegations visiting the show as those from Argentina, Colombia, Denmark, India, Israel, Japan, Malaysia and China, the latter with over 100 delegates from different cities and institutions of the Asian giant.





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## Contextual Data on smart cities

### Energy

- Cities occupy 2% of the Earth's surface but consume 75% of the energy generated.
- 35% of the energy produced is lost in transport and distribution.
- Spanish towns of over 50,000 inhabitants spend over 450 million euros to Public Lighting and 972 million on actions linked to energy efficiency.
- After 12 weeks of having installed smart meters, Birmingham managed to reduce 60% of the electricity bills of its families and lower its CO<sub>2</sub> emissions by 12 tons.

### Environment and Natural Resources

- Cities are responsible for 80% of all greenhouse gas emissions.
- Barcelona Town Hall's cleaning contract (1,994 million euros for an 8-year period) accounts for 63% of spending in the area of the Environment and 15% of the total Town Hall budget.
- More than half of the waste generated in Spain (53% - 12 million tons) is not recycled and ends up in dumps.
- Spanish towns of over 50,000 inhabitants spend over 1,600 million euros on Collection and Treatment of Solid Urban Waste and more than 1,100 million on road cleaning.

### Transport and mobility

- In 2030, if the current transport model continues, the EU will have used up its CO<sub>2</sub> emissions quota for private automobiles alone.
- According to the study "Gridlock and Growth: The Effect of Traffic Congestion on Regional Economic Performance", eliminating traffic congestion in cities could boost productivity for workers by as much as 30%.
- The Texas Transportation Institute estimated that, in 2000, the 75 largest metropolitan areas experienced 3.6 billion vehicle-hours of delay, resulting in 21.6 billion litres in wasted fuel and \$67 billion in lost productivity.

### Information and Communication Technologies (ICT)

- Last October, the number of wireless connections in the USA exceeded the number of



inhabitants: 327.6 million.

- At the start of 2011, there were 2,095 million Internet users in the world.
- In 2015, the gigabyte equivalent of all movies ever made (7.3 petabytes) will cross global IP networks every 5 minutes.

## **Government and Financing**

- In Spain, 84.1% (6,821) of towns have fewer than 5,000 inhabitants.
- Spanish towns of over 50,000 inhabitants will be able to outsource services to the value of 10,000 million euros in projects related to smart cities.
- 52% of Spain's population lives in 145 cities, which manage 57% of total Town Hall resources, equivalent to 29,000 million euros.

## **Town Planning**

- According to the United Nations, 75% of the world population will live in cities in 2050.
- India is planning to build 6 mega cities larger than 369 km<sup>2</sup> in the next 5 years (Barcelona has an area of 102 km<sup>2</sup> and New York 790 km<sup>2</sup>).
- From 2000 to 2005, China's completed urban areas rose from 22,439 km<sup>2</sup> to 32,521 km<sup>2</sup> with the density of urban population increasing from 442 per km<sup>2</sup> to 870 per km<sup>2</sup>.