



**Smart society for innovative
and sustainable cities**

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Report 2011



Smart society for innovative and sustainable cities

29 November – 2 December





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Smart City Expo World Congress

Barcelona , 29 November – 2 December 2011



- Every journey begins with that first step, a first movement towards a goal; sometimes an ambitious goal, and on other occasions an extraordinary one.

We know we must change the way we consume, the way we interact, the way we live with each other. Our challenge is to make our planet a place for living a better life in the future, making the most of our resources in a responsible manner. Today, we know that to get to this future we envision our cities must be transformed first; we need to change them through technology and through innovation, and only then will our cities make our world progress.

- So today we need to think about the cities of tomorrow. We need to think about cities that will integrate all the available concepts, tools and resources in areas such as mobility, environment, energy efficiency, urban planning, the knowledge economy and population management to ensure exceptional and sustainable urban development for their inhabitants. A new tomorrow with a brand new name: smart cities.

- A project of this magnitude requires a combined effort; it needs new talent, the exchange of experiences and the knowledge of experts, researchers and businesses, but most of all it needs the contribution from the cities themselves and their managers. Everyone united in undertaking the same journey, on which major cities and small towns, and both advanced and developing countries, share the same goal.

Today we have taken that first step; it is called Smart City Expo & World Congress.



1. World Congress

The most outstanding Smart City projects



Smart City World Congress

The Smart City World Congress 2011 brought together key **thinkers and the leaders of the most innovative initiatives in the world**. It was a unique experience that featured networking opportunities, a showcase of real-life scenarios, and an overview of the latest solutions on the market.

All the key topics related to Smart Cities were covered: Energy and Environment, Urban Planning, Governance and Funding, Living and People, Mobility and Technology, with topics structured around **three major thematic axes: Liveable Cities for People, Integrated Vision and Sustainable Cities**.

In an exciting program, some 300 speakers from 30 different countries shared their knowledge, experience and vision with a highly engaged audience: city managers, technicians, planners, engineers, town planners, research leaders, CEOs, economists, entrepreneurs, thinkers and intellectuals. There was **an inspiring exchange of a broad scope of views, thoughts and opinions**.



Four powerful ideas filtered through the Congress

The need for new models: New industrial and ecological revolutions; Self-sufficient neighbourhoods.

Jeremy Rifkin talked about the Third Industrial Revolution, an ecological and fundamentally economic revolution: combining the potential of the Internet model with the production and distribution of renewable energy. Michael Braungart reminded us of the importance of mimicking nature and changing from being “less bad for the environment” to “being good for the environment”.

A Smart Society, a collaborative city.

Smart Cities require a Smart Society. Collaboration between different city stakeholders: not only the public and private sector but also people, entrepreneurs, research centres and citizens through peer-to-peer services. This idea was emphasized by both Adam Greenfield and Anthony Townsend, who talked about the city as a place where people live and about the need to use all of their available talent.

Technology to get an integrated vision.

Sensors, the Internet of Things, Big Data or even data collected by citizens' mobile phones can help to get a holistic vision of a specific event or piece of information and to know what is happening at any time: relevant information for the public administration and business sector to improve the efficiency of their services.

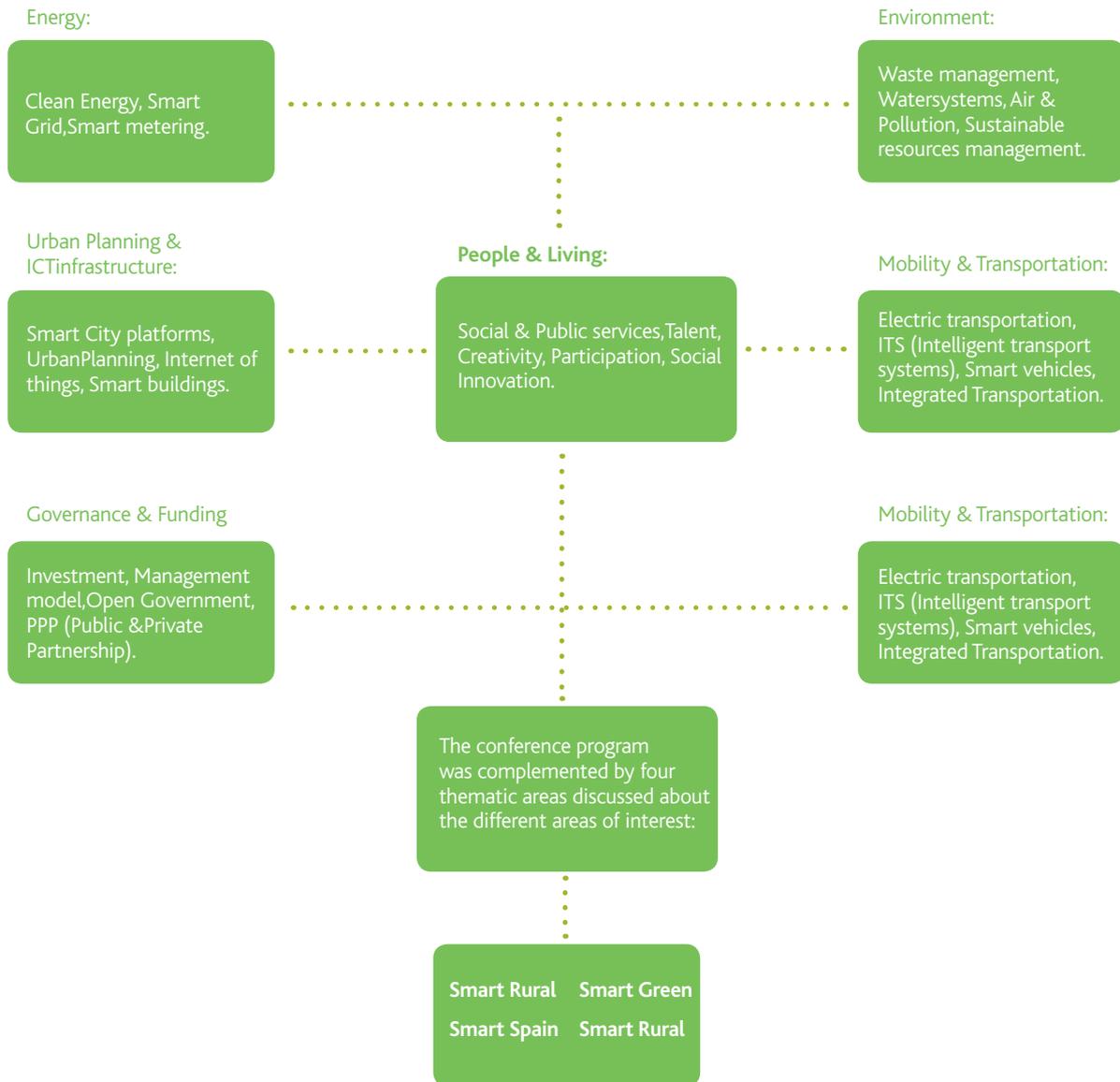
Innovating management models.

Technology is necessary to make far-reaching changes to improve quality of life, but it is not enough. Communities must also innovate with management and governance models: public and private collaboration, complexity of stakeholders and services. Abha Joshi Ghani talked about the importance of making right decisions and managing interdependencies by maximizing efficiencies and synergies.

The Smart City World Congress

Innovation and technology are the bedrock of a smart society, which requires people, companies and governments to be prepared to face important 21st century challenges: climate change, high consumption of non-renewable energy sources, economic development, increasingly dense populations, and obsolete infrastructures.

Through talks, round tables, and side sessions, the congress sparked debate on the key elements in each of the topics around which the program was structured.



Tuesday · November 29th

9:00 h Keynote:

"Senseable city" - Carlo Ratti

Director: SENSEable City Laboratory MIT

9:30 h Plenary Session:

"An innovative and integrated vision"

Jonathan Wareham **Information Direction Management Department** (ESADE), Jordi Botifoll **Senior Vice President EMEA** (CISCO), Ángel David García **Head of M2M Strategy and Alliances** (Telefónica), Bruno Berthon **Worldwide Sustainability Director** (Accenture), Donald Clark **Vice President** (Invensys), Tobías Martínez **CEO** (Abertis Telecom).

Moderator: Joan Majó, Chairman of Knowledge Circle.

14:30 h Keynote:

"A Planet of Civic Laboratories: Bottom-Up Innovation for the Smart City"

Anthony Townsend

Research Director at Institute for the Future

15:00 h Plenary Session:

"Smart Cities: An opportunity for liveable cities"

Anne Altman **IBM General Manager** (Global Public Sector Executive), Adam Greenfield **Founder of Urbanscale**, Joan Clos **Executive Director** (UN-Habitat), Rosa M^a García **CEO** (Siemens España), José Luis Marín **CEO** (ENDESA Red).

Moderator: Alfons Cornella, Infonomia

Thursday · December 1st

9:00 h Keynote:

"Third Industrial Revolution"

Jeremy Rifkin

President, Foundation on Economic Trends, USA

9:45 h Plenary Session:

"Achieving sustainable cities"

Michael Braungart **Professor at Erasmus Univesity Rotterdam and Uni Twente**, Tetsuya Nakajima **Deputy Executive Director** (City of Yokohama), Jordi Payet **Director General Area Mediterráneo y Norte África** (FCC), Group Santiago Olivares **CEO** (Ferroviai Servicios), Enric Ruiz-Geli **Director Cloud 9**, Juan Antonio Guíjarro **General Director** (AGBAR Group).

Moderator: María Teresa Lara, Diputada del Congreso.

11:45 h Keynote:

"Smart Cities and Communities"

Tudor Constantinescu

Directorate-General for Energy, European Commission

15:15 h Plenary Session:

"Sustainable energy"

Lew Fulton **International Energy Agency**, Livio Gallo **CEO** (Enel Distribuzione), Enrique Valer **Country President Iberia & South America** (Schneider Electric), Daniel López Jordà **Director General** (Gas Natural Fenosa).

Moderator: Pedro Nueno, IESE

Wednesday · November 30th

9:00 h Keynote:

"The City Protocol" - Vicente Guallart

Chief Architect, Barcelona

"City, Atoms, Bits" - Neil Gershenfeld

Center of Bits and Atoms - MIT

9:45 h Plenary Session:

"Challenges involved in designing and transforming the city"

Héctor Lostrí **Vice Secretary of Planning of the Autonomous City of Buenos Aires**, Gunter Pauli **Founder of Zero Foundation**, Nader Tehrani **Head of the Department of Architecture** (MIT), Ismael Fernández Mejía **President of ISOCARP**, Partrick Adiba **CEO ATOS IBERIA** (Olympics @ mayor events).

Moderator: Edwin Heathcote, Architecture and Design Critic for the Financial Times.

14:45 h Keynote:

"How do Smart Cities Also become Successful Cities?" - Greg Clark

Senior Fellow Urban Land Institute

15:15 h Plenary Session:

"Smart City Governance Models"

Paul Tilsley **Deputy Leader of Birmingham City Council**, Mildred Warner **City and Regional Planning** (Cornell University), Abha Joshi-Chani **World Bank**, Manuel Ausaverri **Director Smart Cities** (Indra).

Moderator: Germà Bel (University of Barcelona)

Friday · December 2nd

9:00 h Keynote:

"The new Mobility Agenda: Come argue with me" -

Eric Britton

Founder & CEO - EcoPlan Internacional

9:30 h Plenary Session:

"Urban mobility: achieving social efficiency"

Pan Haixiao **Researcher in transport planning** (Tongji University), Shangai Robert Cervero **Institute Director Urban and Regional Development at the Transportation Center** (Berkeley), Robin Chase **Funder & CEO** (Buzzcar), Timothy Papandreu **San Francisco Municipal Transformation Agency**, Peter Chamley **ARUP (Global Infrastructure Practice Chair)**, Ger Baron **Amsterdam** (Innovative).

Moderator: Robert Stussi, APVE and Former AVERE/WEVA President, Mobility Consultant.

- ICT basics / Mobility
- Living & People / Environment
- Urban Planing
- Governance & Funding
- Energy

Speakers



Michael Braungart

A German chemist, researcher, academic and author who advocates the "Cradle to Cradle" concept, which advocates that humans can make a positive instead of a negative environmental impact. Braungart calls for the transformation of human industry through ecologically intelligent design.



Dr Lewis Fulton

Senior Transport Energy Analyst who heads up the transport technology team in the Energy Technology Policy Division (ETP) of the International Energy Agency (IEA). His focus has been on modelling and economic analysis of transport/energy sustainability and policy.



Robert Cervero

Professor of urban planning at the University of California, Berkeley and a frequent advisor and consultant as one of the world's foremost authorities on sustainable transportation systems and urbanism. He serves on the Intergovernmental Panel on Climate Change (IPCC).



Prof Neil Gershenfeld

Director of MIT's Center for Bits and Atoms. His unique laboratory is breaking down boundaries between the digital and physical worlds, from creating molecular quantum computers to virtuosic musical instruments. Author of numerous technical publications, patents, and books.



Greg Clark

Trusted advisor, moderator, writer and commentator on cities, businesses, and institutions in the global era. He maintains city leaders and business leaders have a common agenda to improve how cities function.



Adam Greenfield

Founder and managing director of urban systems design practice Urbanscale LLC, and an adjunct professor at New York University's Interactive Telecommunications Program. Author of numerous books, he talked about the dawn of ubiquitous computing, which he calls "everyware".



Joan Clos

Executive Director of the United Nations Human Settlements Programme (UN-HABITAT). He served as city councillor in Barcelona (1983-87), as Mayor of Barcelona (1997-2005) and was the Minister of Industry, Tourism and Trade of Spain (2006-2008). He had a key role during the 1992 Olympic Games in Barcelona and several leading roles in numerous international organisations.



Erika Harms

Executive Director at the Global Sustainable Tourism Council (GSTC) and Executive Director for Sustainable Development at the UN Foundation, Harms has focused on creating platforms to bring together the private and public sector in support of the UN's conservation priorities.



Abha Joshi-Ghani

Head of Urban Development and Local Government Practice in the World Bank's Sustainable Development Network. She oversees the World Bank's work on Urban Policy and Strategy and Knowledge and Learning. She is also Head of the Global Urbanization Knowledge Platform, a multi-partner initiative of the World Bank. Ms Joshi-Ghani has worked primarily on infrastructure finance and urban development at the World Bank. Her experience includes countries in South and East Asia, Africa and the Middle East.



Nigel Shadbolt

As well as heading the Web and Internet Science Group at the University of Southampton, he is a Director of the Web Science Trust and the Web Foundation. He is a prolific writer and researcher on topics ranging from cognitive psychology to the Semantic Web.



Prof Ashwin Mahesh

Member of the Agenda for Bangalore Infrastructure and Development (ABIDe) Task Force, and co-author of Plan Bengaluru 2020, a new road-map for planning and development in the Bangalore metropolitan region. He has worked extensively with the traffic police and created a model for the development of Puttenahalli Lake in South Bangalore.



Dr Anthony Townsend

Director of Technology Development at the Institute for the Future. His research focus is on the impact of new technologies on cities and public institutions, and the role of technology in economic development.



Carlo Ratti

An architect and engineer who practices in Italy and teaches at the Massachusetts Institute of Technology, Ratti directs the Senseable City Lab which studies built urban environments using new tools that transform the way we describe and understand cities.



Mildred Warner

Professor in the Department of City and Regional Planning at Cornell University where her work focuses primarily on local government service delivery, economic development and new community development models for addressing human services.



Jeremy Rifkin

Academic, adviser, influential speaker, the President of the Foundation on Economic Trends, and the bestselling author of nineteen books on the impact of scientific and technological changes on the economy, the workforce, society and the environment.



Dr Ken Worpole

Senior Professor at the Cities Institute, London Metropolitan University. He writes about social policy, landscape and architecture. He was a member of the UK government's Urban Green Spaces Task Force, and an Adviser to the Commission for Architecture and the Built Environment (CABE).

Speakers on Cities



Ger Baron,
Amsterdam

Program and Cluster manager at the Amsterdam Innovation Motor (AIM) to develop projects in the field of Sustainability. At AIM he initiated and is responsible for several Living Labs and Smart City projects as well as several public-private partnership projects. He has worked for the Dutch Social Democratic party and at Accenture Consulting. His interests lie in innovation, products and services, the role of users, and the adaptation of technologies.



Benoit Kandel,
Nice

The first Deputy Mayor of Nice, Departmental Councillor of the Alpes-Maritimes (Nice 12th Canton) and Colonel of the Gendarmerie, Benoit Kandel graduated from the Special Military School of Saint-Cyr in Coetquidan. He was technical advisor to the Secretary of State for Foreign Affairs and entered politics when he was elected at the municipal elections in Nice in 2008. He likes to get out in the field, is interested in humanism and social justice, and is in charge of the departments of safety, traffic, parking, etc. As Departmental Councillor of the Alpes-Maritimes he is the rapporteur general for the budget.



Cristiana Fragola,
New York

Deputy Director of Strategic Initiatives at the New York City Housing Authority (NYCHA), where she develops and manages sustainability strategies. Previously, she was the Director of MillionTreesNYC, an initiative of Mayor Bloomberg's PlaNYC. Before joining the public sector, Cristiana practiced corporate, transactional and intellectual property law at News Corporation where she was VP and Associate General Counsel. She co-teaches at NYU Wagner School of Public Policy on Building Green Housing and Sustainable Neighbourhoods and collaborates with consulting firms.



Hector Lostri,
Buenos Aires

Assistant Secretary of Planning at the Autonomous City of Buenos Aires. An architect specialised in Production and Technology Architecture and Urban Economics. He was the Director of the Environmental Urban Plan of the Government of the City of Buenos Aires; an advisor on Public Space and Planning to the Legislature of the Autonomous City of Buenos Aires. He has also been an advisor to the Public Space and Planning committees of that legislative body.



Vicente Gualart,
Barcelona

Chief Architect of the city of Barcelona and Manager of Habitat Urbano. He is the Director of the Institute for Advanced Architecture and Gualart Architects. He is at the forefront of the concept of integration between architecture, ecology and information technologies with projects such as Hyperhabitat (Venice Biennale), the Media House Project (City of Barcelona Award 2002), the Fab Lab house (the first solar house built in Barcelona in 2010) or neighbourhoods like Sociopolis in Valencia.



Todd Murphy,
Barangaroo –Sydney

Development Director for the Barangaroo development on the foreshore of Sydney harbour, a new addition to the Sydney waterfront that will deliver a new public park, cultural facilities and spaces for its citizens. Todd is an architect and urban designer who has led a range of significant urban renewal projects containing complex interfaces between elements of public domain, transport and sustainability infrastructure with office, retail and residential land use mixes in a large stakeholder and commercial environment.



Tetsuya Nakajima,
Yokohama

Director of the Climate Change Policy Headquarters of the City of Yokohama, Nakajima is an engineer who specializes in town planning and the leader of the Yokohama Smart Project to turn the Japanese city into a smart city. He has worked on the development of the modern district of Minato Mirai 21, as well as the planning of its street network and the railway line connecting it to the central station of Yokohama.



Alba Simon,
Rio

Superintendent of Biodiversity and Forests Department of the Environment of the State of Rio de Janeiro. She has a PhD in Geography from the Universidade Federal Fluminense (UFF), a Masters in environmental science from the UFF and expertise in environmental planning, also from the UFF. She was the Director of the Conservation Unit of the State Forestry Institute; she worked at the Institute of the Environment of Acre and served in Niterói in non-governmental organizations.



Narinder Nayar,
Mumbai

Chairman of Bombay First. He has been instrumental in establishing a true public/private partnership with the State Government for the regeneration of Mumbai, with the support of the Indian Prime Minister's office and the World Bank. He believes in the dictum "think Local, act Global", and was responsible for getting international companies involved in helping to overcome the challenges of urbanization in Mumbai, a city with a population of 18 million.



Paul Tilsley,
Birmingham

Leader of the Liberal Democrat Group in Birmingham since 2005 having begun his career as a Councillor back in 1968, Tilsley has led the city both on its approach to tackling climate change and in championing the use of digital technology. He represents Birmingham City Council at the Core Cities Leader's Group, has been the Vice Chairman of Eurocities for two years and is now the Chair of the Eurocities Social Affairs Forum.



Timothy Papandreou,
San Francisco

Deputy Director of Transportation Planning - Sustainable Streets Division for the San Francisco Municipal Transportation Agency, where he oversees the agency's ambitious sustainable mobility and climate action goals through innovative multi-modal transportation planning projects, policies and programs. He has worked as an urban transportation and land use planner both in the US and Australia and co-founded Cultivating Sustainable Communities, a non-profit organization that empowers individuals and communities to live a low-carbon, self-sustaining and high-quality way of life.



Ding Xiaohua,
Shanghai

Deputy manager of new energy vehicle department of Shanghai International Automobile City Group. He actively involved in entire stages from program planning, policy making and demonstration implementation of Shanghai International EV pilot city. He also participated some high tech "863" research project of MOST and many international collaboration projects. He possess rich practical and theoretical experience in the area of EV demonstration & promotion, data acquisition, and comparative study.



2. Expo

With the most important companies in the world and their solutions for Smart Cities



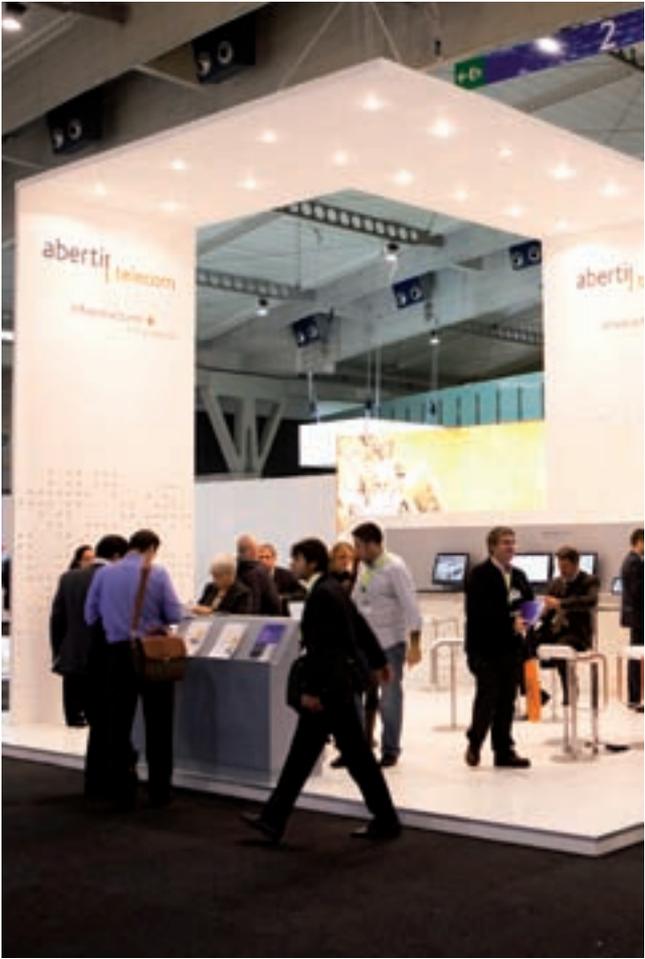
Smart City Expo was an excellent framework for local governments, cities and companies to showcase their products and innovations, generating numerous international business opportunities. Participants were able to see what our most innovative members are doing, so they can now anticipate and spearhead the future. There was a dedicated area for every sector: Cities, Urban Planning, ICT and Research, Environment and Recycling, Mobility and Transport, and Energy and Sustainability.

Smart City Expo brought together local governments, cities and companies. Local governments, which are most actively committed to balanced development; cities, which experiment and take risks, and companies firmly committed to this field of endeavour.

It provided a showcase for a large number of electric vehicles and alternative energy models for urban mobility.

The exhibition concluded its first edition as the new international benchmark for smart cities. The four-day event in Barcelona brought together 6,160 professionals, 118 companies and 290 speakers to discuss the cities of the future, along with representatives from 51 cities on all five continents.

Global Event Partners



abertis telecom

One of the leading European operators in telecommunications infrastructures and services. It provides cutting-edge audio-visual services to radio stations at a national, regional and local level. It also provides mobile radio communications for security and emergency services, and telecommunication services for other operators. It designs, deploys and operates WI-FI networks for public administrations.

To provide these services it has its own terrestrial network of more than 3,200 centres, spread across the whole of Spain, and has also strengthened its position in the satellite communications sector through its participation in Hispasat and as a key partner in Eutelsat.

abertis telecom proposes to continue its strategy of growth in a continually expanding sector as an international reference and leading player in European technological development.

abertis telecom is the telecommunication infrastructures operator of the abertis group, an international group which manages mobility and telecommunications infrastructures across five business areas: toll roads, telecommunications infrastructures, airports, car parks and logistic parks. As a result of the company's continuous international expansion, the Group now operates in 17 countries on three continents.



High performance. Delivered.

Accenture

A global management consulting, technology services and outsourcing company, with more than 244,000 employees serving clients in over 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments.

Accenture's "high performance business" strategy builds on the company's expertise in consulting, technology and outsourcing to help clients perform at the highest levels so they can create sustainable value for their customers and shareholders. Using their industry knowledge, service-offering expertise and technology capabilities, Accenture identifies new business and technology trends and develops solutions to help clients around the world enter new markets, increase revenues in existing markets, improve operational performance, and deliver their products and services more effectively and efficiently. To help implement Smart Cities, Accenture develops and promotes new forms of leadership and governance structures, aligns and engages all relevant stakeholders, assembles the capabilities to drive an open, intelligent infrastructure and creates financial models that are commensurate with the challenges and opportunities ahead.



Aqualogy

The first company to encompass the entire spectrum of products and technologies in the world of water and the environment, Aqualogy's four divisions – Environment, Knowledge, Solutions and Operations – provide specialized consulting solutions, training, control systems and improved processes for the water industry and the environment.

Water is an essential resource. The increase in population, concentrated mostly in urban areas, means it must be managed efficiently. The application of smart solutions is now a necessity. Aqualogy, Agbar's Solutions and Technologies brand, meets this challenge. Aqualogy provides developments that improve water management efficiency and optimise the use of natural resources.

Aqualogy has an extensive catalogue of innovative, flexible and comprehensive solutions that can be easily adapted to any socioeconomic context and customer. Aqualogy is about intelligent water management. It is the answer to any technological need related to water.

Through the activities of ADN (Aqualogy Development Network), a structure focused on the identification, creation and assessment of knowledge, Agbar has become a benchmark company in the sphere of personal development: accreditation and training, environmental education and specialised technical training, and in the sphere of management and knowledge transfer.



Atos

An international information technology services company with 74,000 employees in 42 countries and serving a global client base, Atos delivers hi-tech transactional, consulting, technology, systems integration and management services. With its broad technology expertise and industry knowledge, it works with clients across the following market sectors: Manufacturing, Retail, Services; Public, Health & Transport; Financial Services; Telecoms, Media & Technology; Energy & Utilities.

Atos is focused on business technology that powers progress and helps organizations to create their firm of the future. It is the Worldwide Information Technology Partner for the Olympic Games and is quoted on the Paris Eurolist Market. Atos operates under the brands Atos, Atos Consulting and Technology Services, Atos Worldline and Atos Worldgrid.

It was founded on 1 July 2011 from Atos Origin and Siemens IT Solutions and Services GmbH.

Atos Origin was formed in 2000 when Atos and Origin merged. In 2002, KPMG Consulting's businesses in the United Kingdom and the Netherlands were acquired to establish Atos Consulting. The Sema Group was bought from Schlumberger in January 2004; the acquisition of SIS and the Siemens partnership was then the logical continuation of the Atos strategy.

Global Event Partners



CISCO SYSTEMS INC.

A leader in networking for the Internet, Cisco was founded in 1984 by two computer scientists from Stanford University seeking an easier way to connect different types of computer systems.

Cisco Systems shipped its first product in 1986 and is now a multinational corporation, with over 35,000 employees in more than 115 countries. Today, Cisco solutions provide a networking foundation for service providers, small to medium business and enterprise customers, including corporations, government agencies, utilities and educational institutions.

Cisco's networking solutions connect people, computing devices and computer networks, allowing people to access or transfer information without regard to differences in time, place or type of computer system.

If anyone can lay claim to a 'heritage' in an industry as young as global networking, then it is Cisco. Not only does 85 per cent of Internet traffic travel across Cisco's systems, we also use the Internet to run our own business online, from product orders and inventory management through to staff communications and travel expenses.



COMSA EMTE

The second-largest Spanish unlisted group in the infrastructures, services, engineering and systems sector and the eighth largest Spanish company in the sector. The group has a presence in 15 countries and employs 9,500 people.

With more than a century of experience behind it, COMSA EMTE mainly operates in the fields of Infrastructures, Engineering and Systems, Environment, Services and Logistics, Concessions and Renewable Energy.

The main pillar of COMSA EMTE's progress is its international operations. The expansion that it has experienced over the last few years has given rise to a permanent presence in 15 countries: Andorra, Algeria, Argentina, Australia, Brazil, Colombia, Chile, Spain, France, Mexico, Peru, Portugal, Poland, Switzerland and the United States.

The project is based on the values that people in COMSA EMTE identify with and put into practice on a daily basis. COMSA EMTE fosters the development of people, drives new initiatives and builds sustainability and environmental responsibility into all its areas of business activity.

The Barcelona Citizen Commitment to Sustainability-Agenda 21 is an initiative that endorses COMSA EMTE's commitment to the environment and social responsibility.



Enel Group

The union of Enel in Italy and Endesa in Spain is Enel Group in Endesa. Ten years ago, Enel Group started to develop the new grid, introducing smart meters and automated metering infrastructures. Today, 32 million electronic meters have been installed in Italy and 13 million new generation meters are currently being installed in Spain, the largest ongoing smart metering roll-out in Europe.

Enel is Italy's largest power company and Europe's second listed utility by installed capacity. It is an integrated player, active in the power and gas sectors. Enel today operates in 40 countries worldwide, has over 97,000 MW of net installed capacity and sells power and gas to more than 61 million customers.

Enel Distribuzione and Endesa Distribución Eléctrica have created Meters and More, a non-profit association to open the communication protocol used by their electronic meters. The members of the association include major electricity distribution companies. The Open Meter project, sponsored by the European Union, has deemed the Meters and More protocol a potential European standard for Automated Metering Infrastructure.

Enel is also participating in European projects to promote active demand, electrical mobility and the flexibility of grids to integrate energy from renewable sources.



FCC

FCC is a services provider for the community, carrying out infrastructure and construction works and developing renewable energies. It aims to become a more global business group providing services for citizens. To achieve this, the company has designed various strategies for each of its three main areas of activity: Infrastructures, Services and Energy. The Infrastructure division works in the areas of construction and industrial activity. The Services division covers two large areas: environmental services and services for citizens. Energy is a business area that is undergoing a process of consolidation, generating business in the field of renewable energy.

The Energy business division is in the early stages of consolidation in Spain. FCC is developing the equipment necessary to make the leap to other high-potential markets. The strategy in this area aims to develop an anti-cyclical, recurrent business in the renewable energy sector. This involves constructing and operating wind farms and solar thermal power plants. Two of the key mechanisms within the Energy division's strategy to reduce CO2 emissions are energy efficiency and exploiting energy from renewable sources – wind, hydraulic, solar and biomass.

Global Event Partners



Ferrovial

The world's leading private investor in transportation infrastructure, with a workforce of approximately 70,000 employees and operations in more than 15 countries.

The Company manages key assets such as Canada's 407ETR highway and London's Heathrow Airport. It also provides municipal services to more than 800 cities and towns in Spain and to the millions of citizens who use the Madrid metro system, and the hundreds of kilometres of streets and highways where Amey provides maintenance services in the United Kingdom.

Ferrovial is listed on the Madrid Stock Exchange and is included in the prestigious Dow Jones Sustainability and FTSE4Good indexes.

Ferrovial's activities focus on four business lines: services, highways, construction and airports.

Ferrovial is aware that the world population is growing and people are increasingly choosing to live in metropolitan areas. At the same time, the macroeconomic context is causing Public Administrations to prioritize efficiency, savings and public expenditure constraints. As a result, City services need to become more integrated. Innovation and quality, balanced with sustainability and cost efficiencies, is not an easy equation. This is when a Smart City becomes a reality, a necessity, and a value proposition to improve cities.



Gas Natural Fenosa

The result of two of the gas and electricity industry experts having joined forces to create the first seamlessly integrated energy company in Spain and Latin America, leading the natural gas sales market in the Iberian Peninsula, and the biggest distributor of natural gas in Latin America. With a fleet of 10 LNG tankers, it is the company of reference for LNG/NG in the Atlantic and Mediterranean basins, where it operates 30 bcm.

To achieve the objectives set by the European Union for 2020, it is necessary to increase energy efficiency by 2.7% each year. Investments in energy efficiency are the most effective instrument in terms of cost and volume to reduce emissions of greenhouse gases, to limit energy dependence and increase competitiveness by reducing the costs involved. They improve the triple bottom line: economic, social and environmental.

To implement intelligent energy management, the current model has to change dramatically, moving from unidirectional and analogue to a new structure in which generation and demand communicate with each other through smart grids. Smart grids improve the efficiency of electrical and gas systems and are essential to meet the energy goals of the European Union by 2020: a 20% reduction in emissions of greenhouse gases, a 20% improvement in energy efficiency and 20% of energy from renewable sources.



IBM

IBM is a multinational technology and consulting corporation which manufactures and sells computer hardware and software and provides infrastructure, hosting and consulting services in areas ranging from mainframe computers to nanotechnology.

IBM has a commitment to help make cities smarter, through more than 2,000 engagements with cities around the world. And with expertise in 17 industries and capabilities that span 170 countries, it helps cities to anticipate change and profit from new opportunities.

With insight from over 2,000 projects, IBM is helping make cities of all sizes better places to work and live. A smart idea in one city can make any city smarter, and every city is unique, but many face similar challenges.

The company was founded in 1911 as the Computing Tabulating Recording Corporation through a merger of three companies: the Tabulating Machine Company, the International Time Recording Company, and the Computing Scale Corporation.



Indra

A global technology, innovation and talent company, Indra is on the cutting edge of high value-added solutions and services for the Transport and Traffic, Energy and Industry, Public Administration and Healthcare, Financial Services, Security and Defence and Telecom and Media sectors. The company operates in more than 110 countries and has more than 31,000 employees worldwide, focusing on developing innovative solutions that meet the needs of the most demanding clients. Indra ranks second in Europe by R&D spend. Indra's strength lies in its technology, innovation and talent.

Indra consolidates and concentrates its operations in specialised workplaces, the Centres of Excellence, which are key to our production and our innovation. These function like neural connections, generating substantial synergies in production efficiency and knowledge generation. In other words, they specialise in a particular technology or area of knowledge, enabling them to capitalise on potential economies of scale, thus enhancing production efficiency. They are also specific innovation units that focus on developing a range of products and services which address the real, specific needs of our customers. In short, these workplaces operate as advanced laboratories, using the latest technological breakthroughs to develop bespoke solutions for our customers.

Global Event Partners



Ros Roca Environment

Made up of leading companies from the environmental sector, some of them with nearly 60 years of experience, their activities concentrate on three major areas which cover the complete waste cycle: the manufacture, sale and rental of equipment for street cleaning and waste collection. The design, development and construction of engineering process systems for transferring, sorting, composting, biomass, biogas, upgrading, anaerobic digestion and energy recovery plants and the development and construction of automated waste collection systems.

The group operates in four continents, through the companies Ros Roca and Ros Roca Envirotec (Spain), Dennis Eagle (United Kingdom), Usimeca (Brazil, Mexico and Chile), Eurovoirie, SSV and Ros Roca STV (France), HS (Germany) and Resitul (Portugal) and has more than 20 distributors in various countries worldwide and manufacturing licences.

Ros Roca Environment offers its customers its knowledge and services to help solve environmentally-related problems in today's society and gives them smart products, from refuse collectors and containers through to urban cleaning and waste treatment.



Schneider Electric

A global specialist in energy management with operations in more than 100 countries, Schneider Electric offers integrated solutions across multiple market segments, including leadership positions in energy and infrastructure, industrial processes, building automation, and data centres/networks, as well as a broad presence in residential applications.

It combines its knowledge and experience with Telvent, a pioneer in developing solutions and information services, in order to provide solutions for Smart Cities that give them the space to develop safer, modern and more comfortable cities, facing this challenge in an economically and environmentally sustainable way. Schneider Electric is the global specialist in energy management, with operations in over 100 countries. In Spain, the company has nine production facilities and a logistics centre. In addition, from the group's Spanish headquarters, Schneider Electric leads the group's activities in Europe, the Middle East, Africa and South America.

Schneider Electric Solutions for Smart Cities includes smart grids, smart mobility, smart water, smart public services and smart buildings and homes.



SIEMENS

Siemens

Active in around 190 regions, Siemens occupies leading market and technology positions worldwide with its business activities in the Energy, Healthcare, Industry, and Infrastructure & Cities sectors.

Overall, with 360,000 employees around the world, Siemens is well positioned to offer its customers local, targeted, and tailored solutions. In addition to over 285 manufacturing locations worldwide, Siemens also has office buildings, warehouses, research and development facilities or sales offices in nearly every country around the globe.

A steadily growing demand for energy, increasing water consumption, and the ever-greater need for high-quality, affordable healthcare are all issues that are shaping our world – and these are especially apparent in cities. As an integrated technology company, Siemens offers a wide range of future-oriented solutions to meet these challenges. The company has created the Infrastructure & Cities sector, a new sector that, alongside the existing divisions of Industry, Energy and Health, will allow cities to reconcile their urban growth with a high quality of life, through a portfolio of sustainable and innovative products and services specifically created for cities.



Telefonica

Telefónica

One of the world's leading integrated telecommunications operators, providing communications, information and entertainment solutions, Telefónica has a presence in Europe, Latin America and China. The company operates in 25 countries and has around 300 million customers.

Telefónica's vision is for Smart Cities to be the new urban ecosystems that are able to maximize economic, social, and environmental welfare by properly assigning resources and enabling more sustainable and efficient development. Creating a Smart City is a very complex project that not only requires the involvement of a large number of agents, but is also a long-term commitment. Success will also depend on the value proposition, which must demonstrate its usefulness for citizens and businesses by being both feasible and sustainable.

The near future will bring a radical transformation of cities towards integrated models, with a complex nerve system made up of communications networks and computing capacity that will generate new, more sustainable spaces, with new services for citizens who are more involved and will become active participants. The Internet of Things, the movement of computing to the Cloud, the upsurge of smart phones, open innovation and the social media are all trends with the potential to boost the advent of the Smart City.

Global Event Partners



URBASER

URBASER is the environmental company that belongs to the ACS group (Actividades de Construcción y Servicios), a worldwide reference in infrastructures, industrial services, energy and the environment.

URBASER specialises in street cleaning, waste removal and transportation, urban waste treatment and recycling and comprehensive management of the water cycle, urban landscaping and gardening. It is a leader in waste management and treatment and the removal and treatment of used mineral oils and industrial waste. Its services cover the entire value chain, from design and conception through to project execution, construction, financing and operating a highly qualified professional team. It also operates in the field of renewable energies with a view to limiting the negative impact of greenhouse gases, for which it is developing treatment processes for alternative sources of energy, biomass from biomass crops, waste woodland mass, biodegradable agricultural and industrial waste.



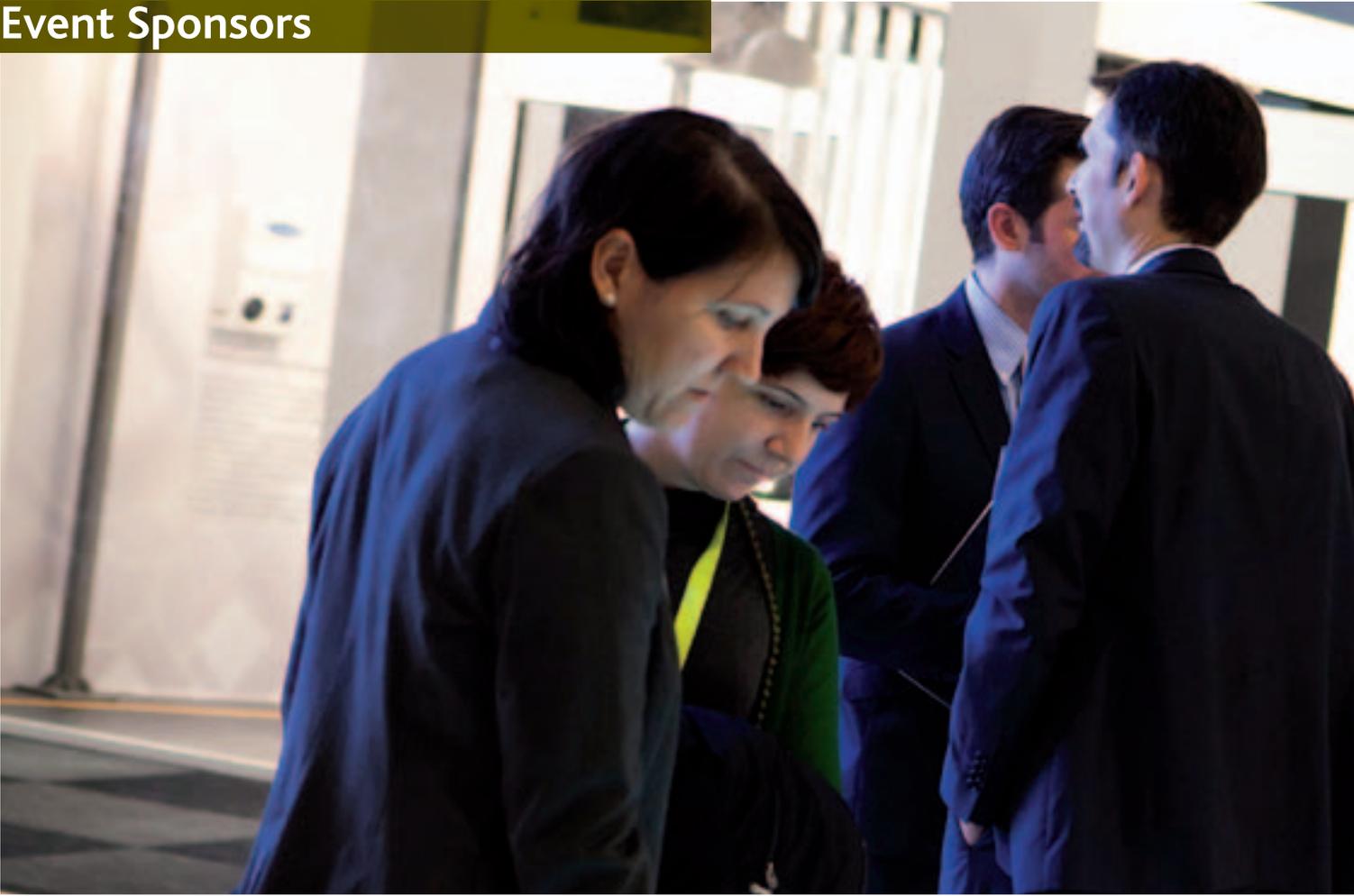
WONDERWARE

A leading developer of technology systems for real-time operational management in smart cities (environmental services, roads, communications, transport, waste, traffic, safety, etc.), infrastructures (airports, water and electricity distribution, highways, railways, roads, etc.), and industry (chemicals and pharmaceuticals, food and beverages, metals, etc.), Wonderware software delivers significant cost reductions associated with designing, building, deploying and maintaining secure and standardized applications for manufacturing and infrastructure operations.

Wonderware software is capable of integrating into a single platform the multiple technologies and devices involved in the management of structurally complex environments. Thanks to the full integration and visibility offered, it guarantees major cost savings in operations and maintenance, promotes service excellence by quickly detecting any incidents and facilitates analysis to improve future processes.

Wonderware projects are based on the integration of management environments involving multiple technologies and a variety of devices that are often geographically dispersed. Wonderware technology is able to cover all the management needs of a smart city and can be applied to both small towns and cities with millions of inhabitants.

Event Sponsors



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Urban planning

Cities

Technical press, services & others



3. World Smart Cities Awards

Identifying cities, solutions and projects that contribute to the evolution of the Smart City concept.



Awards

Smart City Expo World Congress organized the World Smart Cities Awards, aimed at businesses and entrepreneurs, cities, public-private consortiums and organizations with innovative Smart City visions and/or public-private consortium projects that fit in with any Smart City Expo World Congress theme. Our idea is to build the cities of the future: with a high quality of life, sustainable and with innovative, flexible and efficient management and administration. The World Smart Cities Awards were established in order to identify a city, solution or project that clearly contributes to furthering the Smart City concept.

- **City Category:** awarded to a city for their strategy, project or initiative.
- **Project Category:** awarded to one project with a global impact on a specific area or city. It could be presented by companies, cities or consortiums (public-private). Projects must be either already implemented or in the implementation phase.
- **Solution Category:** awarded to one solution for any of the Smart City goals. It had to be presented by a company or entrepreneur. All the solutions submitted for consideration had to have already been tested in a specific city.

Winners

The city of Yokohama, the integral mobility management project in Nice and the Agmos water management system were the winners of the first edition of the World Smart City Awards.

These awards aim to identify the cities, projects and solutions that have made the greatest contribution to developing the smart city concept, and received more than a hundred entries from 19 different countries.

CITY award: Yokohama. Transformation Towards Low Carbon City Infrastructure. Japan

Recognised for its commitment to renewable sources of energy and for spearheading the implementation of electric vehicles, Yokohama's standout project is the "Transformation Towards Low Carbon City Infrastructure", which combines technologies and mechanisms to reduce CO2 emissions and energy dependence on fossil fuels.

PROJECT award: Semiacs. Intelligent Mobility Nice. France

The project of this consortium stands out for its proposal for the integral management of urban mobility, aimed at reducing emissions of greenhouse gases and decongesting city traffic. It includes interventions in public transport (reducing ticket prices to 1 euro and providing public, environmentally-friendly mobility platforms with electric bicycles and cars) and public parking and traffic management by intensive sensor systems in the urban network.

SOLUTION award: Aqualogy. AGMOS. Agbar Management Operating System Barcelona, Spain

Its integral water management system for cities, Agmos, gives a real-time geographical overview of parameters such as the quantity and quality of water supplies and the level and source of water reserves. This platform not only provides the company's staff with all the information they need but also informs end users, and can be used to detect possible incidents in the distribution network and identify the estimated time until they can be resolved.



The projects were evaluated by an international jury including:

- Abha Joshi-Ghani, World Bank
- Carlos Gadsden, International Foundation for the Development of Reliable Governments
- Sunil Dubey, Metropolis Advisor
- Member of Geneva Foundation of Governance and Public Policy
- Carlos Leite, Mackenzie University
- J. M. Piqué, Barcelona City Council
- Ramon Sangüesa, Polytechnic University of Catalonia (UPC)
- Pilar Conesa, Smart City World Congress
- Lluís Gómez, Smart City Expo



Gala Dinner & Awards Ceremony

The Gala Dinner, with 700 guests, took place in the grand Oval Room of MNAC (National Catalan Museum of Art), also the scenario for the first edition of the World Smart City Awards, which recognise smart city initiatives.

City Category:

Winner: **Yokohama**. Transformation Towards Low Carbon City Infrastructure. Yokohama. Japan

Project Category:

Winner: **Semiacs**. Intelligent Mobility Nice. France

Special mention for: **Social car**. Social Car S.L. Movilidad Inteligente. Carsharing P2P en España Barcelona. Spain.

A car sharing initiative based on a peer-to-peer model of resource management and car usage.

Solution Category:

Winner: **Aqualogy**. AGMOS. Agbar Management Operating System Barcelona. Spain

An integral solution for water management in cities



4. Welcome Lunch & Business Bridge

Strengthening the participants' networking experience.



Welcome Lunch

The Smart City Expo & World Congress was enlivened with side events programmed for participants to strengthen their networking experience.

Representatives of each city delegation took part in the welcome lunch hosted by the Barcelona City Council and the Congress.

Business Bridge

The Smart City Expo & World Congress organised the "Business Bridges" initiative, a series of meetings and events to encourage dialogue between delegates. China, India, Brazil and Japan had a significant presence at the event and brought large delegations.

China, India and Brazil are three very rapidly growing economies with huge populations. They are facing some serious environmental and energy issues and already are and will be hugely important engines for change globally. Japan is looking at a more secure energy model in the wake of the Fukushima nuclear disaster.

The Business Bridge initiative allowed delegates from these countries and from the European Union and Spain to mix with and get to know companies and cities alike. They identified their common connections, were able to share experiences on the 'smart' theme and define new ways of collaborating, with the chance of participating in each other's processes of transformation.





5. Communication

From Barcelona to the world.

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Worldwide promotion



The Smart City concept was internationally promoted with a special in situ presentation in several cities and through the Fira de Barcelona's communications strategies and channels and promotional campaigns through its representative offices all over the world.

Road Show

- Brussels
- Hyderabad
- London
- Madrid
- New York
- San Francisco
- Sao Paulo
- Shangai
- Santiago de Chile
- Tokio

Smart City Expo Delegations

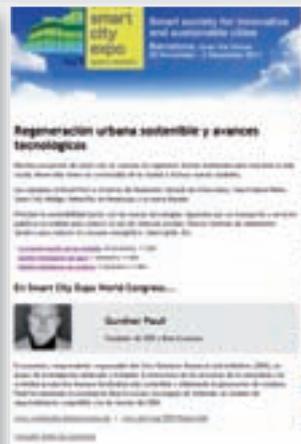
- Argelia
- Argentina
- Austria
- Belgium
- Bolivia
- Brazil
- Canada
- Chile
- China
- Ecuador
- France
- Germany
- Hong Kong
- India
- Ireland
- Israel
- Italy
- Kazajistán
- Luxembourg
- México
- Morocco
- Netherlands
- Perú
- Poland
- Portugal
- Russia
- Switzerland
- Taiwan
- Tunisia
- Turkey
- Ukraine
- United Kingdom
- United States



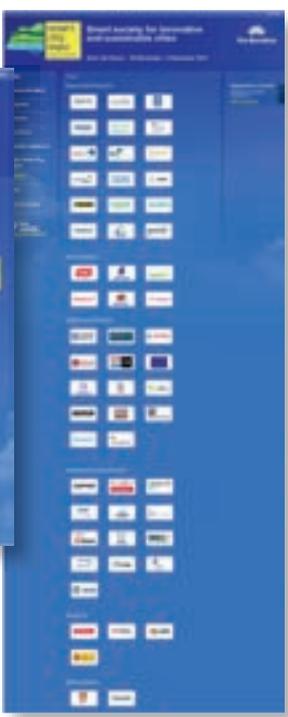
Roadshow

The Smart City Expo World Congress 2011 was promoted with a worldwide roadshow in cities with the most relevant projects related to Smart Cities, including Madrid, London, New York, San Francisco, Sao Paulo, Santiago de Chile, Shanghai and Tokyo. The goal of the roadshow was to present the event at meetings, presentations and promotional campaigns in the press as well as to invite the visited countries to participate.

Online communications



A smart multiplatform communications strategy using the options offered by new social media tools, integrating 2.0 distribution channels and 3.0 conversations and online participation.





The multiplatform communications strategy also took into account the more traditional mass media communication channels, including newspapers, radio and television, for a comprehensive advertising campaign.



ETB



ETB



TV3



La 2 de TVE



Tele 5



Btv



6. Results

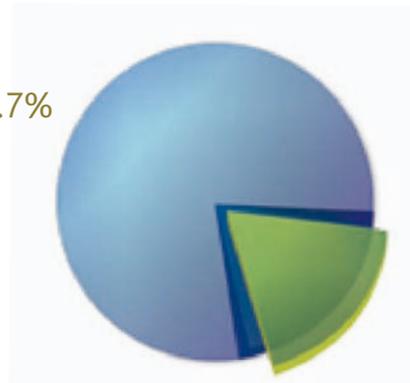
Statistics and relevant data.



6,160 visitors
2,082 attendees
1,670 cities and **51** countries
118 exhibitors
367 speakers and moderators
177 journalists

78.7% purchase decision makers

78.7%



Civil servant – 16.7%
Head of department, Group manager – 31%
Manager, Member executive board – 31%
Others – 21.3%



42.5 % international visitors



42.5 %

78% want to visit next year Smart City Expo World Congress

YES 78%



No 2%

Not yet decided 20%



Smart City Expo World Congress 2012

November 2012

The Smart City Expo World Congress concluded its first edition as the new international benchmark for smart cities.

The ambitious event will be back on November 2012. We are already working to put together a new jam-packed schedule with innovative projects and initiatives, more participative tools and delegations from all over the world.

See you in November

Global Event Partners:



Supporting institutions:



Event Partners:



Hosted by:



Media Partners:



Organized by:

